COVID-19 Pandemic and the Great Economic Crisis of India

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Objectives

The paper examines the COVID-19 Pandemic induced economic crisis in India.

It is presented in two parts

1) Origin and spread of COVID-19 pandemic and its impact in the world.

2) The spread of COVID-19 and the pandemic induced economic crisis in India.

PART I
Origin and spread of COVID-19 and its impact in the World

- During the past one century, five influenza pandemics viz. Spanish flu (1918-1919), Asian flu (1957-1958), Hong Kong flu (1968), Swine flu (2009-2016) and COVID-19 (2019-2022) had disrupted human lives on a global scale.
- Among these, the 1918 Spanish flu was the worst pandemic, which killed an estimated 20 to 50 million people worldwide.
- Though, the COVID-19 pandemic has a low mortality rate compared to the 1918 Spanish flu, it spread to 171 countries in the World within two months.

- The pandemic which spread like a forest fire throughout the World has paralysed large parts of the global economy, sharply restricted economic activities, created uncertainties and unleashed the deepest recession since 1945-46.
- According to World Bank, the largest share of countries in the world have experienced contractions in annual per capita Gross Domestic Product (GDP) since 1870.
- The Indian economy and the regional economy of Kerala experienced the worst recession since 1951-52.
- These global change have a huge adverse impact on Kerala, a state which is highly integrated with the world economy. The pandemic has created unprecedented health crisis in the state.

- It has created unprecedented fall in investment, fall in production of goods and services, large scale loss of jobs, exodus of Keralite emigrant workers from Gulf countries, heavy fall in remittances, acute fiscal crisis of the state and pushed a large number of people to unemployment and poverty.
- It has accelerated a process of structural change such as vanishing traditional activities, emergence of new activities, shift to information technology (IT) based activities, rapid digitalisation, new infrastructural requirements etc.

Spread of COVID-19 in the World

- The COVID-19 which has an origin in Wuhan City, Hubei, Province in China in December 2019. It began to spread at an unprecedented speed throughout the World within a short period.
- According to WHO, the pandemic spread to 22 countries till January 31, 2020.
- By March 2020, the countries which were affected by COVID-19 increased from 57 to 171.
- The number of COVID-19 cases in Italy increased from 2 in January 29, 2020 to 1,05,752 in April 1, 2020.

- There has been a substantial increase in the number of death in Italy due to COVID-19.
- Italy is the European nation with the highest number of air connections with China.
- It is reported that the origin of COVID-19 infected in at least 27 countries could be traced to Italy or Italians.
- The pandemic began to spread an unprecedented speed across all regions and countries in the World within the first three months of 2020.

COVID-19 Cases and Deaths in the World

- There has been a continuous increase in COVID-19 cases and deaths during the three years, 2020, 2021 and 2022 (Table 1).
- During 2022, the COVID-19 deaths has increased from 54.55 lakh in January 2022 to 66.16 lakh in December 2022.
- As on December 1, 2022 the total COVID-19 cases was 63.98 crore.
- The countries which reported the largest number of COVID-19 cases are USA, India, France, Germany and Brazil as on December 1, 2022 (Table 2).
- The countries which reported largest number of COVID-19 deaths are USA, Brazil, India and Russia.

Table 1
Total COVID-19 cases and deaths across the World

Month/Date	Total Number		Growth rate (%)	
	Cases	Deaths	Cases	Deaths
2020				
April 1	8,99,971	48,591	-	-
July 2	1,06,84,425	5,61,591	1087.2	1055.8
October 1	3,47,36,658	11,05,187	225.1	96.8
2021				
January 2	8,43,30,910	19,54,516	142.8	76.8
April 1	12,88,43,747	29,53,283	52.8	51.1
July 1	18,22,78,385	39,74,129	41.5	34.6
October 2	23,45,88,214	48,15,645	28.7	21.2
2022				
January 1	28,90,83,418	54,55,387	23.2	13.3
April 1	48,74,25,311	61,61,990	68.6	13.0
Jun 1	52,77,57,564	62,93,055	8.3	2.1
Dec 1	63,98,42,773	66,16,438	21.2	5.1

Source: WHO. COVID-19 Dashboard

Table 2
Total COVID-19 cases and deaths in the World (as on December 1, 2022)

No	Country	Cases	Death
1	USA	9,73,29,491	10,69,757
2	India	4,46,72,638	5,30,622
3	France	3,67,68,890	1,55,331
4	Germany	3,65,09,047	1,58,106
5	Brazil	3,52,32,625	6,89,665
6	Republic of Korea	2,71,55,813	30,568
7	Japan	2,49,11,367	49,826
8	Italy	2,42,60,660	1,81,098
9	UK	2,40,22,584	1,97,253
10	Russian Federation	2,15,97,613	3,92,060
Other Countries		26,73,82,045	31,62,152
Total World		**63,98,42,773**	**66,16,438**

Source: WHO. COVID-19 Dashboard

Patterns of Pandemic

- Observed patterns of pandemics in history tell us that pandemics are likely to wither in intensity, with sporadic breakouts of limited impact until they become endemic.

- The COVID-19 pandemic will go down in history as one of the worst health crises the world has ever faced.

- Its economic impact may linger for many more years and confront us challenges of rebuilding livelihoods, safeguarding businesses and reviving the economy.

Hypotheses on origin of COVID-19 pandemic

Natural Evolution Hypothesis

- Chinese health authorities first linked the outbreak of corona virus to a sea food and live animal market in Wuhan, selling living wild animals for meat.
- They pointed out that a similar incident had happened earlier.
- And the Chinese government propagated that the virus was originated by natural evolution.
- But due to lack of scientific evidences, the scientists in the western countries rejected the hypothesis.

Creation of new virus hypothesis

- Nicholas wade and two others, Angus Dalgleish and Birger Sorensen have presented evidence to prove that corona virus is a mutated new virus.
- According to them it is a new mutated virus created in the lab at Wuhan Institute of Virology (WIV) using gain of functions research method.

Research related incidence hypothesis

- The US Senate Committee on Health, Education, Labour and Pension (HELP), 2022 which examined the origin of COVID-19 pandemic has rejected the natural evolution hypothesis due to lack of any evidences.

- They said that research-related incidents in labs such as, human errors, mechanical failure, animal bites, animal escapes, inadequate training, insufficient funding, poor quality labs, inadequate safety standards etc can lead an escape of a virus from a lab.
- The committee presents a lot of evidences to indicate the poor maintenance of lab, lack of qualified staff, lack of funds, poor standards of bio safety and bio security of Chinese labs engaged in corona virus research.
- The Chinese government has not allowed WHO team to examine the safety standards of the labs.
- The HELP Committee report concludes that the COVID-19 pandemic was, more likely the result of a research-related incident like infection of virus to a researcher in Wuhan.

COVID-19 Induced Recession: The deepest global recession since 1945-46

- The COVID-19 pandemic had paralysed large parts of the global economy, sharply restricted economic activities, created uncertainties and unleashed a severe recession during the year 2020.
- Available evidences suggest that the global recession of 2020 induced by COVID-19 pandemic is the third worst global recession since 1870.
- Among the recessions, the worst recession was experienced during 1930's (1930-32) and the second worst during the years 1945-46.

- The COVID-19 induced recession is considered as the deepest since 1945-46 and more than twice as deep as the recession associated with 2007-09 global financial crisis (World Bank 2020).
- It is estimated that in the year 2020 the largest share of countries in the world had experienced contractions in annual per capita GDP since 1870.
- The important factors that contributed to the past global recessions were wars, financial crisis, change in monetary and fiscal policies, sharp movements in oil prices, financial disruptions, exchange rate crisis, transitions from central planning etc.
- But the sole factor which contributed to 2020 global recession is COVID-19 pandemic and the disruptions created by it.

Economic and Social Impact of COVID-19 on the world

The Committee for the Coordination of Statistical Activities (CCSA) of United Nations has identified the following broad changes in the World due to COVID-19 pandemic (CCSA, 2021).

- ILO estimated that 8.8 per cent of global working hours were lost in 2020, equivalent to 255 million full-time jobs. These losses were four times greater as those incurred during the global financial crisis in 2009.
- International tourism recorded its worst year ever on record; international tourism declined by 74 percent.

- Aviation passenger traffic declined by 60 percent in 2020, while shipping activity—as measured by vessel port calls—likely declined by around 10 percent.
- World merchandise exports were down 11 percent year-on-year from January to September.
- School closures have affected approximately 90 percent of children worldwide.
- COVID-19 has had an unprecedented impact on global extreme poverty. The pandemic is estimated to have pushed between 119 and 124 million people into extreme poverty in 2020 i.e. those living under $1.90 a day in 2020.

- Global Human Development's worst drop since 1990. Simulations of the pandemic's impact suggest that during 2020, all the capabilities accounted for in the Human Development Index were severely affected: a fall equivalent to seven years of progress.
- Carbon dioxide CO_2 emissions declined 6 percent in 2020 largely attributable to reduced activity in aviation and transport.

PART II: COVID-19 and the Pandemic Induced Economic Crisis in India

Spread of COVID-19 in India

- India reported the first case of the coronavirus infection on January 30, 2020 in the state of Kerala.
- India has experienced three waves of infections.
- The first wave, dominated by the alpha variant, was less infectious and virulent.
- The delta variant dominated the second wave and the peak of the wave was attained on May 6, 2021.
- The third wave, which started in the last week of December 2021 and began to subside after January 20, 2022, was dominated by the Omicron variant, a highly infectious one.

Growth of cases and deaths

- The growth in the number of cases and deaths was low between January 30, 2020 and April 1, 2020 (Table 3).

- The lockdown implemented in India between March 25 and May 31, 2020 (68 days) had helped to contain the spread of the infection to a great extent.

- But there had been a rapid increase in its spread of the pandemic since July 1, 2020.

- By January 1, 2021, the number of COVID-19 cases crossed more than one crore in the country (103 lakh) and the number of deaths more than 1.49 lakh.

- Though the spread of COVID-19 cases and deaths in India was lower during the year 2020, the position had drastically changed in 2021 and 2022.

- By June 1, 2022 India become the second country having the largest number of COVID-19 cases and deaths in the World.

Table 3
Spread of COVID-19 cases and deaths in India

Month/Date	Total Number		Growth rate (%)	
	Cases	Deaths	Cases	Deaths
2020				
January 30	1	0	-	-
April 1	2,059	58	205800.0	
July 1	6,05,221	17,848	29293.9	30672.4
October 1	63,92,049	99,807	956.2	459.2
2021				
January 1	1,03,06,469	1,49,255	61.2	49.5
April 1	1,23,02,115	1,63,428	19.4	9.5
July 1	3,04,57,549	4,00,346	147.6	145.0
October 31	3,42,85,612	4,58,470	12.6	14.5
2022				
Jan 1	3,48,61,579*	4,81,486*	1.7	5.0
July 1	4,34,69,234*	5,25,139*	24.7	9.1
Dec 1	4,46,72,638*	5,30,622*	2.8	1.0

Source: COVID19India (From Jan 30, 2020 to Oct 31, 2021)
* WHO. COVID-19 Dashboard

State wise Growth of COVID-19

- The growth in COVID-19 cases and deaths of Indian states between October 1, 2020 and October 31, 2021, witnessed a spurt (Table 4).
- Here we have taken states and union territories which had total cases above two lakh as on October 31, 2021.
- Among the states and union territories in India, the state which registered the highest growth rate was Kerala.
- Himachal Pradesh rank second, Chhattisgarh third, Uttarakhand fourth and Rajasthan fifth position with respect to the highest growth rate in COVID-19 during the period.
- Among the states, the least increase was witnessed in the state of Andhra Pradesh.

Table 4: Total COVID-19 cases in India

No	STATE/UTs	Oct 1, 2020 (Number)	Oct 31, 2021 (Number)	Growth rate (%)
1	Maharashtra	14,00,922	66,11,078	371.9
2	Andhra Pradesh	7,00,235	20,66,450	195.1
3	Karnataka	6,11,837	29,88,333	388.4
4	Tamil Nadu	6,03,290	27,02,623	348.0
5	Uttar Pradesh	4,03,101	17,10,158	324.3
6	Delhi	2,82,752	14,39,870	409.2
7	West Bengal	2,60,324	15,92,908	511.9
8	Odisha	2,22,734	10,41,457	367.6
9	Kerala	2,04,242	49,68,657	2332.7
10	Telengana	1,93,600	6,71,463	246.8
11	Bihar	1,84,276	7,26,098	294.0
12	Assam	1,82,396	6,10,645	234.8
13	Gujarat	1,38,745	8,26,577	495.8
14	Rajasthan	1,37,485	9,54,429	594.2
15	Madhya Pradesh	1,30,088	7,92,854	509.5
16	Haryana	1,29,912	7,71,252	493.7
17	Chhattisgarh	1,16,153	10,06,052	766.1
18	Punjab	1,15,151	6,02,401	423.1
19	Jharkhand	84,664	3,48,764	311.9
20	Jammu and Kashmir	76,163	3,32,249	336.2
21	Uttarakhand	49,248	3,43,896	598.3
22	Himachal Pradesh	15,219	2,24,106	1372.5
23	Other States & UTs	1,49,512	9,53,292	537.6
Total India		63,92,049	3,42,85,612	436.4

Source: WHO. COVID-19 Dashboard

COVID-19 Deaths

- A review of growth in COVID-19 deaths between October 1, 2020 and October 31, 2021 shows that the state registered the largest increase was Kerala (Table 5).

- The state of Himachal Pradesh rank the second position with respect to deaths.

- Chhattisgarh rank third and Uttarakhand fourth position with regard to growth in deaths.

- Among the states the least increase was reported in Andhra Pradesh.

Table 5: Total COVID-19 deaths in India

No	STATE/UTs	Oct 1, 2020 (Number)	Oct 31, 2021 (Number)	Growth rate (%)
1	Maharashtra	37,056	1,40,216	278.4
2	Tamil Nadu	9,586	36,116	276.8
3	Karnataka	8,994	38,082	323.4
4	Andhra Pradesh	5,869	14,373	144.9
5	Uttar Pradesh	5,864	22,900	290.5
6	Delhi	5,401	25,091	364.6
7	West Bengal	5,017	19,141	281.5
8	Gujarat	3,463	10,089	191.3
9	Punjab	3,451	16,559	379.8
10	Madhya Pradesh	2,336	10,524	350.5
11	Rajasthan	1,500	8,954	496.9
12	Haryana	1,402	10,049	616.8
13	Jammu and Kashmir	1,198	4,432	269.9
14	Telengana	1,135	3,956	248.5
15	Chhattisgarh	986	13,577	1277.0
16	Odisha	912	8,386	819.5
17	Bihar	906	9,661	966.3
18	Kerala	772	31,681	4003.8
19	Jharkhand	721	5,138	612.6
20	Assam	711	5,997	743.5
21	Uttarakhand	625	7,400	1084.0
22	Himachal Pradesh	190	3,738	1867.4
23	Other States & UTs	1,712	12,410	624.9
	Total India	99,807	4,58,470	359.4

Source: WHO. COVID-19 Dashboard

Statewise cases as on December 4, 2022

- Till December 4, 2022 the total cases in India was 446.73 lakh
- Maharashtra has the largest number of cases (Table 6)
- Kerala has the second largest number of cases
- The other states having large number of cases (more than 20 lakhs) are Karnataka, Tamil Nadu, Andhra Pradesh, Uttar Pradesh, West Bengal and Delhi.

State wise cases of deaths as on December 4, 2022

- Till December 4, 2022, the total COVID-19 deaths in India was 5.30 lakh
- Maharashtra has the largest number of deaths (Table 6).
- Kerala rank second position with respect to deaths
- Other states having large number of deaths (more than 20,000) are Karnataka, Tamil Nadu, Uttar Pradesh, West Bengal and Delhi.
- Telangana and Himachal Pradesh reported a lower number of deaths.

Table 6: Total COVID-19 cases and deaths in India (as on December 4, 2022)

No	STATE/UTs	Cases	Death
1	Maharashtra	81,35,977	1,48,407
2	Kerala	68,26,658	71,502
3	Karnataka	40,71,388	40,303
4	Tamil Nadu	35,94,198	38,049
5	Andhra Pradesh	23,39,058	14,733
6	Uttar Pradesh	21,28,042	23,632
7	West Bengal	21,18,494	21,531
8	Delhi	20,06,996	26,518
9	Odisha	13,36,467	9,205
10	Rajasthan	13,15,274	9,653
11	Gujarat	12,77,464	11,043
12	Chhattisgarh	11,77,733	14,146
13	Haryana	10,56,532	10,714
14	Madhya Pradesh	10,54,905	10,776
15	Bihar	8,51,354	12,302
16	Telengana	8,41,130	4,111
17	Punjab	7,84,140	19,289
18	Assam	7,46,099	8,035
19	Jammu and Kashmir	4,79,372	4,785
20	Uttarakhand	4,49,292	7,751
21	Jharkhand	4,42,567	5,331
22	Himachal Pradesh	3,12,581	4,213
23	Other States & UTs	13,27,897	14,601
Total India		**4,46,73,618**	**5,30,630**

Source: https://www.mygov.in/corona-data/covid19-statewise-status/

Vaccination in India

- The COVID-19 vaccine was launched in India on January 16, 2021.

- The first category of people who got priority in vaccination was health care and front line workers, who are worked in medical institutions, administration, police etc.

- The second category of people who received COVID-19 vaccine was old age people (persons over 60 years of age) and persons between 45 and 59 with comorbid conditions from March 1, 2021.

- The vaccination for persons over 45 years of age and 18-44 age group were started from April 1, 2021 and May 1, 2021 respectively.

- Vaccination of the youth in the age group 15-18 years was started on January 3, 2022.

- This measure has finally helped to contain the spread of the pandemic.

Lockdown in India

- The Government of India implemented a lockdown for the entire country of India from 25th March 2020 to April 14, 2020 for 21 days.
- The nationwide lockdown was further extended to 3 phases up to 31st May 2020 (Table 7).
- Subsequently, the lockdown was unlocked by giving a number of relaxations in a phased manner. In the five phases of unlock covering 153 days, most of the major restrictions were withdrawn in a phased manner (Table 8).
- But COVID-19 restrictions in local areas or places continued in many parts of the country and relaxations were given subsequently.

Table 7
Lock down period in India

Phase	Date	Number of days
I	25 March 2020 – 14 April 2020	21 days
II	15 April 2020 – 3 May 2020	19 days
III	4 May 2020 – 17 May 2020	14 days
IV	18 May 2020 – 31 May 2020	14 days
Total days		68 days

Source: Ministry of Home Affairs Orders, Government of India, dated from 24 March 2020 to 1 November 2020.

Table 8
Unlock period in India

Phase	Date	Number of days
First 5 Unlock phases		
I	1 June 2020 – 30 June 2020	30 days
II	1 July 2020 – 31 July 2020	31 days
III	1 August 2020 – 31 August 2020	31 days
IV	1 September 2020 – 30 September 2020	30 days
V	1 October 2020 – 31 October 2020	31 days
	Total days	153 days
Unlock phases with more relaxations		
1 November 2020 – 31 March 2022		516 days

Source: Ministry of Home Affairs Orders, Government of India, dated from 24 March 2020 to 1 November 2020.

Measures implemented during the period of lockdown

- All the offices of the Government of India, State governments, union territories, autonomous bodies, public sector organisations etc were closed with a few exceptions.
- All the commercial and private establishments were closed with a few exceptions.
- All the industrial establishments were closed with a few exceptions on units producing essential commodities.
- All transport services – air, rail, roadways – were suspended with a few exceptions.
- All educational, training, research, coaching institutions etc were closed.

- All places of worship were closed for public.
- All social/ political/ sports/ entertainment/ academic/ cultural /religious functions/ gatherings were barred.
- All persons who arrived into India after February 15, 2020 were asked to remain in quarantine.
- These measures have suddenly stopped all transport services, mobility of people, movements of goods, production activities, shifted activities from work places and educational institutions to home, prevented all gatherings and paralysed the economy.
- A major structural change occurred was spurt in digitalisation in all walks of life.
- The loss in production of goods and services and employment due to lockdown were unprecedented.

Impact on Indian Economy

- India suffered among the biggest pandemic induced losses in the world in terms of output, lives and livelihoods, which may take years to recover.
- Economic activity in sectors/subsectors have not recovered to pre-COVID levels even after two years.
- India's economic rebound also faces difficult challenges from the legacy of deep-rooted structural bottlenecks.
- The Russia-Ukraine conflict has also dampened the momentum of recovery, with its impact transmitting through record high commodity prices and stagflation.
- Concerns of deglobalisation impacting future trade, capital flows and supply chains have amplified uncertainties for the business environment.

Unprecedented recession of Indian Economy in 2020-21

- Indian economy experienced an unprecedented recession in the first and second quarter of the financial year 2020-21 (Table 9)
- The sectors viz. construction, trade, hotels, transport and communication registered a fall of nearly 50 percent in first quarter of 2020-21 compared to previous year.
- Manufacturing witnessed a negative growth of (-)31.5 percent in first quarter compared to previous.
- Except agriculture, forestry and fishing all the sectors experienced deep recession in the year 2020-21.

Table 9
Quarterly growth of GVA at basic prices for 2020-21 at 2011-12 prices (% change over previous year)

Industry	Q1	Q2	Q3	Q4
Agriculture, forestry & fishing	3.0	3.2	4.1	2.8
Mining & quarrying	-17.8	-7.9	-5.3	-3.9
Manufacturing	-31.5	5.2	8.4	15.2
Electricity, gas, water supply etc.	-14.8	-3.2	1.5	3.2
Construction	-49.4	-6.6	6.6	18.3
Trade, hotels, transport, communications etc	-49.9	-18.8	-10.1	-3.4
Financial, real estate etc.	-1.1	-5.2	10.3	8.8
Public administration, defence etc.	-11.4	-10.2	-2.9	1.7
GVA at basic prices	-21.4	-5.9	2.1	5.7

Source: NSO, 2022a.

Magnitude of recession: Using different indicators

- According to the latest estimate of GDP, Indian economy experienced a negative growth of (-)6.6 percent in 2020-21 (Table 10).
- If we take Net Domestic Product as an indicator, the negative growth rate is (-)8.3 percent.
- If we take tax on products as an indicator the negative growth is (-)24.9%
- Taxes on products indicate the actual sales of goods and services in an economy and give the actual fall in aggregate consumption.
- Fall in aggregate consumption gives a better picture about the magnitude of recession compared to other indicators

Table 10
Change in GDP and NDP in India during pre COVID-19 and COVID-19 period (at 2011-12 prices)

No	Item	2019-20 (2nd RE) (Pre COVID-19) (Rs.)	2020-21 (1st RE) (COVID-19 Period) (Rs.)	2021-22 (PE) (COVID-19 Period) (Rs.)	2020-21 compared to pre COVID-19 period (% Change)	2021-22 compared to pre COVID-19 period (% Change)
1	GVA at basic prices	1,32,19,476	1,25,85,074	1,36,05,474	-4.8	2.9
2	Net taxes on products	12,96,482	9,73,400	11,30,041	-24.9	-12.8
3	Gross Domestic Product (GDP) (1+2)	1,45,15,958	1,35,58,473	1,47,35,515	-6.6	1.5
4	Net Domestic Product (NDP)	1,27,83,337	1,17,26,198	1,27,54,679	-8.3	-0.2

RE: Revised Estimate, PE: Provisional Estimate
Source: NSO, 2022.

Indian economy not revived to pre-pandemic level

- Indicators viz. Net Taxes on Products and Net Domestic Products (NDP) suggest that the Indian economy has not revived to the pre-COVID-19 year level even after two years (Table 11).
- Indicators such as Percapita Gross Domestic Product (GDP), Percapita Gross National Income (GNI), percapita Net National Income (NNI), percapita Private Final Consumption Expenditure (PFCE) indicate that the Indian economy has not revived to the pre-COVID-19 year level even after two years.

Table 11
Economic indicators during pre-COVID-19 and COVID-19 period (at 2011-12 prices)

No	Economic indicators	2019-20 (2nd RE) (Pre COVID-19)	2020-21 (1st RE) (COVID-19 Period)	2021-22 (PE) (COVID-19 Period)	2020-21 compared to pre COVID-19 period (% Change)	2021-22 compared to pre COVID-19 period (% Change)
1	Per Capita GDP (₹)	1,08,247	1,00,032	1,07,670	-7.6	-0.5
2	Per Capita GNI (₹)	1,07,191	98,629	1,05,955	-8.0	-1.2
3	Per Capita NNI (₹)	94,270	85,110	91,481	-9.7	-2.9
4	Per Capita PFCE(₹)	61,594	57,279	61,215	-7.0	-0.6

RE: Revised Estimate, PE: Provisional Estimate
Source: NSO, 2022.

Industrial sector: Progress towards normalisation (Table 12)

- The normalisation is indicated interms of ratio of Q1 2020-21 to Q1 2019-20 (Pre-COVID quarter) similar comparisons can be done for other quarters to the respective quarter of 2019-20.
- Index of industrial production of manufacturing, capital goods, infrastructure, consumer durables and non-durables in Q1 2020-21 and Q1 2021-22 suggest that it have not to reached to the pre-COVID level
- Similarly production of all the 8 core industries have not recovered to the pre-COVID level
- Similar is the situation of production of automobiles except tractors.

- It took nearly five quarters for industries, core industries, auto mobiles etc to restore the production to the pre-COVID level.
- Similar is the situation of service sector to restore towards normalisation (Table 13)
- In the case of vehicle sales, air passenger transport, domestic air cargo, petroleum consumption, GST E-Way bills etc, the situation improved only since the second quarter of 2021-22

Table 12
Industrial sector in India: Progress towards Normalisation
(Ratio to the respective quarter of 2019-2020)

No	Indicators	2020-21 Q1	2021-22 Q1	2022-23 Q1
I	Index of Industrial Production (IIP)	64	93	105
	IIP: Manufacturing	60	91	103
	IIP: Capital goods	35	74	96
	IIP: Infrastructure and construction goods	53	98	108
	IIP: Consumer durables goods	32	72	92
	IIP: Consumer non-durables goods	83	98	99
II	Eight Core Industries Index (ECI)	76	96	109
	ECI: Steel	51	97	103
	ECI: Cement	62	97	114
	Electricity demand	84	98	116
III	Production of auto mobiles			
	Passenger vehicles	16	83	106
	Two wheelers	22	60	83
	Three wheelers	23	61	64
	Tractors	60	133	152

Source: Reserve Bank of India (2022). Monetary Policy Report, September 2022

Table 13
Service sector in India: Progress towards Normalisation
(Ratio to the respective quarter of 2019-2020)

Indicators	2020-21 Q1	2021-22 Q1	2022-23 Q1
Trade, hotels, transport, communication etc.			
Commercial vehicle sales	15	51	108
Domestic air passenger traffic	7	31	95
Domestic air cargo	26	78	103
International air cargo	43	94	92
Freight traffic	79	110	123
Port cargo	80	102	111
Toll collection: volume	184	548	1035
Petroleum consumption	74	85	100
GST E-way bill	50	98	143
GST revenue	59	106	144

Source: Reserve Bank of India (2022). Monetary Policy Report, September 2022

Conceptual Framework of labour

- **Labour Force Participation Rate (LFPR):** LFPR is defined as the percentage of persons in labour force (i.e. working (employed) and seeking or available for work (unemployed)) in the population.

- **Worker Population Ratio (WPR):** WPR is defined as the percentage of employed persons in the population.

- **Unemployment Rate (UR):** UR is defined as the percentage of persons unemployed among the persons in the labour force.

- **Current Weekly Status (CWS):** The estimate of labour force according to the current weekly status approach is derived by considering those who worked for at least 1 hour or was seeking/ available for work for at least 1 hour on any day during the 7 days preceding the date of survey.

- **Usual Status (ps+ss) :** The estimate of the labour force in the usual status (ps+ss) includes (a) the persons who either worked or were seeking/available for work for a relatively long part of the 365 days preceding the date of survey and also (b) those persons from among the remaining population who had worked at least for 30 days during the reference period of 365 days preceding the date of survey.

LFPR and WPR in India

- The LFPR during the COVID-19 year (2020-21) and previous year is given in table 14.

- The LFPR during the COVID-19 year was high mainly due to the increase in unemployment rate of all categories of labour force.

- A category which registered a hike in unemployment are young labour force.

- The WPR for the COVID-19 year and previous year is given in table 15

Table 14
Labour force participation rate in India: 2020-21 and 2019-20

Category of persons	PLFS 2020-21		PLFS 2019-20	
	Usual Status (ps+ss)	Current Weekly Status	Usual status (ps+ss)	Current Weekly Status
	Rural			
Male	57.1	56.0	56.3	55.4
Female	27.7	22.7	24.7	21.1
Person	42.7	39.7	40.8	38.6
	Urban			
Male	58.4	57.8	57.8	57.2
Female	18.6	17.3	18.5	17.5
Person	38.9	38.0	38.6	37.8
	Rural + Urban			
Male	57.5	56.5	56.8	56.0
Female	25.1	21.2	22.8	20.0
Person	41.6	39.2	40.1	38.3

Source: Ministry of Statistics and Programme Implementation (2022). Annual Report, Periodic Labour Force Survey (PLFS) (JULY 2020 - JUNE 2021)

Table 15
Worker population ratio in India: 2020-21 and 2019-20

Category of persons	PLFS 2020-21		PLFS 2019-20	
	Usual Status (ps+ss)	Current Weekly Status	Usual status (ps+ss)	Current Weekly Status
	Rural			
Male	54.9	52.0	53.8	50.6
Female	27.1	21.6	24.0	19.9
Person	41.3	37.1	39.2	35.5
	Urban			
Male	54.9	52.4	54.1	51.2
Female	17.0	15.2	16.8	15.4
Person	36.3	34.1	35.9	33.6
	Rural + Urban			
Male	54.9	52.1	53.9	50.8
Female	24.2	19.8	21.8	18.6
Person	39.8	36.3	38.2	35.0

Source: Ministry of Statistics and Programme Implementation (2022). Annual Report, Periodic Labour Force Survey (PLFS) (JULY 2020 - JUNE 2021)

Structure of employment (Tables 16 & 17)

- Of the total workers (employment) self employed account for 55.6 percent (own account workers 38.2% + helper in household enterprise 17.3%)
- Regular wage, salary workers consists of those who receive non-wage benefits (written job contract, paid leave and social security benefits)and not receiving any non-wage benefits account for 21.1%.
- Casual labours who work on daily wage or piece wage account for 23.3 percent.
- Compare to male workers, more female are working as helpers in household enterprises.
- In the case of regular wage/salary workers, the share of female workers is lower.

COVID-19 crisis and changes in labour market (Tables 16 & 17)

- A process of informalisation is taking place. An increase in the share of self employed workers in rural and urban areas.
- There has been a reduction in the share of regular wage/salary workers in rural and urban areas.
- An increase in the share of casual workers in urban areas.
- The process of informalisation/casualistion of labour is accelerated due to COVID-19 crisis.

Table 16
Percentage distribution of workers in Usual Status (PS+SS) during 2019-20 and 2020-21 (PLFS) (Total person)

PLFS	Category of employment					
	Self-employment			Regular wage/ salary	Casual labour	All
	Own account worker and employer	Helper in household enterprise	All self employed			
	Rural					
2019-20	39.8	20.0	59.8	12.5	27.7	100.0
2020-21	40.0	21.3	61.3	12.1	26.6	100.0
	Urban					
2019-20	32.1	5.7	37.8	48.8	13.4	100.0
2020-21	33.2	6.3	39.5	46.4	14.1	100.0
	Rural + Urban					
2019-20	37.6	15.9	53.5	22.9	23.6	100.0
2020-21	38.2	17.3	55.6	21.1	23.3	100.0

Source: Ministry of Statistics and Programme Implementation (2022). Annual Report, Periodic Labour Force Survey (PLFS) (JULY 2020 - JUNE 2021)

Table 17
Percentage distribution of workers in Usual Status (PS+SS) during 2020-21 (PLFS)

Category of persons	Category of employment					
	Self-employment			Regular wage/ salary	Casual labour	All
	Own account worker and employer	Helper in household enterprise	All self employed			
	Rural					
Male	48.6	11.0	59.7	13.6	26.8	100.0
Female	21.9	42.8	64.8	9.1	26.2	100.0
Person	40.0	21.3	61.3	12.1	26.6	100.0
	Urban					
Male	35.4	4.5	39.9	45.3	14.9	100.0
Female	26.0	12.4	38.4	50.1	11.5	100.0
Person	33.2	6.3	39.5	46.4	14.1	100.0
	Rural + Urban					
Male	44.8	9.2	53.9	22.7	23.3	100.0
Female	22.8	36.6	59.4	17.4	23.2	100.0
Person	38.2	17.3	55.6	21.1	23.3	100.0

Source: Ministry of Statistics and Programme Implementation (2022). Annual Report, Periodic Labour Force Survey (PLFS) (JULY 2020 - JUNE 2021)

More than half of the regular/wage salaried workers not getting non-wage benefits (Table 18)

- Regular wage/salaried workers account for 21.1% of the total workers.
- Among the total regular wage/salaried workers, 64.3% have no written job contract.
- Among them 47.9% have no eligible paid leave.
- Among them 53.8% have no social security benefits.
- This suggest that the status of majority of the regular wage/ salaried workers are similar to casual labour.

Table 18
Percentage of regular wage/salaried employment: Non-wage benefits

Category of persons	PLFS (2020-21)		
	Who had no written job contract	Not eligible for paid leave	Not eligible for any social security benefit
	Rural		
Male	68.7	55.5	59.0
Female	58.1	41.8	59.3
Person	66.3	52.3	59.1
	Urban		
Male	62.8	45.0	49.0
Female	63.6	44.9	53.5
Person	63.0	44.9	50.1
	Rural + Urban		
Male	65.2	49.3	53.1
Female	61.5	43.7	55.8
Person	64.3	47.9	53.8

Source: Ministry of Statistics and Programme Implementation (2022). Annual Report, Periodic Labour Force Survey (PLFS) (JULY 2020 - JUNE 2021)

Sector wise employment (Tables 19 & 20)

- Agriculture account for about half of the total employment (46.5%).
- The sector recorded an increase in its share of workers
- The share of employment in manufacture record a fall.
- Share of construction sector employment increased.
- Share of employment in trade, hotel, restaurant etc registered a fall.
- Except agriculture and construction the share of employment in other sectors witnessed a fall.
- The daily wage of casual labour for male and female are poor by any norms (Table 20).
- The wage rate of female workers is much lower compared to male (Table 20).

Table 19
Percentage distribution of workers in usual status (ps+ss) by broad industry division (Rural+Urban)

Broad industry division as per NIC 2008	PLFS (2020-21)			PLFS (2019-20)		
	Male	Female	Persons	Male	Female	Persons
Agriculture	39.8	62.2	46.5	40.0	59.9	45.6
Mining & quarrying	0.4	0.1	0.3	0.4	0.1	0.3
Manufacturing	11.1	10.6	10.9	11.3	10.9	11.2
Electricity, water, etc.	0.8	0.2	0.6	0.8	0.3	0.6
Construction	14.9	5.6	12.1	14.1	5.4	11.6
Trade, hotel & restaurant	14.8	6.1	12.2	15.3	8.0	13.2
Transport, storage & communications	7.3	1.0	5.4	7.4	1.0	5.6
Other services	11.0	14.4	12.0	10.9	14.4	11.9
All	100.0	100.0	100.0	100.0	100.0	100.0

Source: Ministry of Statistics and Programme Implementation (2022). Annual Report, Periodic Labour Force Survey (PLFS) (JULY 2020 - JUNE 2021)

Table 20
Average wage earnings (in Rs.) per day by casual labour engaged in works other than public works during the survey period April-June, 2021.

Category of persons	Average wage earnings
	Rural
Male	348
Female	229
Person	317
	Urban
Male	413
Female	281
Person	394
	Rural+Urban
Male	357
Female	233
Person	327

Source: Ministry of Statistics and Programme Implementation (2022). Annual Report, Periodic Labour Force Survey (PLFS) (JULY 2020 - JUNE 2021)

Unemployment Rate

- According to PLFS, the unemployment rate in 2020-21, the COVID crisis year was lower compared to the previous year 2019-20 (Table 21).

- For rural as well as urban areas the unemployment rate was lower in 2020-21 compared to 2019-20 (Table 21).

- This is an issue which needs explanation.

- One explanation is that Indian economy has been experiencing a recessionary trend since 2016-17 (Table 22).

- The GVA at basic prices fell from 5.81% in 2018-19 to 3.81% in 2018-19 (Table 22).

- All indicators of annual growth has recorded a substantial fall in 2019-20 compared to the previous year (Table 22).

- This might be one of the reasons for the high rate unemployment prevailed 2018-19.

Table 21
Unemployment rates (in percent)

Status	PLFS (2020-21)			PLFS (2019-20)		
	Male	Female	Person	Male	Female	Person
	Rural					
Usual status (ps+ss)	3.9	2.1	3.3	4.5	2.6	4.0
Current weekly status	7.2	4.8	6.5	8.7	5.5	7.9
	Urban					
Usual status (ps+ss)	6.1	8.6	6.7	6.4	8.9	7.0
Current weekly status	9.4	12.2	10.1	10.6	12.4	11.0
	Rural+Urban					
Usual status (ps+ss)	4.5	3.5	4.2	5.1	4.2	4.8
Current weekly status	7.8	6.6	7.5	9.3	7.3	8.8

Source: Ministry of Statistics and Programme Implementation (2022). Annual Report, Periodic Labour Force Survey (PLFS) (JULY 2020 - JUNE 2021)

Table 22
Macro economic aggregates of India (at constant price) (%)

Items	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Annual Growth rate						
GVA at basic prices	7.97	6.23	5.81	3.81	-4.80	8.11
Gross Domestic Product	8.26	6.80	6.45	3.74	-6.60	8.68
Gross National Income	8.27	6.87	6.48	3.86	-7.00	8.47
Net National Income	8.21	6.74	6.23	3.40	-8.75	8.53
Per Capita NNI	6.88	5.52	5.19	2.32	-9.72	7.49

Source: Reserve Bank of India (2022). Handbook of Statistics on the Indian Economy 2021-22.

Wholesale Price Index (WPI) (Table 23)

- During the COVID year the WPI remained stable.
- But the WPI registered a substantial rise in the year 2021-22.
- For all commodities, it was 13% rise
- For fuel and power it was 32.6%
- For non-food articles 21.1%
- For manufactured products 11.1%
- For primary articles 10.3%
- Thus COVID has accelerated an inflationary trend.

Table 23
Wholesale price index – Annual variation (%)

Year	All Commodities	Primary Articles	Food Articles	Non-food Articles	Fuel and Power	Manufactured Products
	Base : 2011-12 = 100					
2018-19	4.3	2.8	0.3	2.9	11.6	3.6
2019-20	1.7	6.8	8.4	4.5	-1.8	0.3
2020-21	1.3	1.7	3.1	1.4	-8.0	2.7
2021-22	13.0	10.3	4.1	21.1	32.6	11.1

Source: Reserve Bank of India (2022). Handbook of Statistics on the Indian Economy 2021-22.

Consumer Price Index (CPI) (Tables 24 & 25)

- The CPI inflation rate since 2020-21 was higher compared to previous year
- The rural and urban CPI rate recorded a rise
- The trend in CPI inflation continued in 2021-22.
- For one year between October 2021 and Oct 2022, the increase of CPI inflation rate was 6.77% (Table 25).
- For rural it was 6.98% and urban 6.50%

Table 24
Consumer Price Index (New Series 2012 = 100)

Year	Index Number (Annual Average)			Index Number (%) (Annual variation)		
	Rural	Urban	Rural + Urban	Rural	Urban	Rural + Urban
2017-18	137.2	132.5	135.0	-	-	-
2018-19	141.3	137.7	139.6	3.0	3.9	3.4
2019-20	147.3	145.1	146.3	4.2	5.4	4.8
2020-21	156.1	154.4	155.3	6.0	6.4	6.2
2021-22	164.5	163.1	163.8	5.4	5.6	5.5

Source: Reserve Bank of India (2022). Handbook of Statistics on the Indian Economy (2021-22).

Table 25
All India Consumer Price Index (General) October 2022

Year	Rural	Urban	Rural + Urban
	Index Number (Base 2012 = 100)		
October, 2021	166.3	164.6	165.5
October, 2022	177.9	175.3	176.7
	Year on year inflation rate (%)		
October, 2021 to October, 2022	6.98	6.50	6.77

Source: Ministry of statistics and programme implementation, Press release dated 14th November, 2022, "Consumer Price Index numbers on base 2012 = 100 for rural, urban and combined for the month of October 2022"

Consumer Confidence Survey of RBI (Table 26)

- The survey obtains current perceptions of consumers across 19 major cities in India about the economic situation.
- The net responses is the difference between the percentage of respondents reporting improved and worsened.
- In the survey on Novemebr 2021, the net responses on economic situation was (-)52.7%.
- For employment (-)44.4%
- Price level (-)94.4%
- Income (-)38.1%
- The negative perception about the economic situations continued in November 2022 survey also.

Table 26
Net Responses* on current perceptions dated November 2021 and Nov 2022 (RBI Consumer Confidence Survey)

Main Variables	November 2021	November 2022	Change
Economic Situation	-52.7	-27.8	Negative
Employment	-44.4	-17.8	Negative
Price Level	-94.2	-93.9	Negative
Income	-38.1	-12.0	Negative
Spending	46.4	69.0	Positive
Consumer Confidence Index	-	83.5	-

*The difference between the percentage of respondents reporting improved and worsened

Source: Reserve Bank of India (2022). Consumer Confidence Survey, November 2022.

Consumer Confidence Survey, November 2021, May 2022 and November 2022 (Tables 27-30)

- Three surveys on general economic situation indicate that net responses are negative (Table 27).
- Current perceptions on employment are negative (Table 28).
- Current perception on price level negative (Table 29).
- Current perception on income negative (Table 30).
- Thus these surveys indicate a negative perception of the economic situation of the country by consumers.

Table 27
Current Perceptions on the General Economic Situation (%)
(RBI Consumer Confidence Survey)

Survey Round	Improved	Remained Same	Worsened	Net Response*
November 2021	17.4	12.6	70.1	-52.7
May 2022	22.5	14.9	62.7	-40.2
November 2022	28.0	16.3	55.7	-27.8

*The difference between the percentage of respondents reporting improved and worsened

Source: Reserve Bank of India (2022). Consumer Confidence Survey, November 2022.

Table 28
Current Perceptions on Employment (%)
(RBI Consumer Confidence Survey)

Survey Round	Improved	Remained Same	Worsened	Net Response*
November 2021	19.6	16.5	64.0	-44.4
May 2022	27.3	17.8	54.9	-27.6
November 2022	31.8	18.6	49.6	-17.8

*The difference between the percentage of respondents reporting improved and worsened

Source: Reserve Bank of India (2022). Consumer Confidence Survey, November 2022.

Table 29
Current Perceptions on Price Level (%)
(RBI Consumer Confidence Survey)

Survey Round	Increased	Remained Same	decreased	Net Response*
November 2021	95.1	3.9	1.0	-94.2
May 2022	95.4	4.1	0.5	-94.9
November 2022	94.9	4.1	1.0	-93.9

*The difference between the percentage of respondents reporting increased and decreased

Source: Reserve Bank of India (2022). Consumer Confidence Survey, November 2022.

Table 30
Current Perceptions on Income (%)
(RBI Consumer Confidence Survey)

Survey Round	Increased	Remained Same	Decreased	Net Response*
November 2021	13.0	36.0	51.0	-38.1
May 2022	17.6	46.0	36.4	-18.9
November 2022	20.9	46.1	32.9	-12.0

*The difference between the percentage of respondents reporting increased and decreased

Source: Reserve Bank of India (2022). Consumer Confidence Survey, November 2022.

RBI's Industrial Output Survey of manufacturing sector (Table 31)

- The survey collects qualitative assessment of the business climate from Indian manufacturing companies.
- In the latest survey 1234 companies responded.
- The net response indicate the difference between the percentage of respondents reporting optimism and pessimism.
- In the two surveys, the companies reported pessimism on five paramneters viz. inventory of raw materials, finished goods, cost of finances, cost of raw materials and salary,
- In survey (Q2 2022-23), pessimism on profit margin is also reported.
- The surveys give a dismal assessment about the business climate prevailing in India.

Table 31
Industrial Outlook Survey of the manufacturing sector for Q2 2021-22 and Q2 2022-23 (RBI)

Parameters	Net responses*	
	Q2:2021-22	Q2:2022-23
Production	33.8	18.1
Capacity Utilisation	28.8	8.6
Inventory of Raw Materials	(-)14.7	(-)4.6
Inventory of Finished Goods	(-)14.9	(-)4.0
Exports	31.5	11.1
Imports	30.2	13.4
Employment	24.9	12.5
Financial Situation (Overall)	32.8	13.9
Cost of Finance	(-)28.6	(-)30.1
Cost of Raw Material	(-)61.0	(-)72.5
Salary/ Other Remuneration	(-)31.3	(-)26.4
Selling Price	38.2	14.4
Profit Margin	9.4	(-)9.3
Overall Business Situation	34.0	15.8

*The difference between the percentage of respondents reporting optimism and pessimism
Source: Reserve Bank of India (2022). Industrial Outlook Survey of the Manufacturing Sector for Q2:2022-23.

Conclusions

- The COVID-19 induced recession is considered as the deepest global recession since 1945-46.
- The Indian economy also experienced unprecedented recession in 2020 due to the pandemic.
- Data such as index of industrial production and service sector indicate that the Indian economy has not revived to the pre-COVID level even after two years.
- The pandemic crisis has accelerated a process of informalisation /casualisation of labour in Indian labour market.
- A review of the structure of employment suggest that 56% are self-employed, 23% casual labourers and 21% regular wage/salaried workers.

- Of the regular wage/salaried workers, majority are not getting any non-wage labour benefits such as paid leave and other labour benefits.
- The data on unemployment suggest that there has been a decline in unemployment rate during the COVID-19 year of 2020.
- But this is attribute to the steep fall in GVA of the Indian Economy, during the previous years of 2020-21.
- The inflation measured by wholesale price index and consumer price index suggest that there has been an increase in inflation during the post COVID period.

- Consumers and investors feel that the Indian economy has not recovered from the worst economic crisis.

- The consumer confidence survey indicates that, consumers feel pessimism on the economic situation.

- The Indian manufacturing companies also have a dismal assessment about the business climate prevail in India.

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THANK YOU