iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 9 **Issue:** VII **Month of publication:** July 2021

DOI: https://doi.org/10.22214/ijraset.2021.36943

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue VII July 2021- Available at www.ijraset.com

The China Influence of COVID-19 and the Fiscal Policy Measures Riposte in India - An Analytical Global Study

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Abstract: ***Coronavirus 2019 (COVID-19's) impact has gone far beyond its direct effect on morbidity and mortality. In addition to adversely impacting non-COVID health care utilization, the pandemic has resulted in a deep global economic contraction due to lockdown policies and declining demand and supply of goods and services. As a result, most countries are experiencing lower levels of gross domestic product (GDP), rising unemployment, higher levels of impoverishment, and increasing income inequality. Some countries are more vulnerable to the economic contagion resulting from COVID-19, including those implementing more stringent lockdowns and those that are more globally integrated due to their dependence on trade, tourism, and remittances. In addition, countries with pre-existing conditions of fiscal weakness due to higher dependence on external grant financing, low tax revenues, and large pre-crisis debt levels are struggling to implement countercyclical mitigative fiscal and monetary policies. In addition to declining economic activity, government revenues have declined, government borrowing is increasing, and public debt levels are projected to skyrocket globally.***

Keywords: Pandemic, Impoverishment, mitigative fiscal, policy response, countercyclical measure, annuities, containments

I. INTRODUCTION

Since its first outbreak in Wuhan, China, COVID-19 has infected all continents, including Antarctica (in December, 2020), and more than 220 countries. The health shock, though global, has transmitted through different trajectories across countries in terms of total infections, mortalities, and recoveries. In the initial stages of the pandemic, the Advanced Economies (AE) of North American and West European region were disproportionately impacted with more than 70 per cent of the total cases and total deaths. The pandemic quickly intensified in number of Emerging Market and Developing Economies (EMDEs) such as Brazil, India, Mexico, Russia and Turkey– that now constitute around 50 per cent of total cases and total deaths. In recent months, amidst a repeat wave, AEs—particularly the United States and several Euro area countries—have accounted for an increasing share of cases; in EMDEs, outbreaks in the Latin America and the Caribbean, and Europe and Central Asia regions have continued to grow. It is evident that AEs have been affected harder by the pandemic.

With globalization, urbanization, and environmental change, infectious disease outbreaks and epidemics have become global threats requiring a collective response. Although the majority of developed countries, predominantly European and North American, have strong real-time surveillance and health systems to manage infectious disease spread, improvements in public health capacity in low-income and high-risk countries—including human and animal surveillance, workforce preparedness, and strengthening laboratory resources—need to be supported by using national resources supplemented with international donor funding. International collective action among governments, non-government organizations, and private companies has been advocated in building and financing technological platforms to accelerate the research on and development response to new pathogens with epidemic potential (2, 4). In the case of COVID-19, such cooperation is critical, especially for the development and production of a vaccine. The Coalition for Epidemic Preparedness Innovations (CEPI), a global partnership launched in 2017, has tracked global efforts in COVID-19 vaccine development activity and is advocating for strong international cooperation to ensure that vaccine, when developed, will be manufactured in sufficient quantities and that equitable access will be provided to all nations regardless of ability to pay (5). Furthermore, affected countries may benefit from exchanging technological innovations in contact tracing, such as health Quick Response (QR) codes, to manage the outbreak more effectively. However, there are important privacy implications that need to be considered (6). In the case of COVID-19, the collective response and adoption of preventive measures to stop the global spread were implemented too late, after COVID-19 had already penetrated other regions through international travel. Figure

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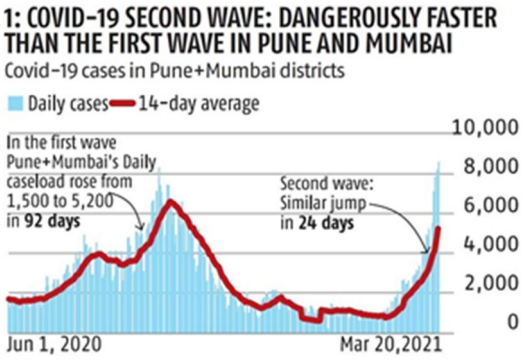
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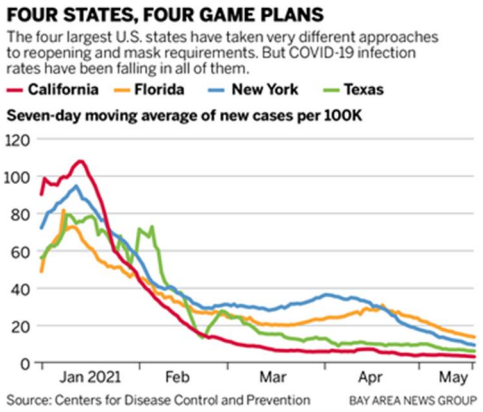
1A presents the dynamics of confirmed COVID-19 cases and shows that large countries in Europe (e.g., Italy, Germany, and the UK) and the U.S. have already outnumbered China, the origin of epidemic, in the number of confirmed COVID-19 cases.

The spread of the pandemic has been in waves . AEs were experiencing their third waves, both in terms of cases and deaths, at the end of the year while EMDEs (excluding China and India) were facing their second waves. China experienced the first wave of cases in February, 2020 after which it has been able to control the spread. India experienced its first wave till September, 2020 after which it has been able to effectively manage the spread – avoiding the second wave as on date. The initial spread of pandemic was limited primarily to western and northern zones of the country, which contributed 42 and 22 per cent respectively . On the other hand, a sharp rise in share of Southern zone was witnessed since July, 2020 with the zone adding more than one-third of the new cases per month on an average. The eastern and central regions each constituted 10 per cent of the total cases respectively during the year. All zones, barring northern region, experienced a single wave of infection till December .The festive season during October and November led to a second wave of infections in the northern region. In per capita terms, the southern zone had a maximum caseload at 1226 cases per lakh followed by western zone at 1124 cases per lakh; the eastern region had the lowest caseload at 342 cases per lakh as on 31st December, 2020. The total death toll in India, as on 31st December, 2020, was 1.48 lakh with more than 50 per cent of the fatalities occurring in western and southern zones of the country. Throughout the pandemic, Maharashtra has been the worst affected state having highest incidence of deaths in India. All zones, except the northern zone, experienced a single wave in terms of deaths. The northern region witnessed three death waves, with the third wave proving to be the most lethal as deaths exceeded 1.7 times more than what it was during the first wave. In per capita terms, the western zone has been the worst performer with 27 deaths per lakh, followed by northern region at 13 deaths per lakh. Deaths per capita have been lower in the eastern and north-eastern zones at 6 and 4 deaths per lakh respectively. As the first step towards timely identification, prompt isolation & treatment, testing was identified as an effective strategy to limit the spread of infection. A characteristic of the pandemic, which aggravated its virulence, was its probable transmission by asymptomatic people. Largescale testing was, therefore, imperative for quick identification of cases, immediate isolation to prevent spread and timely treatment.

It also helped in effective contact tracing and timely isolation of prospective cases. Testing policy has been continuously evolving since the beginning of the pandemic with countries rapidly gearing up the testing capacity to curb the pace of spread

A. Spread of Pandemic in India Wave by Wave





India imposed a stringent nation-wide lockdown during the initial phase of the pandemic in March-April, 2020, followed by gradual unlocking and phasing out of the containment measures. India crossed its peak in mid-September with 11.12 lakh active cases on 17th September, 2020 and 97,860 daily new cases on 16th September, 2020 (Figure 4 (a)). Subsequently, new cases have moved down to less than 16,000 cases per day in January, 2021 despite the festive season and onset of the winter season. The confirmed cases in India have touched more than 1.06 crore, representing around 11 per cent of the world's total case load. India's share in new cases load globally has drastically come down from 31 per cent in September, 2020 to 4 per cent in December, 2020. The pace of spread has been controlled with doubling time of cases rising from 12 days in May, 2020 to 249 days in December, 2020

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B. India's Strategic Multi-Pronged Policy Response

India recognised the disruptive impact of the pandemic and charted its own unique path amidst dismal projections of the spread in the country given its huge population. It was estimated that India would have 30 crore cases and several thousand deaths by the end of May, 2020 . At a time of rapid change and mounting uncertainty, the clear objective of 'Jaan Hai to Jahan hai' and to 'break the chain of spread' helped the government face the dilemma of 'lives vs livelihood', pace the sequence of policy interventions and adapt its response as per the evolving situation. India adopted a graded four-pronged pre-emptive, and pro-active strategy consisting of containment measures, calibrated fiscal support focussed on essentials during lockdown and demand push during unlock phase, financial measures and

C. Structural Reforms to Combat COVID-19

The policy response was tailored to different phases of the epidemic, adapting to evolving requirements to provide succour to people, support demand, facilitate the recovery to pre-pandemic levels and ensure fiscal and debt sustainability. A gradual, smooth transition was paved from 'Jaan Hai to Jahan hai' to 'Jaan bhi aur Jahan bhi'. 1A nationwide 'stringent' lockdown for 21 days was declared on March 24, 2020 and subsequently extended till May 31, 2020. As per the Oxford Government Response Tracker, India was among the first ones to impose a stringent lockdown (with index at 100) despite having a few cases at the time of imposing a lockdown. The lockdown provided the much-needed time to strengthen the health system response, ramp up testing and ensure public engagement/awareness towards practice of social distancing. At the beginning of the pandemic, India was almost totally dependent on imported Ventilators, PPE Kits and N-95 Masks. The Central Government recognised the challenges posed by the pandemic in the very initial stages and successfully ensured more than adequate availability and supplies of essential medical items across the country. A three-tier arrangement of healthcare facilities was created for appropriate management of COVID-19 cases, COVID Care Center with isolation beds for mild or pre-symptomatic cases; Dedicated COVID Health Centre (DCHC) with oxygen supported isolation beds for moderate cases and Dedicated COVID Hospital (DCH) with ICU beds for severe cases has been implemented. As on 29th December 2020 a total of 2,70,710 oxygen supported isolation beds, 81,113 ICU beds (including 40,627 ventilator beds) and 12,669 quarantine centres with 5,91,496 beds had been created. The textile industry rose to the challenge of the pandemic by up-scaling the production of PPE kits and N95 masks from scratch to emerge as the second largest producer of PPE kits and reach a daily production of 32 lakh pieces of N95 masks. Government of India and the RBI have undertaken multidimensional efforts to maintain financial stability and provide necessary regulatory support to ease both demand and supply constraints posed by the pandemic. The policy support provided helped in cushioning the expected fall in demand due to the lockdown-induced distress on both individuals and firms. The fiscal policy response of the Government of India to the pandemic was distinct from other countries in that the demand stimulus was introduced in a phased manner with prior focus on measures to provide a cushion for the poor and vulnerable sections of society and to the business.

II. STATE OF THE ECONOMY 2020-21: A MACRO VIEW 37 SECTOR IN INDIA (ESPECIALLY THE MSMES).

This included one of the world's largest food grains distribution programme, direct cash transfers to 42 crore individuals, more than 20 crore Women Jan-Dhan accounts, cash support to building and construction workers, `30,000 crore additional emergency working capital funding for farmers through NABARD, additional pension payments, provision for free gas cylinders, additional allocation under MGNREGS, as well as government guarantees for credit, postponement of financial deadlines etc. The pace at which India could intervene on technology related transfers of financial assistance to the poor and vulnerable during the pandemic derives its success from the meticulously built social institution of J-A-M (JanDhan, Aadhar and Mobile). Through the Direct Benefit Transfer system, the country could transfer money in crores of accounts through a click of button during the pandemic time. Further, Garib Kalyan Rojgar Abhiyaan (GKRA) was launched on 20th June, 2020 for a period of 125 days in 116 districts of 6 States to boost employment and livelihood opportunities for migrant workers who had returned to their villages and similarly affected citizens in rural areas due to COVID-19 pandemic. Government of India also launched Emergency Credit Line Guarantee Scheme (ECLGS 1.0) to provide much needed relief to stressed sectors by helping entities sustain employment and meet liabilities. A second version of the Scheme (ECLGS 2.0) was also launched to offer necessary credit guarantee for loans by banks and NBFCs to identified stressed sectors. Paradoxically, the first images of COVID-19 that India associates with are not ventilators or medical professionals in ICUs but of migrant laborers trudging back to their villages hundreds of miles away, lugging their belongings. With most of the economy shut down, the fragility of India's labor market was patent. It is estimated that in the first wave, almost 10 million people returned to their villages, half a million of them walking or bicycling. After the economic stoppage, the International Labor Organization has projected that 400 million people in India risk falling into poverty.

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The term "deferred annuity" (can be seen into individual and macro level as well) refers to the present value of the string of periodic payments to be received in the form of lump-sum payments or instalments, but after a certain period of time and not immediately. In other words, the deferred annuity formula helps in determining the present value of the future annuity payments on the basis of the applicable rate of interest and period of delay.

If the annuity payment is to be made at the end of each period, then it is known as ordinary annuity and its formula is expressed using annuity payment, rate of interest, number of periodic payments and period of delay. Mathematically, it is represented as,

[Ordinary Annuity = P * [1 – (1 + r)-n] / [(1 + r) t* r] Where, P = Annuity Payment, r = Rate of Interest, n = Number of Periodic Payments, t = Period of Delay]

If the annuity payment is to be made at the beginning of each period, then it is known as an annuity due and its formula is also expressed using annuity payment, rate of interest, number of periodic payments and period of delay. Mathematically, it is represented as, Annuity Due = P * [1 – (1 + r)-n] / [(1 + r) t-1* r]

The formula for Deferred Annuity can be calculated by using the following steps:

The major difference between a deferred annuity and most other annuity is how and when the withdrawals are started. As any other annuity plan, the deferred annuity is also funded over a period of time through a lump-sum payment or monthly contributions. However, the withdrawals, in this case, do not start immediately after the funding and as such the name – a deferred annuity.

The ordinary annuity formula can be explained as follows:

1) *Step 1:* Firstly, ensure that the annuity payment is to be made at the end of every period, which is denoted by P.
2) *Step 2:* Next, ascertain the period of delay for the payment, which is denoted by t.
3) *Step 3:* Next, determine the total no. of periodic payments to be made and it is denoted by n.
4) *Step 4:* Next, determine the rate of interest applicable for the period and it is denoted by r.
5) *Step 5:* Finally, the ordinary annuity formula can be expressed on the basis of the annuity payment (step 1), no. of periodic payments (step 2), a period of delay (step 3), and rate of interest (step 4) as shown below.

Ordinary Annuity = $P * [1 – (1 + r)^{-n}] / [(1 + r)^{t} * r]$

The annuity due formula can be explained as follows:

a) *Step 1:* Firstly, ensure that the annuity payment is to be made at the beginning of every period, which is denoted by P.
b) *Step 2:* Next, ascertain the period of delay for the payment, which is denoted by t.
c) *Step 3:* Next, determine the total no. of periodic payments to be made and it is denoted by n.
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Annuity Due = $P * [1 – (1 + r)^{-n}] / [(1 + r)^{t-1} * r]$

That can majorly be used of deferred annuity for such cases:

- It is used by insurance companies to assess the quantum of money to be paid either as a regular income or a lump sum.
- It is used by investors to add to their existing retirement income, such as Social Security.
- It is used to defer the tax on earnings.

III. RURAL SECTOR

Now if we think about rural sector for agriculture is the largest employer, at 42 percent of the workforce, but produces just 18 percent of GDP. Over 86 percent of all agricultural holdings have inefficient scale (below 2 hectares). Suppressed incomes due to low agricultural productivity prompt rural-urban migration. Migration is circular, as workers return for some seasons, such as harvesting. Evidence of Indian labor market segmentation is widely available—with a small percentage of workers being employed formally, while the lion's share of households relies on income from self-employment or precarious jobs without recourse to rights stipulated by labor regulations. Only about 10 percent of the workforce is formal with safe working conditions and social security. Perversely, modern-sector employment is becoming "informalized," through outsourcing or hiring without direct contracts. The share of formal employment in the modern sector fell from 52 percent in 2005 to 45 percent in 2012. During this period, formal employment went up from 33.41 million to 38.56 million (about 15 percent), while non-agricultural informal employment increased from 160.83 million to 204.03 million (about 25 percent).

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Most informal workers labor for micro, small, and medium-sized enterprises (MSMEs) that emerged as intermediate inputs and services suppliers to the modern sector. However, workers struggle to get paid, which the government identifies as great challenge. Payroll and other taxes, as well as limited access to subsidized credit for large firms, are disincentives to MSME growth. Although over half of India has smartphone access, relatively few can telework. Retail and manufacturing jobs require physical presence involving direct client interaction. Indeed, income for families unable to telework has fallen faster.

The government's crisis response has mitigated damage, with a fiscal stimulus of 20 trillion rupees, almost 10 percent of GDP. Also, the Reserve Bank of India enacted decisive expansionary monetary policy. Yet, banks accessed only 520 billion rupees out of the emergency guaranteed credit window of 3 trillion rupees. In fact, corporate credit in June is lower than June last year by a wide margin after bank lending's fall. S&P has estimated the nonperforming loans would increase by 14 percent this fiscal year. Corporations have deleveraged retiring old debts and hoarding cash, as have households. Recovery through investment and consumption has stalled. These trends are exacerbated due to the pandemic. The manufacturing Purchasing Managers Index (PMI) recovered 50 percent since May but at 47.2 it remains in negative territory. Services contribute over half of GDP but its PMI, even after bouncing back, remains low at 33.7 in June. Consumption of electricity, petrol, and diesel have regained from the lockdown lows but are still 10-18 percent below June 2019 levels. Agriculture has been the bright spot, with 50 percent higher monsoon crop sowing and fertilizer consumption up 100 percent. Unemployment levels had spiked to 23.5 percent but with a mid-June recovery to 8.5 percent—and then crept up again marginally.

RBI undertook several conventional and unconventional liquidity enhancing measures to manage liquidity situation in the economy. These measures, inter alia, included injection of durable liquidity of more than `2.7 lakh crore through Open Market Operation (OMO) purchases between February 6-December 4, 2020, `20,000 crore through two purchase auction OMOs in State Development Loans (SDLs), `1 lakh crore via Targeted Long Term Repo Operations (TLTROs) of up to three years' tenor, `1.25 lakh crore through Long Term Repo Operations (LTROs) conducted in February-March 2020, reduction in the Cash Reserve Ratio (CRR) requirement of banks from 4 per cent of net demand and time liabilities (NDTL) to 3 per cent with effect from March 28, 2020 augmenting primary liquidity in the banking system by about 1.37 lakh crore, raising banks' limit for borrowing overnight under the Marginal Standing Facility (MSF), `50,000 crore Special Liquidity Facility for mutual funds and refinance facility worth `75,000 crore for all India financial institutions i.e., NABARD, NHB, SIDBI and EXIM Bank. A key measure taken by RBI and Government of India during H1:2020-21 to ameliorate the liquidity constraints faced by NBFCs, was to set up a Special Purpose Vehicle (SPV) to purchase short-term papers from eligible NBFCs/HFCs, which could then utilise the proceeds to extinguish their existing liabilities.

To ameliorate corporate stress, Government suspended the initiation of fresh insolvency proceedings under Section 7, 9 and 10 of Insolvency & Bankruptcy Code 2016 for defaults arising on or after 25th March 2020 till 25th March 2021. RBI, too, announced loan moratorium from 1st March 2020 to 31st August 2020 along with an asset classification dispensation and special resolution framework for COVID-19 related stressed assets. Under the resolution plans that could be invoked under the above window, lenders were permitted to grant additional moratorium of up to two years. Also, MSME accounts classified as Standard where the aggregate exposure of banks and NBFCs was `25 crore or below as on March 1, 2020, were permitted to restructured without a downgrade in the asset classification, subject to certain conditions.

India's response has been unique in recognising that the pandemic would have long-term disruptive effects on the productive capacity. The Atmanirbhar Bharat Mission was, accordingly, a composite package announced with welfare measures to address the short-term distress of individuals and firms; and structural reforms to alleviate the long-term distress on the economy. With gradual unlocking of the economy, the focus of the stimulus measures shifted towards investment boosting and consumption revival measures like Production Linked Incentives, enhancing capital expenditure and investments in infrastructure sector. The nuanced adaptations in policy as per the requirements of the pandemic was based on continuous dialogue and coordination between the Centre, States and Local Governments. The overall policy response, therefore, is aimed at making the Indian economy more resilient and flexible to deal with the opportunities and problems of the post-COVID world.

A. In India Fiscal Changes/Setup within Pandemic

{Policy Package in India to Combat COVID-19 |Measures Nature Policy Tools| Containment measures Containment and Closure Policy | Transmission prevention | Education sector closure| Complete Nation-wide lock-down for 21 days | Travel bans/restrictions| Closure of public places/cancellation of public events| Curtailment of non-essential economic activities |Risk profiling of districts into Red Zone (hot spots), Orange and Green Zones | Social distancing norms | Mandatory use of masks| Fiscal Policy Measures

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|Health sector | Welfare| Tax Measures |Increment in daily wage under MGNREGS | Garib Kalyan Rojgar Abhiyaan – livelihood creation in rural areas |Tax & contribution policy changes | Support to States, linking borrowings to Reforms | Aatma Nirbhar Bharat Package 1 | Emergency Credit Line Guarantee}

IV. POLICY DILEMMAS UNDERLYING COVID-19

'Lives Vs Livelihoods'- Given the fast spread of the pandemic, the immediate public health policy priority was, 'flattening the epidemiological curve' to mitigate the impact of the spread. The steps to "flatten the curve" were intended to slow the transmission of the virus, push the peak of the curve and spread the distribution of cases over time. Countries, accordingly, across the globe adopted various non-pharmaceutical interventions (NPIs) like social distancing measures via work & school closures, travel bans, cancellations of public events and restrictions of internal movement and, by social isolation measures via quarantining infected people from the population, tracing infected persons contacts and enhanced testing. The containment measures allowed ramping up of the health and testing infrastructure, arresting the spread of the virus and saving 'lives'. Countries that imposed effective NPIs, especially at the onset of the pandemic, could manage the spread of the pandemic relatively better. Even if no containment measures were implemented, a recession would have been fueled by the precautionary and/or panic behavior of households and firms faced with the uncertainty of dealing with a pandemic that had no cure. This is because households voluntarily took precautions which affected demand, especially for non-essential items. The lockdown reinforced this response to the pandemic. The public health measures, adopted to contain the spread, engendered sizeable immediate economic costs as they led to almost full suspension of economic activity, curbed consumption and investment, as well as restricted labor supply and production. COVID-19, therefore led the world to the predicament of saving 'lives' or 'livelihoods' as the steps taken to flatten the infection curve, steepened the macroeconomic recession curve.

B. Demand-side and Supply-side Shocks

The pandemic has been a unique economic shock that has triggered both supply and demand side shocks simultaneously across economies around the world . Increased uncertainty, lower confidence, loss of incomes, weaker growth prospects, fear of contagion, curtailment of spending options due to closure of all contact-sensitive activities, the triggering of precautionary savings, risk aversion among businesses and resultant fall in consumption and investment – leading to the first order demand shock. The supply chain disruptions caused by closure of economic activity and restricted movement of labour lead to the first order supply shocks.

The first order supply side disruptions potentially created second round effects on both demand and supply. The initial supply shock, resulting in wage and income loss, could impact aggregate demand and impair productive capacity leading to supply shocks. These effects were further amplified through international trade and financial linkages, dampening global activity and pushing commodity prices down. The feedback loops of demand and supply generated potential hysteresis effects - when households demand less, firms get reduced revenues, which feeds into reduced activity by firms, and thus reduced household income.

The policies to 'flatten the epidemiological curve', therefore, needed to be accompanied by economic policies designed and targeted to mitigate the resulting shock to the economic system and 'flatten the recession curve'. There was, however, unprecedented uncertainty about the potential spread of the pandemic. The pandemic, therefore, posed unprecedented dilemmas before policymakers – lives vs livelihoods and flattening the twin curves of pandemic and the resultant economic recession.

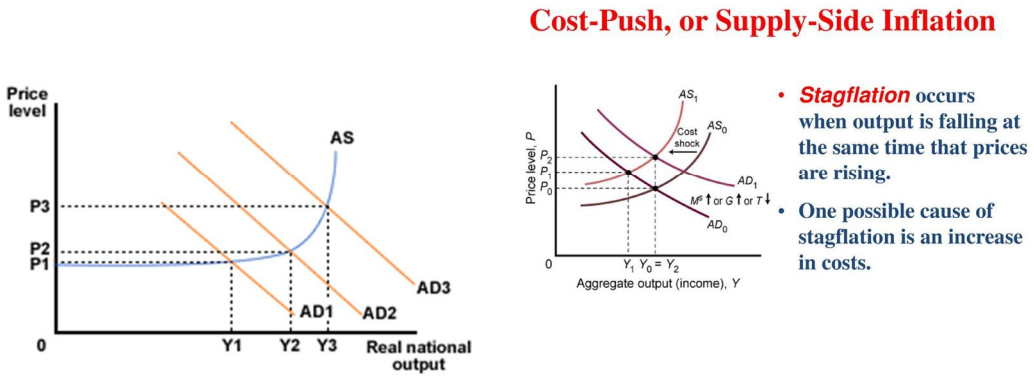
V. SECTORAL IMPACT OF COVID-19 IN INDIA: - UBIQUITOUS, YET IRREGULAR

The spread and intensity of COVID-19 induced twin economic shock can be broadly captured through impact on output/Gross Value Added (GVA) and employment. In terms of GVA shock, non-essential activities are likely to endure a combined shock directly proportional to their respective GVA contribution, given that they could not operate during lockdown. Essential activities are likely to undergo a dampened shock, primarily arising from the indirect impact of restricted activities in non-essential sectors. In terms of employment shock, contact-sensitive sectors like trade, hotels, transport, tourism, etc. are likely to undergo a shock proportional to the respective employment share, with informal workers likely to bear the larger brunt .The construction and mining sectors, that employ a larger share of informal workers, have been severely affected by the pandemic-induced lockdowns. Percentage distribution of usually working persons in usual status by broad status in employment for each industry of work.

The impact of the pandemic and associated health measures has been unique as it has affected every sector of the economy. Agriculture was largely insulated from the lockdown in India as timely and proactive exemptions from COVID-induced lockdowns to the sector facilitated uninterrupted harvesting of rabi crops and sowing of kharif crops. However, supply chain disruptions impacted the flow of agricultural goods leading to high food inflation and adverse initial impact on some major agricultural exports.

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The manufacturing sector was hit hard in the first quarter but has since picked up though mining still remains impacted. Construction and Services sector were hit the hardest due to the pandemic induced requirements of social distancing and minimising of personal interaction.



VI. DISRUPTION OF GLOBAL ECONOMY BY THE PANDEMIC:

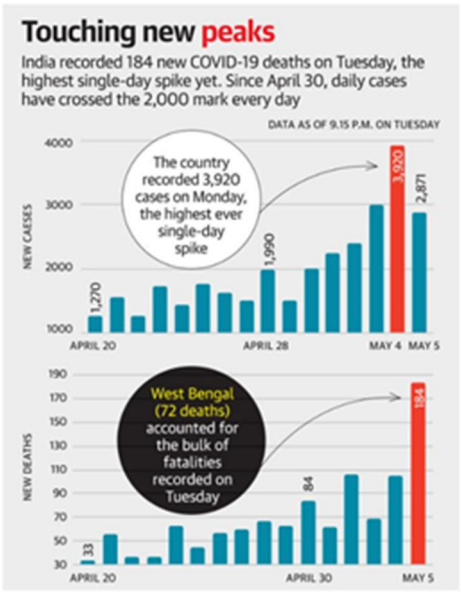
As was evident from the earlier section, the pandemic raised unprecedented health challenges on a global scale and posed unique policy dilemmas. Since 2018, the growth momentum in global output was on a weakened footing owing to various factors like trade tensions, political instability, slowed demand and reduction in industrial activity. COVID-19 pandemic accentuated the deceleration by causing severe demand and supply disruptions. Economic activity has been belabored by reduced mobility, owing both to official restrictions and private decisions; uncertainty regarding the post-pandemic economic prospects and policies has impacted investment; disruptions in education have decelerated human capital accumulation; concerns about the viability of global value chains; and the adverse impact on international trade and tourism.

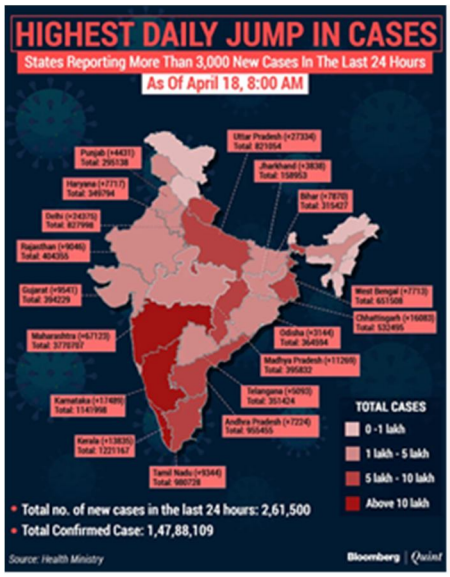
The month of April 2020 became the month of "Global Lockdown" with world economic activity coming to a standstill – leading to a steep fall in output during second quarter of 2020.

Global output is expected to witness the sharpest contraction in a century, contracting in the range of 3.5 - 4.3 per cent in 2020 as per the estimates provided by IMF and World Bank. The cumulative loss to global GDP over 2020 and 2021 is estimated at around USD 9 trillion – greater than the economies of Japan and Germany combined. Loss of output is anticipated to be more severe in AEs at 5.4 per cent compared to EMDEs, excluding China, which stood at 5.0 per cent for the year 2020. This is aligned with the more severe impact of the pandemic spread in AEs than EMDEs as was seen above. The estimates for global growth were revised upward through the year with easing of lockdowns and resurgence in economic activity in July-September quarter of the year. The rebound in global activity has, however, been uneven and subdued since the beginning of second half of the year due to resurgence in COVID-19 infection rates in AEs.

The pandemic induced border closures and supply disruptions interrupted the international provision of goods and services. The Global composite Purchasing Managers Index (PMI) was in contraction for five months before July, 2020. Global trade is projected to contract by 9.2 per cent in 2020—comparable to the decline during the 2009 global recession but affecting a markedly larger share of economies. Trade has, however, played a critical role in responding to the pandemic, allowing countries to secure access to vital food and medical supplies. Most commodity prices rebounded from their mid-2020 lows as strict lockdowns were gradually lifted and demand firmed, especially from China. The recovery in oil prices was more modest amid concerns over the pandemic's lasting impact on oil demand. Gold emerged as a safe-haven investment in the backdrop of the pandemic prices with prices increasing by 26.2 per cent in November, 2020 as compared to December, 2019. Food prices also surged during the year reflecting supply chain disruptions. As a result of weak demand and subdued energy prices, inflation moderated in most part of the world, deflationary pressure emerged in major AEs. Fall in inflation in EMDEs was less broad based than in AEs, reflecting the effects of sharp currency depreciations as well as rising domestic food prices in some countries.

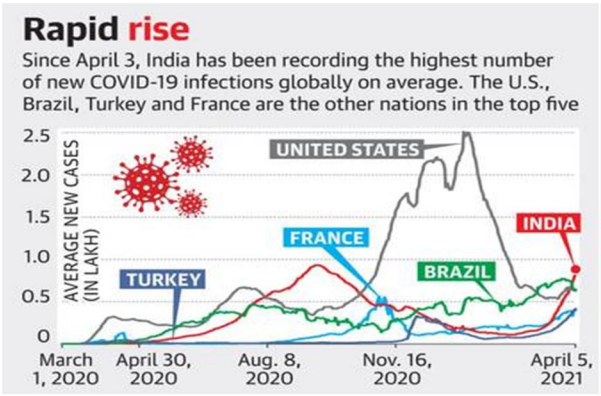
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A. State of the Economy 2020-21: A Macro View

Global financial conditions have remained accommodative on the back of continued policy support via unprecedented swift interventions by Central banks. Despite subdued activity and a highly uncertain outlook, global equity markets have rebounded at a faster pace from the March lows, though with notable differentiation across countries, depending on the spread of the virus, the scope of policy support, and sectoral composition. Behind the broad rebound of risky assets, there are clear signs of differentiation across sectors. Some sectors (such as airlines, hotels, energy, and financials) have been more affected by the lockdown and social distancing, whereas those that are less contact-intensive (information technology, communications) have fared better. US dollar index has weakened by 7.4 per cent on year-tod ate basis in comparison to most G-10 currencies with countries adopting various policies to alleviate downward pressure on their exchange rates.

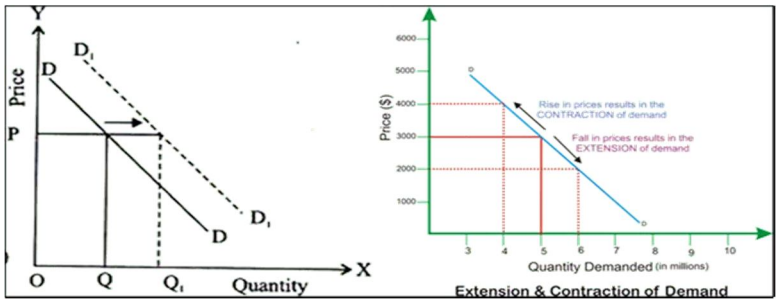


The pandemic has exacerbated the risks associated with a decade-long wave of global debt accumulation. Sizeable discretionary support, along with a sharp contraction in output and an ensuing fall in revenues has led to a surge in government debt and deficits. Debt burdens have increased as corporates faced a period of sharply reduced sales and sovereigns have financed large stimulus packages. Debt levels have reached historic highs, making the global economy particularly vulnerable to financial market stress . General government debt in major economies rose during Q2 2020 . Debt is likely to rise further as governments finance the recovery by facilitating the transition of capital, labor, skills, and innovation to a post-pandemic economic environment.

Going forward, an effective vaccination campaign, restoration of consumer and business confidence as well as continued monetary and fiscal support are expected to lift the global output by 4.5 – 5.5 per cent in 2021. Downside risks to this forecast include the possibility of mutant strains, delays in vaccine procurement and distribution, disruptive effects on potential output from the pandemic, and financial stress triggered by high debt levels and weak growth.

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 9 Issue VII July 2021- Available at www.ijraset.com



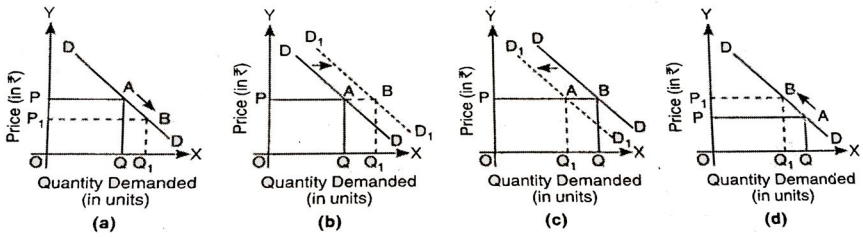
VII. INDIAN ECONOMY ON THE PATH OF A RESILIENT V-SHAPED TRAJECTORY

The Indian economy, after subdued growth in 2019, had begun to regain momentum January 2020 onwards, only to be stalled by the once-in-a-century black swan COVID-19 outbreak. Since then, several high frequency indicators have demonstrated a V-shaped recovery. The fundamentals of the economy remain strong as gradual scaling back of lockdowns along with the astute support of 'Atmanirbhar Bharat Mission' have placed the economy on the path of underpinning.

There has been rapid recovery in India's economic activity from the COVID-19 pandemic induced unprecedented lows of the first quarter of FY 2020-21 on the back of extraordinary fiscal and monetary support provided by the Government and RBI. Overall movement of high frequency indicators over Q1, Q2 and Q3 indicated speedy pickup in Q2 and growing convergence to pre-pandemic levels in Q3. As India's mobility and pandemic trends aligned and improved concomitantly, indicators like E-way bills, rail freight, GST collections and power consumption not only reached pre-pandemic levels but also surpassed previous year levels.

A. Movement of High Frequency Indicators

The year also saw manufacturing sector's resilience, rural demand cushioning overall economic activity and structural consumption shifts in booming digital transactions. The full impact of the pandemic on the Indian economy is still unravelling and the future growth prospects would critically depend on sustenance of momentum of this recovery. Agriculture is set to cushion the shock of the COVID-19 pandemic on the Indian economy in 2020-21 with a growth of 3.4 per cent. It is the only sector that has contributed positively to the overall Gross Value Added (GVA) 2020-21. This indicates that agricultural activities for rabi harvesting and kharif sowing were largely unaffected by the covid 19-induced lockdown. Given the expectation of a bountiful kharif harvest, the food grain production target has been set at 301 million tonnes for the 2020-21 crop year, up by 1.5 per cent from the record output achieved in 2019-20. Sowing remained healthy while procurement continued unabated, firming up buffers and channelizing supply, while ensuring food security throughout the year.

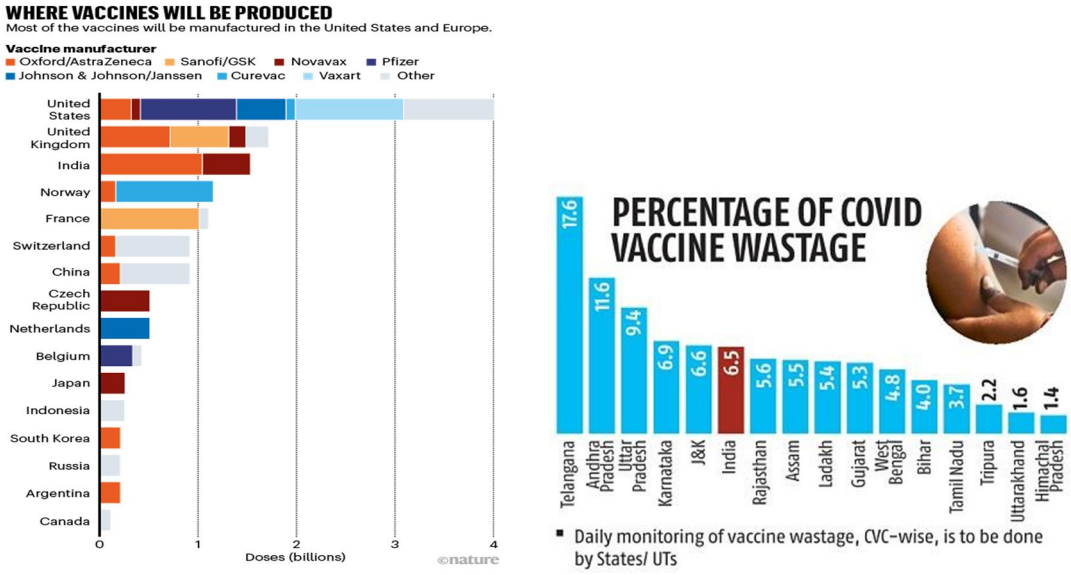


The target for procurement of rice for 2020-21 is 495.37 lakh tonnes 1.27 Rural demand has remained resilient empowered by the government's thrust on the rural economy and infrastructure in previous years, through a bouquet of reforms for both farm and non-farm sectors. There has been re-energised focus in the last six years on rural roads by extension to smaller villages, rural housing and sanitation, provision of basic amenities under various Government Schemes and creation of durable assets through MGNREGS. These measures have been reinforced by rural digitalisation and financial inclusion drives which also aided in smooth implementation of demand push measures during COVID-19. Initiatives to spur skill development, entrepreneurship, Self Help Groups and livelihoods have further empowered the rural economy to combat the COVID-19 induced vagaries. Critical steps such as PM-KISAN, adoption of cost plus 50 per cent formula for MSP, focus on State of the Economy 2020-21: A Macro View 23 irrigation via PM Krishi Sinchai Yojana, micro-irrigation scheme, promoting economies of scale through FPOs, and institutionalizing e-NAM (Electronic national agricultural market), and promotion of agricultural mechanization through subsidies and custom hiring centres, have contributed to nourishing a vibrant agricultural sector, which remains a silver lining to India's growth story of FY 2020-21.

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ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
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A palpable V-shaped recovery in industrial production was observed over the year. Manufacturing rebounded and industrial value started to normalize. Headwinds, however, lingered on. The index of eight core industries, which make up around 40 per cent of the index, registered a growth of (-) 2.6 per cent in November 2020 as compared to a growth of 0.7 per cent in November 2019 and (-) 0.9 per cent in October, 2020. Consequently, IIP, after registering positive growth in October 2020 slipped back into contractionary zone in November, 2020. PMI Manufacturing, however, continued to remain in expansionary zone in December 2020. Resuscitating steel consumption reinforced acceleration in construction sector, propping up employment as economy unlocked. The housing market, a key forward linkage sector for steel consumption, saw gradual resurgence. Electricity sector retained its momentum with power consumption registering positive YoY growth since September.



One critical and lasting consequence of the pandemic will be the accelerated adoption of digital technology in health care delivery. We conclude by discussing ways in which the changes wrought by COVID-19 from a health care, policy, and economics perspective can add value and are likely to endure post-pandemic.

State/UT-wise allocation of Covishield and Covaxin through GoI for first fortnight of May'21

State	Covishield	Covaxin	Total
Maharashtra	17,50,620	5,76,890	**23,27,510**
Uttar Pradesh	13,49,850	4,11,870	**17,61,720**
Rajasthan	12,92,460	4,42,390	**17,34,850**
Gujarat	12,48,700	4,11,490	**16,60,190**
Karnataka	10,05,370	3,31,300	**13,36,670**
West Bengal	9,95,300	3,27,980	**13,23,280**
Madhya Pradesh	8,71,290	2,87,120	**11,58,410**
Bihar	7,64,850	2,52,040	**10,16,890**
Andhra Pradesh	6,90,360	2,27,490	**9,17,850**
Kerala	6,84,070	2,25,430	**9,09,500**
Chhattisgarh	6,47,300	2,13,300	**8,60,600**
Telangana	6,28,760	2,07,200	**8,35,960**
Odisha	5,88,010	1,93,770	**7,81,780**
Tamil Nadu	5,39,060	1,94,120	**7,33,180**
Punjab	4,63,710	1,52,810	**6,16,520**
Haryana	4,23,890	1,39,690	**5,63,580**
Delhi	3,73,760	1,23,170	**4,96,930**
Jammu & Kashmir	3,84,700	0	**3,84,700**
Jharkhand	2,62,790	86,590	**3,49,380**
Assam	2,53,960	83,690	**3,37,650**
Uttarakhand	2,42,160	79,800	**3,21,960**
Himachal Pradesh	3,02,080	0	**3,02,080**
Tripura	96,670	31,860	**1,28,530**
Goa	54,620	0	**54,620**
Mizoram	45,550	0	**45,550**
Meghalaya	42,520	0	**42,520**
Arunachal Pradesh	36,510	0	**36,510**
Chandigarh	32,210	0	**32,210**
Sikkim	31,600	0	**31,600**
Manipur	31,590	0	**31,590**
Nagaland	30,220	0	**30,220**
Puducherry	29,890	0	**29,890**
Andaman & Nicobar	19,940	0	**19,940**
Ladakh	15,260	0	**15,260**
Dadra & Nagar Haveli	8,300	0	**8,300**
Daman & Diu	7,910	0	**7,910**
Lakshadweep	4,160	0	**4,160**
Total	**1,62,50,000**	**50,00,000**	**2,12,50,000**

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VIII. CONCLUSION

Fact is that prices across the board are moving up, not just in the US but also in the Indian economy. The central bank/s are keeping an eye on the inflationary numbers and expecting them to be transitory rather than turning into runaway inflation.

Since the pandemic started early last year, central banks across the world have cut interest rates or have refrained from increasing interest rates so that they can soften the impact of the pandemic on the economy.

This results in two things – on one side of the economy, it creates a cushion or a soft stand for people to access funds, capital and for people to survive better. But on the other hand, there is a gush of liquidity which actually drives prices of assets and commodities higher.

This inflation is slightly accentuated or could get acute status because there's been a lot of lockdowns and supply side constraints as far as production is concerned.

Therefore, when you have excess liquidity due to policy actions of low interest rates, and you have less productivity, it leads to more money chasing less number of goods that are produced. Therefore, this is driving the rise in prices and creating an inflationary trend in the intermediate time.

Thankful: Authors are immensely grateful to Prof. (Dr.) Dhrubajyoti Chattopadhyay, an eminent scientist, for his endless support.

IX. ACKNOWLEDGMENTS

1) *Author Contributions:* Concept and design: Mullins, Drummond, Bloomberg
2) *Drafting of the Manuscript:* New York Times, Drummond (Health Care), Times of India, Indian Express, Nippon Times, The Guardians
3) *Critical Revision Of Paper For Important Intellectual Content:* Drummond | Times of India | Indian Express | Govt. of India | PTI | Reuters
4) *Conflict of Interest Disclosures:* The authors reported no conflicts of interest.
5) *Funding/Support:* The authors received no financial support for this work.

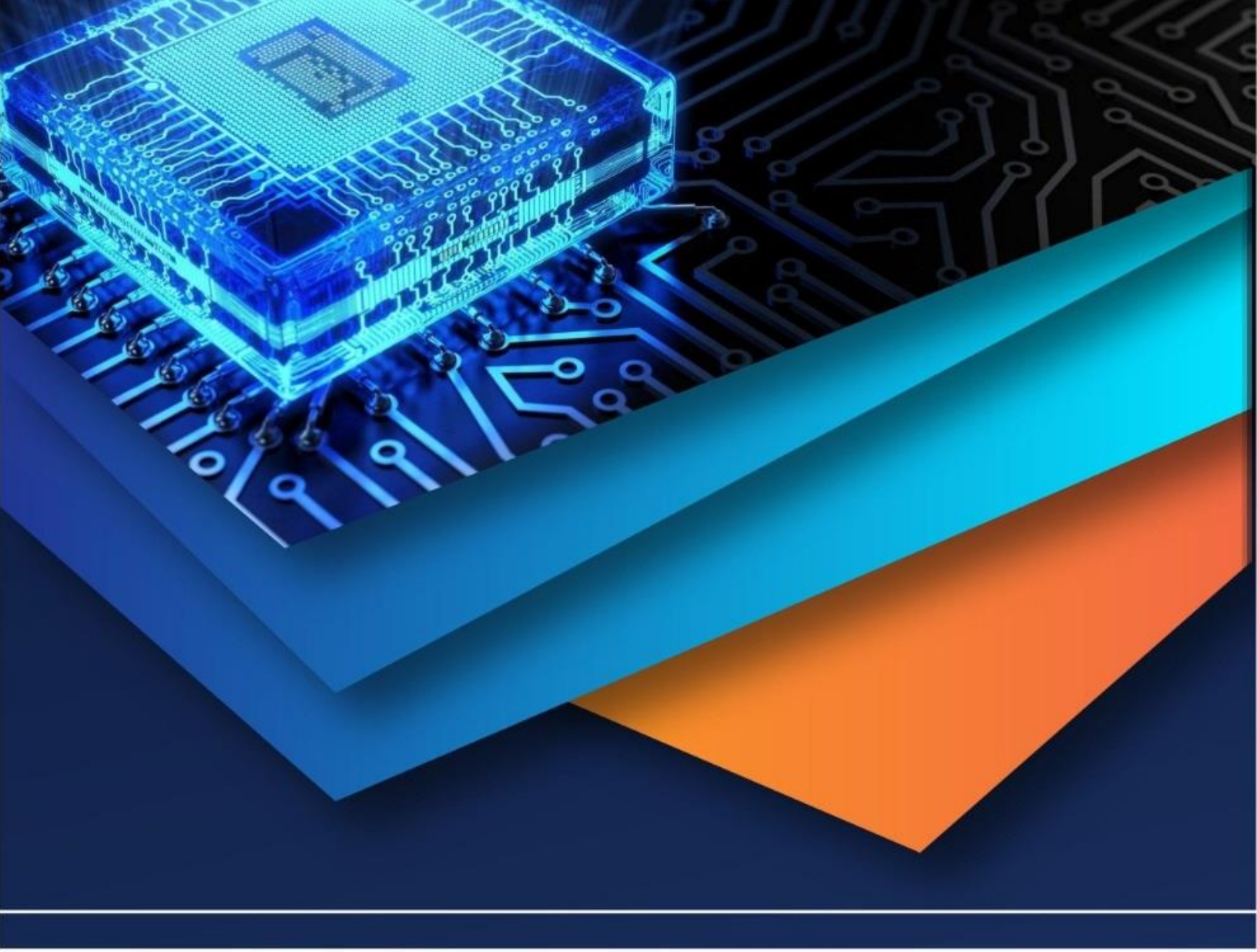
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