

COVID-19 Pandemic and the Great Economic Crisis of Kerala

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Objectives

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

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 Kerala.

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

- Till June 2022, the total number of COVID-19 cases in the World was 52.77 crore and deaths 62.93 lakh (Table 1)
- The countries which reported the largest number of COVID-19 cases are USA, India, Brazil, France, Germany and U.K.
- The countries which reported largest number of COVID-19 deaths are USA, Brazil, India, Russia and Italy (Table 2)

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

Source: WHO. COVID-19 Dashboard

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

No	Country	Cases	Death
1	USA	8,32,38,653	9,97,336
2	India	4,31,60,832	5,24,636
3	Brazil	3,09,77,661	6,66,453
4	France	2,86,36,126	1,45,019
5	Germany	2,63,33,899	1,39,507
6	UK	2,23,04,851	1,78,829
7	Russia	1,83,35,514	3,79,200
8	South Korea	1,81,19,415	24,197
9	Italy	1,74,21,410	1,66,697
10	Turkey	1,50,72,747	98,965
Other Countries		22,41,56,456	29,72,216
Total World		52,77,57,564	62,93,055

Source: WHO. COVID-19 Dashboard

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 Dalglish 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 CO₂ emissions declined 6 percent in 2020 largely attributable to reduced activity in aviation and transport.

PART II

The Spread of COVID-19 and the Pandemic Induced Economic Crisis in Kerala

Spread of COVID-19 in India

- India reported the first case of the coronavirus infection on January 30, 2020 in the state of Kerala.
- The growth in the number of cases and deaths was small 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 in the initial phase. But there had been a rapid increase in its spread of the pandemic since July 1, 2020.

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
May 31	4,31,58,087*	5,24,636*	23.8	9.0

Source: COVID19India ([From Jan 30, 2020 to Oct 31, 2021](#))

* WHO. COVID-19 Dashboard

- 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.
- 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.

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	Telangana	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

- 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.
- 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

Phases of Spread of COVID-19 in Kerala

- The first COVID-19 case in India was reported in Thrissur district in the state of Kerala on January 30, 2020. During the initial phase, the rate of spread of the pandemic was very low in Kerala.
- But the situation witnessed a substantial change since October 2020 with a spurt in COVID-19 cases and deaths.
- Based on the trend in growth in monthly COVID-19 cases and deaths, we can classify the COVID-19 spread into three phases: the first phase between January 30, 2020 and October 1, 2020; the second phase between October 1, 2020 and March 1, 2022 and the third phase since March 1, 2022.

Table 6
Spread of COVID-19 cases and deaths in Kerala

Month/Date	Total Number (Cumulative)		Monthly increase	
	Cases	Deaths	Cases	Deaths
2020				
Jan 30	1	0	-	-
July 1	4,593	25	-	-
Oct 1	2,04,241	771	1,27,716	473
2021				
Jan 1	7,65,924	3,095	1,57,567	825
Mar 1	10,61,341	4,210	1,28,704	450
July 1	29,37,033	13,359	3,90,694	4,350
Nov 1	49,73,954	32,049	2,79,262	6,867
2022				
Mar 1	65,02,060	65,501	4,24,504	9,901
June 1	65,59,623	69,753	17,645	670

Source: GoK. COVID-19 dashboard

- During the first phase (up to October 1, 2020) the growth in COVID-19 cases and deaths was very low compared to other states in India due to the factors such as effective implementation of preventive measures announced by the WHO and Central Government, Kerala's prior experience in containing the outbreak of NIPAH virus, effective implementation of the national lockdown of 68 days announced by the Central Government, and effective intervention of government hospitals and other medical institutions to prevent the COVID-19 spread.

- The trend in the growth in COVID-19 cases began to witness a substantial increase in the second phase (October 1, 2020 and March 1, 2022). There had been a spurt in monthly increase in COVID-19 cases and death between October, 1 2020 and November 1, 2020 (Table 6).
- The third phase is the period which witnessed a decline in the monthly new cases and death (Table 6). We can notice a steep decline in the newly monthly cases and death since March 1, 2022.
- A district wise number of COVID-19 cases and deaths as on March 1, 2020 is given in Table 7.

Table 7
District-wise COVID-19 cases and deaths in Kerala
(Mar 2022)

No	District	Cases (Number)	Deaths (Number)
1	Kasargod	1,66,132	1,294
2	Kannur	3,47,472	4,271
3	Wayanad	1,67,146	922
4	Kozhikode	6,69,653	6,036
5	Malappuram	6,45,585	5,711
6	Palakkad	4,48,488	5,493
7	Thrissur	6,66,591	7,051
8	Ernakulam	8,77,818	7,453
9	Idukki	2,06,776	1,387
10	Kottayam	4,44,449	4,192
11	Alappuzha	3,88,680	5,074
12	Pathanamthitta	2,64,616	2,366
13	Kollam	5,07,911	6,159
14	Thiruvananthapuram	7,00,743	8,092
Kerala		65,02,060	65,501

Source: GoK. COVID-19 dashboard

Vaccination in Kerala

- The COVID-19 vaccine was launched in Kerala 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 8).
- 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 9).
- But COVID-19 restrictions in local areas or places continued in many parts of the country and relaxations were given subsequently.

Table 8
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 9

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.

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 10)
- 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 10
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 11).
- 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 11
Change in GDP and NDP in India during pre COVID-19
and COVID-19 period (at 2011-12 prices)

No	Item	2019-20 (2 nd RE) (Pre COVID-19) (Rs.)	2020-21 (1 st 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 from the recession

- 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 12).
- 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 12
Economic indicators during pre-COVID-19 and COVID-19 period

No	Economic indicators	2019-20 (2 nd RE) (Pre COVID-19)	2020-21 (1 st 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.

The Great Economic Crisis of Kerala

Impact of lockdown on States income: Findings of the quick assessment of Kerala, State Planning Board.

- It was estimated that during the first quarter of 2020-21, the total losses in GVA was around Rs. 80000 crore. This works at about 10 percent of the total GVA of the state for 2020-21.
- It was estimated that 70 per cent of the manufacturing production in the State was being lost due to the lockdown and the disruptions, which started from the March 2020.

- It was estimated that the sector, trade, hotels and restaurants incurred a loss in GVA of Rs. 4000 crore in March, Rs 10000 crore in April and Rs 3000 crore in May 2020.
- Assuming the annual income from tourism sector at Rs 45000 crore, it is estimated that there will be a loss of about Rs 20000 crore in 2020-21.
- All modes of transport have been affected during the lockdown period.
- Most of the Auto/Taxi operators/drivers were forced to stop their operations and lost their jobs.
- And the loss to transport sector during lockdown period of 40 days was estimated as to Rs 9600 crore.
- The most serious concern in the IT sector in the lockdown period was the virtual disappearance of the micro, small and medium enterprises (MSME) units which have a turnover of less than Rs 5 crore per annum.

Loss of employment of unincorporated enterprises: Survey findings of, The Department of Economics and Statistics (DES) 2020 and 2021

- Unincorporated sector enterprises are those which were not incorporated. It excludes (1) enterprises which are incorporated i.e. registered under Companies Act 1956, (2) the electricity units registered with the Central Electricity Authority (CEA), (3) government and public sector enterprises and (4) co-operatives.
- The major findings of the survey are the following. Five percent of the sample enterprises working during the first phase (April 2020 to July 2020) had been closed permanently.

- Another 4 percent were temporarily closed during the second year i.e. between April 2021 and July 2021.
- About half (49 percent) of the closed enterprises and more than half (57 percent) of the temporarily closed enterprises belonged to service sector.
- There was huge loss in operational days, loss of employment and loss of receipts in 2020 and 2021 (Table 13).
- This indicates that the adverse impact of the COVID-19 continued in the second year i.e. 2021 without much change.
- These facts suggest that the recession of COVID-19 is likely to last for few years.

Table 13
Loss in operational days and employment in sample unincorporated enterprises

No	Loss	April	May	June	July
1	Loss in operational days (%)				
	In 2020	84	65	29	25
	In 2021	32	72	60	36
2	Loss of employment (%)				
	In 2020	74	53	32	29
	In 2021	32	51	45	33
3	Loss in receipts (%)				
	In 2020	79	61	44	41
	In 2021	35	68	45	39

Source: DES, 2021.

Trends in changes of GSDP

- The state economy experienced an unprecedented fall in growth rate during the COVID-19 crisis year (-9.2 percent) (Table 14).
- The per capita GSDP also registered a steep fall (-)9.66.
- Except primary sector, all the sectors experienced heavy fall in production (Table 15).
- The secondary sector consists of manufacturing, electricity and other utility services and construction registered a negative growth of 9.50 percent.
- The tertiary sector registered a negative growth of (-)9.25 percent.
- The taxes on products registered a heavy fall of -15.36 percent.

Table 14
State Domestic Product and Per Capita Income of Kerala

	Income, in Rs Crore			Growth Rate, in %	
	2018-19	2019-20 (P)	2020-21 (Q)	2019-20 (P)	2020-21 (Q)
Gross State Domestic Product					
At Constant (2011-12) prices	5,54,228	5,66,522	5,14,399	2.22	-9.20
Gross State Value Added (GSVA) at basic prices					
At Constant (2011-12) prices	4,80,226	4,90,765	4,50,696	2.19	-8.16
Per capita GSDP					
At Constant (2011-12) Prices	1,59,878	1,62,610	1,46,910	1.71	-9.66

P: Provisional estimate, Q: quick estimate

Source: KSPB, 2022a

Table 15
Trends in growth rate of GSDP at 2011-12 prices

No	Sector	2018-19	2019-20 (P)	2020-21 (Q)
1	Primary	-3.16	-6.40	3.81
2	Secondary	0.45	-2.70	-9.50
3	Tertiary	7.20	5.60	-9.25
4	Total GSVA at basic prices	4.23	2.19	-8.16
5	Taxes on Products	28.16	2.44	-15.36
6	Subsidies on products	-24.99	3.74	-5.80
7	Gross State Domestic Product	7.37	2.22	-9.20

P: Provisional estimate, Q: quick estimate
Source: KSPB, 2022b

Sector wise changes

- Primary sector is the only sector registered a growth in 2020-21 (Table 16).
- In primary sector, the two sub sectors registered a negative growth are forestry and fishing.
- In secondary sector all subsectors registered a negative growth (Table 17).
- Construction sector which provide employment to about 24 lakh workers, registered a negative growth of (-) 10.31 percent.
- Manufacturing (industries) which provide employment to about 15 lakh workers registered a negative growth of (-) 8.94 percent.

- This indicates unprecedented loss of production and employment in industries and construction.
- In tertiary sector, except the railways, all the sub-sectors experienced moderate or heavy fall in production of goods and services (Table 18).
- The sub-sectors which experienced more than 10 percent fall in production are, transport, storage and communication, road transport, water transport, air transport, services incidental to transport, storage, real estate and public administration.
- The tertiary sector provides employment to about 65.7 lakh workers.
- All these suggest that the state experienced the worst recession since the formation of the state.

Table 16

Trends in growth rate of primary sector at 2011-12 prices

No	Sector	2018-19	2019-20 (P)	2020-21 (Q)
1	Agriculture, forestry and fishing	-2.09	-5.09	3.38
1.1	Crops	-4.69	-5.53	5.54
1.2	Livestock	-2.35	-2.07	4.87
1.3	Forestry and logging	3.83	1.71	-1.11
1.4	Fishing and aquaculture	6.55	-16.67	-7.35
2	Mining and quarrying	-17.27	-26.90	12.58
	Primary	-3.16	-6.40	3.81

P: Provisional estimate, Q: quick estimate

Source: KSPB, 2022b

Table 17**Trends in growth rate of secondary sector at 2011-12 prices**

No	Sector	2018-19	2019-20 (P)	2020-21 (Q)
1	Manufacturing	-5.28	-5.11	-8.94
2	Electricity, gas & water supply	22.96	2.07	-6.00
3	Construction	4.05	-1.09	-10.31
Secondary		0.45	-2.70	-9.50

P: Provisional estimate, Q: quick estimate

Source: KSPB, 2022b

Table 18

Trends in growth rate of tertiary sector at 2011-12 prices

No	Sector	2018-19	2019-20 (P)	2020-21 (Q)
1	Trade, repair, hotels and restaurants	10.43	3.41	-5.70
1.1	Trade & repair services	11.10	3.26	-5.56
1.2	Hotels & restaurants	3.31	5.15	-7.34
2	Transport, storage & communication	3.38	5.06	-11.90
2.1	Railways	-7.62	3.56	4.29
2.2	Road transport	5.42	-1.02	-13.21
2.3	Water transport	27.72	10.12	-35.42
2.4	Air transport	-49.10	66.25	-16.58
2.5	Services incidental to transport	3.30	2.38	-17.97
2.6	Storage	88.41	4.90	-23.87
2.7	Communication & services	5.23	18.45	-9.28
3	Financial services	18.55	4.46	-7.84
4	Real estate, ownership of dwelling & professional services	6.88	6.16	-11.42
5	Public administration	3.24	-1.80	-12.90
6	Other services	2.36	11.11	-9.31
	Tertiary	7.20	5.60	-9.25

P: Provisional estimate, Q: quick estimate

Source: KSPB, 2022b

Growth in unemployment rate

- The labour surveys indicate that the pandemic disruptions in labour market and State economy had resulted in huge loss of employment and spurt in unemployment rate.
- According to Periodic Labour Force Survey (PLFS), the unemployment rate was 11.8 percent in 2018-19, prior to the spread of the COVID-19 (Table 19).
- A notable aspect of Kerala's unemployment is the higher rate of unemployment among female compared to male.
- Due to the pandemic, there had been a spurt in unemployment rate.
- In the rural as well as urban areas we can notice a sudden increase in unemployment rate of male labour force.

- On the other hand, growth in unemployment rate of female persons was small.
- The unemployment rate witnessed a rise, both in rural as well as urban areas.
- The subsequent labour force survey in June 2021 indicate that the rate of unemployment remained at high rate without much change.
- This suggests that the State economy has not recovered from the unprecedented economic recession.

Table 19**Unemployment rate according to Current Weekly Status for 2019-20 and 2020-21 in Kerala(Age group 15 years and above)**

	Male	Female	Person
	PLFS July 2018 – June 2019		
Rural	8.0	19.0	11.6
Urban	7.9	20.9	12.1
Rural+Urban	8.0	19.8	11.8
	PLFS July 2019 – June 2020		
Rural	14.1	21.2	16.5
Urban	15.3	20.4	16.9
Rural+Urban	14.7	20.8	16.7
	PLFS July 2020 – June 2021		
Rural	12.6	22.4	15.8
Urban	15.7	23.1	18.0
Rural+Urban	14.0	22.7	16.8

Source: NSO, 2021.; NSO, 2022b.

Exodus of Keralite emigrants from GCC countries: Findings of a study. CDS working paper No. 507, April 2022.

- The major findings of the survey of 404 return emigrant workers belonging to five districts of Kerala are the following.
- Keralite emigrants were forced to return to Kerala due to loss of jobs.
- The return has resulted in total loss of remittances received by the households on regular basis, shattered their finances, increased their debt burden and pushed them to acute economic distress.

- Majority of the return emigrants who availed leave and came to Kerala could not return to GCC countries and stranded in Kerala.
- Due to return, most of the emigrant workers became unemployed, remained without income, faced high uncertainty to find employment and were pushed to poverty.
- The local labour market experienced fall in employment due to recession on the one hand and increased supply of labour on the other resulting in increase in unemployment rate.
- The return emigrant workers feel that the labour market situation and prospects of getting regular and remunerative jobs are bleak in Kerala.

Statistics on Indian and Keralite Emigrants in GCC countries and their return due to COVID-19

- Total stock of Indian emigrants in GCC countries in midyear 2020 : 95.68 lakh. (Male : 73.11 lakh, Female : 22.57 lakh)
- Rough estimate of Keralite emigrants in GCC countries (25 to 30 percent of total stock of Indian emigrants) : Between 23.9 lakh and 28.7 lakh.
- Total Indian's returned from GCC countries due to COVID-19 up to 30th April 2021 (Vande Bharath Mission): 40.24 lakh

- Number of Keralite returned from GCC countries up to June 22, 2021 (NORKA): 17.41 lakh
- Reasons for return of 17.41 lakh Keralite emigrants according to NORKA (loss of jobs 71.4%, visa expiring related 19.8%, children below 10 years 5.6%, senior citizen 2.1% pregnant women 0.9% and spouse of pregnant women 0.2%)

Source: CDS working paper No 507, April 2022.

Acute fiscal crisis: State lost fiscal ability to finance activities other than routine day to day expenditure.

- The fiscal indicators viz. revenue deficit (RD), Gross Fiscal Deficit (GFD), Debt GSDP ratio shows that Kerala has been facing persistent and acute fiscal crisis
- The target of FD as per KFRA Act is zero, but the state was not able to achieve it (Table 20)
- The state was also not able to achieve the GFD/GSDP ratio stipulated by KFRA Act (Table 21)
- The public debt level was also alarming (Table 22).
- But the CAG says that the actual debt may be high, if we include the out of budget spending.

- For meeting even routine revenue expenditure the state resorts to borrowing
- For meeting payment of social welfare pensions or paying salaries and pensions to KSRTC Staff government borrows money and incurre interest payments
- The CAG report on state finances for the year 2020-21 gives a dismal picture and very poor performance of state finances for five years from 2016-17 and 2020-21

Table 20

Trends in Revenue Deficit (RD)

Year	RD (Rs crore)	RD as % of revenue expenditure	GSDP	RD as % of GSDP	RD Target as per KFR Act (in %)
2019-20	14495	13.8	824374	1.8	0.0
2020-21	25830	20.9	799571	3.2	0.0
2021-22	26582	15.5	901998**	2.9*	0.0

* Based on provisional GSDP **Provisional

Source: CAG 2022 (a) and CAG 2022(b) and GoK 2022a

Table 21

Trends in Gross Fiscal Deficit (GFD)

Year	GFD (Rs crore)	GFD as % of total expenditure	GFD as % of GSDP	GFD Target as per KFR Act (%)
2019-20	23837	20.9	2.9	3.0
2020-21	40970	29.5	5.1	3.0
2021-22	42786	27.3	4.7*	3.0

* Based on provisional GSDP

Source: Same as Table 20

Table 22

Trends in Public Debt

Year	Public debt (Rs crore)	Growth (%)	Debt/GSDP (%)	Target as per KFR Act (Debt-GSDP Ratio)
2019-20	265362	9.8	32.2	29.7
2020-21	302620	14.0	37.8	29.7
2021-22 (RE)	339939	12.3	37.7*	34.7

* Based on provisional GSDP
Source: Same as Table 20

- The COVID-19 pandemic has aggravated the fiscal situation of Kerala.
- The reliance on borrowing to cover fiscal deficit is diminishing as the net availability of borrowing after adjusting payment of interest and repayment of debt is meagre.
- This has led to a situation where the State is forced to seek funds outside the budget even for revenue expenditure.
- Rapid rise in NPRES and the failure of successive governments to curtail the expenditure is the root cause of the present crisis as well as earlier crises.

- The basic reason for the persistent fiscal crisis in the state can be attributed to the huge increase in salary and pension expenditure due to pay and pension revision once in five years.
- Due to the fiscal crisis, the State has lost its ability to find resources or borrow funds for spending on items to revive the State's economy from unprecedented recession.

Unprecedented crisis in tourism sector

- Composition of Kerala's tourism suggests that nearly 94 percent of the tourists are domestic and 6 percent are international.
- The spread of the pandemic has resulted in an unprecedented crisis in the tourism sector.
- There had been a fall in 71 percent of foreign tourist arrivals and 73 percent of domestic tourist arrivals in 2020 compared to 2019.

- During 2021, the trend in the fall in foreign tourist arrival continued, but witnessed a revival in the arrivals of domestic tourists.
- The COVID-19 has also effected a structural shift of a decline in the share of foreign tourists on the one hand and increase in the share of domestic tourists. Most of the tourists belonging within the state of Kerala

Table 23
Trends in tourism arrivals to Kerala

Tourists/Total revenue from tourism/year	Year	Number of Tourists	Percentage Change
Domestic Tourist arrivals	2019	18384233	-
	2020	4988972	(-)72.86
	2021	7537617	51.09
Foreign tourist arrivals	2019	1189771	-
	2020	340755	(-)71.36
	2021	60487	(-)82.25
	Total revenue (Crore)		
Total revenue (Crore)	2019	45011	-
	2020	11335	(-)74.82
	2021	12286	8.38

Source: Kerala Tourism Statistics 2021 highlights

Conclusions

- Due to the COVID-19 induced crisis, the Indian economy experienced the worst recession since 1951-52.
- The state economy of Kerala also faced unprecedented crisis since the formation of the state in 1956.
- The lockdown implemented had created severe damage to the state economy. It was estimated that during the first quarter of 2020-21, the total losses in GVA was around 10 percent of the total GVA of 2020-21.
- State economy experienced an unprecedented negative growth rate during 2020-21 (-9.2 percent).

- The secondary sector and the tertiary sector experienced a negative growth of more than 9 percent. There has huge loss of employment and steep increase in unemployment rate.
- Russia's invasion of Ukraine in February 2022 had arrested the process of global economic recovery from global recession and created conditions for prolonged global recession and stagflation.
- Due to these global changes the recovery from the unprecedented economic crisis and recession of Kerala may be delayed.

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THANK YOU