

Macroeconomic Pandemic Panorama of Developing Economies: A Special Case of Indian Economy

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Abstract: *The recent COVID-19 pandemic has adversely affected the socio-economic and political ecosystem across the economies. The externalities can be observed in all dimensions such as in labor market, manufacturing and services, transportation, and tourism. It has been observed that the populated developing economies have been severely impacted due to spread of pandemic. The rising health expenditure, increasing debt, labor migration, increase in unemployment, prices, and the loss of output are the major factors to drag these economies into vulnerability. The present study attempts to identify the numerous adverse externalities generated due to COVID-19 pandemic in the developing economies. The macroeconomic effect of pandemic on Indian economy has been discussed in the later section of the study.*

Keywords: *COVID-19, Developing economies, Pandemic, Macroeconomic, Externalities.*

1. Backdrop

The study highlighted the fall in growth trend, unemployment increase and growth of migration and miseries. The severe impact of the current pandemic has been more numerically observed in underdeveloped and highly populated countries. The direct impact of the COVID -19 fuelled pandemic has been mostly visualized in the highly populated countries such as India, China, Brazil, Bangladesh, and Pakistan. The number of casualties due to waves of pandemic is mainly observed in these countries. The challenges such as insufficient health infrastructure and inappropriate governance (planning and execution) are the fundamental causes behind such failure. In addition, the recent wave not only has the short term direct effects in the countries' socio-economic ecosystem, but it will have medium and long term indirect effects as well. The adverse externalities of pandemic is yet to prolong in the form of low economic growth, low productivity, low per capita income, low employment generation, high rates of inflation, high incidence of abject poverty, unplanned and unsettled migration, hunger, malnutrition, famine, low living standard, and failures of millennium development goals.

In this socioeconomic and political context the developing and underdeveloped countries are those countries which are less developed in terms of industrial base, GDP, and human development as compared to the developed countries. As per [Althor, Watson, and Fuller \(2016\)](#) "Developing countries tend to have some features in common often due to their histories or geographies". The populated countries are having the developing countries status. China and India currently account for about 37 percent of entire global population. They are the big giants in terms of population and they are under the category of developing country. In addition, Bangladesh, Brazil, Nepal, Sri Lanka, and Pakistan are also considered as developing countries. These countries have been facing several issues of

vulnerabilities of different dimensions. The low human development countries face several issues such as political instability and lack of political will, inefficient governance, high population growth rate, low levels of growth and development, lack of employment opportunity, low productivity, high incidence of unemployment and poverty and their adverse externalities such as high IMR, hunger, crime, unplanned and unsettled migration from rural to urban, rising slums, environmental degradation, low educational and health levels and so on. The issues and challenges faced by highly populated developing countries have been created vulnerability at the global level. As per [Worldometer \(2021\)](#) the GDP (PPP) per capita in dollars in 2017, the top five countries were Qatar with 128,647 followed by Macao 115,367, Luxembourg 107,641, Singapore 94,105, and Brunei 79,003. It is recorded extremely low in the populated countries such as Bangladesh 3,877 with 147th rank, India 7,166 with 122th in rank, Pakistan 5539 with 134th rank, and China 16,842 with 79th rank.

According to [Human Development Report \(2020\)](#), in HDI the top five countries are Norway, followed by Ireland, Switzerland, Hong Kong China (SAR) and Iceland with same points. The case of populated countries is grim in terms of their development. India stood at 131th rank in HDI, Bangladesh at 133th, Pakistan at 154th, Nepal at 159th, Brazil 82th, China 85th. As per Institute for Economics and Peace (IEP), the [Global Peace Index \(2020\)](#), the top five countries are, Iceland, New Zealand, Portugal, Austria, and Denmark. While the populated countries recorded enormously low, Bangladesh stood at 97th rank, China 104th, India 139th, and Pakistan is at 152th. MPI Population vulnerable to multidimensional poverty, unemployment rate, and number of hungry people in these countries have been also recorded extremely high as compared to developed countries. These statistics clearly reflect that the south Asian populated developing countries have been facing huge heterogeneity in economic growth and developmental process. The ineffective planning process of several decades have dragged these countries into vulnerable situation. The recent pandemic has further aggravated inequalities across nations.

2. Literature Review

The epidemics and pandemics are not new in the human civilization. They have happened at different stages in human history ([Ferguson et al., 2020](#)). In the context of recent era, fast pace of inventions, globalisation, and transportation have contributed in escalating the impact of pandemics across the globe. There have been ample evidences about the rise in the frequency of pandemics from the year 2000 and thereafter. Numerous studies have been noticed that the rise frequency of pandemics ([Garrett, 2007; Keogh-Brown, McDonald, Edmunds, Beutels, & Smith, 2008; Madhav et al., 2017](#)) argue that it was inevitable. The increased viral disease amongst animals have also contributed in epidemics and pandemics ([Madhav et al., 2017](#)). As per study on COVID 19 by Imperial College of London claimed that COVID-19 is the most grave incidence since the 1918 Spanish Influenza pandemic ([Ferguson et al., 2020](#)). The widespread adverse externalities of pandemic has also been witnessed in recent year due to spread of COVID-19. A number of economists and social scientist estimated the pandemic related disruptions to overall economy. The impacts can be seen in labor markets, manufacturing and service sector, transportation, tourism, and real estate market, and others. There have been lost of working hours across the economies. International Labor Organisation, estimated that there have been lost of total working hours in 2020 as compared to 2019. They were highest in Europe (14.6%) and America (13.7%), followed by middle income economies. Organisation also estimated the aggregate global job losses about 114 million in 2020 as compared to 2019 ([Human Development Report, 2020](#)). In addition, numerous studies estimated the effect of COVID-19 pandemics on loss of working hours and job loss (e.g., ([Adams-Prassl, Boneva, Golin, & Rauh, 2020; Béland, Brodeur, & Wright, 2020c; Coibion, Gorodnichenko, & Weber, 2020a; Kahn, Lange, & Wiczer, 2020](#))).

Some more studies found the similar results, For instance, the rate of unemployment upsurge witnessed in the US are partly driven by lockdown/social distancing policies ([Rojas et al., 2020](#)). [Adams-Prassl et al. \(2020\)](#) investigate the disparity in job/income losses based on the type of job and individual characteristics for the United States (US) and the United Kingdom (UK). The pandemic has

disproportionately affected the economically vulnerable population which includes parents with younger children (Alstadsæter et al., 2020). It also affected the workers with lower levels of education, younger adults, and immigrants are concentrated in occupations that are less likely to be performed from home (Yasenov, 2020). The COVID 19 pandemic has also affected the mortality and health that has been reflected in studies (e.g., (Goldstein & Lee, 2020; Lin & Meissner, 2020)). Some studies also tried to relate the impact of pandemic on mental health and well-being (e.g. (Brodeur, Grigoryeva, & Kattan, 2020c; Davillas & Jones, 2020; De Pedraza, Guzi, & Tijdens, 2020; Tubadji, Boy, & Webber, 2020)). The study by Chatterji and Li (2020) relates the effect of the pandemic on the US health care sector.

3. Pandemic and its Externalities

As discussed above the ongoing COVID-19 fuelled pandemic has numerous direct and indirect implications on the global economy. The 2020 Global Economic Prospects estimates 5.2 percent of contraction in Global GDP in 2020. Every region is subject to substantial economic downfall in 2020 and 2021. As per the projection by United Nations Development Programme (UNDP), the developing economies would lose at least 220 billion dollars in income. An additional 95 million people are expected to have entered the ranks of extreme poor in 2020 due to average annual loss in per capita GDP (IMF). 207 million people could be derived into extreme poverty by 2030, due to severe long term sustained pandemic effects as per new study by UNDP. The debt burden of developing countries may climb between 2.6 and 3.4 trillion dollars over the next two years, according to UNCTAD (2020). Remittances are estimated to fall by 7.2 percent in 2020, followed by further decline of 7.5 per cent in 2021 (Lee, 2021).

Table-1.

Growth of World Output and GDP (in percentage).

Annual Percentage change	2019	2020 Estimated	2021 Forecast	2022 Forecast
World	2.5	-4.3	4.7	3.4
Developed Economies	1.7	-5.6	4.0	2.5
Economies in transition	2.2	-3.4	3.4	3.0
Developing Economies	3.6	-2.5	5.7	4.6
Africa	2.8	-3.4	3.4	3.6
East and South Asia	4.9	-0.5	6.5	5.2
China	6.1	2.4	7.2	5.8
India	4.7	-9.6	7.3	5.9
Brazil	1.4	-5.3	3.2	2.2
Least Developed Economies	4.8	-1.3	4.9	4.6

Source: World Economic Situation and Prospects (2021).

The World Economic situation prospects of 2021, estimated -4.3 growth of GDP of world during the 2020. This growth figure is better than some developing economies such as India and Brazil. The GDP growth rate of Chinese economy estimated positive 2.4 percent contributed to maintain the overall growth of developing economies. The developed economies have recorded contraction of GDP growth by 5.6 which is severe as compared to overall world's GDP growth, economies in transition, and developing economies in the same year (Table 1). In the same year, the estimation reflects that the Indian economy is recorded contraction of GDP growth by -9.6 percent, most vulnerable as compared to other developing economies like China and Brazil. The least developed economies is faced negative 1.3 percent in GDP growth. The projection for the period 2021 and 2022 have shown the recovery in across the world. The slowdown in GDP growth across the economies has been generated adverse socio-economic externalities. As per an estimation by International Food Policy Research Institute, that the fall of output by 5 percent would probably raise the extreme poverty by about 140 million people around the world. With Africa alone for about 80 million and South Asia for 42 million (Laborde, Will,

& Rob, 2020). In an estimation on poverty, the World Bank indicates that in 2020, the number of people in extreme poverty in baseline scenario will increase by 71 million. The poverty rate increasing from 8.2 percent in 2019 to 8.8 percent in 2020. It also reflects that, in the downside scenario, the world's poverty will increase by 100 million in the 2020 (World Bank, 2020). The situation of the developing economies is also very grim. The impact of pandemic on poverty rates in populated developing economies is more austere than developed regions. Since the large number of labor force has been engaged in unorganized sector the economies like India facing the problem of loss of working hours, unemployment, poverty, and hunger. In an estimation by International Labor Organization (ILO), in the Asia and Pacific, the annual calculated decline in working hours is 7.9 per cent. The sub-regions of Asian reflects very heterogeneous figures, Eastern Asia recorded at 4.2 percent, South-Eastern Asia and Pacific at 8.2 percent, and Southern Asia at 12.7 percent. The two most populated economies China and India recorded estimated annual average losses of 4.1 per cent and 13.7 percent, respectively (Human Development Report, 2020). The decline in the working hours further implicates in terms of increasing unemployment level and poverty.

Table-2.

Estimated changes in extreme poverty rates in 2020 due to the pandemic.

S.No	Regions	Change in headcount ratio (percentage)	Change in number of poor (millions)
1	East Asia and the Pacific	0.21	4.41
2	Europe and Central Asia	0.23	1.16
3	Latin America and the Caribbean	0.55	3.58
4	Middle East and North Africa	1.22	4.91
5	Other high income	0.01	0.07
6	South Asia	1.25	23.28
7	Sub-Saharan Africa	2.74	31.17
8	Least developed countries	3.16	33.4
9	World total	0.88	68.57

Source: UNCTAD (2020).

Table 2 shows the UNCTAD (2020) calculations of change in the poverty levels in 2020 of various regions across the world. The least developed countries shows the highest change in the headcount ratio and number of poor during the year 2020, followed by Sub-Saharan Africa, South Asia, Middle East and North America. The total change in the number of poor in the world stood at 68.57 during the year 2020.

The countries across the world have also seen the reverse migration of labor-force from urban to rural during the pandemic and lockdown strategy of the government(s). The case of populated economies such as India and China has been more vulnerable than the developed economies. Lockdown strategy by most of countries' government has shut-down the manufacturing and transportation services lead to reduced working hours and income. Migrant labor-force mostly concentrated on the facilitating of services, which employed around 70 per cent of migrant workers in 2013 (ILO, 2015). Voluminous such workers are physical workers in area of construction work, domestic and tourism services (ILO, 2018a). Migrant labor-force those were engaged in the manufacturing and service sector has affected most by the pandemic and further lockdown strategy. The effects of pandemic, lockdown, and decline in working hours lead to loss of jobs. As per ILO estimation, the global decline in informal working hours in the second quarter of 2020 was initially estimated to correspond to the loss of more than 305 million full-time jobs (ILO, 2020d). The service sector such as tourism has also severely affected by pandemic and lockdown. In 2020, as per estimation by UNWTO (2020b) there will be between 850 million to 1.1 billion fewer international tourist arrivals about 910 billion dollar to 1.2

trillion dollar lost in tourism export revenue and 100 million to 200 million jobs at risk due to the pandemic (UNWTO, 2020b; N. Verma, 2020, 2021a).

4. The Case of India

Recent decline in the GDP growth rate has been a major concern for the Indian economy. Last year, Indian economy performed worst in the list of top 20 economies in the world. As per official estimates, the Indian economy has seen 7.3 percent contraction in GDP in 2020-21 and likely to contract by 7.7 per cent in 2020-21 (NSO, 2020-21) has left Indian economy with numbers of adverse socio-economic implications. The low GDP numbers has reduced the fiscal space subsequent to decline in public expenditure and capacity to provide aid to other underdeveloped and developing economies which would expected to hamper the trade relationship with other economies. As per official estimates, India's trade with association of Southeast Asian nations, the Gulf nations, China, and North America reduced. In addition to that the China's economy has been performing well in terms of GDP growth rate and able to create new relationships with other economies. India who has a potential to expand its horizons across the world has now losing this opportunity due to decline in GDP numbers. In the wake of globalisation, the most of the economies have always been formulate macro-economic policies to expand their trade benefits. The economies' competitiveness and relationships both enduring side by side. It has been identified in the economic literatures that the performance of trade depends on the strength and capacity of the economy. The GDP, structural developments, monetary, fiscal, and trade policies and their performances determine the strength and capacity of any economy. In recent decades, the emerging economies such as China, Brazil, Bangladesh, Singapore, and Indonesia have been emerged as a trading partners as well as competitors of Indian economy. The GDP figures of these economies have been recorded much better than Indian economy in the last two years in the wake of pandemic hit situation.

Table-3.

Real GDP Growth (annual percent change).

Country	2018	2019	2020
Bangladesh	7.9	8.2	3.8
Brazil	1.8	1.4	-4.1
China, People's Republic of	6.7	5.8	2.3
India	6.5	4	-8.0
Indonesia	5.2	5	-2.1
Singapore	3.5	1.3	-5.4
Sri Lanka	3.3	2.3	-3.6
Advanced economies	2.3	1.6	-4.7
Emerging market and developing economies	4.5	3.6	-2.2
World	3.6	2.8	-3.3

Source: IMF Datamapper (2021).

Table 3 shows the last three year real GDP growth performance of some developing economies of the world. Only two countries 'China' and 'Bangladesh' in the above listed economies have been recorded positive growth rate in real GDP in the year 2020. The Bangladesh's economy performed much better than Indian economy in the last three years. The first wave of COVID have not been severely impacted the economy, Bangladesh recorded positive 3.8 percent growth in the real GDP growth in 2020. It was remarkably performed better than Indian economy who recorded -8.0 percent, which is worst among all above stated economies, even as compared to all advanced, emerging market economies. The performance of India was better in 2018 it was only behind the Bangladesh and China, but just before the COVID hit, India's performance in real GDP recorded a decline by 2.5 percent in

2019 as compared to 6.5 percent in 2018 and reached to 4 percent in 2019 (Verma, 2021a; Verma, 2021b).

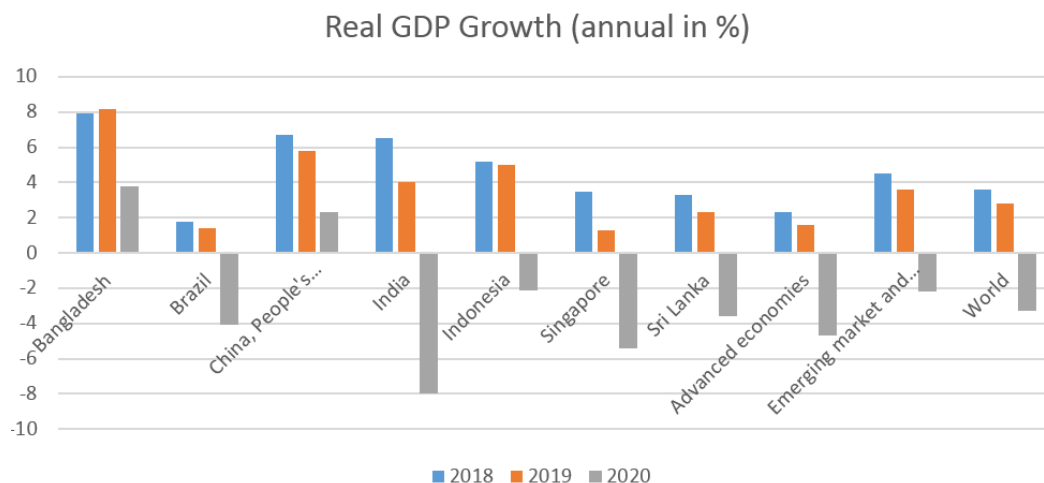


Figure-1.
Real GDP Growth (annual in percentage).
Source: IMF Datamapper (2021).

4.1. High Public Debt

The net lending/borrowings as a percent of GDP of India has been the second highest among the above listed economies, only after Brazil. It has increased from -6.33 in 2018 to -7.41 in the subsequent year and then increased significantly to -12.26 in 2020. The low per-capita income and higher the percentage of borrowings leads to higher dependence on the external factors which further impacted the overall economic growth and developmental process. The cumulative borrowings of Indian economy much greater than the economies such as Bangladesh, Indonesia, Singapore, Sri Lanka, since their size of economy is less than the Indian economy.

Table-4.
Net lending/borrowing (also referred as overall balance) (% of GDP).

Country	2018	2019	2020
Bangladesh	-4.64	-5.43	-5.47
Brazil	-7.10	-5.88	-13.37
China, People's Republic of	-4.65	-6.34	-11.39
India	-6.33	-7.41	-12.26
Indonesia	-1.75	-2.23	-5.87
Singapore	3.69	3.84	-8.94
Sri Lanka	-5.32	-8.18	-11.88
Advanced economies	-2.51	-2.94	-11.68

Source: IMF Datamapper (2021).

As per IMF, Fiscal Affairs Department, India's debt to GDP ratio increased from 74 percent to 90 percent during the COVID-19 from 2019 to 2020 and expected to stagnant at high levels in coming five years. The Bangladesh's debt to GDP ratio in 2020 was only 38.86, Indonesia 36.62, China's 66.83, was less than India. Even emerging market and middle income economies and low-income developing economies have recorded less as compared to India's debt to GDP ratio in the year 2020.

On the front of trade, as per official estimates, India's Merchandise trade deficit stood at \$15.10 billion in April 2021, while net of services stood at \$ 8.17 billion (estimation), trade deficit \$6.93 billion in the April 2021.

4.2. Inflation and Vulnerability

The recent pandemic hit has been dragged the world economy into severe vulnerability, and India economy is not an exceptional. It has marked an austere dent on socio-economic ecosystem. The economic downfall and the social evils have been picked up in the recent last two years and expected to rise in future. The problems such as unemployment, poverty, price rise, hunger, and malnutrition are expected to rise in near future. In India where nearby 180 million people about 14 percent of total population are undernourished. India ranked 94th among 107 countries as per the recent ([Global Hunger Index, 2020](#)). About 20 percent of children under 5 years age are underweight, and 51.4 percent women in the reproductive age (15-49 years) are anaemic, report added. The consistent price rise in the food and essential commodities and services have been one of the major contributor in rising the numbers of hunger and malnutrition. The consistent rise in fuel prices at the global and national level directly indirectly contributes in the price index of these commodities. The current pandemic hit has been affected mostly the labour force who were and are engaged in unorganised, service, and construction sector such as working in restaurants, dhaba, tea stalls, shopping malls, groceries, maid services, and so on. As per Economic Survey 2018-19, 93 percent of total workforce in India is engaged in unorganised sector. It means about 41.85 crore out of 45 crore are in unorganised sector. They have been severely affected by the pandemic hit subsequent to lockdown strategy of government (s) in the economy. The rise in prices of essential commodities and services due to rise in fuel prices and shortage of supply and stagnant high demand for commodities have further added the pressures on the vulnerable segment of the economy.

Table-5.
Monthly Wholesale Price Index (WPI) inflation; Base year 2011-12.

S. No.	Commodity Description	April, 2019	April, 2020	April, 2021 (Provisional)
1	Petrol	1.86	-23.92	42.37
2	LPG	11.11	-1.11	20.34
3	Kerosene	21.45	-28.01	42.72
4	Mustard Oil	-0.08	10.65	48.50
5	Sunflower Oil	1.21	5.89	48.65

Source: RBI (2021).

Table-6.
CPI-Combined (rural and Urban): Inflation, Base 2012=100.

S. No	Commodity description	April, 2019	April, 2020	April, 2021 (Provisional)
1	Meat and Fish	7.55	9.27	16.68
2	Egg	1.94	9.01	10.55
3	Milk and products	0.42	9.42	-0.13
4	Oils and fats	0.74	10.43	25.91
5	Fruits	-4.89	2.67	9.81
6	Vegetables	2.87	23.61	-14.18
6	Health	8.43	2.80	7.76
7	General Index (CPI)	2.99	7.22	4.29

Source: RBI (2021).

The [Table 5](#) reflects the last three years WPI inflation of some important commodities, which directly and indirectly determines the household expenditure. In the April, 2021 (provisional estimates), the WPI inflation in 'sunflower oil' was recorded highest jump 48.65 followed by 'mustard oil' 48.50,

'kerosene' 42.72, 'petrol' 42.37, and 'LPG' 20.34. The figures were comparatively better in the last two years. The straight surge in their WPI inflation in all above vital commodities have been put a lot of burden on the consumption and savings of vulnerable or poor people of the country.

In the April 2021, the CPI inflation in most of the protein rich commodities such as meat and fish, egg, oils and fats have shown a drastic increase over the last two years. The 'edible oil', which is an essential commodity of the households has shown spiral jump in its prices. The inflation of 'oils and fats' recorded 25.91 which was 0.74 in April, 2019. The protein rich commodities such as 'meat and fish' and 'egg' have also seen hike in their prices as compared to their last two years inflation rate. The inflation in 'milk and products' have shown a small decline in April, 2021 but inflation was recorded 9.42 in April, 2020 as compared to 0.42 in April, 2019. The inflation in 'vegetables' surged from meagre 2.87 in April, 2019 to 23.61 in April, 2020, then showed a decline and reached to -14.18. 'Milk and products' have also recorded an increase between April, 2019 and 2020 but reduced in 2021 as per the recent estimates. These two commodities gave some relief to the vulnerable people. The inflation in 'health' has also recorded a rise from 2.80 April 2020 to 7.76 in April, 2021.

4.3. Health Expenditure and Infrastructure

According to [National Health Accounts \(2016-17\)](#) the total health expenditure as percent of GDP was estimated 4.2 in 2004-05 which declined to 4 percent in 2013-14 and further declined to 3.8 percent in 2016-17.

Let us see comparative statistics of some health sector variables, as per latest data available on the world bank database, in 2018 the current health expenditure per capita, PPP (current international \$), India spent 275.13 which was lower than China 935.19, Brazil 1530.82, Sri Lanka 516.92 and far lower than the developed nations such as U.S 10623.85 and U.K 4619.57 and then the World's average 1467.19. The number of hospital beds per 1000 people in India was only 0.53 in 2017 as compared to other developing countries, China recorded 4.31, Brazil 2.09, Italy 3.18, Sri Lanka 4.15, Myanmar 1.04, Pakistan 0.63, Singapore 2.49, and the world 2.891 in the same year 2017. In addition, the number of physicians per 1000 people as per world bank, Brazil 2.16 in 2017, China 1.978, India 0.777, Italy 3.98, Sri-Lanka 0.927, Myanmar 0.863, Nepal 0.910, Pakistan 1.00, and the world 1.565 in the year 2017. In a report on 20th April 2020 by CDDEP and Princeton University on health infrastructure estimates the existing hospital capacity of India's public and private health sector in terms of number of hospital beds, Intensive Care Unit (ICU) beds, and ventilators, access of States and Union Territories (UTs), the study suggest approximately 19 lac hospital beds, 95 thousand ICU beds and 48,000 ventilators are available in India. The estimates of state level distribution of beds and ventilators shows that most of them are concentrated in seven states- Uttar Pradesh 14.8 percent, followed by Karnataka 13.8 percent, Maharashtra 12.2 percent, Tamil Nadu 8.1 percent, West Bengal 5.9 percent, Telengana 5.2 percent, and Kerala 5.2 percent ([Kapoor et al., 2020](#)). Further official data as of 11th December 2020 reported that there are dedicated COVID-19 treatment facilities for 15375, dedicated isolation beds 1541821, oxygen supported beds and ported beds 270738, ICU beds 80583, and ventilator beds 40454 ([MHFW, 2020](#)).

According to Lancet study in "The Hindu" in 2016 the (healthcare quality and accessibility) HAQ index, India ranks 145th with 41.2 points among 195 countries, behind its neighbours like China (48), Bangladesh (133), and Bhutan (134) ([The Hindu, 2018](#)).

5. Political-Will and Pandemic

India is a democratic political nation. The bureaucratic system has been a backbone of the country's political and economic ecosystem and works for the proper execution and implementation of policy and strategy. The planning process and formulation of policy at the macro level are left with the cabinet ministers and policy advisors with the inclusion of administrators. But have we done all this in appropriate way in this severe pandemic phase? Have the top ministers or decision makers included all the relevant stakeholders such as top administrators, doctors, medical experts, economists, experts in the field of labor and migration, state representatives and administrators to minimize the externalities of

pandemic? The decision makers future plans were hardly ready in order to recover economic conditions, minimization of poverty levels, rising aggregate demands and supply of goods and services, achieving ample growth in all sectors, reducing the levels of unemployment and giving job opportunities to labor force, reducing crimes in the cities, and future plan for health system to tackle the pandemic like situations effectively. There are several questions those arises in this current pandemic. The citizens give votes, taxes and trusted their representatives and seek assurances from the government that it will take care of all these things and works for expanding development and welfare in the country rather than concentrating on only fund collection and profit making just like private corporates. We do not have sufficient doctor patient ratio, health care hospitals to people ratio, number of beds and patient ratio, appropriate medical product's supply and demand. There are several other facts. Private hospitals have charged exorbitantly. There has been black marketing of key medicines and injections. This is mainly because of more demand and less supply.

The multitude of externalities of pandemic cautioned us last year only. There were rising demand for medical facilities and shortage of its supply, drastic and huge reverse migration from cities to rural areas amid pandemic psycho-fear, insufficient public transport, mismanagement of central and state government strategy on transportation and food supply to vulnerable people, high inflation rate on essential products, hoarding and black marketing of medical products and services. The improper planning can lead a country and people into a vulnerable situation even though it has sufficient resources. The same happened in the case of India. Recently, on 4th may 2021, renowned economists and former RBI governor of India, Prof. Raghuram Rajan said on Bloomberg that "India's overwhelming surge of coronavirus infections has revealed complacency after last year's first wave, as well as a lack of foresight, a lack of leadership".

6. Policy Implications and Conclusion

The straight downfall of global GDP indicates the vulnerability and severity of coronavirus led pandemic. As per World Economic outlook update for January 2021, the global GDP contracted by 3.5 percent in 2020, expected to grow by 5.5 percent in 2021 and 4.2 in 2022 ([World Economic Outlook, 2021](#)). The impact of pandemic does not end with the number of causalities and slowdown in GDP. The real picture is yet to come in medium terms. The spread of its adverse socio-economic externalities would be the next challenging job for the politicians, policy makers and administrators across the countries. The populated countries such as India, Brazil, Pakistan, and Bangladesh have been drastically affected by the virus which has further affected health infrastructure. The coronavirus pandemic has already led to a dramatic loss of human life across the world and especially in populated developing countries. Public health, labour force migration, and food system directly affected and presented unprecedented challenge. The socio-economic disruption and improper planning have been distressing tens of millions people who are at threat of falling into abject poverty. The number of undernourished people, estimated at nearly 690 million and could increase up to 132 million by the end of the year (joint statement by ILO, FAO, IFAD, and WHO, 13TH Oct, 2020). Millions of enterprises have been shut down and face an existential threat. The labour force of informal sector and workers in unorganised segment smashed badly due to pandemic and lockdown strategy of the many countries. In addition, the United Nation (UN) food agencies estimated the number of hungry people who regularly go to bed without food is around 690 million. If it continues with same pace, then the number will exceed to 840 million by 2030 (FAO, IFAD, UNICEF, WFP and WHO, 2020). The World Bank recently estimated that an additional 88 million to 115 million people will fall into extreme poverty in 2020, with the total rising to as many as 150 million by 2021.

The statistics on health sector have showed that India is lagging not only in terms of public investments in health sector but also in terms of providing ample requirements of health medications and infrastructure when we compared to other developing nations such as China and Brazil in terms of number of beds and physicians even below than world's average. On the one hand, we are in the top five in terms of economic growth from last more than two decades but in terms of health status we are far

below than world's average. The CAG report of 2019 stated “*annual financial allocations for the health sector has been rising but targets for outlays in 2019-20 had been missed which indicated that there is a long way to go before the goal of raising Public Health Expenditure to 2.5 per cent of GDP by 2025 could be met. Besides, providing adequate physical infrastructure and human resources critical for achievement of SDGs (Goal 3) targets would be an area of challenge*”. The economic survey 2020-21 strongly recommended that country should increase in public spending on healthcare services from 1 percent to 2.5-3 percent of GDP, as envisaged in the [National Health Policy \(2017\)](#). It estimates this can significantly reduce the Out-Of-Pocket-Expenditure (OOPE) from 65 percent to 35 percent of the overall healthcare spend which directly contributing to the high incidence of disastrous expenditures and poverty.

The current pandemic has raised concerns in the area of health facilities and Government's will at all level. The mismanagement and lack of ample or shortage of health facilities are not only the outcome of political will on the expenditure on health sector in the current years but it reflects the effects of low public expenditure on health from several decades. The government's machinery should be well formed with the inclusion of all stakeholders such as experts in the field of pandemic, administrators, virologists, social-scientists, environmentalist, and psychologists in order to formulate and execute policies to reduce the all dimensional externalities in the socio-economic ecosystem of the country. The proper planning and effective execution is must to handle the crisis at this level. The private health sector should also be well regulated so that they do not charge exorbitantly.

During the pandemic the rising cost of healthcare has been brutally affected the vulnerable people. The high cost COVID treatment could leave lakhs of poor people into severe vulnerability. The increase in the prices of essential food and services would drag them to withdraw their life-time savings, sale of live-stocks and other assets, and push to take loans, just to survive and sustain. In addition, the increased prices of protein rich commodities would reduce their protein and nutrients levels in the body and further implicates in degrading overall health due to low immunity, high chances to catch illness and finally leads to hunger and malnutrition. The government should take initiatives to tackle these externalities produced by rise in prices of essential products. The steps should be in the direction of reducing fuel prices which is exclusively engaged in transport of essential commodities, reduction of GST of essential commodities and services, prepare strategy in order to motivate the agricultural farmers to produce more protein rich commodities and instigate manufacturing units to produce more medical equipment and medicines. These steps directly and indirectly help the vulnerable segment of the economy subsequently it would help to reduce the upcoming surge in the number of malnutrition and hunger people in the economy. The government should take initiatives to tackle these externalities produced by rise in prices of essential products. The steps should be in the direction of reducing fuel prices which is exclusively engaged in transport of essential commodities, reduction of GST of essential commodities and services, prepare strategy in order to motivate the agricultural farmers to produce more protein rich commodities and instigate manufacturing units to produce more medical equipment and medicines. These steps directly and indirectly help the vulnerable segment of the economy subsequently it would help to reduce the upcoming surge in the number of malnutrition and hunger people in the economy. On the front of GDP and debt, the lower GDP and rising debt to GDP ratio due to rising lending and borrowing put the pressure on government and finally on each citizen of the country. The higher economic pressure on government would lead to more fiscal burdens and subsequently push to raise tax rates in the economy. The trade relationship can also be weakened due to low fund availability which reduce the capacity to help other countries. India has still lot of potential to revive overall economy only if the steps are taken in the right direction. On the trade aspects India can reap immense benefits from exploring new trade opportunity. There are 43 Nations in Latin America, and 41 nations in unspecified regions where India can explore their trade potential in order to expand the trade benefits ([RBI, 2021](#)). The export and imports in these regions has negligible share. India should expand their relationships in these region. In addition, India can also expand their trade commodity and services. There are few economies where India do trade in the varieties of commodities. The exploration in the new trade opportunities with the variety of commodities should be the objective

of policy makers. The terms of trade and searching new avenues are very much required in this intense rivalry world.

The highly populated countries have been buffeted by economic breakdown for multiple quarters due to lockdown strategy and shut down of industrial production and transportation, closing down of informal markets and shopping complex, decline in consumption, pressure of weak healthcare system, rise in health care cost, loss of trade and tourism, dwindling remittances, and mounting debt. These externalities further push to rise in unemployment, poverty, inequality in income, high growth in price index, migration, hunger, and so on. The short term impact and implications have been now observed and the medium and long term externalities are yet to be seen. These externalities of the pandemic are more damaging to highly populated developing countries. Recently Oxfam report stated, “the coronavirus pandemic has potential to lead an increase in inequality in almost every country”. In addition, the World Inequality Report, 2018 stated that “the world over, for 40 years, the richest 1 percent have earned more than double the income of the bottom half of the global population”.

The vital challenge for the World now a days is that the infections are still rising in the many parts of the world. The new variant and new mutations of virus have been continuously affecting most of the populated countries especially south Asian countries. The vaccination drive has started almost across the globe. The politically based delays in manufacturing and distribution of vaccines may raise complications in populated underdeveloped and developing countries. In order to reduce the vulnerability due to pandemic, there is need of viable and effective policy making and execution at the global level. The proper coordination among global institutions, national and state level governments have to be rollout to tackle the deadly coronavirus and its externalities in the near future. The whole globe needs humanity and coordination to grow. The political and people’s will are the keys to make the rational planning and their implementation.

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