



A study and the impact of covid-19 on the different industries of the economy

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Abstract

India is between the top worst-hit countries by COVID-19, which has impacted almost all industries and sectors across the world. This study attempts to analyze the impact of novel corona virus in the areas of different sectors of economy which has been affected both in positive as well as in negative ways. This pandemic is not only taking peoples' lives but also it is impacting world economies resulting job losses, business disruptions and making us head towards one of the worst times ever for people on the Earth. The study has been conducted on seven major industries of the economy to find out how much they are affected by covid 19. There are some sectors that are highly benefited by the spreading of the virus. In this study we are going to see that at the same time how some sectors are flourishing and others are declining.

Keywords: COVID-19, economy, industries, pandemic

Introduction

India is one of the countries in the world who suffers greatly during the Coronavirus pandemic situation for last two years. According to the suggestions from high authorities and officials of Indian Government, the best way to fight with this tough situation is to restrict the movement of common people. This can be achieved only by locking down the streets, transportation local market and social gatherings. For that reason, the government imposed nationwide lockdown in late March' 2020 to combat the spread of the virus. After several months of closure, India has the second highest number of cases in the world with more than 2.8 crore positive cases (from JHU CSSE COVID-19 Data, 2021). The government imposed the lockdown in several phases while the shutdown took a toll on the country's economy. The lockdown restriction halted the most economic activities and led to job loss of millions of people and revenue streams.

The government took precautionary measures to curb the virus spread by restricting the movement but the virus wreaked havoc in the country. The virus killed many, including those who were fighting the battle against it to safeguard others' life (Deshpande, 2020) [31]. Almost all the sectors have been adversely affected as domestic demand and exports sharply plummeted with some notable exceptions where high growth was observed. In this paper we are going to focus on the few different industries and discuss the impact of Coronavirus on them. The COVID-19 pandemic and the multi-staged lockdown have brought about a staggering hit to the Indian Economy. The monetary effect of Coronavirus pandemic in India has been, to a great extent, considered problematic. India's development in the final quarter of the fiscal year 2020 went down to 3.1% as indicated by the Ministry of Statistics. The manufacturing, a significant piece of any economy, experiences an absolute absence of clearness. Lockdown has put extraordinary weight on the flexible chains of fundamental wares, and thusly, a considerable lot of the Indian organizations have concentrated on the production of basic things just, along halting all other exercises, in this manner cutting down the

development sketch.

This Corona Virus pandemic merely destroyed the Indian economy. The degree of GDP may additionally fall, all the more so when India is not resistant to the worldwide downturn. Indeed, it accepted that India is increasingly powerless since its economy has debilitated and in a profound situated stoppage for a few quarters, much before the COVID-19 got known. (Sidhu, Rai, Khaira and Kaur, 2020) [33] With COVID-19 spreading quickly in India, policymakers stressed over how to battle the infection and limit its effect on the economy (McKibben and Fernando, 2020). The GDP for the year 2019-20 was 4.2 percent which is reduced by 7.7 percent in 2020-21 as the pandemic-induced lockdowns led to chilling of economic activity, hurt jobs and demand. The pandemic and lockdown has hit the country's economy so badly that its GDP has reduced tremendously which it haven't faced in the last five years.

Pharmaceutical Industry

The domestic pharmacy market turnover in India has reached Rs. 1.4 lakh crores (equivalent to \$ 20.03 billion) in 2019 from Rs. 1.29 lakh crores in 2018 as per the government data. In India, the healthcare industries consist of both private sector and public sector. India plays an important role in the global pharma sector, and has a great pool of scientists/engineers with good potential to steer the industry ahead to greater heights. The Indian pharmaceutical industry supplies for over 50 percent of global demand for various vaccines. India is the 3rd largest producer of drugs in terms of volume and vaccine production accounts to 60 per cent global production. The average growth rate of India's biotechnology industry comprising biopharmaceuticals, bio-services, bio-agriculture, bio-industry, and bioinformatics is expected to be 30 per cent and to reach US\$ 100 billion by 2025. The Indian pharmaceutical exports, including drug formulations, intermediates, bulk drugs, biological, surgical and Ayush and herbal products has reached US\$ 16.28 billion in FY 20. It was estimated that 80 per cent of the antiretroviral drugs used globally to combat AIDS (Acquired Immune

Deficiency Syndrome) are supplied by Indian pharmaceutical firms. The medical device industry in India market is expected to grow US\$ 25 billion by 2025.

The corona virus pandemic and its resultant lockdown badly affected all major sectors of the economy, but it has come as a boon in disguise to the Indian pharmaceutical sector. Though some part of pharmaceutical business was affected such as supply chain and import of active pharmaceutical ingredients from China, Covid-19 has provided some opportunities in the pharmaceutical sector, especially India. In generic market, India is facing high competition from China for the supply of APIs at lower cost. India imports 70 per cent of the API needs from China. This created a lot of hardship to some of the domestic pharmaceutical firms manufacturing certain key APIs. In view of the Covid-19 pandemic situation, the Government of India (GoI) should take important steps for removing the technical and financial barriers, which will spur the pharmaceutical industry to ramp up API production-thereby reducing the dependency of pharmaceutical industry with China.

The GoI has taken important steps by proposing an incentive package of Rs. 13.76 billion for the promotion of domestic manufacturing of critical key starting materials, drug intermediates, APIs. Several key representatives from the pharmaceutical industry and NITI Aayog have suggested that fostering the approvals of pharmaceutical infrastructure developments, clearance from environment ministry and providing tax exemptions and subsidies for the development and promotion of the pharmaceutical industry hubs could benefit the market.

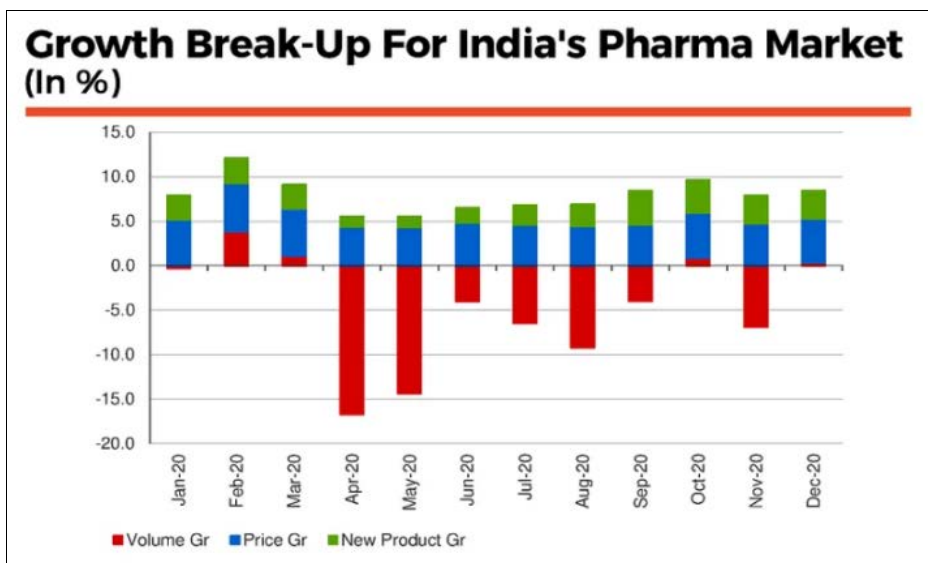
Amidst pandemic situation, urgent action is needed to boost medical supply of sanitizer, face masks, disinfectants, surgical gloves, protective gears for health personnel, scanners, infrared thermometers, test kits, inhalers, ventilators etc. Most of the items require low level of technology and can be manufactured easily. The MSME sector needs high focus in the above endeavor for twining public health and economic development. The Covid situation could be made as an opportunity for MSME for producing low end technology items in medical and sanitary equipment's like masks, gloves, cottons etc. and this could even revive the stagnant sectors.

During the Covid pandemic, several initiatives were taken

by the Union Cabinet to boost pharma industry, which include the amendment of existing Foreign Direct Investment policy to allow FDI to invest up to 100 per cent under the automatic route for manufacturing medical device subject to certain conditions. According to the data by DPIIT, the pharma sector attracted cumulative FDI inflow worth US\$ 16.54 billion during April 2000 to 2020 June. Some of the investments made in the pharma sector during the Covid crisis include sterilization devices and germicidal cabinet, portable and rechargeable car sanitizer, alcohol-free and bleach-free sanitizers and wheeled sterilization unit especially for hospitals by researchers from reputed organization. The Jubilant Generics Ltd has entered into a non-exclusive licensing agreement with Gilead Sciences Inc for the manufacture and sale of potential Covid drug Remdesivir in 127 countries, including India. The Telangana Government has proposed to the Union Government to set up a Pharma-city at Hyderabad with a financial aid of Rs. 3418 crore. A record sale of Rs. 52 crore was reported by the PMBJP at an affordable rate to the public.

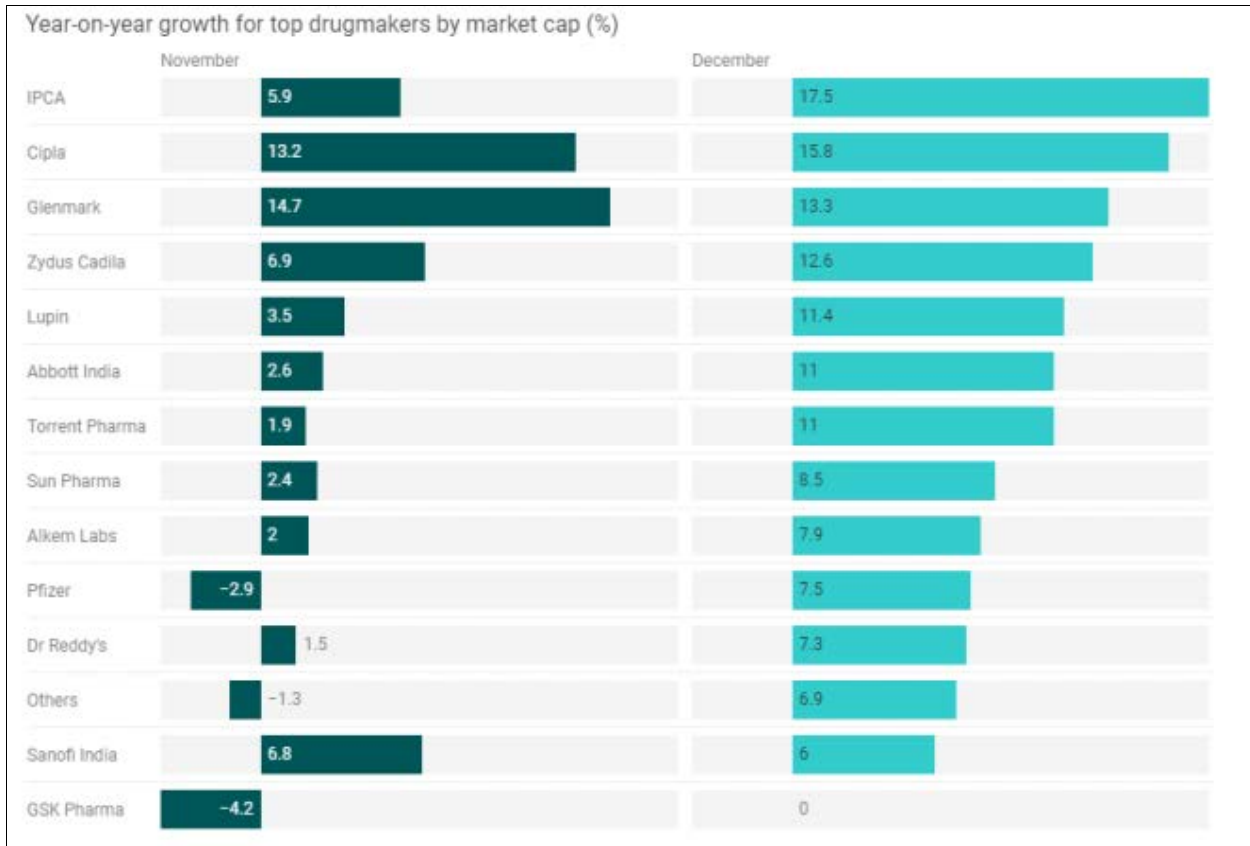
India unveiled plans to collaborate with Netherlands with an aim to provide digital health facilities. The Government initiated PLI scheme for the pharma sector worth Rs. 15,000 crore. India has planned to set up Rs. 1 lakh crore funds for boosting the pharma sector to manufacture pharmaceutical ingredients domestically by 2023. The National Health Protection Scheme, a Government funded healthcare program, which benefit 100 million poor families in the country, provides an insurance cover of up to Rs. 5 lakh per family per year for secondary and tertiary care hospitalization.

The fund allocated to health insurance scheme Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) is Rs. 6400 crore. The Pharma Vision 2020 is an initiative by GoI for making India a global leader in drug manufacture and approval time for new facilities for manufacturing has been reduced to boost the investment. The government has offered Rs. 6,940 crore production linked incentives between 5-20 percent for incremental sales and plans to set up three mega drug parks to drive sustainable cost competitiveness. [Varma, 2021] ^[1].



(Source: <https://www.bloombergquint.com/business/prices-new-launches-aid-indias-pharma-sales-in-december>)

Fig 1: comparative study of growth of sale volume, growth of price and growth of new product between pre Covid and post Covid time period.



(Source: <https://www.bloomberquint.com/business/prices-new-launches-aid-indias-pharma-sales-in-december>)

Fig 2: Comparative analysis of market growth among few top drug making companies in India

Virtual Platform Industry

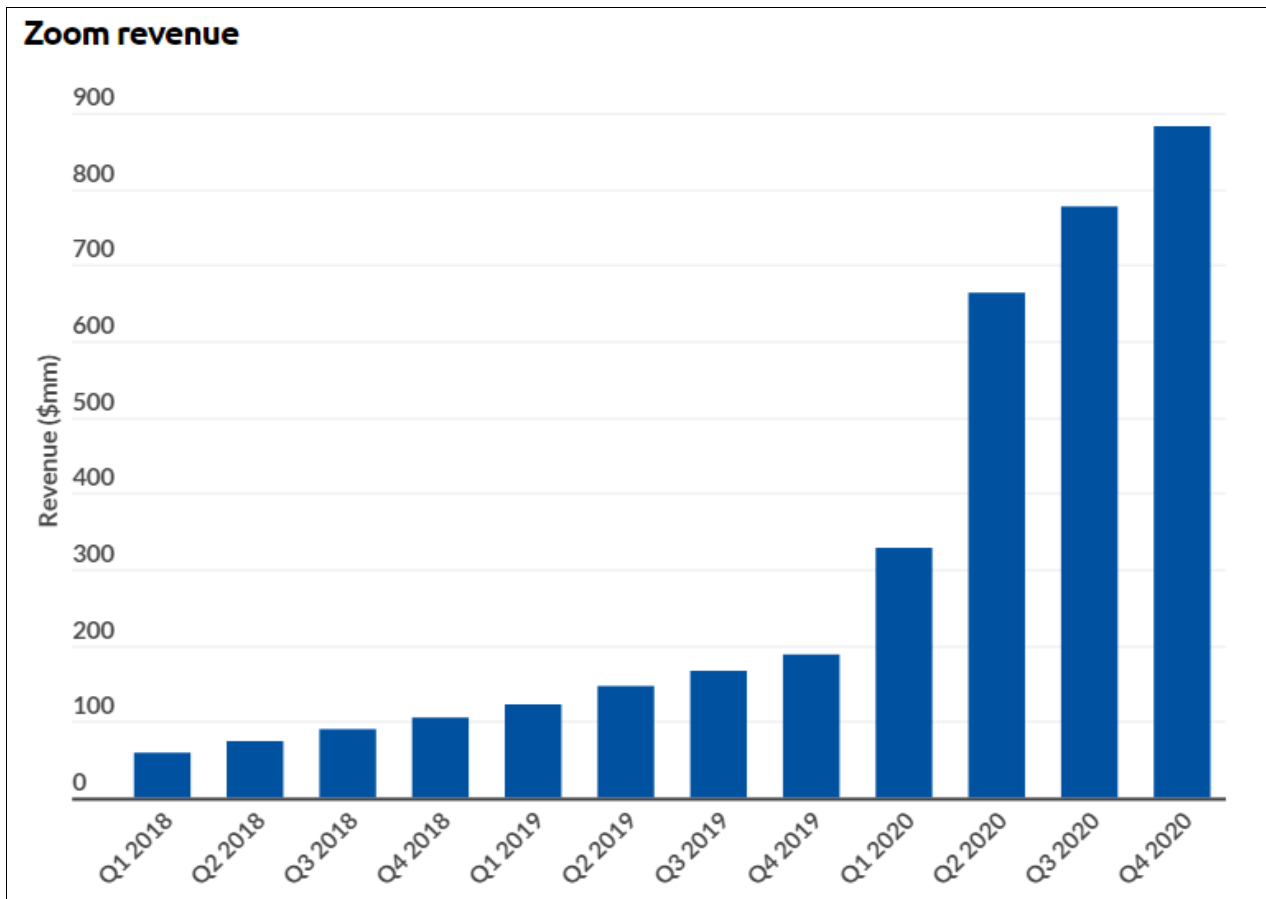
The current situation of the COVID19 pandemic severely affects the day-to-day life of the individuals. This lockdown has a great impact on humans both in a positive and a negative way. One major backdrop is they lack personal contact with each other. They wanted to meet each other physically, but were not able to do so due to the pandemic. Before pandemic, people would rarely use video calls, video conference or any other virtual platform but lockdown and social distancing compelled people to learn different types of virtual platform.

Video conferencing is a technology that allows users in different locations to hold face-to-face meetings without having to move to a single location together. This technology is particularly convenient for business users in different cities or even different countries because it saves time, expenses, and hassles associated with business travel. Uses for video conferencing include holding routine meetings, business deals, and interviewing job candidates etc. Before pandemic we use to do work, performing meetings, interviews, regular classes in person or physically, but this covid19 pandemic has stopped everyone of us from doing our regular jobs. The situation present during the lockdown has affected the breakdown in teaching-learning activity, academic meeting, examination etc., almost all the examinations were cancelled due to the lockdown [Gupta and Goplani, 2020] [2]. In India, all academicians have started upgrading themselves for online connectivity with students for the purpose of teaching learning. Video conferencing platforms help a lot in carrying out these

activities smoothly. Teachers of all levels, whether schools or colleges, have started using applications such as Zoom, Google Meet, Cisco WebEx, etc. for learning teaching activity [Gupta, 2020] [2].

With lockdown, video communication has become an important part of technology in a work capacity, to get many people out of the office. Many teams are now using cloud-based services such as Cisco Vibex, Microsoft Teams, Zoom, Google Hangouts, etc. to negotiate based on their choice, needs and price range. As we all know, face-to-face interaction at the workplace is a necessity, using only written and verbal communication when so much information is lost or misplaced - the ability to see each other clearly during virtual meetings has helped eliminate these issues. A more effective and productive working experience for all of us (McKenna, 2020) [3].

Virtual platforms have played an important role in healthcare communication during lockdown. Some activities such as healthcare education, health care delivery, healthcare management, screening of diseases, information and awareness about diseases, prevention of measures, etc. have become possible due to different virtual platforms. It also helps the Government to keep the work going during this lockdown. India is one of the leading economies in the Asia Pacific region and contributes to the overall revenue growth of the region, which is projected to leap from 19% market share in 2020 to approximately 24% by 2030 of the video conferencing market [Transparency Market Research, 2020].



(Source: <https://www.businessofapps.com/data/zoom-statistics/>)

Fig 3: Bar diagram for the increase in revenue of virtual platform (Zoom) in different course of time related to Covid pandemic.

Entertainment Industry

The outbreak of coronavirus is significantly impacting industries across India, with the music and entertainment industry being no exception. With the implementation of lockdowns across the country as a way of containing the spread of the virus, public gatherings have been prohibited and theatres, cinemas, shows and concerts have been cancelled indefinitely. The Bollywood industry was hit almost immediately as movie theatres across the country were closed and major releases were delayed. Even after the lockdowns are lifted, the call for social distancing might become a norm and the ripple effects will have serious implications for the people in the entertainment industry who survive on production and distribution of music and movies and the allied live events.

Even though dark clouds seem to be looming over the future of the entertainment industry, there seems to be a silver lining with the digital OTT platforms, music streaming platforms and radio seeing a steady growth in their business models. As per a KPMG report, with people confined to their houses, the consumption of content on these platforms has seen a surge both in terms of hours spent and newer audiences. With limited sources of entertainment due to the risk of contracting the contagious virus, people are bound to turn to the in-home entertainment options such as digital, TV and gaming and experts believe that this would eventually result in habit formation. Major productions are

now looking at digital releases of movies on OTT platforms as box office revenues will no doubt shrink due to the strong likelihood of people avoiding crowding facilities for a while. According to the BBC, it saw its radio properties boast a streaming increase of 18%. In accordance with the reports, in a time of heightened uncertainty and disrupted routines, consumers are turning to radio as a trusted source of information and community connection. Irrespective of the pandemic and the lockdown, music is still being streamed and performed on various platforms and the music continues generating royalties. When the income in other areas has decreased, royalty income can be of great help to the artists. It is advisable for artists to get themselves registered with the various copyright collections societies at the earliest to avoid missing out on royalties. The major copyright societies in India are The Indian Performing Right Society Limited [IPRS] (for composers and publishers), Indian Reprographic Right Organisation [IRRO] (for literary organizations) and Indian Singers Rights Association [ISRA] (for performers). More and more artists and companies are looking at having their content/music licensed to the digital platforms as it would help generate revenue. It is important that easy and structured licensing schemes and royalty rates are set in place by the government so that new content can easily be made available for public use and artists are not deprived of a chance to receive their fair share of royalties [Rajpal and Ali, 2021].

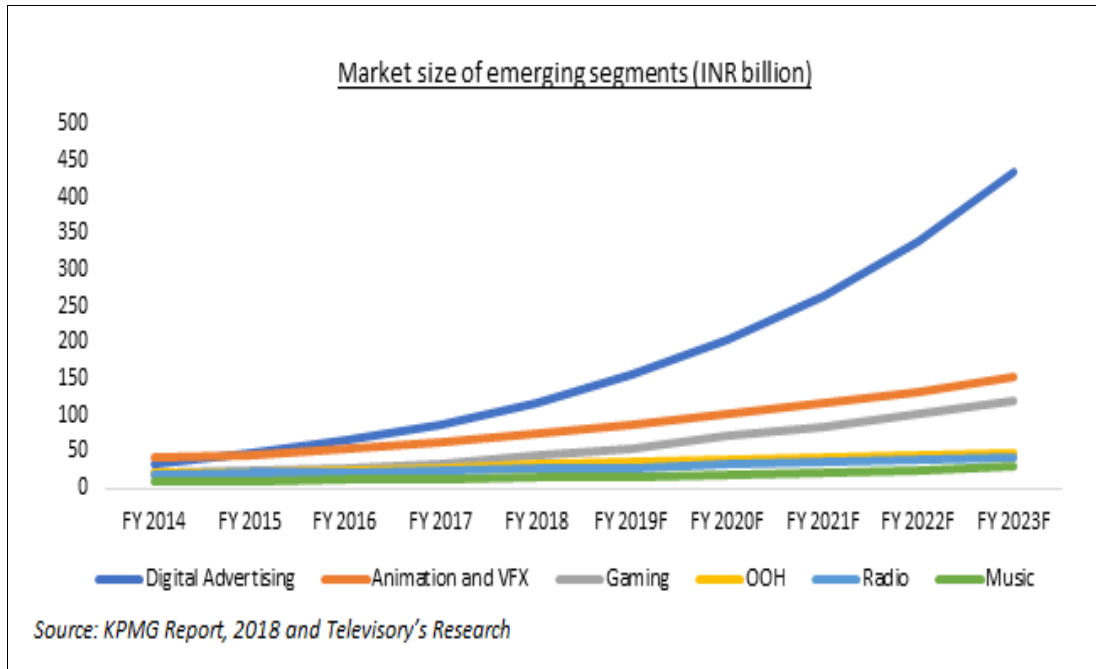
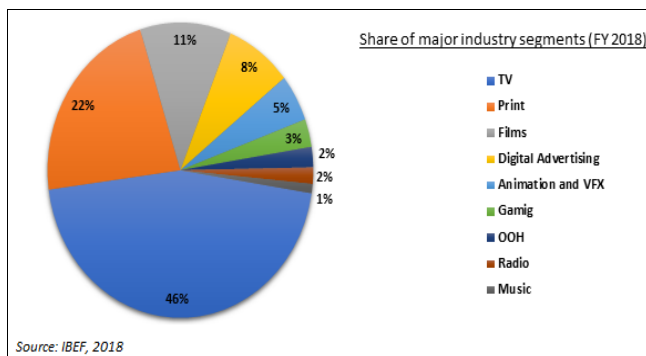


Fig 4: Assumptive approach for growth of different entertainment industry in future with respect to 2018 (when Covid pandemic was not stratred).



(Source: <https://benchmark.televisory.com/widget/blogs/-/blogs/unnoticed-growth-of-the-media-and-entertainment-industry-in-india>)

Fig 5: Pie chart for the distribution of usage of different entertainment industry at pre covid period of time (2018).

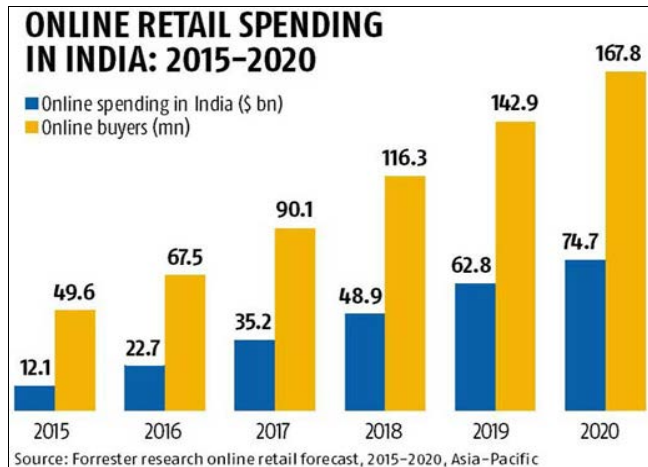
Online Retail Industry

The Indian retail market is greatly divided up between the unorganized sector, which includes about 13.8 million conventional family run neighborhood stores and the organized retail sector with a share less than 10%. The organized sector includes all organized brick & mortar stores and online shopping sites. Despite the boom in B2C e-commerce sector in India, majority of Indians continue to have more faith in the neighborhood brick & mortar stores for shopping as they prefer touching and feeling the products and negotiating discounts over-the-counter, before buying. In India, a great majority of B2C ecommerce retailers draw customers to shop online by offering bargains such as free delivery, discounts, buy-one-get-one-free and exchange offers. However, many Indian shoppers known to be cost-conscious and conservative as a part of their value system, are generally not attracted into making quick decisions based on promotions and advertisements [Halan, 2020].

With the emergence of novel coronavirus which causes a highly infectious disease Corona virus disease (COVID-19)

that has infected more than 16.5 Cr people worldwide. Since it spreads primarily through contact with an infected person or when a person touches a surface that has the virus on it, the best way to protect ourselves is to stay at home. This has increased online shopping usage, globally. In India, it has led to a rise in the number of FTUs or first-time-e-commerce-users in India, who had been so far inhibited to shop online, have dramatically changed people’s shopping habits as they were afraid of shopping outdoors. Amazon – one of the leading ecommerce players in the country, and the world, has announced on its site that the customers are relying on them like never before in their social distancing and self-quarantine efforts. Hence Amazon is temporarily prioritizing its available fulfillment and logistics capacity to serve essentials such as household staples, packaged food, health care, hygiene, personal safety and other high priority products. It is temporarily going to stop taking orders for lower-priority products. Globally too Amazon has seen a surge in orders and is raising overtime pay for associates working in its warehouses, during the coronavirus outbreak [Halan, 2020].

The pandemic has accentuated the trend towards greater adoption of social media and growth in sales through e-commerce websites. Shifts in consumption habits have also been observed, driven by the need for sourcing essential items. Social media and own e-commerce shops are important sales channels for the e-commerce companies. Both channels have witnessed higher growth since the beginning of the COVID-19 crisis. The COVID-19 crisis has been associated with a change in sales composition for more than 65 per cent of them. Additionally, the survey confirms that more customers have gone online to look for essential products. Groceries, pharmaceuticals, health and hygiene products, restaurant delivery, as well as financial services, are the sales categories which saw the largest increases in the COVID-19 crisis through third-party online marketplaces.



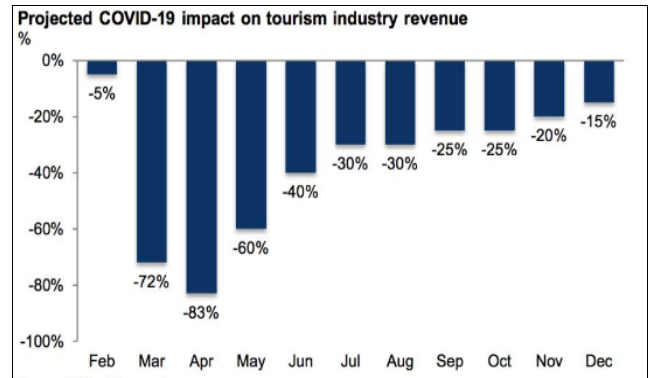
(Source: <https://www.proschoolonline.com/blog/top-5-reasons-why-india-is-a-hot-e-commerce-destination>)

Fig 6: Comparative bar diagram of online spending with respect to online buyers in India from 2015 to 2020.

Tourism Industry

Due to the COVID-19 pandemic, the travel and tourism industry’s employment loss is predicted to be 100.08 Million worldwide (Statista, 2020) [10]. The pandemic has not only affected economically but as well as politically and socially (Cohen, 2012). As the number of infected cases rising throughout the nation, and with the implementation of certain measures and campaigns like social distancing, community lockdowns, work from home, stay at home, self- or mandatory-quarantine, curbs on crowding, etc., pressure is created for halting the tourism industry/business (Gretzel *et al.*, 2020; Sigala, 2020) [9]. According to Liu *et al.* (2019) [8], the most dynamic sector is the tourism industry that benefits many other sectors like lodging, catering, transportation, retail, entertainment, etc. contributing to economic growth and recovery globally. It has been reported that tourism growth has outperformed the world GDP growth record from the past consecutively from the year 2011–2017 (WTTC, 2018) [12]. India is one of the developing nations known for its uniqueness in its tradition, culture and unparalleled hospitality. It is a major destination for many international tourists, creating several employment opportunities and generating enormous taxes (Ahmed & Krohn, 1992) [13]. The Indian tourism industry can be divided into three major segments, such as (i) international inbound tourism; (ii) domestic tourism; and (iii) outbound tourism. The Indian tourism industry has created about 87.5 million jobs, with 12.75% of total employment, thereby contributing INR 194 billion to India’s GDP (WTTC, 2018) [12]. Tourism is a major source of revenue and employment in many countries. It is a generator for employment, income, tax collections and foreign exchange earnings. Global tourism is affected by many types of disruptive events, such as terrorist attacks like 9/11, epidemic outbreaks like SARS-CoV-2, MERS-CoV, Ebola, Swine flu, etc. in the past (Wen *et al.*, 2020). However, the recent epidemic outbreak (COVID-19) originated from Wuhan, China has severely impacted almost every industry, including Tourism worldwide (Yeh, 2020) [15]. The virus spread to all continents through air transport and still propagates infection exponentially (Nicolaidis *et al.*, 2020) [17]. To stop the spread, many countries completely/partially close their boarder and cancelled all flights, and events including

sports, entertainment, pilgrimages, conferences etc. UNWTO (2020) [16]. As a result, global tourism has slowed down significantly. The number of international flights dropping by more than half following the tourism industry temporarily laid off half of their workforce (Gössling *et al.*, 2020) [18]. The World Travel & Tourism Council predicts a tourism-related loss of up to US\$ 2.1 trillion in 2020 and up to 75 million jobs (WTTC, 2020) [19].



(Source: <https://www.forbes.com/sites/tamarathiessen/2020/04/01/us-travel-industry-warns-of-910b-coronavirus-losses/?sh=5536d65c6c9d>)

Fig 7: Representation of negative impact on the revenue of tourism industry in India for the year of 2020.

Restaurant and Hospitality Industry

Disruption through present pandemic is applicable to almost all the sectors of economy. However, impact of COVID-19 pandemic on Indian food, agribusiness and hospitality industry is largely experienced. As like other developing countries, India is facing outrageous crisis due to COVID-19, which has compelled all countrymen to remain under lockdown for uncertain period. COVID19 has hit various sectors including agriculture, hotels, restaurants, tourism, food processing, packaging and other industries (Atadil, H. A., & Green, A. J. 2020) [21]. This entire lockdown has resulted in disturbance of various segments of food, agribusiness and hospitality industry mainly due to closure of restaurants, hotels, local sweet shops, food vendors and tea stalls (Yen, C. H., Teng, H. Y., & Tzeng, J. C. 2020) [22]. Local restaurants and food cafes selling non-veg food are also badly impacted because of misinformation on social media about chicken as carrier of COVID-19 (Rahman, I., & Bernard, S. 2020) [23]. Moreover, sealing of state and district borders has ceased the movement of carriers to and from mandies across the country, thus bringing the value of fruits and vegetables to stand still (Kim, E., & Tang, L. R. 2020) [23, 28]. This disruption in the agribusiness supply chain has affected the stakeholders on the demand side as well as on the supply side. Amid this situation, consumers are anxious and trying to stock vegetables (for household purpose and also owners of hotels and restaurants to ensure online food delivery), despite of the regular advisory notice from the government against food stocking during locked down and pandemic. From the supplier side perspective, major hindrances observed in present Corona crisis include labour shortage, lack of transportation facilities, untimely rains, farmers shift to alternate crops disillusioned by previous losses. Another possible cause for price rise in COVID-19 scenario is increased marketing cost and marketing margin due to limited availability of labour, logistic facilities and storage facilities. Marketing cost

includes actual expenses required for bringing potato from farm gate to the consumers, handling charges at local points, transportation and storage costs, handling charges.

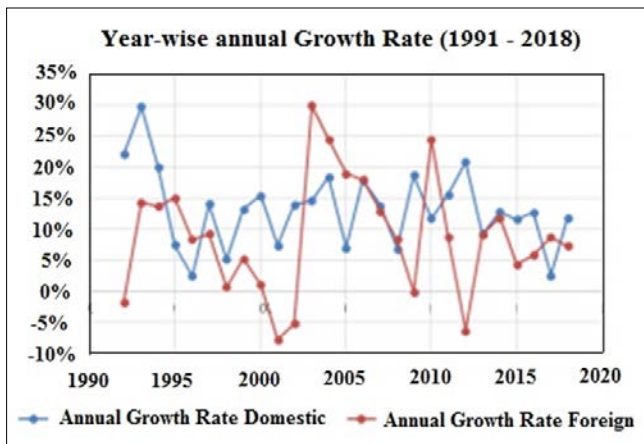


Fig 8: Year wise annual growth rate of hospitality industry from 1991 to 2018. Red line indicates the change in visit by foreign tourists, blue line indicates the change in visit by Indian tourists [Shetty, 2021].

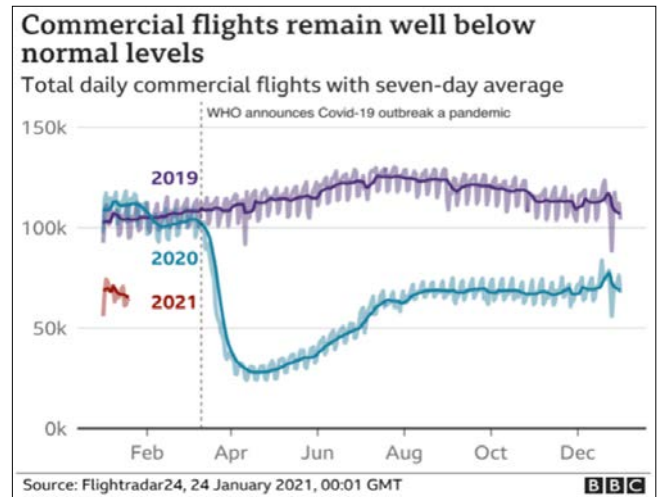
Transportation Industry

After a year of the Covid 19 pandemic, it is evident that the transport industry was the most effected on the economical level. As a result, transportation revenues dropped significantly, therefore, transport workers’ wages were deducted, other transport workers were laid off, and some transport companies closed due to bankruptcy. The pandemic has put the governments and transport companies in the challenge of adapting to the new norms, consider new means of transport operations, the efficiency of services provided to passengers, prioritizing passenger’s safety, and above all preventing the Corona Virus from spreading. Logistics and transport companies are facing many challenges in order to adhere to safety procedures such as social distancing, checking Covid 19 test results and other needed information, as these procedures will prolong traveling. The role of transportation is fundamental and cannot be depreciated as it still contributes to nourishing and supplying other sectors that were immensely impacted by Covid 19 such as the health sector. Doctors and Nurses must be able to get to work, hospitals need to receive the necessary medical supplies and citizens restricted from movement rely on provisions being delivered to shops.

The civil aviation industry has been among the most severely hit sectors globally. Although the media has extensively covered the issue, the future remains unclear. The International Civil Aviation Organisation (ICAO) actively monitors the economic impact on the industry and regularly publishes reports and forecasts.

The road transport sector is essential to social and economic development and guarantees mobility across countries. Road freight transport services ensure the supply of essential goods, including food and medical supplies, as well as a vast range of materials upon which businesses and consumers depend. The road transport sector not only makes an important contribution to economic growth and job creation, but also prevents shortages of essential goods. Road transport in some countries has been declared an essential service. During the first wave of Covid 19, the demand on oil has significantly dropped to more than 50% due to the closure that the world has witnessed. The

pandemic has impacted public transport dramatically in general. During lockdowns and mobility restrictions, governments made it clear that rail is an essential service that has to maintain a minimum level of service. Rail freight was essential in providing commodities such as food, coal, and health related materials (e.g. medicine, PPEs. etc to communities during the lockdowns. Despite all this, overall freight traffic has been reduced during the Covid 19 pandemic.



(Source: <https://www.bbc.com/news/business-51706225>)

Fig 9: Representation of change in travel by flight with due course of time period from 2019 to 2021.

Conclusion

The Indian economy has been experiencing significant slowdown over the past few quarters. As the COVID-19 crisis continues to expand, manufacturers will likely face challenges on numerous fronts. Manufacturers will also need to look beyond their own economic viability. They will need to coordinate closely with the public sector to forge plans that are essential to both public safety and the solvency of their workforce, while keeping the lights on in their operations. It will continuously going to hamper the different sectors of the Indian economy until and unless half of the population of our country gets the vaccine at least. Huge unemployment has been generated in all the sectors of the economy. Worst hit industries are hotels, travel, transport, oil, entertainment, real estate, construction. We can hope that in upcoming months most of the population will get the vaccine and by maintaining social distancing, health and hygiene we can start the workings of different sectors and can hope for new employment oppurtunities in the near future. The Asian Development Bank (ADB) has projected that India's gross domestic product (GDP) will rebound strongly by 11 per cent in 2021-22 due to continued economic recovery boosted by increased public investment, vaccine rollout, and a surge in domestic demand. The forecast, which has appeared in its publication titled "Asian Development Outlook 2021", assumes that this would happen once vaccines are deployed extensively across the country and the second wave of the coronavirus disease (COVID-19) pandemic is contained. ADB has also predicted that the country's economic growth will to moderate to seven per cent in 2022-23 as base effects will disappear. The economy is expected to have contracted by eight per cent in 2020-21 in line with the Government's second advance estimate (Singh, 2021).

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