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Economy impact of covid-19 - A case study of India

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ABSTRACT

Economic impact of Covid-19: A case study of India

The outbreak of Coronavirus disease 2019 (COVID-19), first identified in Wuhan, the capital of Hubei, China, in December 2019 and since then having spread globally, has been recognized as a pandemic by the World Health Organization (WHO) on 11 March 2020. India is widely affected by this pandemic. As on 29.04.2020, more than 31000 cases of Coronavirus have been confirmed in India with more than 1000 deaths. The immediate response that countries adopted was the lockdown “stay at home” measures aiming to avoid movement of people since the virus was believed to spread through contact with the infected persons. The lockdown also had its own economic impact as it puts halt to most economic activities and operations with an exception of essential services.

The outbreak of the Covid-19 pandemic is an unprecedented shock to the Indian economy. The economy was already in a parlous state before Covid-19 struck. With the prolonged country-wide lockdown, global economic downturn and associated disruption of demand and supply chains, the economy is likely to face a protracted period of slowdown. The magnitude of the economic impact will depend upon the duration and severity of the health crisis, the duration of the lockdown and the manner in which the situation unfolds once the lockdown is lifted. In this paper we describe the state of the Indian economy in the pre-Covid-19 period, assess the potential impact of the shock on various segments of the economy, analyze the policies that have been announced so far by the central government and the Reserve Bank of India to ameliorate the economic shock and put forward a set of policy recommendations for specific sectors.

In this report we are discussed about the economy impact of virus in Indian Economy. Its impact of the lockdown measures on various sectors in the primary, secondary and industries and so on and the action taken by the Indian government for recovery the economy.

ანოტაცია

Covid-19– ის გავლენა მსოფლიო ეკონომიკაზე: ინდოეთის ეკონომიკის მაგალითი

კორონავირუსის ეპიდემიის 2019 წლის აფეთქება (COVID-19), პირველად გამოვლინდა ჩინეთის დედაქალაქ ჰუბეიში, ვუჰანში, 2019 წლის დეკემბერში და მას შემდეგ მსოფლიო მასშტაბით გავრცელდა, 2020 წლის 11 მარტს ჯანმრთელობის მსოფლიო ორგანიზაციის (WHO) მიერ იგი პანდემიად იქნა აღიარებული. ინდოეთი მრავალმხრივ არის დაზარალებული ამ პანდემიით. 2020 წლის 29 მარტისთვის ინდოეთში კორონავირუსის 31000-ზე მეტი შემთხვევა იყო დადასტურდა 1000-ზე მეტი ლეტალური შედეგით. დაუყოვნებლივი ზომები, რომლებმაც მიიღეს ქვეყნებმა, მდგომარეობდა ქვეყნების ჩაკეტვაში, მოწოდებაში „სახლში დარჩენისკენ“, რაც გულისხმობდა ადამიანების გადაადგილების შეზღუდვას, რადგან ითვლებოდა რომ ვირუსი ვრცელდებოდა ინფიცირებულ პირებთან უშუალო კონტაქტის გზით. ჩაკეტვას გააჩნია საკუთარი ეკონომიკური შედეგი, რამდენადაც იგი იწვევს ეკონომიკურ საქმიანობისა და ბიზნეს-ოპერაციებს შეფერხებას, თუ არ ჩავთვლით სასიცოცხლოდ აუცილებელ სერვისებს.

Covid-19- ის პანდემიის გავრცელებამ უპრეცედენტო დარტყმა მიაყენა ინდოეთის ეკონომიკას. კოვიდ 19-ის გავრცელებამდე ეს ეკონომიკა ისედაც სავალალო მდგომარეობაში იყო. გახანგრძლივებული ეკონომიკური ჩკეტილობით, გლობალური ეკონომიკური ვარდნით და მოთხოვნილებათა და მიწოდების ქსელებთან დაკავშირებული შეფერხებით, ეკონომიკას სავარაუდოდ გაუჭირდება გაჯანსაღება. ეკონომიკური ზემოქმედების სიდიდე დამოკიდებულია ჯანდაცვის კრიზისის ხანგრძლივობასა და სიმძიმეზე, ჩაკეტვის ხანგრძლივობასა და იმაზე, თუ როგორ განვითარდება მოვლენები ჩაკეტვის გაუქმებისთანავე. ამ ნაშრომში ჩვენ აღვწერთ ინდოეთის ეკონომიკის მდგომარეობას პრეკოვიდ-19 – ე პერიოდში, ვაფასებს ეკონომიკური შოკის პოტენციურ გავლენას ეკონომიკის სხვადასხვა სეგმენტზე,

ვანალიზებთ იმ პოლიტიკას, რომელსაც ატარებს ცენტრალური მთავრობა და ინდოეთის სარეზერვო ბანკი იმ მიზნით რომ შეამსუბუქოს ეკონომიკური შოკი და დასახოს სამომავლო განვითარების გზები ეკონომიკის კონკრეტული სექტორებისთვის.

ჩვენ განვიხილავთ ვირუსის გავლენას ინდოეთის ეკონომიკაზე. დაბლოკვის პოლიტიკის გავლენას ინდუსტრიის პირველად, მეორადი და ზოგადად, სხვადასხვა სექტორებზე.

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CHAPTER: 01

1. Introduction

In the past 15 years china has experienced numerous public health crises caused by disease outbreaks include severe acute respiratory syndromes (SARS) in 2003. Experts say SARS and the new coronaviruses that causes covid-19 come into begin. Here's what we know about the virus that was first detected in Wuhan, China, in late 2019 and has set off a global pandemic. Coronaviruses are a group of related RNA viruses that cause diseases in mammals and birds. In humans, these viruses cause respiratory tract infections that can range from mild to lethal. Mild illnesses include some cases of the common cold (which is caused also by certain other viruses, predominantly rhinoviruses), while more lethal varieties can cause SARS, MERS, and COVID-19. Symptoms in other species vary: in chickens, they cause an upper respiratory tract disease, while in cows and pigs they cause diarrhea. There are as yet no vaccines or antiviral drugs to prevent or treat human coronavirus infections. The name "coronavirus" is derived from Latin *corona*, meaning "crown" or "wreath", itself a borrowing from Greek κορώνη *korōnē*, "garland, wreath". The name was coined by June Almeida and David Tyrrell who first observed and studied human coronaviruses. The word was first used in print in 1968 by an informal group of virologists in the journal *Nature* to designate the new family of viruses. The name refers to the characteristic appearance of virions (the infective form of the virus) by electron microscopy, which have a fringe of large, bulbous surface projections creating an image reminiscent of the solar corona or halo. This morphology is created by the viral spike peplomers, which are proteins on the surface of the virus.

On December 31 of last year, Chinese authorities alerted the World Health Organization of an outbreak of a novel strain of coronavirus causing severe illness, which was subsequently named SARS-CoV-2. As of February 20, 2020, nearly 167,500 COVID-19 cases have been documented, although many more mild cases have likely gone undiagnosed. The virus has killed over 6,600 people.

1.1 Covid-19 Situation in India:

The first confirmed case in India was reported on 30 January 2020 in Kerala, which rose to three cases by 3 February; all were students returning from Wuhan. Apart from these, no significant rise in transmissions was observed in February. On 4 March 22 new cases were reported, including 14 infected members of an Italian tourist group. As of 11 June 2020, the MoH&FW has confirmed a total of 286,579 cases, 141,029 recoveries (including 1 migration) and 8,102 deaths in the country. India currently has the largest number of asia, with the number of total confirmed cases breaching the 100,000 mark on 19 May and 200,000 on 3 June. India's case fatality rate is relatively lower at 2.80%, against the global 6.13%, as of 3 June. Six cities account for around half of all reported cases in the country Mumbai, Delhi, Ahmedabad, Chennai, Pune and Kolkata.

As of 24 May 2020, Lakshadweep is the only region which has not reported a case. As we know, this virus was established to spread from person to person in close proximity, similar to other respiratory illness, such as flu (WHO 2020). India observed a 14-hour voluntary public curfew at the instance of the prime minister, Narendra Modi on 22 March. It was followed by mandatory lockdowns in COVID-19 hotspots and all major cities. Further, on 24 March, the Prime Minister ordered a nationwide lockdown for 21 days, affecting the entire 1.3 billion population of India. On 14 April, the PM extended the nationwide lockdown till 3 May which was followed by two-week extensions starting 3 and 17 May with substantial relaxations. Beginning 1 June the Government has started *unlocking* the country (barring *containment zones*) in three unlock phases. The lockdown entailed closing most institutions, business and service provisions with an exception of essential services such as medical and pharmaceutical services. The lockdown also entailed cancelling international and domestic flights and locking down the borders, in effort to contain the spread of the virus. It is an undeniable fact that these efforts done worldwide and in India, in particular, have direct impact on economic activities; since value chains and most other services and activities were put to hold while the relevant authorities were monitoring the spread of virus.

Using the World Bank's headline projections of 3.2% contraction in 2020-21 and 3.1% growth in 2021-22, we can calculate the projected growth for rest of the economy. This comes to a 7.2% contraction in 2020-21 and 1.4% growth in 2021-22.

1.2 Major Sectors Affected by Pandemic:

With rising unemployment, interest rates, and fiscal deficit, the economy in India has seen better days. Adding fuel to this fire is the novel Coronavirus that is sending tremors down Indian trade markets dependent on China for imports.

A. Raw materials and spare parts

Nearly 55% of electronics imported by India originate from China. These imports have already slid down to 40% in light of the coronavirus outbreak and subsequent lockdown. As a countermeasure, India is considering the promotion of indigenous production in a bid to reduce dependency on a single market. Additionally, China is India's third largest export partner for export of raw materials like organic chemicals, mineral fuels, cotton, etc.; and a lockdown of the countries is likely to lead to a substantial trade deficit for India.

B. Pharmaceuticals

The toll on the pharmaceutical industry is of significant concern for India, mainly as 70% of active pharmaceutical ingredients (API) are imported from China. These active pharmaceutical ingredients are essential to a large number of pharmaceutical manufacturing companies in the country. As pandemic is rapidly making its way through India, medication is going to be the number one consumer demand, and because there aren't nearly enough APIs to manufacture drugs, the subsequent traders and the market are witnessing skyrocketing prices. The prices of vitamins and penicillin alone already see a 50% surge.

C. Tourism

India is big on cultural and historical tourism, attracting domestic and foreign nationals throughout the year. It does not come as a surprise that a large number of confirmed COVID-19 cases in India include foreign tourists. But with visas being suspended and tourist attractions being shut indefinitely, the whole tourism value chain, which includes hotels, restaurants, attractions, agents, and operators is expected to face losses worth thousands of crores. Experts believe the tourism industry is likely to take a massive hit, and it could end up crippling the industry for the foreseeable future.

D. Aviation

After the Government of India indefinitely suspended tourist visas, airlines are said to be working under pressure. Nearly 600 international flights to and from India were canceled for varying periods. Around 90 domestic flights have been canceled, leading to a sharp drop in airline fares, even on popular local routes. Private airport operators have requested the Government to grant permission to impose a nominal passenger facilitation charge on airfares to cover the increased operating cost.

Goals:

This master thesis articles discusses about how covid-19 has impacted in modern economy and impact of lockdown measures in various sectors. In order to provide a better understanding to government and practitioners of why improving management of response to infectious disease outbreaks is so critical for country's economy, its society, and its place in the global community. And what will undo for economy recovery.

Research Methodology:

The master thesis research is mainly conducted by using secondary data, mostly from various sources from the internet, several academic studies and articles.

CHAPTER-2

Impact of covid-19 on Global Economy

The outbreak of pandemic Covid-19 all over the world has disturbed the political, social, economic, religious and financial structures of the whole world. World's topmost economies such as the US, China, UK, Germany, France, Italy, Japan and many others are at the verge of collapse. Besides, Stock Markets around the world have been pounded and oil prices have fallen off a cliff. In just a week 3.3 million Americans applied for unemployment and a week later another 6.6 million people started searching for jobs. Also, many experts on economic and financial matters have warned about the worsening condition of global economic and financial structure. Such as Kristalina Georgieva, Managing Director of International Monetary Fund (IMF), explained that "a recession at least as bad as during the Global Financial Crisis or worse". Moreover, Covid-19 is harming the global economy because the world has been experiencing the most difficult economic situation since World War-II. When it comes to the human cost of the Coronavirus pandemic it is immeasurable therefore all countries need to work together with cooperation and coordination to protect the human beings as well as limit the economic damages. For instance, the lockdown has restricted various businesses such as travelling to contain the virus consequently this business is coming to an abrupt halt globally.

As Covid-19 has already become a reason for closing the multiple businesses and closure of supermarkets which seems empty nowadays. Therefore, many economists have fear and predicted that the pandemic could lead to inflation. For instance, Bloomberg Economics warns that "full-year GDP growth could fall to zero in a worst-case pandemic scenario". There are various sectors and economies that seem most vulnerable because of this pandemic, such as, both the demand and supply have been affected by the virus, as a result of depressed activity Foreign Direct Investment flows could fall between 5 to 15 percent. Besides, the most affected sectors have become vulnerable such as tourism and travel-related industries, hotels, restaurants, sports events, consumer electronics, financial markets, transportation, and overload of health systems. Diane Swonk, Chief Economist at the Advisory Firm Grant Thornton, explained that "various nations have multinational companies that operate in the world because the economy is global. For instance, China has touchpoints into every other economy in the world, they are part of the global supply chain. So one should shut down production in the U.S. by shutting down

production in China”. Besides, Kristalina Georgieva in a press release suggested that four things need to be done to fight against Covid-19 and avoid or minimize losses. Firstly, continue with essential containment measures and support for the health system. Secondly, shield affected people and firms with large timely targeted fiscal and financial sector measures. Thirdly, reduce stress to the financial system and avoid con tangent. Fourthly, must plan for recovery and must minimize the potential scaring effects of the crisis through policy action. Concerning the serious and worsening conditions all over the world, nations need cooperation and coordination among themselves including the help and mature as well as sensible behaviour of people to effectively fight against Coronavirus. Otherwise, because of the globalized and connected world, wrong actions and policies taken by any state will leave a severe impact on other countries as well. This is not the time of political point-scoring and fight with each other rather it is high time for states to cooperate, coordinate, and help each other to defeat this fatal pandemic first for saving the global economic and financial structure.

2.1 Impact of covid-19 on the Indian economy

The economic impact of the 2020 coronavirus pandemic in India has been largely disruptive. India's growth in the fourth quarter of the **fiscal year** 2020 went down to 3.1% according to the **Ministry of Statistics**. The **Chief Economic Adviser to the Government of India** said that this drop is mainly due to the coronavirus pandemic effect on the Indian economy. Notably India had also been witnessing a pre-pandemic slowdown, and according to the **World Bank**, the current pandemic has "magnified pre-existing risks to India's economic outlook". During the lockdown, an estimated 14 crore (140 million) people lost employment while salaries were cut for many others. More than 45% of households across the nation have reported an income drop as compared to the previous year. The **Indian economy** was expected to lose over ₹32,000 crore (US\$4.5 billion) every day during the **first 21-days of complete lockdown** which was declared following the **coronavirus outbreak**. Under complete lockdown, less than a quarter of India's \$2.8 trillion economic movement was functional.

Although the outbreak of the covid-19 pandemic impacts all sectors and everyone in the country, there are those that are hard hit depending on the basis of their operation. Among the sectors

analysed and consider in this report are the tourism, manufacturing industry, foreign trade Restaurant and so on.

2.2 Tourism Industry

Tourism is one of the biggest sector in country, contributing approximately 2.9 trillions U.S dollar to GDP in 2019. In the same year, the United States' travel and tourism industry directly contributed the highest amount to global GDP, with a total of 580.7 billion U.S. dollars. Meanwhile, the city and special administrative region of Macau generated the highest share of GDP through direct travel and tourism of any economy worldwide. It incorporates many industries, including lodging, transport, attractions, travel companies, and more. Tourism is a major driver of jobs and growth. But covid-19 has dramatically changed this. The impact on tourism enterprises and workers, the majority being young women is unprecedented. This sector is however, one of the hard hit sectors, since its operation depend on the movement of people. The lockdown period therefore has significant impact both on international and domestic tourism.

All Tourism sectors are experiencing mass disruption which is leading to a fight for survival and causing severe economic impacts. Tourism destinations are also being majorly impacted. Destinations are taking drastic action to ensure safety and minimize the threat of the virus. There are many impacts that are already presenting themselves including economic loss, job losses and extreme losses in tourist numbers. Many destinations will experience severe economic impacts from the impacts of COVID-19. The economic impacts are a result of travel restrictions and lockdowns which result in tourists being unable to visit attractions and places such as restaurants and bars. This is leading to many jobs being lost and tourist destinations losing a major economic resource

Travel & tourism in India contributed 9.2% in India's GDP and generated 26.7 million jobs in 2018. Apart from this, The tourism sector accounts for 12.75% of employment in India, 5.56% of it is direct and 7.19% is indirect. over 87 million people were employed in the travel sector in 2018-19 in India, according to the Ministry of Tourism (MOT) annual report for 2019-20. It is estimated that in India, branded and organised hotels annual revenue is ₹38,000 crore (\$5billion).

Apart from those most of the international tourists come from United States, Australia, Vietnam, Thailand, Vanuatu, Singapore, Israel, Jordan, Kenya, Russian Federation, Brazil, Finland, Germany, Japan, Myanmar because the Government of India announced officially a Visa on Arrival status/facility for International Visitors to enter/visit India from 43 countries for to promote GDP of the country. The restaurant industry in India, has an annual turnover of approx ₹4 lakh crore (\$53 billion). This industry provides direct employment to more than 7 million people. India's air transport industry employs over 400,000 people directly and 940,000 are employed in related supply chains.

The lockdown period therefore has significant impact on domestic as well as international tourism. With international and domestic travel on halt, demand for turbine fuel has substantially declined. On account of Coronavirus, the Indian tourism and hospitality industry is expecting a potential job loss of around 38 million. Indian Association of Tour Operators (IATO) estimates the hotel, aviation and travel sector together may suffer a loss of about ₹85 billion keeping in mind the travel restrictions imposed on foreign tourists.

2.3 The informal business sector

India's informal sector is the backbone of the economy. It employs the vast majority of the work force, and the formal sector depends on its goods and services. The nation's quality of life hinges on things becoming better for masses of informally employed people. The formal sector consists of licensed organisations that pay taxes and must obey labour laws. It is also called the "organised" sector. It provides the employment that is good in the sense of being well paid and linked to benefits such as vacations, sick leave as well as social protection such as health insurance and pension schemes.

The pandemic has already exposed the health vulnerabilities facing India, especially its rural poor, and urban slum dwellers. As a measure to contain the community transmission of the virus, the government announced a nationwide lockdown which was extended twice to continue through 17 May.

The impact of a little less than two-month lockdown is turning out to be immense. Since economic activities have come to a standstill, factories are not running, establishments are

closed, and most markets are shut, there is a disruption in work, wages/income and food--all three interconnected--for crores of people in India. Almost 90 percent of workers in India work in the informal economy--that part of the economy which thrives on daily work, and daily cash, with little provisions of employment protection. Like demonetisation, the current lockdown has exposed millions of workers and their families to starvation, hunger, death and very bleak future prospects.

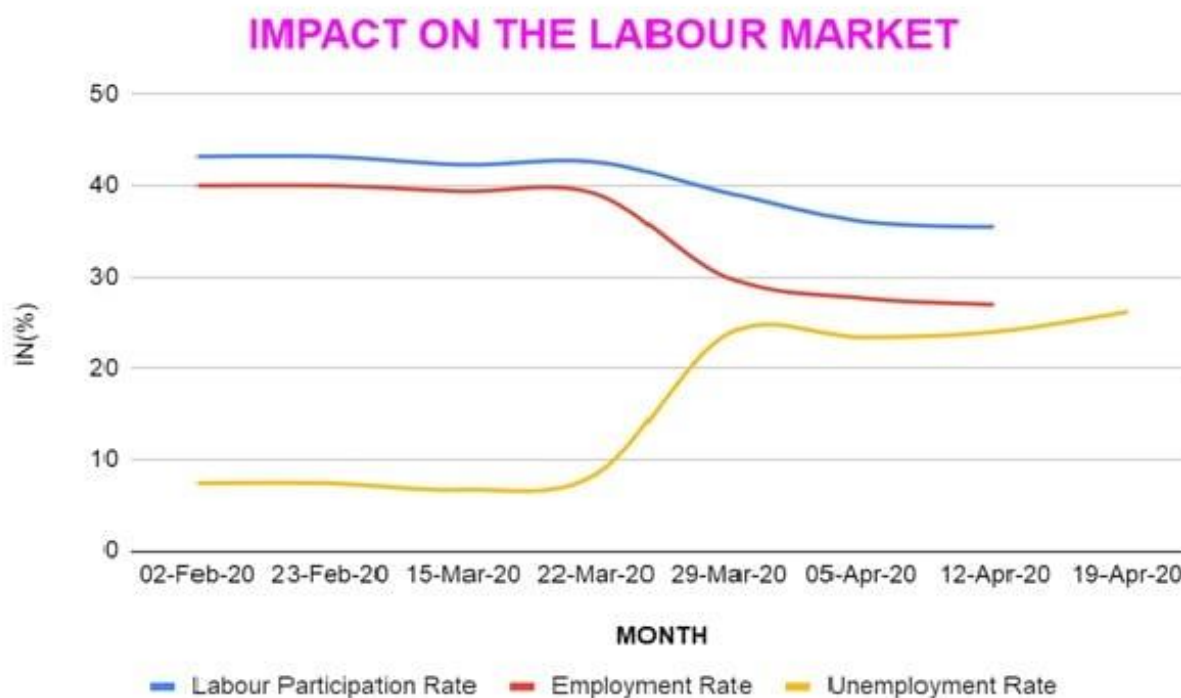
The consequences on the Indian economy, especially the informal economy including the poor, the marginalized.

- **Rising unemployment, falling labour force:**

The coronavirus pandemic comes as huge shock to the labour market in India, denting the employment scenario and threatening the survival of millions of workers and their families. According to the latest survey of the Centre For Monitoring Indian Economy (CMIE), the overall rate of unemployment has increased from 8.4 percent to 23.8 percent in the week ending 29 March. In absolute terms, the number of unemployed people has risen from 32 million to 38 million. The corresponding figures for urban and rural areas are 30 percent and 21 percent. The data from CMIE on labour force, employment and unemployment to put it in graphical form.

Around one-fourth of the total working age population, i.e 285 million people out of 1,003 million were working in the first lockdown week. Before lockdown the number was 404 million. It means the rest 119 million people lost their jobs within the starting week of the lockdown. The assumptions made out of the impact shows that around one-third of India's households could be facing relentless livelihood crises.

As the figure below shows, the rate of employment in January 2016 was 40.7 percent and this remains almost unchanged up to February 2020 with the rate at 40 percent. But the figure changed in March 2020 after the first week of lockdown and reached 29.9 percent and further declined to 27 percent in April 2020.



If we consider the occupational structure, we find that around 40 million urban informal workers are committed in ten highly susceptible occupations including a small shops salespersons, labourers in construction, manufacturing and transport, domestic helpers, housekeeping, painters, street vendors, garbage collectors, restaurant service workers, and market and stall salespersons. These workers are worse hit during the lockdown and consequently their families.

Exodus of migrant workers: A fallout of lockdown:

Migrant workers make up a major part of the employment force in India in the unorganised sector. It is difficult to estimate the total number of migrant workers in India. The reason for this is because there is no portal for the registration of migrant workers. By some estimates, India has around 40-50 million seasonal migrants. These are the ones in distress the most. The exodus of migrant workers either at AnandVihar in New Delhi or at Bandra station in Mumbai is a manifestation of loss of livelihoods. Many of these workers, having lost work and hence income, started trudging on foot back to their villages in the hope of surviving the lockdown. Some were reported to have died. Though some immediate steps were taken by some state governments to provide daily food rations to migrant workers, reports say that jobless migrants find it increasingly difficult to survive, let alone lead a dignified life. Jan Sahas, a non-governmental

organisation, has done a survey on the question of inadequate relief measures for migrant workers. The labour and employment ministry has asked the chief ministers and the governors of the states to release funds into the account of construction workers using the cess collected by the building and other construction worker's welfare board. Jan Sahas found 94 percent labourers did not have the BCOW (Building and Other Construction Workers) cards, making them ineligible for any transfer; 14 percent did not have ration cards, while 17 percent did not have bank accounts. The NGO also claimed that if represent the data of 55 million labourers in the construction sector, then more than 51 million labourers will not have access to any benefits.

As far as the problem of ration cards is concerned, those who have ration cards of their native states and are stuck at other destinations must be provided with the delivery of rations. And those without ration cards should also receive free rations for the next six months, the organisation said.

The Jan Sahas said, the general status of the migrants in a society is that they are excluded from all social safety mechanisms. It is unacceptable that there is no directive issued by the state government concerning the welfare of migrant workers. No welfare schemes are provided until it becomes impossible to avoid the pictures of large groups of migrant workers walking in deplorable conditions.

COVID-19 has posed serious challenges for the Indian economy--both in terms of health hazards and economic risks. With lockdown extended further till 17 May, its implications would be grave, given the large size of population and heavy dependence of workers in the informal economy. Due to uncertainties, measuring the full impact of this crisis is not possible now. Its impact will begin to show only in times to come. Nonetheless, preparedness in terms of policy responses is imperative in order to contain the spread of virus and further economic slowdown as well

2.4 Food and Supply Chain in India

Even as the country gears up to fight the COVID-19 pandemic, the food supply chain for vegetables, fruits and other daily essentials is facing one of the worst setbacks in the mid of a

national 21-day lockdown. With over 3,000 positive cases and counting, the central government's call for a total lockdown has been a desperate attempt to control the pandemic that has already claimed thousands of lives across the globe. While the online food and grocery stores are stepping up their operations to supply essentials to the masses, the overall food supply chain is battling a number of challenges to stay functional. These range from lack of regular supplies added pressure on agricultural and temperature-sensitive food storage and lack of manpower.

There are three impact areas which are majorly affected due to the covid-19 which are:

- **Workforce:** To limit the impact of pandemic government has already instructed their people to stay at home where in developing nations like India, government has already advised their employees to stay at home. Some of the industries are depends on other industries for goods in which supply chain has disrupted due to pandemic. Now, the industries having very less workforce to meet the customer demands.
- **Products:** The pandemic has transformed the competitive landscape. Suppliers are at risk to lose their market value and share as clients are now seeing the other options when they are not receiving the good products or on time.
- **Costs:** There has been increase in the costs of the products due to increase in the shipping charges of products and industries are now also meeting with their financial objectives. There is increase in some of the products due to the pandemic effect as it disrupt the supply chains

The outbreak of the virus disrupted the production and the functioning of the global supply chain. Most Companies across the world are especially dependent upon inputs from china. The lockdown worldwide has worsened the already disrupted supply chain while trade across countries has been limited to only essential goods and services.

- **Disruption of India's supply chain**

During the time of the lockdown, business operations are halted and both import and exports of good and services are restricted. India is the developing country and Covid-19

has disrupted the supply chain of India. Global supply chains are also disrupted by the Covid-19. Many countries has banned on the import and export of many goods which affected the manufacturing firms across the globe. In India, certain industries have become more and more dependent on Chinese imports. These industries are under significant risk. This includes pharmaceuticals (China supplies almost 70 per cent of active pharmaceutical ingredients (API) requirement for the industry); automobiles (10-30 per cent of the raw materials and base components are imported from China); chemicals and textiles. The renewable energy sector relies on China for 80 per cent of the sector's requirement of solar panels. Finally, and potentially most problematically, several micro, small and medium enterprises (MSMEs) are dependent on Chinese imports.

In early March, the Directorate General of Foreign Trade (DGFT) imposed restrictions on the export of 13 APIs and 13 formulations made from these APIs. Steps were taken to expedite customs clearances of Chinese imports. The Apparel Export Promotion Council (AEPC) has identified alternative sources of input suppliers to help diversify sourcing of raw materials and products.

- **Combating supply side concerns:**

The present outbreak provides valuable lessons for companies in general and Indian companies in particular. Lean supply chain strategies, while increasing short term profits, contribute to supply chain vulnerability. Covid-19 has taught corporate decision-makers that in formulating future supply chain designs, apart from cost, quality and delivery they would also need to stress-test the chains on new performance measures including resilience, responsiveness and reconfigurability. Companies would also seek to diversify supply chains from a geographic perspective to reduce supply-side risk from one country. Multiple sources of key commodities or strategic components would be identified and protocols will be in place to activate alternative sources of supply in short notice.

It is likely that corporate strategy would also look to build a robust inventory as buffer against supply chain disruptions. The only silver lining for the present crisis has been that

because of the anticipated Chinese New Year holidays, companies had stocked up inventory. In the absence of this, the situation would likely to have been worse. Many companies would want to move at least a part of their supply chains locally. This would lead to increased investment in India's local industries and act as a shot in the arm for an economy in crisis.

For example, with respect to pharmaceuticals, the Government of India's has decided to promote domestic manufacturing of critical Key Starting Materials (KSMs)/Intermediates and Active Pharmaceutical Ingredients (APIs) in the country. The approved scheme will promote Bulk Drug Parks with financial investment of ₹3,000 crore in the next five years. This is an urgent wake-up call for Indian industry to realise the need to develop its own local sourcing units and adopt alternative strategies for reducing the dependency on China.

2.5 Auto sector:

The global pandemic caused by the novel corona virus comes at time when both the Indian economy and the automotive industry were hoping for recovery. While the GDP growth forecasts were north of 5.5%, COVID-19 may result in a negative impact of 1-2% on the expected growth rates. The absolute magnitude of impact depends on the duration of ongoing lockdown and the impact caused of this pandemic. The onset of Covid-19 in India will have a negative impact on the automotive industry. It is estimated that there will be an overall revenue impact of at least \$1.5 -2.0 bn per month across the industry. If we look deeper at the auto sector industry, there may be a production loss of Rs 1.23 lakh crores in this period of shut down. This report studied that the decline in exports in the motor vehicle sector will be around Rs 51,000 crores.

The economic impact with respect to imported inputs to the sector reveals that the electrical and electronic equipment will be the most hit due to this global supply chain disruption. We anticipate a reduction of about Rs 4,600 Crore in imported inputs by the auto industry of these particular types of inputs, clearly mapping back to the disruptions caused by China's prolonged shut down. Within the domestic input market, the electrical

equipment as well as iron and steel components may witness the maximum decline, amounting to Rs 22,000 crores. However, we also expect a larger decline in imports of auto-components than that of domestic auto-components; this is because of an increasing substitution of imported auto-components by domestic ones, in response to the global supply chain disruptions that make the imported auto-components either too expensive or just not available in sufficient quantities due to the shut downs elsewhere in the world. Last but not the least, the total domestic demand for the products from the automotive industry as a whole may witness a reduction of about Rs 74,000 crores.

In short, the Indian economy, much like many other economies today, is likely to suffer quite severely due to the ongoing Covid crisis. Auto industry is hit from multiple fronts: demand slump both domestically and exports, as well as negative global and domestic supply chain disruptions involving both forward and backward linkages. So, this is a story of a vicious cycle of demand and supply bringing each other down perpetually.

Nevertheless, industries, citizens and the government should work together on the combination of path to quick recovery, contained contagion and stimulus packages, to minimize this damage and avert its sustained worsening in future.

- **Pandemic impact on Auto sector market of India:**

This is the first time in the history of India that US\$120-billion automobile industry registered an unprecedented zero sales in the domestic market in the month of April". And while there were a number of exports and tractor sales that were registered during the lockdown — such as Mahindra, which exported around 56 units of tractors and sold 4,716 units last April, these figures are not included in the scope of the lockdown because tractors are considered an essential component needed in "agricultural activity." According to the Society of Indian Automobile Manufacturers (SIAM) car makers has been losing an average revenue loss of Rs 2,300 crore turnover each day since the March 24 lockdown. And now that the country's lockdown has been extended until May 17, the cumulative, accumulated losses are now projected at around Rs 1,26,500 crore over a 55-day period.

This is despite the many adjustments that India's auto manufacturers are doing to make the coronavirus lockdown more bearable to everyone. Auto car reported that car companies are

creating online platforms to allow customers to book a test drive or buy a new car. These include Ford India's new Dial-A-Ford service, FCA India's "Book My Jeep" module online, Tata Motors digital sales platform 'Click to Drive', and Hyundai's "Click to Buy".

Extended car warranties are also the norm, with Volkswagen India, Yamaha, Jaguar Land Rover, Porsche, Nissan, Audi India, Toyota, Maruti Suzuki, Volkswagen India, Renault and Hyundai just some of the car companies that are now giving customers this added option even during the lockdown

Sadly, none of these are making significant changes to stop India's car industry from bleeding to death. And now that the country's auto industry stands at an 18 percent year-on-year decline in fiscal year 2020, with zero domestic market sales in the first month of fiscal year 2021, SIAM, the Automotive Component Manufacturers Association of India (ACMA) and the Federation of Automobile Dealers Associations of India (FADA) have jointly written a letter to the government asking to "permit the entire automotive value chain to re-commence operations in unison."

India's automotive industry is a key driver of the country's economy. This US\$120 billion (6.05 trillion) industry contributes seven percent of India's GDP, 49 percent to the country's manufacturing production, and generates direct and indirect employment. The sector also exports US\$27 billion (P1.3 trillion) worth of vehicles and car parts each year

2.6 Foreign Trade

Coronavirus pandemic is taking a toll on the global economy and it has had its impact on India as well. India's foreign exchange reserves have been taking a hit. In the week leading to April 3, India's foreign exchange reserves declined by USD 902 million. This brought India's foreign reserves to 474.66 billion. In the week before that, the reserves had surged by USD 5.65 billion and that brought the reserves to USD 475.56 billion.

The reserves had touched a life-time high of USD 487.23 billion in the week to March 6, after it rose by USD 5.69 billion. During 2020-21, the country's foreign exchange reserves have risen by almost USD 62 billion.

In the reporting week ended April 3, the foreign currency assets (FCA), a major component of the overall reserves, decreased by USD 547 million to USD 439.12 billion.

Expressed in dollar terms, the foreign currency assets include the effect of appreciation or depreciation of non-US units like the euro, pound and yen held in the foreign exchange reserves. The gold reserve also declined by USD 340 million to USD 30.55 billion in the reporting week, the RBI data showed. The special drawing rights with the International Monetary Fund (IMF) were up by USD 5 million to USD 1.43 billion.

The country's reserve position with the IMF dipped by USD 19 million to USD 3.57 billion, the data showed.

2.7 Transport and logistic

Transportation sector has been one of the primary victims of COVID-19. From rickshaw pullers to airlines, all have been affected economically by the pandemic. India's overall energy demand fell by 11% in March 2020. Due to lockdown in many countries, the demand for passenger transport has been adversely hit. The freight segment has had a mixed short-term effect in terms of transportation demand. There is a surge in demand for truck drivers in transportation of essential goods. For instance, there is 40% to 60% increase of product being moved into grocery stores and warehouses in US since COVID spread started². However, the supply chain disruption and slowdown caused by COVID is expected to pull down freight demand in the medium-term. Urban freight segments in India have also had a mixed short-term effect in terms of transportation demand. Since February, the online food orders have dropped by 20% whereas online grocery orders are overflowing³. It is to yet to be seen whether these acquired habits of online grocery shopping will sustain after the pandemic passes. Even though the fall in passenger transport demand is pushed by social distancing restrictions, COVID-19 may have a long-term effect on people's travel behaviour.

Citing higher risk of community spread of the virus in buses, many city/state/national governments issued guidelines for public transport operators. These included various instructions from dispensing tickets to disinfecting seats. With increasing restrictions imposed by governments, both public transport services and their demand have been badly hit.

Even after the situation normalises, the perception of risk associated with crowded areas could lead to shift in preferences towards personal travel modes. That is, people may avoid using public transport modes to avoid crowds. People may also avoid shared mobility modes like auto

rickshaws, micro-transit vans, e-rickshaws etc. The drivers employed in app-based taxi services are economically suffering in the short term due to the COVID lockdown. However, it cannot be said if these modes may face long term economic effects in terms of reduced travel demand.

Many players in the transportation sector are adapting to these changing demands. For instance, American Airlines and some of its peers have converted many of the passenger flights to carry goods⁷. These idle airplanes have been assigned to carry e-commerce, medical supplies and office cargo. In China, autonomous vehicles were piloted to provide 'touchless' service to provide delivery issues while reducing the risk of spread of the disease⁸. Indian Railways have simultaneously cancelled passenger trains and ramped up parcel services and other freight services for essential commodities⁹. In Bengaluru, Three Wheels United (TWU), a city-based social enterprise, launched a program for auto drivers to deliver medicines, groceries and other essential goods to the residents. Unfortunately, this program hit a roadblock regarding permissions from the authorities to operate during the 21-day lockdown in India.

During the lockdown, only essential people and commodities are permitted by the authorities. The list of essential people and commodities must be continuously revised to minimise the adverse impact on people's lives and the spread of the pandemic. Considering this lockdown as a large travel demand experiment, organisations have much to gain from optimising transportation of employees in the future, in terms of productivity and costs. Also, during this period, due to no transport modes, people have been exposed to walking in roads with neither pollution nor congestion. Hence authorities may expect better results in future policies aimed at nudging short trips into pedestrianised modes. However, as the transportation sector employs millions, in the long run, it is necessary to understand the pandemic's impact on consumer preference and the subsequent transportation demand for passengers and goods.

Logistic industry

The logistics industry is considered a crucial sector to boost international trade as a consequence of digitalization and globalization. The logistics and freight industry is evolving rapidly and regarded as the backbone of the economy in India as it ensures quick, efficient and economical transport of goods across India and many commercial sectors rely on it. The innovative and advanced technologies have provided increased efficiency and extra combined operating models in the logistics industry in India.

Logistics is the interplay of technology, infrastructure, skilled manpower and new types of service providers which defines whether the logistics sector will be able to aid its customers, minimize their costs and provide quality services.

The countrywide lockdown in India, though a great move to curb the drastic effects of the novel coronavirus, is crippling industries across various sectors and the economy as a whole. The Indian logistics companies are finding it difficult to keep the business lines operational.

According to the All India Motor Transport Congress, the daily movement of trucks has decreased to less than 10 per cent of normal levels. Road transport accounts for about 60 per cent of freight traffic in India, according to the Ministry of Road Transport and Highways. Naturally, with many countries on lockdown, the global supply chain has virtually come to a standstill. As a result, shipments lie pending as factories and warehouses are shut in a prompt response to the global health emergency. It remains unclear as to when the situation returns to normalcy. Before India implemented a mandatory lockdown to curb the far-reaching consequences of COVID-19, disturbances across the supply-chain management were already visible in some parts of the country. Gated societies in several cities banning access to delivery agents and work from home policies initiated early by many companies started impacting the overall delivery percentage since early March. Though government authorities are helping in solving the impasse by engaging with stakeholders involved in the delivery of essential services, e-commerce players in B2B and procurement domains have been left stumbled. Indian Chamber of Commerce (ICC) has estimated losses to the logistics sector at about Rs 50,000 crore.

Major FMCG companies struggle to transport their goods due to shortage of trucks. Though the government has permitted the movement and delivery of essential goods, accessibility remains a challenge since the logistics is not moving at a fast pace because of many restrictions in place. There is a shortage of drivers since almost all of them have moved back to their hometowns. Unavailability of sufficient labour at loading and unloading points is also hampering the logistics operations in the country. Additionally, there is a huge number of daily wage earners who are grappling hard to survive the situation.

2.8 Wholesales and Retailer

The lockdown implemented by the Government to prevent the spread of COVID-19 in the country has greatly affected the retail business. Most stores, except stores selling Essential Food & Grocery, have been shut across the country. Garments, Saris, Electronics, Mobile Phones, Furniture, Hardware, etc. almost all stores are closed. Non-Grocery/Food Retailers are reporting 80% to 100% reduction in sales. Even retailers of essential items are facing losses as they aren't allowed to sell non-essential items, which would bring them higher margins. 85% of the retail costs are fixed costs, which is putting several financial pressures on retailers. The industry is experiencing severe liquidity challenges, which can lead to large scale unemployment. The cash inflow of the industry has come to a standstill, while the fixed operating costs remain intact, as per the survey conducted by Retailers Association of India (RAI) which was filled by 768 respondents across India to earn 40% as compared to last year's revenues.

Impact on Non-Food Retailers – More than 95% of Non-Food Retailers has their shops closed in the lockdown and are looking at practically no revenues till the lockdown is in place. In the next 6 months, Non-Food Retailers expect

Impact on Food Retailers – Most of Food Retailers also sell non-essential goods in the same and / or different stores. The non-food business in the stores has come to a standstill in the lockdown leading to revenue loss. Additionally, 25% of these retailers have non-

food stores that have been closed leading to further losses. In the next 6 months, Food Retailers expect to earn 56% as compared to last year's revenues.

Overall Business Outlook – 70% of retailers expect the business recovery to happen in more than 6 months, 20% expect it to take more than a year. <10% of Medium and Large Retailers expect to earn any profits till Aug'20, 26% of Small Retailers expect to earn profits in the same time period.

Manpower rationalization - Small Retailers are expecting to lay-off 30% of their manpower going forward, this number falls to 12% for Medium Retailers and 5% for Large Retailers. On the whole, retailers who responded to the survey expect a layoff of about 20% of their manpower.

2.9 Garment Industry

Indian Textiles and Apparels (T&A) industry accounts for approximately 4% of the global T&A market. The T&A industry is one of the largest and the most important sectors for the Indian economy in terms of output, foreign exchange earnings and employment. The industry contributes approximately 7% to industrial output in value terms, 2% to the GDP and 15% to the country's export earnings. The Indian economy has been hit hard by COVID-19. Due to the countrywide lockdown various transport facilities including trains and flights are suspended which is expected to hurt domestic operations in India. With the virus now also affecting and disrupting global supply chains and economy for almost 3 to 6 months now, the situation is having a severe implication on the Indian economy as well.

The areas that would face the crisis created by Covid-19 pandemic are:

Labor force and Employment: T&A provides direct employment to over 45 million people but the nationwide lockdown have led to a temporary closure of factories and lay-offs have already begun among low wage worker.

Import& Exports of raw material and readymade garment: The COVID-19 pandemic is primarily expected to adversely impact exports and with second-order impact on the domestic markets with both exports as well as domestic sales falling.

The pandemic has affected the majority of India's export market (the US and EU together constitute for approximately, 60% of the total apparel exports from India in value terms), causing order cancellations/deferral of order leading to inventory build-up and expectation of slower realization of export receivables leading to higher working capital requirements. Apparel exports are expected to fall due to drying up of order in the last quarter of FY20, working capital issues and lack of clarity on the duties and incentives especially when exporters from Bangladesh, Sri Lanka and Vietnam receive preferential access.

Additionally, domestic consumption is also getting impacted due to all India closure. New store openings have stopped and even domestic stores are facing an inventory build-up due to apparel sources for the upcoming summer season, Further, domestic prices could be negatively impacted if exporters dump their inventories in the domestic market leading to even reduced margins. This could lead to short term blips such as reduced employment of casual labour (factory closures and people moving back to their home towns) and reduced consumption.

Supply chain disruption: The Garment manufacturers need to look at local sourcing opportunities, due impact on import and export.

Consumer sentiment: If nationwide lockdown continues and the situation persists, will impact consumer sentiment on the higher side, due to closure of market and mall also to maintaining the social distancing, safety and health.

The extent of the outbreak and lockdown would directly impact the length of the recovery cycle. However, to minimize the impact the Confederation of Indian Textile Industry (CITI) has requested the government to immediately announce a relief package for the textile and apparel sector to mitigate the crisis being faced by the capital and labour-intensive textile Industry, post the coronavirus spread.

2.10 Real Estate Market

The real estate sector is one of the most globally recognized sectors. Real estate sector comprises four sub sectors - housing, retail, hospitality, and commercial. The growth of this sector is well complemented by the growth of the corporate environment and the demand for office space as well as urban and semi-urban accommodations. The construction industry ranks third among the 14 major sectors in terms of direct, indirect and induced effects in all sectors of the economy. It is also expected that this sector will incur more non-resident Indian (NRI) investments in both the short term and the long term. Bengaluru is expected to be the most favoured property investment destination for NRIs, followed by Ahmedabad, Pune, Chennai, Goa, Delhi and Dehradun.

The Indian real estate sector has witnessed high growth in recent times with the rise in demand for office as well as residential spaces. Private Equity and Venture Capital investments in the sector have reached US\$ 1.47 billion between Jan-Mar 2019. Institutional investments in India's real estate are expected to reach US\$ 5.5 billion for 2018, the highest in a decade. Between 2009-18, Indian real estate sector attracted institutional investments worth US\$ 30 billion and received US\$ 2.3 billion in first half of 2019. Real estate attracted around US\$ 14 billion of foreign private equity (PE) between 2015 and Q3 2019. Real estate attracted around Rs 43,780 crore (US\$ 6.26 billion) of investments in 2019.

According to data released by Department for Promotion of Industry and Internal Trade Policy (DPIIT), construction is the fourth largest sector in terms of FDI inflows. FDI in the sector (includes construction development and construction activities stood at US\$ 41.53 billion from April 2000 to December 2019.

India's real estate sector, like most other industries, is on a slow recovery path after taking a massive hit due to the Covid-19 lockdown. The most optimistic estimates suggest that revival in the industry will begin within six to nine months after the lockdown is completely lifted. This assessment rests on the projection that India among the only two major nations with GDP growth prospects (however slim) in spite of the pandemic. The **United Nations** (UN) and the **International Monetary Fund** (IMF) have said that India and China show prospects of bouncing back in 2021.

While the industry deals with the slump, the current scenario throws up a great opportunity for non-resident Indians (NRI) to invest in real estate back home. From pressure on pricing to a weak rupee and **RERA guidelines**, there are several factors that currently favour NRI investors, who play an important role in driving real estate growth in India.

This is the golden opportunity for NRI buyers right now is the depreciation of the Indian rupee by almost 10% against the US dollar. A stronger dollar means more purchasing power for NRIs. Moreover, interest rates for housing loans have receded substantially in India. Recently the State Bank of India announced attractive home loan options with interest rates in the range of 7.2% and 7.6%.

In addition, over the next few months, builders and developers are likely to resort to innovative incentive schemes to generate demand and cash flow. These could include price cuts, which makes the opportunity even more lucrative. Buyers are seeking deals in the anticipation of a price correction of 15-20% on properties across regions. They hold the power to bargain against developers/sellers who are strapped for cash, are willing to offer concessions, and/or have projects on stand-by due to shortage of labour and raw materials. This is an opportune time for NRIs to upgrade their family homes in India to more independent and self-sustainable properties with varied amenities and larger space. This is important at a time when the ever-evolving dynamics of immigration laws and higher H-1B visa denials make for an unstable situation for many NRIs in the US.

2.11 Agriculture and poultry

Agriculture in India contributes to 6.4% of the total world's economic production. China is the largest contributor followed by India accounting for 19.49% and 7.39% of the total agricultural output respectively. India is the first and foremost an agriculture-based economy with 47% of its working population employed in the agriculture sector while China employs only 29.5% of its population in agriculture. With about half its population employed in agricultural activities, this should be a prominent source of India's GDP if not the main source. In India, agriculture constitutes 17.32% of GDP as per 2018 data and this value has remained somewhat constant since 2011. COVID-19 is disrupting some activities in agriculture and supply chains. Preliminary reports show that the non-availability of migrant labor is interrupting some harvesting activities, particularly in northwest India where wheat and pulses are being harvested. There are disruptions in supply chains because of transportation problems and other issues. Prices have declined for wheat, vegetables, and other crops, yet consumers are often paying more. Media reports show that the closure of hotels, restaurants, sweet shops, and tea shops during the lockdown is already depressing milk sales. Meanwhile, poultry farmers have been badly hit due to misinformation, particularly on social media, that chicken are the carriers of COVID-19.

Here are some measures are required to keep the agricultural sector and supply chains working smoothly:

- The government has correctly issued lockdown guidelines that exempt farm operations and supply chains. But implementation problems leading to labor shortages and falling prices should be rectified.
- Keeping supply chains functioning well is crucial to food security. It should be noted that 2 to 3 million deaths in the Bengal famine of 1943 were due to food supply disruptions—not a lack of food availability.

- Farm populations must be protected from the coronavirus to the extent possible by testing and practicing social distancing.
- Farmers must have continued access to markets. This can be a mix of private markets and government procurement.
- Small poultry and dairy farmers need more targeted help, as their pandemic-related input supply and market-access problems are urgent.
- Farmers and agricultural workers should be included in the government's assistance package and any social protection programs addressing the crisis.
- As lockdown measures have increased, demand has risen for home delivery of groceries and E-commerce. This trend should be encouraged and promoted.
- The government should promote trade by avoiding export bans and import restrictions.

The lockdown has choked off almost all economic activity. In urban areas, leading to the widespread loss of jobs and incomes for informal workers and the poor. Estimates by the Centre for Monitoring Indian Economy show that unemployment shot up from 8.4% in mid-March to 23% in the first week of April. In urban areas, unemployment soared to 30.9% as of April 5. The shutdown will cause untold misery for informal workers and the poor, who lead precarious lives facing hunger and malnutrition.

2.12 Public Administration, Health and Education

The public administration, education and health are also some of the sectors negatively affected by the pandemic. Covid-19 being a health threat, the health sector was more challenged, having to change how they think, act and had to look for a completely new operation mechanism in dealing with the pandemic. The severe impact of COVID-19 has shaken the world to its core. Further, most of the Governments around the world have temporarily closed educational institutions in an attempt to contain the spread of the

COVID-19 pandemic. In India too, the government as a part of the nationwide lockdown has closed all educational institutions, as a consequence of which, learners ranging from school going children to postgraduate students, are affected.

These nationwide closures are impacting over 91% of the world's student population. Several other countries have implemented localized closures impacting millions of additional learners. UNESCO is supporting countries in their efforts to mitigate the immediate impact of school closures, particularly for more vulnerable and disadvantaged communities, and to facilitate the continuity of education for all through remote learning. The UNESCO report estimates that the coronavirus pandemic will adversely impact over 290 million students across 22 countries. The UNESCO estimates that about 32 crores students are affected in India, including those in schools and colleges. Therefore, the government has come up with e-learning programs. Many ed-tech firms have tried to leverage the occasion by offering free online classes or attractive discounts on e-learning modules.

These measures have been met with an overwhelming response by students with some startups witnessing as high as 25% uptick in e-learning. Remote learning seems a viable solution to students during this time as they offer convenient, on-the-go and affordable access to lessons. E-learning also comes as an interesting and interactive alternative as compared to classroom teaching.

A complete revolution in the way we learn today has been brought about by Technology. Each student gets in contact with a world-class education, which is not easy to impart by the traditional white chalk and blackboard method of teaching. This new learning is more interesting, personalized and enjoyable. A massive open online course (MOOC) is an online course aimed at unlimited participation and open access via the web. India is considered to be the biggest market for MOOCs in the world after the USA. Since the population of India is huge, massive open online course (MOOC) is said to open gateways for a lot of Indians in terms of bringing an educational revolution. Online distant learning programs give a great opportunity to avail high-quality learning with the help of internet connectivity. Digital learning has many advantages in itself like digital

learning has no physical boundaries, it has more learning engagement experience rather than the traditional learning, it is also cost-effective and students get to learn in the confines of their comfort zone. However, digital learning is not without its limitations and challenges, since face-to-face interaction is usually perceived as the best form of communication as compared to the rather impersonalized nature of remote learning. Globally, online education has met with some success. In the case of India, we still have a long way to go before digital learning is seen as mainstream education, because students living in urban area have the facilities to opt for digital education, however, rural area students do not have the required infrastructure nor are financially strong to avail the resources required for digital education. Building of the digital education infrastructure by the Government of India presently appears to be difficult due to lack of budget.

Further, even if the digital infrastructure is built, training has to be given to the teachers to use the digital system to provide authentic and proper, uninterrupted and seamless education to the students. Remote learning increasingly relies on the reliable power supply and ubiquitous Internet connectivity which might be a far-fetched thing for Tier 2 and Tier 3 cities in India. Due to the outbreak of the pandemic, the work from home (WFH) culture is booming in India. As social distancing is prescribed as the best way to curb the spread of COVID 19, companies are faced with an unprecedented challenge of ensuring it is business as usual even if everyone is working remotely. Therefore, not only businessmen or start-ups in India have opted for an online platform like Zoom App to stay connected with their employees who are working from their homes but also the educational institutions have opted for different digital platforms to facilitate learning for their students. However, only educational institutions in urban areas can provide those facilities. Again the questions are raised for the learners in rural areas, the educational systems in rural areas and their growth.

With so many different ways to define e-learning and the educational approaches that can be taken in these learning environments, many colleges and extra curriculum activity classes have started making use of the technology. Through applications such as Zoom various colleges especially engineering and designing colleges of Pune have undertaken

the task of educating students through video conferencing. Undeterred by the security concerns which such video conferencing applications may pose, these applications are widely used and have proved to be beneficial and with a lot of advantages. There is picture, sound clarity which makes imparting of knowledge and learning effective for both the instructor and the student.

But at the same time, there is a glaring disadvantage as exams have to be postponed. Examinations cannot be conducted online. It is not only just the question of imparting continuous and uninterrupted learning during the outbreak of COVID 19 pandemic but also the most important challenge for the instructor is to focus on the overall elements of a well-developed course. Developing a purposeful and well-defined online course, which supports the instructor and learner, means devoting the appropriate time and embedding the applicable course elements into the e-learning environment. Through the use of technology, we can, if not provide a strong alternative to the conventional education system, mitigate and compensate for the impediments posed and inconvenience caused due to COVID 19 pandemic to the education system and learners by extension. Learning, as they say, is a continuous and ever-evolving process. The educational institutions in India, from schools to universities, can use this present adversity as a blessing in disguise and make digital education a major part of the learning process for all learners in the future

2.13 Government Revenue Collection

The covid-19 outbreak will have some undeniable impact on government tax revenue. The COVID-19 outbreak and nationwide lockdown is severely denting the revenue collections of states pushing them to look at possible revenue earning measures including phased opening of liquor vends and pan and gutka shops in the first phase of relaxations for restarting economic activity post lockdown.

Sources in the state government departments said that GST(Goods and Service Tax) collections, one of the prime sources of revenue for the states, is seriously compromised

in the month of April with several state governments reporting serious fall in collections that are as high as 80-90 per cent some cases.

Concerned about the steep fall, the Centre is yet to declare the GST collection numbers for April though monthly GST collection numbers for a particular month is announced on the first day of the next month. The delay, officials say, is because the government deferred allowed delayed filing of GSTR 3B returns for 15 days from the due date of April 20 to ease compliance burden on taxpayers during lockdown.

The worst hit seems to be states such as Delhi, West Bengal, Assam, Andhra Pradesh that are reporting fall in April GST collections to the tune of 90 per cent. In case of Delhi, officials have indicated that they have collected just Rs 300 in April against normal monthly collection of Rs 3,000 crore. Similarly, Assam seems to have collected just about Rs 200 crore as GST in April against close to Rs 1,000 crore at this point of the year.

West Bengal is also facing serious fall in tax collections as lockdown has completely stopped service sector activity while manufacturing also remains suspended. GST collections have been badly hit in hilly states that depend largely on tourism and hospitality for revenue.

"We anticipate that April GST collections may fall to a third of average monthly collections of just over Rs 1 lakh crore. The collection data could see some improvement in later dates as tax return filing dates have been extended for April," said a tax expert a not willing to be named.

Due to concerns on GST, several states are looking at resuming economic activity under the permissions given by the Home Ministry on relaxations during lockdown. In this regard, opening of liquor shops and increasing sales of petrol and diesel through increased transportation activities is being looked by states. Taxes on fuel and liquor alone provides close to 40-50 per cent of state revenue. So start of these activities would provide some relief.

Services accounts for almost 60-70 per cent of GDP while manufacturing about 25 per cent. Both the activities have been seriously hit in the lockdown pushing analyst to project India GDP growth at just 1-2 per cent in FY21.

2.14 Financial Market

As the global economy is declining in terms of output and production it is expected that the world will suffer from recession. The American Credit Rating Agency Fitch has forecasted Indian rupee, the currency will average 77 per US dollar in 2020 and 80 in 2021 and steep monetary easing. In the short run steep monetary easing will pressure the rupee weaker but over the long term it is expected of overvaluation of Indian rupee. The foreign investors has pulled out \$14 billion dollar in March 2020. The economy is facing huge crashes and wealth erosion, which in turn is impacting consumption levels. On the other side Sensex and Nifty closed sharply baked by weak global cues amid historic due to fall in oil prices. BSE Sensex closed 1,011 points lower at 30,636 and NSE Nifty ended 280 points lower at 8,981 on 21 April 2020. The domestic equity markets was seen on March 12, when following the trend of the global equity markets, both the BSE Sensex and NSE Nifty crashed by more than 8% in a single day. An estimated Rs 10 lakh crore of market cap was reportedly wiped off due to this single day fall. The virus crises has already dropped out equity wealth to 40 percent of the expected size of India's gross domestic product (GDP). The aggregate market capitalism of all BSE listed shares of 52 lakh crore, as it fall from Rs.155.53 lakh crore on December 31, 2019 to Rs. 103.69 lakh crore in March 24,2020. The Reserve Bank of India (RBI) has reduced the repo rate by 75 basis points (bps) and bring it down to 4.4 percent, the lowest repo rate fallen till now The rate cut will lead to encourage growth and financial stability

CHAPTER 03:

Market in India after covid-19

3.1 Effect of Covid-19 on Indian lifestyle

The emergence of COVID -19 pandemic has severely impacted individuals from all walks of life. The rapid spread of the disease to nearly all parts of the country has posed enormous health, economic, environmental and social challenges to the entire human population. In the absence of any effective drugs and vaccines for treatment, social distancing and other preventive measures are the only alternatives. Lockdown is among one of the options suggested by WHO to reduce spread of the virus. India was quick to close its international borders and enforce the world's largest COVID lockdown on March 22, 2020. The present study attempts to highlight the impact of imposed nationwide lockdown on society and environment alike along with analysis of lifestyle changes. The study was based on an online survey using a structured questionnaire with over 1000 responders across the country. The pandemic situation demands a certain way

of shaping the society to reduce virus spread and safeguard oneself. In this study, we analyzed the changes that the society has undergone during lockdown to mitigate the spreading of the infection. We also addressed the changes that have become part of our lives during lockdown – hygiene and health consciousness, work from home (WFM), online teaching, digital shopping, changing internet habits and societal changes.

Firstly, people have become more hygiene conscious. They are taking personal hygiene more seriously. The ritual of washing hands, sanitizing things before use, that started as a compulsion is becoming a habit. (According to IANS C-VOTER Gallup International Association Corona)

Secondly, Work from Home (WFH) is become a part of our lives. Many IT companies in the West and even in India has been practicing it with perfection. Covid 19 has taken it to another level with almost all companies asking its employees to WFH.

Thirdly, Educational institutions, business organizations among others, have taken online education to a new level by offering classes, coaching and courses in an innovative way to keep their audience hooked at these times of lockdown.

Fourthly, people started maintaining social distancing. So the culture has seeped into our living rooms with people especially, women, juggling between cooking, parenting and working at the same time!

3.2 Empirical Analysis on the Impact of COVID-19 on Lifestyle of Indians during a Lockdown period in India.

In this research, researcher has tried to analyze and explain the impact of COVID-19 and lockdown on lifestyle of Indians. Researcher has tried to figure out the changes occurred due to the COVID-19 and lockdown in the routine life of Indians and has also tried to figure out, how are Indian coping with this COVID-19 and lockdown situation.

Research work based on the secondary and primary database. The main survey was across India in the months of April 2020. For this study, researcher has selected 273 respondents from 22 states & UT and 82 cities of India through a purposive & convenient random sampling technique. The data has been collected through structured questionnaire containing 28 questions including several sub questions.

Research findings:

- Majority (87%) of Indians are buying Grocery and Food items from local vendors and the frequency of visit was twice a week (58%).
- Few (18%) have mentioned that they have not received their income and majority of them were employer or businessman
- Expenses, Workload and Pursuing Hobbies have been increased for Female.
- Time Spent with Family, Online Meetings, Use of Mobile, TV, Internet and social media has increased during this lockdown.
- People in age bracket of 31-40 have recorded that their time spent on Online Meeting has increased and most of them are private sector employees.
- Use of Internet and Social Media has increased for everyone except those who are above age 50
- People in age bracket of 20-30 are missing Hangout, weekend parties, Trekking/Adventure/Nature walk.
- People in the age bracket of 20-40 are missing Eating Food Outside, watching movies outside, Playing Outdoor

3.3 Covid-19 effect on the purchase pattern of consumer

As social distancing becomes the new normal due to the COVID-19 pandemic, consumer habits are adapting in real-time to the new environment and circumstances. As many consumers are under stay-at-home or shelter-in-place orders around the nation, they are likely to continue reduced spending patterns in these and other product categories. 40% of consumers are stocking up on kitchen supplies, hence the supermarkets and grocery stores are experiencing 80% spike in store visits. With 70% of the consumers preferring home-cooked meals, restaurants have seen a 90% drop in visits. 6% of respondents found difficulties in sourcing the food and grocery essentials. 39% of consumers are experiencing issues obtaining hand sanitizers and hand-washing supplies.

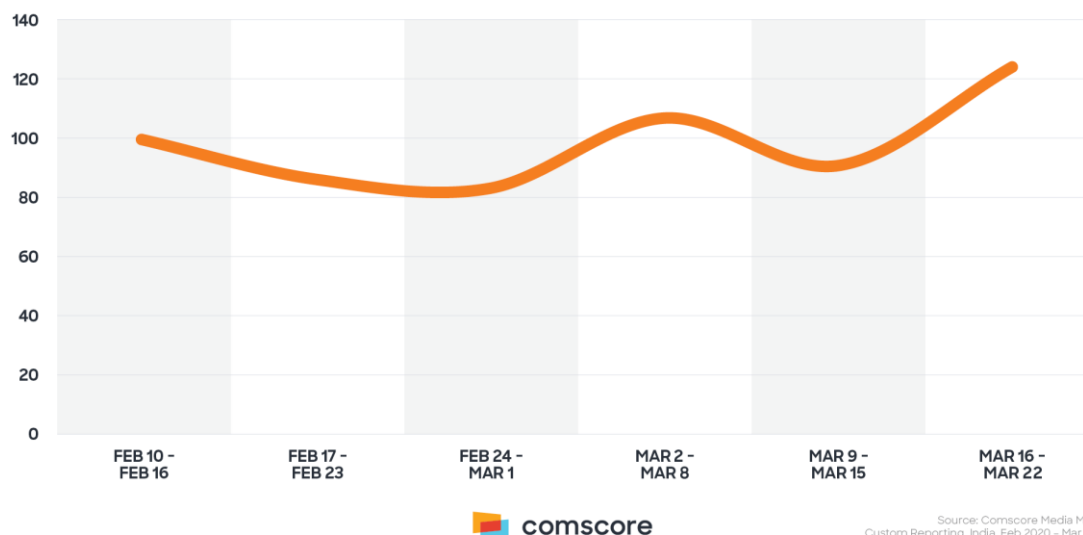
3.4 Effect of covid-19 in digital platforms

Staying at home due to the lockdown has consumers spending more time on digital platforms. Time spent on games has dramatically increased, more people are playing online games and more gaming companies are cashing in on the rising interest in India.

Devoid of sports, travel and any social activities, many have turned to online games. Between the weeks of Feb. 10-16, 2020 and March 16-22; 2020, visits to online gaming websites or apps increased by 24%. Engagement, as measured by time spent on gaming sites or apps, increased by 21% during the same time period.

Online Gaming Sites: Visit Index

WEEK OF FEB 10-16 = 100



3.5 Effect of covid-19 in digital Marketing

Covid-19 changing everything in the world in general and India in particular. All local Government and Central government are encouraging rather directing people to stay at home and stay safe. Mobile is now the dominant way for people to communicate, to shop and all-purpose in a modern digital economy. Marketers and different brands trying to acquire consumer in response to COVID -19. Sectors like organized Retail make avenues to sell their product through online, as because consumers will avoid shopping in the store because of social distancing. Big Bazaar has announced that its doorstep delivery services will remain open in various parts of the country during India's 21-day lockdown. The services will be available in Mumbai, along with Delhi NCR, some parts of Uttarakhand, Madhya Pradesh, Himachal Pradesh, Jammu and Punjab. The e-grocer has been witnessing heavy demand since the nation has entered a 21-day lock down, as announced by the Prime Minister on March 22, to control the spread of the deadly

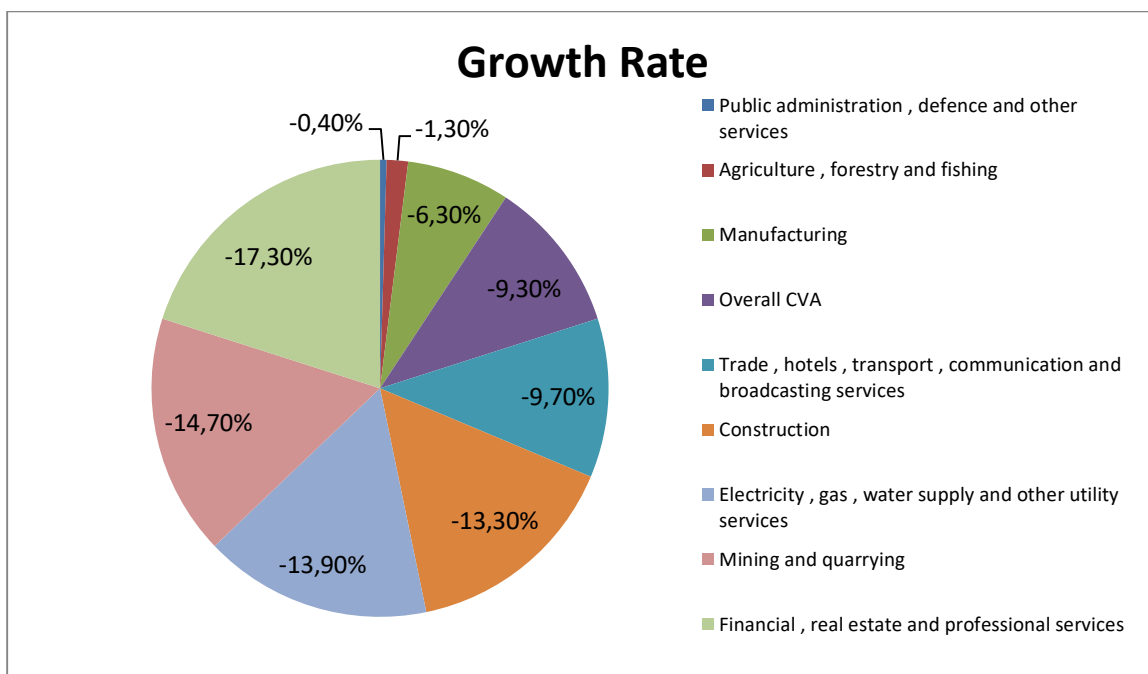
coronavirus. Though online delivery services have been exempted from lockdown by the government to ensure a smooth supply of essential items, e-tailers have faced disruptions in the form of supply and workers shortage. At the same time we should not forget that the outbreak of coronavirus has cast its spell on daily wage workers, as they are left empty handed with no jobs and money. Selling of product online, virtual gaming products, and rise in social media marketing will no doubt increase digital marketing for all sectors to rich to their prospects with ROI. No doubt social media marketing will help digital marketing to the next step in this critical juncture. As people are staying at home, no traveling, physical fitness is the concern where the gyms are closed, same time demand for organic product has more demand in digital marketing.

3.6 Domestic Consumption

The overall impact of the lockdown on domestic consumption is an expected slowdown in overall consumption. Tambaku, ghutka suppliers, for example, went on complete lockdown which implies zero sales. During country lockdown , government of India has give permission for only essential things such as grocery shops and pharmacies.

There are other sector, however, where demand boomed since the outbreak of the virus. Specially, the production of sanitizers, hand washes, masks and gloves as well as pharmaceuticals. The manufactures of the products require to protect onself from the virus therefore received high demand.

Estimated impact from the coronavirus (COVID-19) on India between April and June 2020, by sector GVA (Gross value Added)



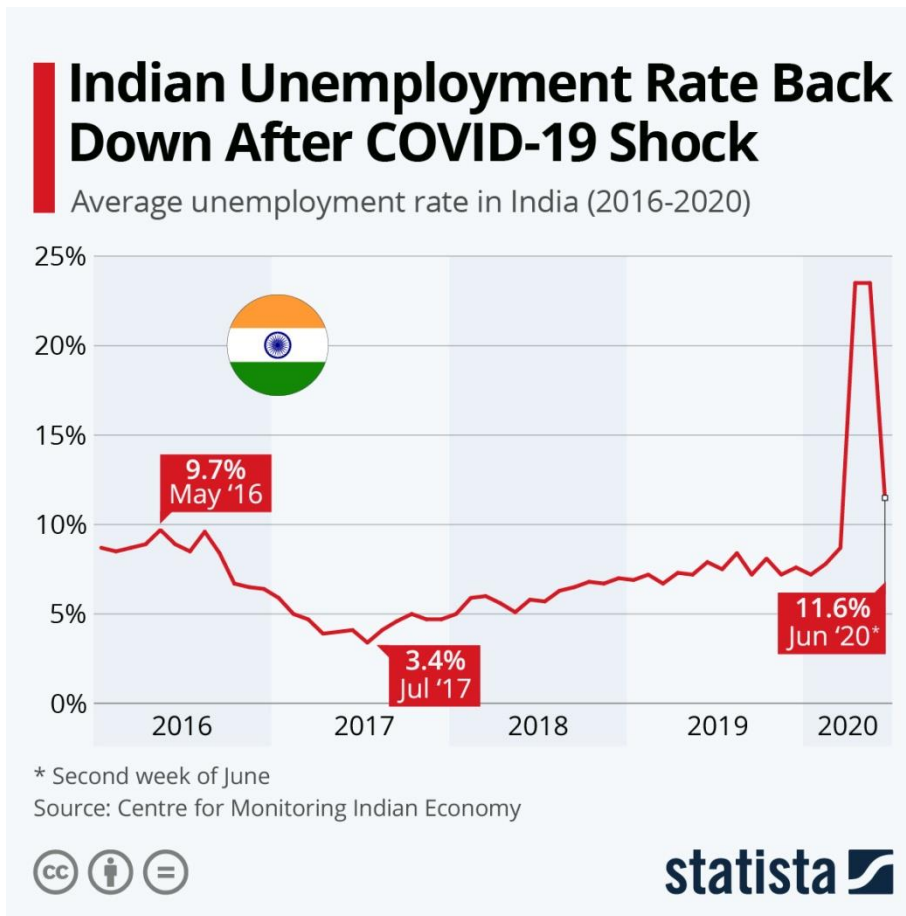
The loss incurred by enforcing a lockdown in the country was estimated at 26 billion U.S. dollars and a significant decline in GDP growth is also expected in the June quarter of 2020. With the imposition of restrictions on transportation worldwide, the trade sector also took a hit. Exports and imports saw a drastic decline in the country especially in the case of essential commodities such as petroleum, food crops, and coal, among others.

3.7 jobs are at risk

To estimate the impact of the lockdown on employment, The Indian unemployment rate went off the charts following the COVID-19 outbreak in the country and subsequent lockdown. According to the Centre for Monitoring Indian Economy, it reached 23.5 percent overall (average of rural and urban rates) in April and in May.

According to reporting by Financial Express, the rate was back down to just 11.6 percent in the second week of June. While this means some relief for Indian workers, the rate is still seriously elevated. The highest rate reached in the last five years was 9.7 percent in

May of 2016. Before the crisis began, the Indian monthly unemployment rate hovered around 7-8 percent, according to CMIE.



3.8 Steps taken by the Indian Government during lockdown

Relief for poor

The Indian Government, on 27.03.2020, announced a Rs 1.7 lakh crore relief package aimed at providing a safety net for those hit the hardest by the Covid-19 lockdown, along with insurance cover for frontline medical personnel. About 800 million people are expected to get free cereals and cooking gas apart from cash through direct transfers for three months.

Such steps include:

- Ujjwala beneficiaries to get free cooking gas (LPG) cylinders in next three months.
- Collateral-free loan doubled to ₹20 lakh to 63 lakh women self-help groups.
- Government will pay EPF (employee provident fund) contribution, both of employer and employee, for 3 months for all those establishments with less than 100 employees out of which 90% earn less than ₹15,000 per month.
- Ex-gratia of Rs.1,000 shall be granted to 3 crore poor senior citizen, poor widows and poor disabled.
- Every MNREGA worker to get hike of Rs. 2,000.
- Health workers to get medical insurance cover of Rs. 50 lakhs.

The government recently introduced the **Aarogya Setup** mobile application to educate citizens about novel coronavirus and help them make informed decisions amid the crisis.

Union Human Resource Development Minister Ramesh Pokhriyal on Sunday launched a web portal to monitor and record the initiative by the ministry to combat Covid-19 with Knowledge, Technology and Innovation (YUKTI).

The last date for filing **income tax returns** for the financial year 2018-19 has been extended to June 30, 2020. The interest rate on delayed income tax payment has been decreased to 9% from 12%.

CHAPTER 04:

Opportunity for Recovery

4.1 Global Challenges

Initially, the perception was that the COVID-19 pandemic would be localized in China only. It later spread across the world through the movement of people. The economic pain became severe as people were asked to stay at home, and the severity was felt in various sectors of the economy with travel bans affecting the aviation industry, sporting event cancellations affecting the sports industry, the prohibition of mass gatherings affecting the events and entertainment industries (Horowitz, 2020; Elliot, 2020). There are parallels between the COVID-19 crisis and the events of 2007-2008: as in 2020, many people in the earlier recession assumed the impacts would largely be localized (in that case based on an assumption that the subprime mortgage crisis would be a relatively minor problem affecting only the US, but ultimately affecting the global financial system) (Elliot, 2020). The sudden economic disruption caused by COVID-19 is not only destructive but also has spillover implications because it created demand and supply shocks in almost every area of human endeavor (El-Erian, 2020)

4.2 Challenges for India Government

India faces multiple major challenges on the COVID-19. India has a population of 1.32 billion people; more than one-sixth of the world population and it is very difficult to maintain social distancing without country shutdown like some other big country especially those big cities with crowded streets, trains, buses and offices. like Iran, USA, Spain etc. According to latest data of government National survey Organization only 36% of Indians wash their hands with soap before a meal and because 160 million Indians do not have access to clean water to wash their hands. India has high rates of TB and pneumonia, and the TB and hypertension worsen Covid-19 outcomes. The prevalence of among Indian adults of diabetes and hypertension is 10% and 25%, respectively. The awareness about disease dynamics is very poor, even among the wealthier and more educated parts of the population: after the national voluntary 'people's curfew' called by the prime minister on 22 March, which was by and large a success, people came out on the streets and celebrated with no attention to social

distancing, achieving the exact opposite of what the curfew was supposed to achieve. Imposing a lockdown is next to impossible in India's vast rural hinterland, home to 900 million people (65% of the population). Seventy per cent of the rural population is dependent on agriculture and April and May is the harvesting season for their Rabi crops.

Before the 21 day lockdown imposed from 25 March, the expected case in India between 300 million and 500 million by July end, with a peak somewhere in April and/or May of 100 million cases, with 10 million (10%) requiring hospitalisation, 5 million recovering, 5 million needing critical care and 1 to 2.5 million deaths. After the lockdown, these numbers are estimated to come down by about 80%, with 1 million needing critical care, including ventilator support. India has just 20 000 ventilators. *That is a 98% shortfall.* The government response has been to make 40 000 more by June

The COVID-19-induced 21-day lockdown has put more strain on an economy that was already experiencing declining growth and increased joblessness. More than 75% of India's substantial 100 million migrant workers have lost their jobs overnight. The retail industry is expected to lose 10 million jobs, the restaurant industry 1.5 million jobs and the transport industry 5 million jobs. Fifteen million unregistered workers have been left out of a Government benefits package. There is no doubt that with falling incomes, this economic pandemic will increase the proportion of health expenditure that is catastrophic, thereby pushing more people below the poverty line.

India has just 0.8 doctors per 1000 population as against Italy's 4.1, China's 1.8, Spain's 4.1, Iran's 1.1 and the USA's 2.6. India has just 0.7 hospital beds per 1000 population as against Italy's 3.4, Spain's 3, Iran's 1.5 and the USA's 2.9. In the wake of a tsunami of COVID-19 cases requiring hospitalisation, this manpower and infrastructure are going to prove inadequate. There is some hope in India that the avalanche will not come. This hope stems from two silver linings: the weather and the age demographic of the population. There is some evidence that the COVID-19 virus is weather and humidity sensitive. The spread of outbreaks of COVID-19 suggest a preference for cooler and drier climates. India's summer temperatures average 32–40°C with a humidity range of 50%–

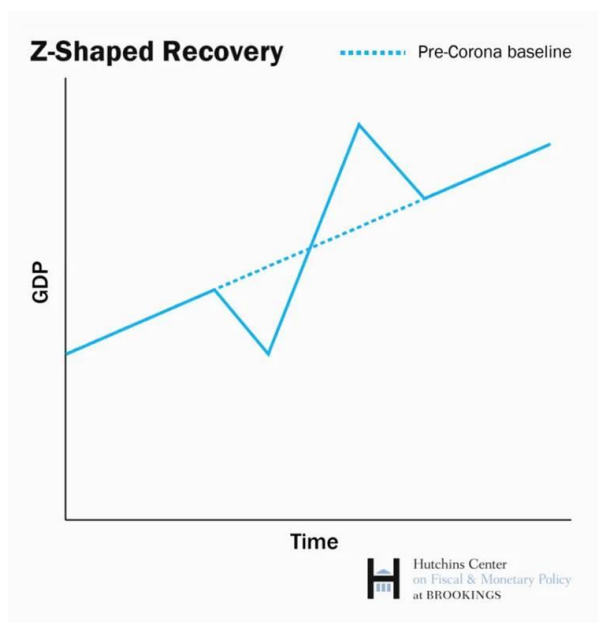
70% across the country. If COVID-19 actually is weather and humidity sensitive, it would slow down the spread of the virus in India.

4.3 How will Indian Economy Recovery

Covid-19 impacted by the whole country economy, so India is also one of those Countries where the economy was hated badly. Indian has chosen the shape of recovery like as 'U', V and Z. It is important to understand the factors that determine the shape of recovery. These include the overall duration of the pandemic, the effect on jobs and household incomes, the extent of fiscal stimulus provided by the government etc.

Z- Shaped:

If the economic disruption was just for a small period wherein more than people's incomes, it was their ability to spend that was restricted, then when the lockdown opened it is possible to imagine

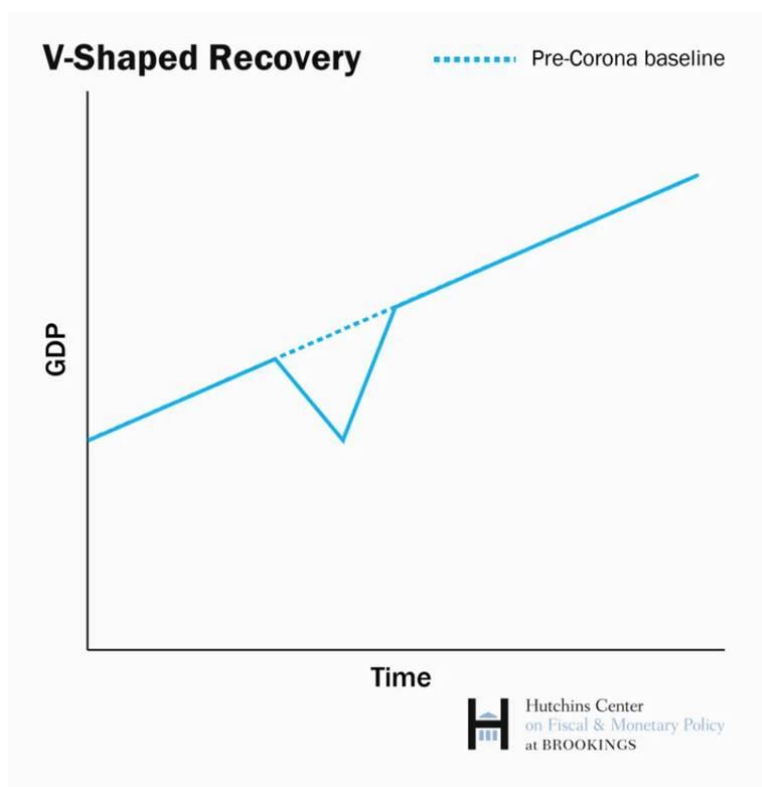


This type of recovery is talking about the absolute GDP, not GDP's growth rate — actually overshoots the trend path because of the Stayed demand such as salon visits,

movies, purchase of new cars, houses and appliances etc. — all of them get bunched up together.

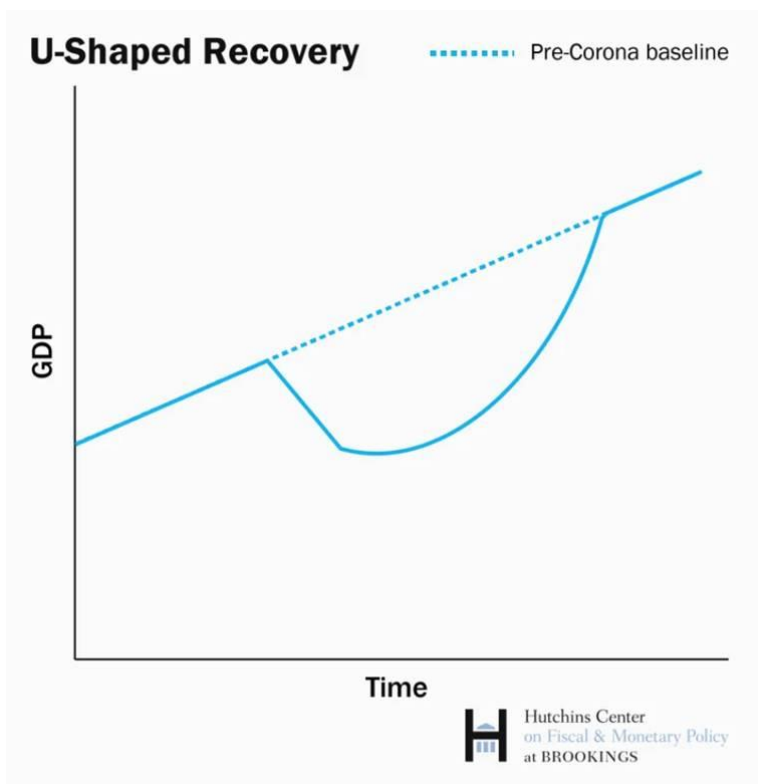
V-shaped:

In such a scenario, and assuming incomes and jobs are not permanently lost, the economic growth recovers sharply and returns to the path it was following before the disruption. This is called a “**V**”-shaped recovery.



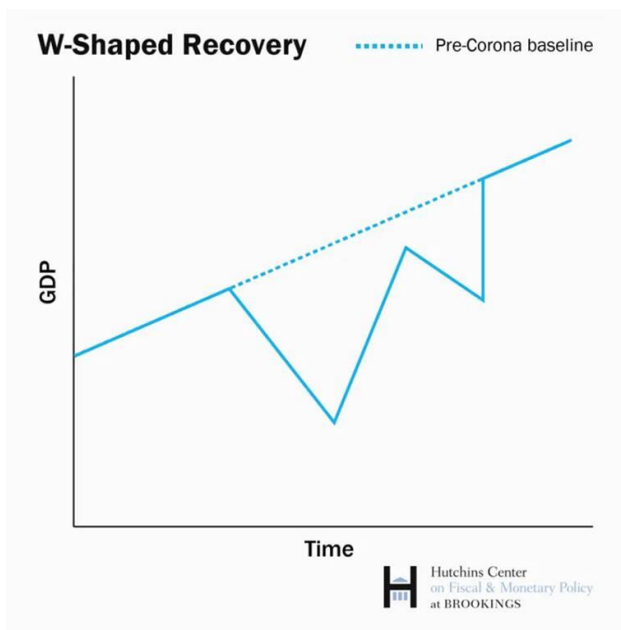
But what will happen if this recovery is slower and takes more time because the economic disruption resulted in several jobs being lost and people losing incomes, drawing down on their savings etc.

U-shape:



Then the economy will follow a **“U”-shaped** path. In such a scenario, after the initial fall, the recovery is gradual before regaining its momentum. If this process is more-long drawn than it throws up the **“elongated U”** shape.

Since we are talking about a Covid-induced disruption, it makes sense to also look at a **“W”-shaped** recovery as well. This shape allows for the possibility of a V-shaped recovery, which is pegged back by a second wave of infections until of course, the economy recovers for the second time.



4.4 Opportunity for Recovery

India is preparing itself with new normal life exited from lockdown through private sector response. But in India the private sector meets nearly two-thirds of healthcare needs of people. In addition, most of the healthcare goods—drugs, vaccines, diagnostic tests, biomedical equipment, among others—are supplied by the private sector.

The public health sector includes national, state, and district level governance systems across the country. It enables a coordinated response across the system. There are multiple representative bodies for hospitals, nursing homes, general practitioners, specialists, diagnostic chains, pharma and biotech companies, and device manufacturers. A coordinated response from these bodies is not yet evident.

The following brief outlines a few action plans to help mount an effective and coordinated response from the private sector.

How should healthcare providers prepare themselves?

When we enter in the new normal life of living covid-19, healthcare providers will be required to reopen medical services to all people. We can follow the rules of WHO by using face masks, hand hygiene and social distancing. Clinics and hospitals have to make necessary modifications in their facilities to screen and triage people as they enter, provide segregation facilities for suspected or proven Covid patients and others, provide adequate personal protection equipment (PPE) to healthcare workers as per scientific guidelines, train the staff in the new methods of managing patients, and assign at risk staff to non-frontline functions.

Healthcare providers can adopt innovative methods—*telemedicine, mobile clinics, home visits, remote monitoring systems*—for mild to moderately ill patients to provide services remotely in order to avoid crowding healthcare facilities. Payments systems for these remote services should be designed and put in place. Healthcare provider associations should interact with health insurance players to evolve appropriate guidelines considering the new normal. Private providers in cities and towns can share details of the resources they have – single room beds, intensive care beds, ventilators, syringe pumps, dialysis machines, ECMO machines, PPEs, nursing and medical staff with expertise in ICU management and ventilator management. They can also agree on charges for sharing these resources. Hospital associations can interact with supplier associations for better coordination in sourcing critical material. Online platforms can connect healthcare providers with suppliers. Similar efforts can also be built for sharing diagnostic tests.

Gain Public Trust

While people, those who can't afford private healthcare, have lost trust in public healthcare facilities, there is a growing disillusionment among people with private healthcare as well. Sensational media reports on hospital bills for dengue cases, suspicion of doctors' recommendations high cost tests and procedures, fast rising bills that even the middle class is finding unaffordable have dented the public trust in private healthcare. There is a risk of that mistrust deepening further during times of Covid as they are either

denied care or charged exorbitant prices for care. The private sector should reflect on their role in diminishing public trust and come up with solutions that sustain them financially while demonstrating their social responsibility.

Private sector response to supply goods

There is a need to create a platform where data can be provided with regards to products, stocks, and their prices for specific Covid-19 products. The platform will be able to connect healthcare providers with suppliers. That way limited supplies can be made available most efficiently. There is an intense competition across the globe to capture the new market for Covid-19 related products, including tests, drugs, vaccines, critical care equipment, and PPEs. India is trusted globally to supply quality goods at affordable costs – it supplies the bulk of vaccines and drugs for viral infections like hepatitis C and HIV. Private manufacturers should leverage the large research and development capacity that exists in public sector. The innovations need not be in developing new products. They can look at repurposing existing drugs or innovate on processes that reduce the cost of production. They should also partner with international universities and multilateral bodies who are looking at bulk manufacturing partners to ensure equitable supply to low and middle income countries.

Public private partnership

Firstly, there is a need to change the prevailing mindset in both systems – the private sector should also be accountable for population health, while public sector should not neglect individual basic health needs like safety, quality, and experience. While medical professionals have drifted more towards the private health sector, nursing and allied healthcare professionals and ASHA workers prefer the public health system. While public healthcare is overburdened in terms of bed occupancy and consults per doctor, much of private healthcare has underutilized capacity, be it beds, high-end equipment like CT scans and MRIs, or doctors or teachers. There is a strong case to be made for nurturing the public private partnership with a shared goal of better population health.

Chapter-5

Finding and Conclusion

Finding: impact of covid-19 on the economy beyond 2020

The theoretical framework used in this paper is based on the GDP Identity, where GDP is defined as follows

$$\text{GDP} = C+I+G+ (X-M)$$

Where, C is household consumption of domestically produced goods and services, I is investment purchases by firms of domestically produced goods and services, G is government purchases domestically produced goods and services, X-M minus imports (M) where the trade balance or the net export. The outbreak covid-19 by implication have impacts on consumption because of lost lives, employment and income. It has impact on investment because of market uncertainties globally. It impacts government spending as governments need to spend more on their economy in attempts to contain the spread of virus, and finally it impact both export and import.

The Reserve Bank on India (RBI) on Friday said India's Gross Domestic Product (GDP) growth will be in negative territory in 2020-21 as the outbreak of COVID-19 has disrupted economic activities.

The domestic economic has been impacted because of two month country lockdown and the top six industries states that account for 60% of India's industrial output are largely in red and orange zones.

Post Covid 19 Situation:

Although the coronavirus has exposed the glaring inequalities the world is facing, it also may be accelerating the uptake of digital solutions, tools and services, as the world

struggles to carry on with their daily lives and work on-line. With governments and businesses imposing travel restrictions and social distancing measures, digital solutions are allowing telework and online education, and enabling shopping online. This may in fact be accelerating the shift towards a more digital economy – something UNCTAD has been observing for some years ago. We recently released statistics showing that E-commerce sales hit \$25.6 trillion globally in 2018, up 8% from 2017, according to the latest available estimates. And that was already before the Coronavirus pandemic began. One can imagine that with the shift in behaviours engendered by the pandemic, many more people will be willing and eager to do business on-line rather than in person, going forward.

That being said, we must be very cautious that the uneven access and opportunities afforded by digital technologies do not become a bigger problem as they grow in popularity. It will also be important to ensure that privacy concerns and data ownership concerns are not simply forgotten as consumers and producers alike do more and more business on-line going forward.

Recommendations:

The above study shows the adverse effect of COVID-19 Pandemic in economic development of India and somehow analyzes the impact on Global Economy. The study can be recommended to the scholars, research personnel's and students for their acknowledgement about the situation and crisis faced by the pandemic. Also, this particular study can be termed as base for the higher level studies conducted on the same base.

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