



The Indian sectoral economy in the face of the Covid pandemic- A macro-level analysis

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Abstract

A once-in-a-century crisis like COVID-19 will have enormous ramifications for the economy. With India employing around 90 per cent of its workforce under the informal category, the impact goes beyond the economy to social issues like rising unemployment and poverty (MoL&E). The formal and organised sectors like hospitality, civil aviation, and automobiles also have no shield and no response to the pandemic. To the serendipity, agriculture rescued the Indian economy, providing employment and enough thrust to rural households to sustain them at a bare minimum. Though agriculture and IT came to the rescue, the impact of COVID-19 on the economy is unambiguous – the worst. This blue moon incident demands appropriate Government intervention to heal the wounds it created.

Keywords: COVID-19, agriculture, industry, service sectors, and employment.

Introduction

The COVID-19 pandemic has undoubtedly halted progress across the globe. Stringent lockdowns have been imposed across the country to limit the spread of the virus. India has one of the most stringent lockdowns in the world (according to the Oxford Covid-19 Government Response Tracker, OxCGRT (2021)). The lockdown, in turn, has created sufficient force to induce supply-side disruptions. In addition to the supply-side shock, demand pulled back due to the uncertain environment created by the pandemic. Considering the initial studies and various projections by the institutions functioning globally, the Indian economy is unambiguously negatively impacted by the pandemic.

According to the CMIE (2020) data, the gross domestic product at current market prices (2020–21) is 2.97. Furthermore, GVA at constant prices shows a further plunge of about 6.16 during the same year. This aggregate data shows the magnitude of the impact COVID-19 had on the economy. Consider the classic sectoral analysis of agriculture, industry, and services fragments. The data of CMIE shows the same depressing trend in the industry (2020–21 growth rate is -6.96) and services (2020–21 growth rate is -8.36) sectors. However, agriculture (growth rate of 3.63) has done relatively well amid the pandemic due to fewer supply-side restrictions and the availability of a surplus workforce due to the return of migrant labourers.

We are considering the massive impact the pandemic had on the economy. The paper aims to unravel the journey of various sectors and companies. While analysing the growth rate, the paper will also focus on the issue of unemployment trends among the sectors and companies chosen for study.

The study's objectives are as follows

1. The current study aims to investigate the impact of COVID-19 on India's primary, secondary, and tertiary sectors.

2. To assess the contribution of different sectors to the GDP growth of the Indian Economy and the aftermath of COVID-19.
3. To examine the effect of the COVID-19 pandemic on the country's employment patterns.

The study used secondary data, which was collected from various sources, including annual reports from different departments and economic surveys.

Review of Literature

The COVID-19-induced epidemic has had a massive impact on economies worldwide, and India is no exception to such massive global events. The pandemic has significantly impacted and continues to disrupt global value chains (GVCs) and local production networks in agriculture, industry, and services. This had a significant detrimental impact on society, too.

According to the Economic Survey (2022), the GVA for the total economy would decrease by 7.2% during 2020-21, although agriculture will retain a positive trend of 3.4%. As a result, total foodgrain output in the country is expected to reach a new high of 296.65 million tonnes, up 11.44 million tonnes from 2018-19.

The paper Covid-19: Impact on the Indian Economy by Dev and others (2020) argued that the initial lockdown did affect agricultural activities and the necessary supply chains through several channels: input distribution, harvesting, procurement, transport hurdles, marketing, and processing. Restaurant closures, transportation constraints, and other factors lowered demand for fresh vegetables, poultry, and fishery goods, impacting growers and suppliers.

When the initial lockdown was imposed in March, farmers were stranded with their harvest because APMC (Agricultural Product Market Committee) mandis were shuttered in various states, interrupting food delivery from production to consuming centres, as focused by Narayanan (2020).

COVID-19 has influenced the Indian Economy in all possible ways, including the Lack of financing and liquidity crunch. It also examines issues closely related to MSMEs: a double whammy of supply-demand disruptions, a Lack of labour force, a Credit and liquidity conundrum, Logistical woes, and other challenges (Lal, 2020).

Output in the allied sector has decreased dramatically, particularly in poultry (-19.5 per cent), followed by fisheries (-13.6%), sheep/goat/pig (-8.5 per cent), dairy (-6.6 per cent), and horticulture (-6.6 per cent) (-5.7 per cent), by the NABARD (2020).

The data from the consumer pyramid household survey show that agriculture's share of total employment has increased from 35.3 per cent (in 2017-18) to 36.1 per cent (in 2018-19) and then to 38 per cent (in 2019-20) as labour migrated from the unorganised sector to the agricultural sector during times of distress, as per CMIE (2020), Economics Times (2021). Furthermore, there is a decrease in labour supply owing to lockouts, while demand has grown, resulting in an 8.36 per cent increase in the wage rate. Female tribal labourers play a dominant role in agricultural and allied activities, Padma (2005)

This catastrophe has not spared the manufacturing sector. During the shutdown, the industry suffered a significant drop. According to an economic survey (2022), industrial activity fell by 1.9% in November 2020 and rebounded from a low of -57.3% in April 2020.

In the report of the Mining Industry in India (2020), the contribution of the quarrying and mining sector to the gross value of the country was Rs 1238.04 billion in 2020–2021, compared to Rs 1807.71 billion in 2019–2020. In addition, owing to local mine-specific needs, the provisional average daily labour employment in bauxite, fluorite, and tin mines has grown. However, we may witness a 14 per cent reduction in employment in the mining industry.

Despite government action, mining operations are harmed; the KPMG (2020) analysis revealed that mining operations are permitted in all central mineral-producing states during the lockdown. On the other hand, mining activity has been reported to be significantly disrupted during a pandemic. The research cited a variety of causes, including constraints on the free movement of public and private cars, a lack of demand, and a labour shortage. In addition, input-output for 33 industries discovered that the backward linkage score is more significant than the forward linkage score, meaning that the construction industry has a more substantial 'pull' influence on the economy than the 'push' effect.

A study by Lal(2020a) provides insights into agriculture in the globalisation scenario regarding land utilisation, cropping pattern, expenditure and income pattern, credit sources and livestock of the Kaniparthi village in Karimnagar district of Andhra Pradesh.

According to Dinesh (2020), India's services industry suffered a substantial setback during the COVID-19 pandemic-mandated shutdown. Because of its contact-intensive nature, the industry shrank by about 16% in the first half of the fiscal year 2020-21.

Ghosh (2020), in his paper 'Impact of the COVID-19 Pandemic on the Indian Services Sector', noted that trade, hotel, transportation, communication, and broadcasting services recorded a 15.6 per cent decrease in Q2. As a

result, over 21.5 million individuals working in the tourist sector are anticipated to lose their employment between April 2020 and December 2020. The essay also recommended several government initiatives and their repercussions.

Sahoo (2020) investigated the impact of the pandemic across industries in several scenarios, including total, prolonged, and partial lockdowns at various levels of capacity utilisation. They decided that the impact on the Indian economy was tremendous and revealed numerous strategies to address the matter.

The ILO Monitor (2021), predicts that at least 40 million informal workers will be impoverished due to job losses during a pandemic. The same conclusion may be drawn from research undertaken by Business Today (2021) during the pandemic's initial wave. According to the survey, at least 23 crore individuals may have been forced back into poverty. However, the primary causes of such events are job loss and unemployment. Massive losses are expected across different income groups, especially in upper-middle-income countries (7.0 per cent, 100 million full-time workers) Lal(2020b).

Mitra's (2021) report, "COVID-19 and Women's Labour Problem: Reiterating an Inclusive Policy Response", emphasises the gender dimension of the labour crisis during a pandemic. The report shed light on women's employment losses across all industries and reaffirmed its strong call for inclusive policy responses and stimulus. A study by Mehta and others argued the unequal implications of COVID-19 on different areas of the economy. They concluded that at least 200 million jobs and dependents are in jeopardy.

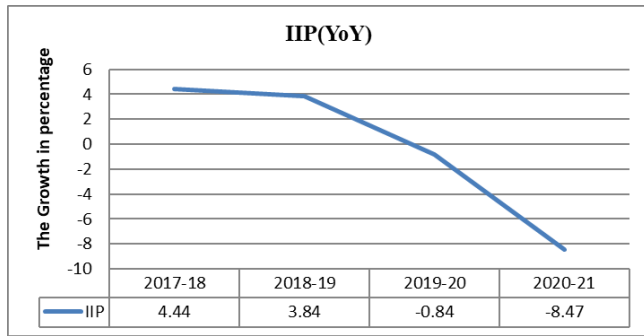
Results and Discussion

The results and discussion are presented in the following sections: Industrial sector, agricultural sector, and service sector.

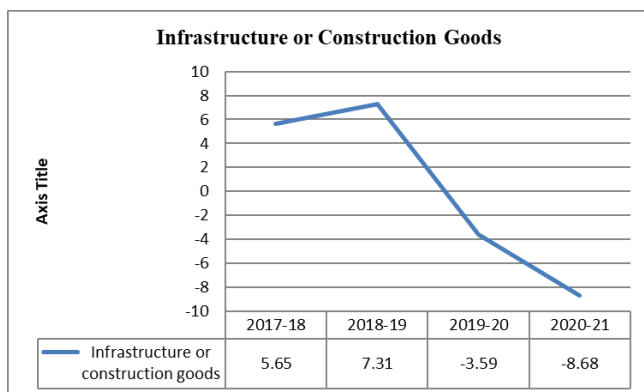
The Pandemic Impact on the Industrial Sector-I:

The COVID-19 pandemic public health emergency and its immediate fallouts, such as strict lockdowns, the return of migrant workers, and other supply-side restraints coupled with the demand decline, have negatively affected the industrial sector. The IIP (Index of Industrial Production) data sourced from the CMIE (2020) have reflected this trend.

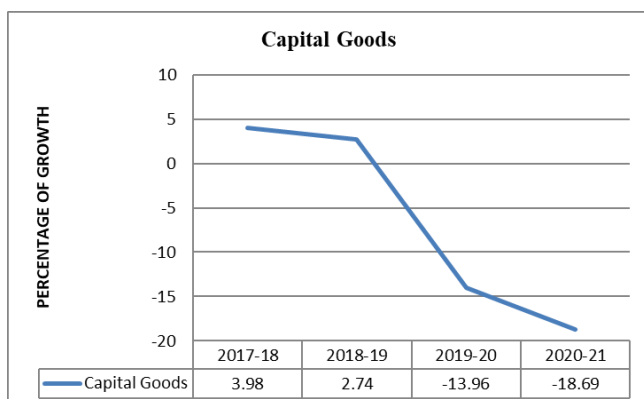
The growth of the pre-pandemic era, i.e. during the year 2017-19, has recorded decent positive numbers. While the growth rate started to decline in early 2020 due to the emergence of viral cases in the country, it has reached one of the historical lows of negative 8.47 rate during 2020-21. Though various factors might lead to such a low peak in the growth rate (as there has been a declining trend of IIP since 2017), the presence of Covid 19 has made such a situation worse, and the impact can be seen from the steep decline of IIP graph (Figure- IIP (YOY)). After such a steep dip in year-on-year growth, the growth rate during the first half of 2021-22 was positive at 22.9 per cent, Economic Survey, (2022). The impact on the industrial sector can be better analysed by looking into the conditions of the various sectors.



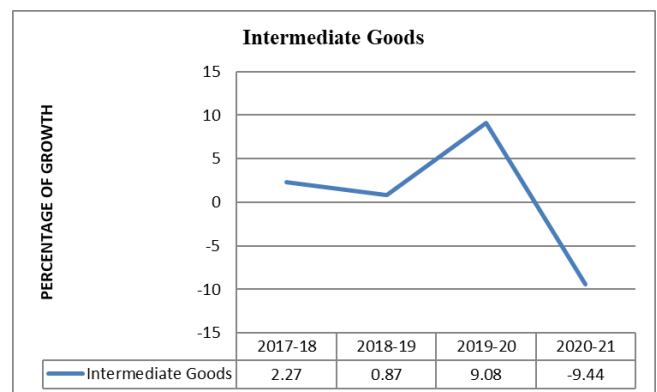
The construction industry employs about 51 million Invest India (2021), one of the significant labour-intensive industries. Most such labour belongs to the migrant labour category in countries like India. Due to the return of migrant labourers to their native place, post lockdown, a labour crisis emerged in the industry. Along with a lapse in consumer demand, these factors have crippled the industry. So, according to the data from CMIE (2022), the construction industry has recorded a negative growth rate of 3.59 and 8.68 in 2019 -20 and 2020-21, respectively. However, the advanced estimates suggest that the construction industry had grown with a positive 10.7 growth rate during 2021-22.



The capital goods industry is often regarded as the backbone of the economy. According to data from IIP and CMIE (2020), the capital goods industry has grown at 3.98 and 2.74 during the pre-pandemic era, i.e. 2017-18 and 2018-19, respectively. The impact of the COVID-19 pandemic further amplifies this declining trend. As a result, the growth rate has stood at negative 13.96 and negative 18.69 during 2019-20 and 2020-21, respectively. Factors like labour supply crunch, decrease in demand from industries and supply-side bottlenecks turned such a bleak and blue moon situation into reality.



The intermediate goods industry is also the victim of the pandemic-induced halt. The growth rate during 2019-20 has interestingly pegged at a positive 9.08 per cent, reflecting the very minute impact of a pandemic on the industry. However, such a trend has not been carried into 2020-21. The growth rate during the year 2020-21 was negative 9.44 per cent, reflecting the strong impact of the pandemic on the industry. However, an optimistic trend is expected as the data presented by the Economic Survey 2021-22 has provided the industry's growth rate as unfavourable at 3.7 during November 2021. The same demand slump and supply-side hurdles lead to this situation.



These industry trends unambiguously hint at a great halt in the manufacturing sector due to the pandemic effect on the economy. Though there was a declining trend in most industries during the COVID era due to factors like a trade war between China and the USA and the NPA crisis in India, the impact of a pandemic on the industries is high in magnitude and intensity, reflecting grave and once in a century crisis. The Economic survey [4] of 2020-21 advocated and supported the government policy of protecting lives over livelihoods. This approach, though considered sensible on prima facie, has brought the livelihoods and lives of the marginal community at stake because the line between the lives and livelihood is very marginally thin in poorer sections of society and often has a meagre tolerable limit to the livelihood shocks like the pandemic induced halt.

The employment trends of the secondary sector, as sourced from the CMIE (2020), have hinted at the declining trend. The employment rate was 24.9 during 2017-18 and 25.7 during 2018-19. However, the Employment rate steeply declined to 23.5 per cent during 2019-20 owing to the first case reported in January 2020 and other lagging factors pulling down the employment rate from the past few years. The data for 2020-21 and 2021-22 are yet to be made public, but if we theoretically link the industrial growth and employment, it would have decreased further in 2020-21 and 2021-22.

Employment in the manufacturing sector has declined from 51 million Indians in 2016-17 to 27.3 million in 2020-21, Business Standard (2021). Even the subsectors of manufacturing, like the Construction and Mining industry, have dipped in employment rate by 25 per cent and 38 per cent, respectively, from 2016-17 to 2020-21, Business Standard (2021).

These typical trends reflect the long-held crisis in the secondary sector intensified by the arrival of the COVID-19 pandemic. Hence, the Government is mandated to take appropriate strategic policy action.

Agriculture-II

India is an agrarian country, with around 70% of its people depending directly or indirectly upon agriculture and 82% of farmers being small and marginal (Lal, 2019).

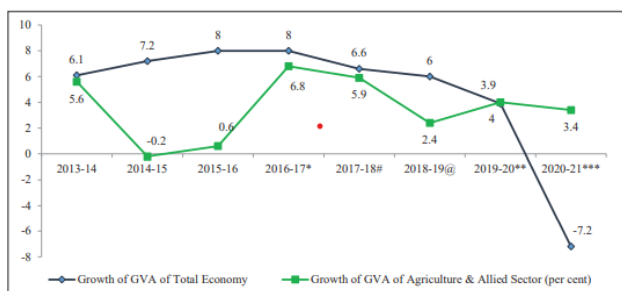
Per the provisional estimates of national income released by CSO on 29th May 2020, the country's share of agriculture and allied sectors in Gross Value Added (GVA) at current prices is 17.8 per cent for 2019-20⁽⁴⁾. The share of agriculture and allied sectors in GVA of the country has declined from 18.2 per cent in 2014-15 to 17.8 per cent in 2019-20[4], an inevitable outcome of a development process in which the relative performance of non-agricultural sectors becomes more dominant.

Items	Year					
	2014-15	2015-16	2016-17*	2017-18#	2018-19@	2019-20**
Share of GVA of Agriculture & Allied Sector in GVA of Total Economy (per cent)	18.2	17.7	18.0	18.0	17.1	17.8
Share of Crops	11.2	10.6	10.6	10.4	9.4	NA
Share of Livestock	4.4	4.6	4.8	5.1	5.1	NA
Share of Forestry & logging	1.5	1.5	1.5	1.4	1.3	NA
Share of Fishing & aquaculture	1.0	1.1	1.1	1.2	1.2	NA

Source: Department of Agriculture, Cooperation & Farmers Welfare (DAC&FW).

Agriculture and Allied Activities

The resilience of India's agriculture sector can be seen from the fact that despite the COVID-19 pandemic, its performance in output was substantial. About 54.6 per cent of the total workforce in the country are still engaged in agricultural and allied sector activities (Census, 2011), which accounts for approximately 17.8 per cent of the country's Gross Value Added (GVA) for the year 2019-20 (at current prices) Economic Survey (2022). While the difficulties created by COVID-induced lockdowns adversely affected the performance of the non-agricultural sectors, the agriculture sector came up with a robust growth rate of 3.4 per cent at constant prices during 2020-21. The National Statistical Office (NSO) estimates show that GDP growth in agriculture has increased from 2.4% in FY19 to 4% in FY20. It was also relatively better at 3.5% in Q3 of FY20.



Source: Based on data received from DAC&FW.

The adverse impact of COVID-19 on agriculture has been much less than on manufacturing and services. However, the initial lockdown did affect agricultural activities and the necessary supply chains through several channels: input distribution, harvesting, procurement, transport hurdles, marketing and processing.

Narayanan's (2020) study indicates that when the initial lockdown was imposed in March, farmers were stuck with harvest as APMC (Agricultural Product Market Committee) mandis closed in several states, disrupting food supply disruption from production to production in the consumption centres. Since supply chains have not been

working correctly, vast amounts of food were wasted, leading to 18 massive losses for Indian farmers.

According to a study based on purposive sampling from 560 districts of 33 States/UTs manned by 401 district development managers of NABARD (2020), all the subsectors have shown a decline in the magnitude of production, with poultry showing the highest decline of 19.6% followed by fisheries with a decline in production by 13.6%. Crop production has been the least impacted, with a decline of 2.7%. However, production in the allied sector had declined significantly, especially in the poultry sector (-19.5%), followed by the fisheries sector (-13.6%), Sheep/Goat/Pig (-8.5%), dairy (-6.6%) and horticulture (-5.7%).

The pandemic outbreak has hit the poultry and related sectors the hardest. Demand has fallen drastically due to the widespread fear circulating in the wake of COVID-19 that animal products were carriers of the Coronavirus and may be a source of the infection. The demand for milk has not been impacted much in the dairy sector. However, the demand for processed dairy products, viz. sweets, khoya, paneer, cream, etc., was adversely affected mainly due to demand disruptions caused by the lockdown.

The closure of hotels, restaurants, sweet shops, parlours, and street vendors reduced demand for dairy products. As a consequence of declining demand, dairy farmers were not getting remunerative prices for their milk, which ultimately led to decreased milk production. All these factors resulted in a decline in production in the dairy sectors by about 6% at all Indian levels within one month of the lockdown period.

The COVID-19 lockdown caused a drop in the market demand due to the closure of the outlets selling livestock products. With the closure of sweet shops and tea stalls, many private dairies were impacted, and they stopped milk procurement from the farmers. This resulted in the farmers diverting their milk to the cooperatives. As a result, milk procurement in the cooperative sector increased because, as per their mandate, they could not reject milk supplied by the farmers. The cooperatives face liquidity problems due to higher conversion into milk powder and white butter, which is caused by higher milk procurement.

All states except Gujarat (5%), Rajasthan (2.5%), and Karnataka (1.7%) have witnessed a decrease in horticulture production.

The full range of activities required to deliver fish and fish products from production to the final consumer is subject to indirect impacts of the pandemic through changing consumer demands, market access or logistical problems related to transportation and border restrictions. This has led to severe disruptions in the fisheries supply chain. Except for Telangana (an increase of 7%), all states witnessed a 14 decline in fisheries production.

A survey by Azim Premji University shows that 37% of farmers were unable to harvest, 37% had sold at reduced prices, and 15% were unable to sell the harvest. In rural areas, it is noted that non-farm incomes and employment have been rising. A NABARD (2020) survey shows that only 23% of rural income is from agriculture (cultivation and livestock) if we consider all rural households. Around 44% of income is from wage labour, 24% from government/private service and 8% from other enterprises. It shows that income from the non-farm sector is the primary source in rural areas. In the pre-Covid-19 period,

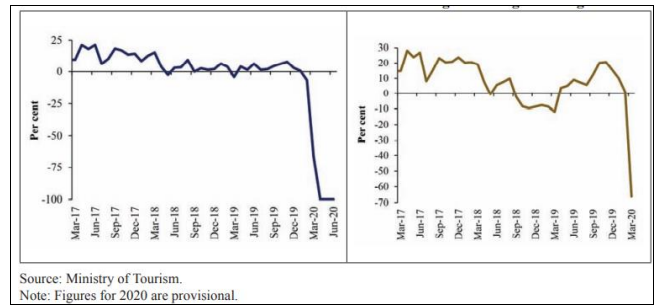
rural incomes were partly affected by lower real wage growth. However, the lockdown has affected urban areas more than rural areas.

Services Sector

The COVID-19 pandemic, the subsequent lockdown, and social distancing measures have significantly impacted the contact-intensive services sector. Air passenger traffic, rail freight traffic, port traffic, foreign tourist arrivals, and foreign exchange earnings all contracted sharply following the first lockdown announced in March 2020.

The service sector contracted by almost 16 per cent during the first half of 2020-21. A sharp contraction led to this decline in all subsectors, particularly trade, hotels, transport, communication, and services related to broadcasting, which contracted by 31.5 per cent in H1 FY 2020-21.

Sub-sectors 'Trade, hotels, transport, communication & broadcasting services', 'Financial, real estate & professional services', and 'Public administration, defence & other services' are estimated to contract by 21.41 per cent, 3.68 per cent and 0.82 per cent respectively, in the year 2020-21. According to the National Restaurant Association of India NRAI report (2021), the Indian food services industry has contracted by nearly 53 per cent. More than a quarter of the restaurants have been permanently closed. In FY21, the restaurant industry declined by 53 per cent and was estimated to be worth ₹2,00,762 crore, compared to ₹4,23,624 crore in FY20.



A study on the impact of Coronavirus on tourism conducted by Times of India (2020) has reported that the pandemic caused "significant" job losses in tourism after the implementation of the pandemic, saying that 14.5 million jobs were lost during the first quarter, followed by 5.2 million jobs lost in the second quarter and 1.8 million jobs lost in the third quarter of 20-21, after lockdown. It also states that 32 per cent of the staff employed by the industry's organised sector- 23 lakhs restaurant workers out of the total workforce of 75 lakhs – have lost their jobs.

According to an Economic Survey (2022), 2020-21, the information technology and business process management industry grew by 102 per cent, reaching US\$ 190.5 billion in revenues in 2019-20. It also added 1.8 million employees, up 70 per cent over the last ten years. Software & Engineering Services has witnessed consistent growth each year, constituting a share of 21 per cent in the sector and US\$ 40.2 billion in revenue in 2019-20. BPM Services has maintained its share at 19.8 per cent, while the Hardware services have been declining in share each year but maintaining growth in revenues. During 2019-20, the revenue growth for the IT-BPM sector (excluding hardware and e-commerce) made a recovery to reach 7.9 per cent, up from 6.8 per cent in 2018-19.

Ports handle around 90 per cent of export-import cargo by volume and 70 per cent by value in India. The consistent growth of around 6 per cent was maintained in overall port traffic between 2015-16 and 2018-19. However, it decelerated to 1.98 per cent in 2019-20 before falling sharply in 2020, owing to the lockdown in the wake of the COVID-19 pandemic. As a result, the turnaround time of ships, a crucial indicator of the efficiency of the ports sector, has declined from 4 days in 2014-15 to 2.62 days in 2020-21 (April-September).

However, it is pertinent to note that while the services sector contracted by over 20 per cent in the first quarter (Q1) of FY 2020-21, the contraction narrowed to 11.4 per cent in the second quarter (Q2) of FY 2020-21.

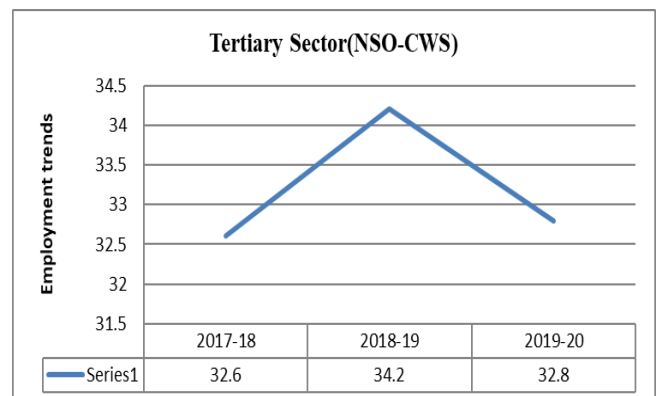
Sector	Share in GVA (per cent)		Growth (per cent YoY)			
	2020-21	2018-19	2019-20	2020-21	2020-21	2020-21
	(AE)	(1st RE)	(PE)	(AE)	(H1)	Q1 Q2
Total Services (Excluding construction)	54.3	7.7	5.5	-8.8	-15.9	-20.6 -11.4
Trade, hotels, transport, communication & services related to broadcasting	15.4	7.7	3.6	-21.41	-31.5	-47.0 -15.6
Financial, real estate & professional services	22.2	6.8	4.6	-0.82	-6.8	-5.3 -8.1
Public administration, defence & other services	16.7	9.4	10.0	-3.68	-11.3	-10.3 -12.2

Source: Ministry of Statistics and Programme Implementation.
 Note: Shares are in current prices and growth in constant 2011-12 prices; RE: Revised Estimates. PE: Provisional Estimates. AE: Advance Estimates

The COVID-19 pandemic has also debilitatingly impacted world travel and tourism, including India. According to the World Tourism Barometer of the United Nations World Tourism Organization (December 2020 edition), international arrivals fell by 72 per cent globally over the first ten months of 2020, with restrictions on travel, low consumer confidence, and a global struggle to contain the COVID-19 virus.

To contain the spread of the virus, the Director-General of Civil Aviation (DGCA) suspended all commercial international flights in March 2020. However, the ban has been extended till January 2021.

The growth rate of foreign tourist arrivals (FTA) declined from 14 per cent in 2017 to 5.2 per cent in 2018 and 3.5 per cent in 2019. Likewise, the growth rate of foreign exchange earnings (FEEs) declined from 19.1 per cent in 2017 to 4.7 per cent in 2018, increasing slightly to 5.1 per cent in 2019.



The tertiary sector shares a relatively decent portion of India's employment burden. The service sector has an employment share of about 32.6 per cent in 2017-18, 34.2 per cent in 2018-19 and 32.8 per cent in 2019-20. Due to the arrival of the COVID-19 pandemic, experts suggest a dip in employment levels in contact-based service sector fragments like the tourism and hospitality industries. The Economic survey of the year 2021-22 has demonstrated how contact-based services are poorly performed compared to contactless services like IT and business services, which had and still have the option to work and perform tasks remotely. The second wave and arrival of Omicron have a relatively lower impact on the service industry's growth and employment prospects, as observed by the Economic Survey.

The High-Frequency indicators, such as Google COVID-19 GMBR (2021), suggest a recovery path in the services sector. For example, mobility in retail and recreation has grown by 6% compared to baseline, and mobility in supermarkets, pharmacies, and parks has grown by 52% and 23%, respectively. Hence, unless a new wave intrudes the growth path, we can expect a strong recovery in the service sector.

The Incentivised Provided for Agricultural Sector - I

Despite the COVID-19 pandemic, agricultural output performance was substantial. The sector has received a renewed thrust due to various measures, including credit, market reforms, and food processing, under the Atma Nirbhar Bharat announcements. The Hindu (2022) reported that the finance minister announced a ₹1 lakh crore Agriculture Infrastructure Fund to create farm-gate infrastructure for farmers. The scheme provides a medium to long-term debt financing facility for investment in viable projects for post-harvest management infrastructure and community farming assets. To support Micro Food Enterprises (MFE), the Government has allocated 10,000 crores to those who require technical upgrades to meet FSSAI food standards, build brands, and enhance marketing support. Various Government interventions for the development of allied sectors, including animal husbandry, dairying, and fisheries, demonstrate its resolve to tap the potential of these sectors further to enhance farm welfare. Under Pradhan Mantri Matsya Sampada Yojana (PMMSY), 20,000 crores were allocated to fishers. It aims to develop integrated, sustainable, and inclusive marine and inland fisheries by developing infrastructure such as fishing harbours, cold chains, markets, etc.

Steps were also taken to maintain close surveillance of the milk situation and facilitate the resolution of issues related to the forward and backward linkages for a smooth supply of milk and milk products during the lockdown, Cariappa, (2021). As one-time support, a sub-scheme for providing interest subvention on working capital loans was designed for the financial year 2020-21 under the ongoing scheme State Dairy Cooperative & Farmers Producers Organization (SDCFPO) to provide interest subvention of 2 per cent per annum, with an additional incentive of 2 per cent interest subvention for prompt and timely repayment to the financially stressed milk unions. After a budget announcement that included the livestock sector in Kisan Credit Card in February 2020, 1.5 crores of dairy farmers of milk cooperatives and milk producer companies were targeted to provide Kisan Credit Cards (KCC).

Also, a stimulus package of 15,000 crores for the Animal Husbandry Infrastructure Development Fund has been set up. The AHIDF will incentivise investments by individual entrepreneurs and private companies, including MSME, to establish dairy processing and value-added infrastructure, meat processing and value-added infrastructure, and animal feed plants.

The new scheme, Pradhan Mantri Matsya Sampada Yojana (PMMSY), was launched in May 2020 by the Government of India as part of the Atma Nirbhar Bharat Package. It will invest an estimated 20,050 crores in fisheries development for five years from FY 2020-21 to FY 2024–25.

These reforms are steps towards the One Nation, One Market objective and help India become the world's food factory. Moreover, they would finally help achieve the goal of a self-sustainable rural economy. Also, the MGNREGA infusion of Rs 40,000 crore may help alleviate migrants' distress when they return to their villages.

However, the details were disappointing to the Hindu (2020). The total fresh spending for agriculture in the package is less than ₹5,000 crore. The rest are schemes already included in past Budgets, announcements with no financial outgo, or liquidity/ loan measures routed through banks. The package also failed to provide financial support to farmers.

Industrial Sector - II

While writing this research, we note that the global economic environment has fluctuated. The Hindu (2022) warned India about increasing oil prices, which would harm consumption and Indian recovery post-pandemic. Ongoing geopolitical tensions between Russia and Ukraine amplify the supply-side slump induced by the COVID-19 pandemic. The Industrial experts and Moody's Analytics hint at the decreased supply of microchips in the global market. This supply shortage is induced by Russia controlling about 44 per cent of global palladium supplies, and Ukraine controls about 70 per cent of global neon supplies, which are critical raw materials in chip production. The Economics survey (2022) has elaborated on how chip production will hit various industries by considering automobiles as a particular case. Hence, given such a profound crisis in the world and the Indian economy, it is appropriate to look at and assess the government intervention to understand the future recovery path better.

The Indian Government, during the earlier phase of the pandemic-induced crisis and the subsequent phase of pandemic recovery, has advocated for Atmanirbhar Bharat (a self-reliant India). The PM of the country has also urged Indians to be 'vocal for local' Times of India(2020a). This call has two connotations attached, i.e., the moral and social responsibility of Indians to stand by Indians during tough times. The second interpretation calls for discovering an uninterrupted, self-reliant, alternative supply chain. Incentives like the Production Linked Incentive scheme are worth mentioning—however, the scheme aimed to increase incentives for production in India. The more profound interpretation of such a scheme also allows us to look at it through the urge to diversify the supply chain and, if not, create a new one altogether. The FDI policy reforms in sectors like Defence and Insurance, which the Government took, are also essential in attracting continuous fund flow and expertise. The redefinition of MSMEs by expanding the

limit of turnover and profits and removing irrational service and manufacturing dichotomy of earlier definition is a welcome step, as now more small enterprises can get incentives from MSME schemes. The little incentives like the CHAMPIONS portal, which is established as a hub and spoke model to handhold small enterprises till they grow large, will create a conducive environment for enterprise development in the country, aiding in the recovery of a pandemic now and in future. Another scheme PM MITRA is to strengthen the textile sector by developing integrated large-scale and modern industrial infrastructure facilities for the entire value chain of the textile industry, which will provide enough impetus for one of the largest employing verticals in the manufacturing sector. India is often regarded as the Pharmacy of the World, but India requires a continuous supply of APIs to be a natural leader in pharmacy. For APIs, we now depend on China in a high proportion. So, to counter such a trend, the Indian Government has launched The Scheme for the Promotion of Bulk Drug Parks to make India a true leader in pharmacy by providing world-class infrastructure. This year's budget has committed to launching PM GATI SHAKTI (2023), providing the Indian industry with essential infrastructure that will positively spill over into the industrial climate.

This set of incentives will have a prolonged positive effect on the Industries. These Incentives, along with liquidity easing policies of RBI and additional credit facilities granted to MSME and NBFCs, will have a positive and sustained effect on the path of recovery. However, though the fluctuations of the economy are accounted for in the decision-making process, as stated by the Finance Minister, The Hindu(2022b), the magnitude of fluctuations experienced by the world due to geopolitical tension between Russia and Ukraine are not taken into account on precision. So, continuous policy evaluation and sufficient intervention by the Government are advised.

Services Sector -III

In the wake of the COVID-19 pandemic, most of the services sector's subsectors witnessed a contraction in growth during 2020-21. In addition, aviation and tourism declined sharply in 2020.

The Centre rolled out a whopping Rs 20.9 lakh crore stimulus package to pull the economy out of the pandemic's ravages. The package focused on the MSME sector, employee provident fund, power distribution companies and taxation, among other affected areas. Most of the stimulus package involves funding, loan opportunities, and liquidity in the market. While the package is a beam of hope for some, it has overlooked the plight of the services sector. The sector finds little mention or attention in the Government's Atmanirbhar Reform Package, The Indian Express (2020).

Most job losses have been in this sector. Given the crisis and their enormous share in the country's economy, it is baffling that the Government has failed to include them in the various Covid revival packages unveiled over the past year The Tribune (2021).

However, to improve the Ease of Doing Business in the IT Industry, particularly Business Process Outsourcing (BPO) and IT-enabled services, the Government, in November 2020, simplified the Other Service Provider (OSP) guidelines of the Department of Telecom. The new guidelines tremendously reduce the compliance burden of the BPO industry and enable 'Work from Home (WFH). In

addition, the Government has embarked on the ambitious Sagarmala Programme to promote port-led development. The vision of the Programme is to reduce the logistics cost of exports, imports, and domestic trade with minimal infrastructure investment.

With COVID-19 infections having fallen drastically and vaccinations having been stepped up, the tourism and hospitality industries are rebounding again. Aviation companies are relieved as air passengers throng airports, while the hospitality sector is also returning to normal.

The outlook has also become precarious with the discovery of yet another variant, identified initially in South Africa, and given the name of Omicron by the World Health Organisation (WHO). Hence, even if there is a third wave of infections, they have stressed that these are not likely to have as disastrous an outcome as the second wave. However, the entry of the new variant has brought a new set of apprehensions. Even though reports indicate that it triggers mild symptoms which do not need hospitalisation, there is already a knee-jerk reaction by some countries which are selectively shutting their borders. In such a scenario, there is again fear that the weakest sector of the economy - services and tiny enterprises - will face the brunt if movement curbs are implemented.

A revival package should be formulated and launched as soon as possible. The GDP data may be encouraging, but a large swathe of the economy, much of it in the informal sector, is falling behind the others. The Government must not wait any longer to take action on this front, Hans India (2021).

Conclusion and Suggestion

The COVID-19 pandemic is undoubtedly a "once-in-a-century crisis." The magnitude of its impact on people's lives and livelihoods is unimaginably high. The dark scenes like migrant workers' return, the floating dead bodies and heaps of worry clouds above are still fresh. The pandemic-induced economic halt is unique in its formation and structure; the earlier known economic crash downs of this magnitude are explained mainly by the economic variables (e.g., the Global Financial Crisis of 2008), but this pandemic is a web of health, human and economic crisis making it more complex and unique downfall. The supply chain crash and consumer fears about an uncertain future have steeped the growth rate and aggregate output. The lockdown has become the most authoritarian medicine available, and it has crashed down all the socio-economic improvements of the past decade. The people living at the lowest strata have to search all sources to have a meal for the day, and even the rankings and observations of the Global Hunger Index (2021) are alarming for India. Amid such fears, the Government intervened by launching schemes like the Pradhan Mantri Garib Kalyan Anna Yojana, PM-GKAY-(2021), which is part of Atmanirbhar Bharat to supply free food grains to migrants and people experiencing poverty. PM Garib Kalyan Rojgar Yojana (2020) will employ migrant workers who returned amid fears of the pandemic.

Amidst such gloomy clouds hovering over the economy, agriculture has stood out as a bright spot, with a positive growth rate. In contrast, the industry and contact-based services have sunk into crisis. The 2019-20 economic survey expected the economy to bounce back swiftly, translating into a V-shaped recovery path. However, a more detailed investigation and research into the growth of

various sectors have shown that the K-shaped growth path seems appropriate in the Indian context. While there are debates about which path the Indian economy should take, the contentions seem to have subsided on growth, as the Indian economy has improved following the pandemic halt. Although recovery has begun and the magnitude of its speed is debated, recovery takes time. "Though there is light at the end of the tunnel, the road ahead is still dark and long" The Hindu(2020c). Sowmya Swaminathan. Though the quote is said in the context of the virus spread and health crisis, it also aptly represents the country's economic condition. The shocks to the economy are ever-evolving. The dynamics of shocks continue to change and challenge. The pandemic risk has subsided, but the ongoing geopolitical tension between Ukraine and Russia further amplifies the shock to the economy. The experts also express concerns regarding the potential re-emergence of the US Federal Reserve-induced Taper Tantrum, as seen in 2022. The credit rating agencies also expressed concerns about the potential for stagflation. Hence, although pandemic risk has subsided, economic shocks to the interconnected economies are ever-evolving and remain challenging. It is the responsibility of experts, governments, and institutions always to be prepared for ever-increasing risks and challenges.

References

- Annual Report-2013-14(MoL&E, GoI) Report on Employment in Informal Sector and Conditions of Informal Employment (2013-14). <https://labour.gov.in/sites/default/files/Report%20vol%204%20final.pdf>
- Business Standard (2021). Manufacturing employment is nearly half of what it was five years ago (2021). https://www.business-standard.com/article/economy-policy/ceda-cmie-bulletin-manufacturing-employment-halves-in-five-years-121050601086_1.html
- Business Today (2021). COVID-19, the first wave pushed 23 crore Indians into poverty: Azim Premji University. <https://www.businesstoday.in/jobs/story/covid-19-first-wave-pushed-23-crore-ndians-into-poverty-azim-premji-university-295173-2021-05-06>
- Cariappa AG Adeeth, Kamlesh Kumar Acharya, Chaitanya Ashok Adhav, R Sendhil, P Ramasundaram (2021). Impact of COVID-19 on the Indian agricultural system: A 10-point strategy for post-pandemic recovery, <https://journals.sagepub.com/doi/full/10.1177/0030727021989060>
- Dev S. Mahendra & Rajeswari Sengupta (2020). Covid-19: Impact on the Indian economy, Indira Gandhi Institute of Development Research, Mumbai Working Papers 2020-013, Indira Gandhi Institute of Development Research, Mumbai, India. <https://ideas.repec.org/p/ind/igiwpp/2020-013.html>
- Economic Survey (2021-2022). <https://www.indiabudget.gov.in/economicsurvey/>
- Economics Times (2021). Share of agriculture sector in employment sees steady increase: CMIE, <https://economictimes.indiatimes.com/news/economy/indicators/share-of-agriculture-sector-in-employment-sees-steady-increase-cmie/articleshow/85266073>.
- Global Hunger Index (2021). <https://www.welthungerhilfe.org/hunger/global-hunger-index/>
- GMBR (2021). Google Community Mobility Reports. <https://www.google.com/covid19/mobility/>
- ILO Monitor (2021). COVID-19 and the world of work, seventh edition (2021). https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/briefingnote/wcms_767028.pdf
- Ilaiah M & Lal B Suresh (2019). Agrarian Distress and Farmers Suicides in Telangana State, The Indian Economic Journal, December. <https://www.researchgate.net/publication/338447859>
- Impact of lockdown on the mining industry in India (2021). <https://link.springer.com/article/10.1007/s13563-021-00263-6>
- Invest India (2021). <https://www.investindia.gov.in/sector/construction>
- KPMG (2020). Impact of COVID-19 on the mining sector of India (2020). <https://assets.kpmg/content/dam/kpmg/in/pdf/2020/05/impact-of-covid19-on-mining-sector.pdf>
- Lal B Suresh & Ravindar Musham(2020a). Globalisation and Agriculture: A Case Study in Karimnagar. <https://www.researchgate.net/publication/339899508>
- Lal B Suresh, Phalguni Sachdeva, Simran & Tanu Mittal, (2020). Impact of Covid-19 on micro small and medium enterprises (MSMEs): An overview, International Journal of Multidisciplinary Research and Development, Volume 7; Issue 12; Page No. 05-12. <https://www.researchgate.net/publication/363534094>
- Lal B Suresh. (2020b). Health and economic shocks of COVID-19. 7. 06–12. 10.22271/ijmrd.2020.v7.i4.02. <https://www.researchgate.net/publication/340679097>
- Lal B Suresh & Padma A (2005). Empowerment of Tribal Women in Andhra Pradesh, Southern Economist, Vol.44, Issue-15&16, December. <https://www.researchgate.net/publication/339016781>
- Live mint (2022). India is better prepared to handle taper tantrums this time, according to Eco Survey (2022). <https://www.livemint.com/budget/economic-survey/india-is-better-prepared-to-handle-taper-tantrum-this-time-says-eco-survey-11643623564026.html>
- Mitra Sona & Dipa Sinha (2021). COVID-19 and Women's Labour Crisis Reiterating an Inclusive Policy Response. https://iwage.org/wp-content/uploads/2021/05/COVID19-and-Womens-Labour-Crisis_Reiterating-an-Inclusive-Policy-Response.pdf
- NABARD (2020). Impact Assessment of COVID-19 on Indian Agriculture and Rural Economy, <https://www.nabard.org/auth/writereaddata/tender/1211203145Impact%20Assessment%20of%20COVID.pdf>
- NRAI report (2021). Covid shrinks India's restaurant industry by half: <https://www.thehindubusinessline.com/news/restaurant-industry-contracts-53-due-to-pandemic-nrai-report/article37164765.ece>

23. PM Garib Kalyan Rojgar Yojana (2020). <https://pib.gov.in/PressReleasePage.aspx?PRID=1632861>
24. PM-GKAY-(2021). Vikaspedia - Pradhan Mantri Garib Kalyan Anna Yojana (PM-GKAY). <https://vikaspedia.in/schemesall/aatma-nirbhar-bharat-abhiyaan/pradhan-mantri-garib-kalyan-anna-yojana-pmgkay>
25. The Centre for Monitoring Indian Economy (CMIE), (2020). <https://www.cmie.com/>
26. The Hans India (2021). The COVID-battered services sector needs a revival package (2021). <https://www.thehansindia.com/business/covid-battered-services-sector-needs-revival-package-718281?infinitemscroll=1>
27. The Hindu (2020). An agriculture-led revival as the flawed claim (2020). <https://www.thehindu.com/opinion/lead/an-agriculture-led-revival-as-flawed-claim/article32575457.ece>
28. The Hindu(2020c). Long road ahead despite COVID vaccine, warns WHO official (2020). <https://www.thehindu.com/news/national/long-road-ahead-despite-covid-vaccine-warns-who-official/article33368343.ece>
29. The Hindu (2022). India is good at managing finances, but the rise in global energy prices will hurt it, says IMF MD (2022). <https://www.thehindu.com/business/Economy/india-good-at-managing-finances-but-global-energy-price-rise-will-hurt-it-says-imf-md/article65213621.ece>
30. The Hindu(2022a). SP warns that soaring Energy Prices could hit growth and consumption (2022). <https://www.thehindu.com/business/Economy/soaring-energy-prices-could-hit-growth-consumption-sp-warns/article65207922.ece>
31. The Hindu(2022b). FM Nirmala Sitharaman is concerned about rising crude oil prices. <https://www.thehindu.com/business/Economy/fm-nirmala-sitharaman-airs-concern-over-rising-crude-oil-price/article65204377.ece>
32. The Indian Budget 2022-23. <https://www.indiabudget.gov.in/>
33. The Indian Express (2020). The services sector, the driver of India's growth, has been left out of the Centre's relief package (2020). <https://indianexpress.com/article/opinion/columns/service-sector-jobs-economy-covid-un-serviced-sector-6571279/>
34. The Oxford Covid-19 Government Response Tracker (OxCGRT)(2021). <https://www.bsg.ox.ac.uk/research/research-projects/covid-19-government-response-tracker>
35. The Tribune (2021). The services sector needs a revival package (2021). <https://www.tribuneindia.com/news/comment/services-sector-in-need-of-revival-package-292446>.
36. Times of India (2020). Covid impact on tourism, <https://timesofindia.indiatimes.com/business/india-business/covid-impact-of-tourism-14-5-million-jobs-lost-in-2020s-q1-alone/articleshow/84573975.cms>
37. Times of India(2020a). 'Vocal for local should become mantra for every Indian': PM Modi (2020). <https://timesofindia.indiatimes.com/india/vocal-for-local-should-become-mantra-for-every-indian-pm-modi/articleshow/77557766.cms>
38. UNCTAD (2021). Covid-19 and Tourism an update, https://unctad.org/system/files/official-document/ditcinf2021d3_en_0.pdf