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# Impact of COVID-19 on decent work, economic growth, and world trade

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## 1. Present status of the world economy

As the pandemic continues, it is going to decide the fate of global economic activity. In 2021 the world economy is set to step toward the strongest postrecession recovery in the last 80 years.<sup>1</sup> The recovery will be nonuniform across nations as it is anticipated that the major economies may register strong progress while most developing economies may experience lag. This year the growth in the global economy is predicted to accelerate to 5.6%, capitalizing on the potential of major economies of the world, namely, the United States and China. The world economy has picked up in 2021; however, the global GDP level will be 3.2% lower than the forecasts before the pandemic. The developing countries are going to face the slump for a much extended period.

It is expected that a quarter of growth in 2021 would come from China and the United States.<sup>2</sup> The strength of the US economy lies in substantial financial support and widespread vaccination drive, which contributed to a 6.8% GDP growth, which is the highest since the 1980s. China has already shifted its focus toward its economic stability and is expected to see an 8.5% growth.<sup>1</sup> A surge in outside demand and increased prices may lead to GDP growth in emerging market economies. It needs to be noted that the economic recovery depends on reappearances of COVID-19 waves, imbalances in vaccination drives, and measures by the governments.<sup>3</sup> In addition to the direct effects of the pandemic, the developing economies are struck with dampening skills due to loss of jobs and obstructed education, lesser investment, greater debts, and vulnerable economic structure.<sup>4</sup>

The experts have been optimistic about the ability of major emerging markets to cope with the pandemic and reduce new cases. Except for China, the growth among emerging market economies is expected to be 4.7% in 2022 in light of the withdrawal of support from the government. This perception rests on substantial uncertainty. The economy can be disrupted with pandemic waves, an environment filled with bankruptcies, stress, and social discontentment. Nevertheless, spillovers from developed countries have the potential to generate more dynamic growth globally.

All things considered, the pandemic is relied upon to have made genuine difficulties in the context of development.<sup>5</sup> The per capita pay growth rate is projected to be 4.9% among developing and emerging economies.<sup>6</sup> However, per capita pay lost in 2020 won't be completely recovered by 2022 in around 66% of developing and emerging economies, including 3/4 of struggling low-income nations. Before the current year is over, around 100 million individuals might have fallen once again into outrageous neediness while so-called weakest communities would have felt the majority of these antagonistic effects—females, kids, and casual laborers.<sup>6</sup>

The operations of almost all sectors have been affected by the pandemic. Lockdowns, supply chain interruptions, social distancing, and the issues of migrant laborers have led to changes in the functioning of the businesses. In light of the earlier discussion, the present chapter sets out to Impact of COVID-19 on Decent Work, Economic Growth, and World Trade. [Section 2](#) examines the effect of the pandemic on economic growth. In [Section 3](#), the effects on the trade have been discussed by highlighting the specific issues faced by the production sector and international trade including foreign direct investment (FDI) concerns. [Section 4](#) presents an overview of decent work across key sectors. In [Section 5](#), policies for recovery have been discussed. [Section 6](#) concludes with future perspectives.



## **2. Pandemic crisis on the economic growth**

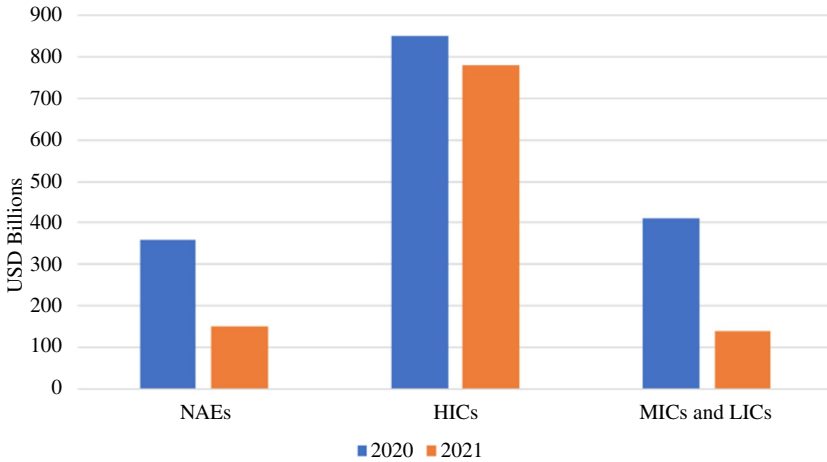
The growth in the low-income countries (LICs) has been about 2.9% owing to lower vaccination. On comparing the per capita gains, it can be easily recalled that these are similar to what was two decades back in this set of nations. This is the highest sluggishness that the world has ever observed in the last two decades if the dip in 2020 is ignored. The output of LICs has been much lesser than what was forecasted before the COVID-19. The worst impact of the virus has been observed in LICs and the areas under conflict. However, it is expected that Asia and the Pacific

regions would recover soon, especially the eastern part of Asia, mainly due to the power portrayed by China.<sup>7</sup> On the other hand, severe rebounds of the pandemic in India, Pakistan, and Nepal, particularly the second wave, would hamper the recovery in South Asia. The Middle East would see growth; however, this growth might not be enough to offset the effects of the earlier shrinkage.

Coming to Latin America and the Caribbean, it can be anticipated that they would also not be able to overcome the ill effects on their economy that happened in 2020.<sup>8</sup> The recovery in the sub-Saharan region is affected by the lower vaccination and subsequent delays to major investments in infrastructure and the extractives sector. However, these regions might be supported by the externalities of the recovery across the globe. It needs to be noted that, though the challenges have been anticipated, the picture will be clear only in the longer run. Several other issues pose a major threat to these countries, particularly after the COVID-19 crisis.<sup>9</sup> For example, the unmanageable burden of debt due to increased borrowing to fight the pandemic. With sluggishness on account of economic activities, a gradual recovery in 2021, and enhanced health-related social and economic spending, the burden of debts on low-income developing countries has risen to unsustainable levels. Therefore servicing obligations related to external debt will represent a big task.

A suspension, recently extended by another 6 months to mid-2021, on debt service payments of bilateral loans to 73 developing countries classified as least developed countries by the UN.<sup>13</sup> However, temporary postponement concerning service payments is not enough. Additional debt relief would be required to help the lower-income and least developed economies overcome the economic threat worsened by the pandemic. Furthermore, procedures for restructuring sovereign debt at the international level are fragmented and are insufficient to solve sovereign debt crises. With additional resources unlikely to be mobilized from other sources, such as Official Development Assistance, borrower countries will be left without additional external finance in a state of crisis when their citizens need support for healthcare and social well-being. Also, the debt servicing costs have been on the rise since 2012.<sup>1</sup>

Additionally, the developing nations face problems with repayments since the denomination of public debt in foreign currency. Fig. 1 shows the total amount of sovereign debt repayments due from different economies. The whopping amount due at the end of 2021 is about \$2.7 trillion. A major proportion of this amount is due by governments in



**Fig. 1** Public external debt for MICs and LICs and Sovereign debt for HICs and NAEs (based on UNCTAD secretariat calculations). NAEs (new advanced economies): Russian Federation, Republic of Korea, Turkey, Hong Kong, Ukraine. HICs (high-income developing countries): Argentina, Lebanon, Brazil, Colombia, China, Chile, Mexico, Malaysia, Saudi Arabia, Thailand, UAE. MICs and LICs (middle- and low-income developing countries): India, Ghana, Egypt, Indonesia, Pakistan, Nigeria, Burkina Faso, Ethiopia, Philippines, Madagascar, Rwanda, Nepal, Sierra Leone, Yemen, Uganda, Belize, Bangladesh, Bolivia, Cameroon, Djibouti, Cote d'Ivoire, Fiji, Guatemala, Kenya, Honduras, Nicaragua, Paraguay, Papua New Guinea, Solomon Islands, Tonga.

low- and middle-income countries (MICs), as evident from Fig. 1. The possibilities of financing from external sources would be shrinking due to the pandemic. Therefore the repayment should be suspended for LICs and MICs for the current year to prevent any chances of widespread debt crises.

Another issue that required resolution in the short term is that of the migrant workers. There are 164 million migrant workers globally, and they constitute about 64% of total immigrants.<sup>10</sup> Millions of migrant employees were serving at the forefront during the pandemic as healthcare workers. It needs to be acknowledged that about 20% of doctors and 15% of nurses are immigrants. Migrant workers contribute to their homeland as well as the place they are employed. One of the major highlights of the COVID-19 crisis was the experiences of migrant workers across the world.<sup>11</sup> The scale at which the effects of pandemic-related crises affected this community was huge and created a debate in the global community. Especially, the healthcare and economic crises that these communities faced were huge. The COVID-19 pandemic has shed more light on the important role played by migrant workers in their destination. At the time of lockdown, several

restrictions were imposed. Even then, several supply chains could resume operations due to migrant workers. However, obstructions in the movement of workers affected migration and thus cast an effect on other sectors. The agriculture sector was most affected as it is much more dependent on migrant workers as compared to other sectors. Seasonal farmworkers were affected due to the lockdown barricades and a record shortfall of about 1 million workers, which has been reported to affect Europe.<sup>12</sup>



### 3. Impact on trade

The dissent caused by the pandemic compelled business leaders across the globe to quickly adjust their systems for the well-being and security of their people. However, the survival of the organizations is another obvious test that business leaders have faced during pandemic times. The actions, such as lockdown, were taken to prevent the infection spread, which was followed by a scenario where production facilities halted, wrecking the whole worldwide network of value chains. It could be easily noticed that manufacturing has been one of the most noticeably hit sectors. The manufacturing industry represented almost 16% of the worldwide GDP in 2018.<sup>13</sup> Thus the focus of the government bodies across the nations essentially centers around empowering this sector leading to initiatives such as Make for India and Made in China 2025. Made in China 2025 has been the foundation strategy to transform China into a manufacturing hub. The strategy looks forward to moving China up the supply chain by using technological innovations or Industry 4.0 technologies. It is reported that 75% of organizations have one or more than one Tier 1 supplier from China.

Similarly, Make in India was launched in 2015 to invigorate the creation of products in India and diminish India's reliance on trading countries by production in their own country. Since then, FDI in the nation has trailed an ideal direction. The FDI got in the country since April 2000 is \$592 billion, which was about double India's FDI from April 2014 to March 2019, i.e., \$286 billion.<sup>14</sup> This brought about allowing FDI in various sectors along with venture-friendly policies. Unfortunately, the COVID-19 flare-up could cause worldwide FDI to contract by 5%–15% because of the plant closures that led to the shrinkage in the manufacturing sector.<sup>1</sup> The adverse consequences of COVID-19 on FDI ventures have been more in energy, auto, and aircraft businesses. Because of the plagues of COVID-19 across the globe, the makers of chemical, electronic gadgets, and airplanes confronted concerns in regard to the supply of inputs. Many of these companies

initiated a decrease in underway activities and deferred the launch of new items, mainly due to the interrupted supply of components. The gadgets business is fundamentally influenced because of the COVID-19, as China is responsible for almost 85% of the worth of parts used in cell phones and almost 75% on account of televisions.<sup>15</sup> For example, every basic part, printed circuit sheets, LED chips, memory, TV panels, and capacitors, is imported from China. But, in January 2020, part costs increased by almost 2%–3% because of industrial facility closure, adversely affecting businesses across the globe.<sup>15</sup>

Looking at Europe, the automobile and gadget makers briefly shut their processing plants or limited their production, which brought about misfortune to the trade worldwide. For example, Daimler and Volkswagen announced as of late that they would briefly close down vehicle and motor manufacturing in their plants in Europe due to the COVID-19 episode to ensure the well-being of their laborers.<sup>16</sup> Companies such as Ford Motors Co.; Samsung Electronics Co., Ltd.; BASF SE; and Boeing Co. were badly hit by the pandemic. Further, these organizations also initiated moving their production facilities from the worst-hit nations to the nations with lesser COVID-19 plague. For example, in 2021, Ford Motors Co. cancelled a joint endeavor it had entered with Mahindra and Mahindra in 2019, referring to the reason that the COVID-19 pandemic exacerbated the situation for Ford.<sup>17</sup> The endeavor was pointed toward creating, promoting, and distributing Ford vehicles in India and some Ford and Mahindra items in the global markets. With that joint venture off the cards, Ford's odds of persistence in the Indian market became drearier and the company decided to exit India.

### 3.1 Production and international trade

The rate of decline of the industrial production index has slowed down in 2021. The average decline across nations concerning the industrial production index between March 2020 and June 2020 was 2.5%.<sup>18</sup> The average percentage decrease across lower- and middle-income nations fell in the first quarter of 2020 but was better in the next quarter of 2020. The index of industrial production recorded a lower decrease for upper- and middle-income countries in the first two quarters of 2020. The environment is full of uncertainties, and the impacts are going to be disproportionate across the sectors. United Nations Industrial Development Organization (UNIDO) compared production data between December 2019 and June 2020 for

62 nations that together account for about 9/10th of manufacturing value-added globally. The analysis shows that more than 50% of those nations have gone through a stretched economic downturn over January–June 2020. A few nations restricted their exports and accelerated their imports. Many nations did not apply trade policy.<sup>19</sup> Also, in most of the developed nations, capital spending is diminished by different extents. The majority of the countries saw a reduced investment in machinery and equipment.<sup>18</sup> This translates into a lower trade with other economies. Despite several measures, such as the introduction of liquidity and a reduction of borrowing, the investment was constricted in 2020. The hardships faced by international trade were worsened by a steep fall in the cost of energy. It needs to be noted that energy is an important component of most agricultural nations' trade. A particularly extreme fall in their unfamiliar trade profit added to the difficulties previously presented by money deteriorations vis-à-vis the US dollar.<sup>20,21</sup> In 2020 the effect of the pandemic on the trade volume of merchandise was different across geographies. Most countries recorded huge drops in both imports and exports.<sup>22</sup> The only exception was Asia. In Asia, the volumes of exports saw a surge of 0.3%. The volumes of imports were down by 1.3%. The strongest decline in imports was observed in the geographies which are rich in natural resources, namely, Africa, Middle East, and South America. This could be attributed to lower revenues in exports, with oil prices down by 35%. As compared to other geographies, North America saw a relatively lower decline in imports. Due to the large fiscal measures in the United States, the demand for merchandised products has been driven by North America, which is also motivating for other economies. South America and Europe are seeing an increase in imports with other regions following the league with slight improvement.<sup>23</sup>

Most of the worldwide demand for imports is being covered by Asian exports. The exports from Asia are anticipated to increase by 8.4% in 2021. The exports from Europe will also grow to the same extent. However, North and South America would see a smaller rise in exports compared to Asia and Europe in 2021. Exports from Africa and the Middle East depend on the travel sector as demand for oil would increase in that case.<sup>24</sup>

### 3.2 Foreign direct investment

Due to the sudden outbreak of the pandemic and subsequent lockdown, foreign direct investment (FDI) was instantly struck. Some of the expenditures related to the investment continued, but many of them were



obstructed. A chain of events was triggered. A steep decline in FDI inflows worldwide was reported. According to the United Nations Conference on Trade and Development (UNCTAD), COVID-19 would lead to a downfall in FDI, which is mainly due to the contraction in the manufacturing industry and shutdowns.<sup>25</sup> This downfall is expected to be about 5%–15%. The FDI flows value in 2019 was about \$1.6 trillion. The pandemic shed an adverse impact on FDI immediately after its commencement, leading to a downturn in economies. The incomparable pandemic circumstances led to the tardy execution of the investment projects. The new projects were shelved, and the foreign affiliate income saw a sharp decline. In 2020 the FDI was less than \$1 trillion for the time ever (since 2005). It is anticipated that FDI will mark recovery only in 2022 or even after that. Various projects announcements were shelved. On similar lines, most of the mergers and acquisitions were postponed for uncertain times or even annulled. Even the hyped mergers were delayed in the United States and Europe due to issues with the approval.



#### **4. Decent work: An overview**

As per the investigations by International Labour Organization (ILO), 1.1 Mn of automotive manufacturing employees in the European Union were impacted due to the shutdowns in March 2020.<sup>26</sup> This is about 40% of the total population employed in the automotive sector. Most of these workers are German. These figures allude just to laborers straightforwardly working with car, truck, van, and transport producers. Nonetheless, considering the broader supply chain networks, the pandemic influences the entirety of the 13.8 million jobs in the EU. In the absence of new revenue streams, many organizations will confront huge liquidity issues in short to medium term. In the United States, the pandemic is influencing around 150,000 unionized laborers and countless nonunionized laborers in the industry.<sup>27</sup> The interruption in India's auto industry and its supply chain network is probably going to cost more than US\$ 800 million by 2021. Contract laborers represent more than half of the labor force and are especially in danger in the near and medium term. A decline in manufacturing and demand cast a huge thump on the impact on laborers, both as far as business and working conditions in apparel manufacturing. An expected 200 manufacturing plants in Cambodia either deferred or reduced production, and more than 5000 employees have lost their positions.<sup>26</sup> In Myanmar, an absence of crude materials from China has prompted the shutdown of

somewhere around 20 industrial facilities and acted as a hammer on about 10,000 jobs.<sup>25</sup> Simultaneously, the quantity of orders has plunged. In Vietnam, about 440,000–880,000 laborers could confront diminished hours or joblessness. In the direst outcome imaginable, this number could reach as high as 1.3 million. More than 2.17 million laborers in Bangladesh have been influenced by the emergency, with many confronting joblessness as orders are dropped, and production decays steeply. About 20% of firms were found to keep paying staff compensation for over a month under these conditions. Over 1,000,000 laborers have effectively been excused or furloughed.<sup>25</sup> Further, the impact on decent work across some of the sectors has been discussed.

#### 4.1 Health sector

The healthcare industry is a significant wellspring of work. In many locales, business development rates for healthcare have been better as compared to other sectors. Healthcare and social work represented more than 105 million positions worldwide in 2013, 130 million positions in 2018, and an expected 136 million positions in 2020.<sup>28</sup> Moreover, well-being frameworks can create more good positions by animating development in different areas, like gear and mechanical production. In the United States, for instance, the healthcare sector was phenomenal in beating the 2007–2008 monetary emergency. Between 2006 and 2016, business development in medical care settings was 20%, in contrast to just 3% in the remainder of the economy. It is reported that 18 out of the 30 quickest developing occupations are in medical care and related occupations, adding an extended 3.4 million positions by 2028.<sup>28</sup> The United Nations High-Level Commission on Health Employment and Economic Growth perceived the healthcare area as a vital financial area and its interests in the well-being of the labor force. Moreover, the investment toward healthcare is expected to gain ground toward meeting the Sustainable Development Goals.<sup>29</sup> Data show, nonetheless, that practically all healthcare systems face difficulties finding, deploying, and holding adequate qualified, skilled, and motivated employees. Generally speaking, it is assessed that there will be a worldwide shortage of 18 million healthcare workers by 2030, which will principally influence low- and middle-income nations. The inconsistent spread of healthcare workers both between and inside nations establishes an obstruction to healthcare value.<sup>30</sup> Moreover, loopholes in healthcare would essentially influence the least fortunate populaces, especially in the countryside.<sup>28</sup> In 2014 the extent of the

populace without admittance to healthcare administrations because of deficiencies was assessed at 84% in low-income nations. In some Asian and African nations, more than 90% of the populace had no admittance to medical services because of outrageous deficiencies in the number of healthcare workers (under three well-being laborers for every 10,000 individuals).

## 4.2 Agriculture

Various significant European agrarian nations, including France, Italy, Germany, Spain, and Poland, are especially frail. It is estimated that over a fourth of the food produced in the nation depends on roughly 370,000 normal occasional migrant agricultural laborers. The pandemic has likewise genuinely affected manpower-intensive harvest and because of deficiencies of manpower, lockdowns, and the brief discontinuance of farming. For instance, Europe's rural area is confronting extraordinary deficiencies because of terminated travel. Countless part-timers could not arrive at ranches that depended on their work during the reaping period. The effect on the sector is relied upon to be a long haul. Around 100,000 farmworkers will most likely be unable to come to Italy this year,<sup>31</sup> and the figure might be twofold that in France. In Germany, about 286,000 occasional transient laborers are locked inconsistently in organic product, vegetable, and wine creation; the government is investigating various methods of getting adequate laborers for the collection, including running nonstop flights for farmworkers and giving impermanent work licenses. On April 2, 2020, the European Commission had given viable direction for the Member States to work with cross-line travel for part-timers in basic occupations, which incorporate food area laborers, while setting up all vital means to stay away from the additional spread of the pandemic. The pandemic may likewise contrarily affect the livelihoods of millions of estate laborers occupied with exports. For instance, the new impermanent suspension of one of the world's biggest tea barterers in Mombasa, Kenya, where tea from numerous eastern African nations is exchanged, whenever delayed, could devastatingly affect nearby economies. In Kenya alone, tea gives employment to somewhere in the range of 600,000 limited ranchers and daily wage earners. The immediate effect will be felt in different chain hubs, including processing plants, stockrooms, and carriers, just as homesteads, which might be compelled to stop production and lay off pluckers, who are frequently among the most burdened laborers and profoundly powerless against the financial inversion.

### 4.3 Construction

Construction laborers are among the weakest migrants who are confronting critical vulnerability and monetary difficulties because of the pandemic. Their everyday environments are such that social isolation to prevent the spread of the pandemic may not be possible, which has given rise to worry about the spread of the infection. Limitations on worldwide travel straightforwardly affected laborers' movement, prompting tough spots, for example, enrollment delays, questionable or unpredictable lawful status in nations, and being kept from getting back to homeland.<sup>32</sup> Besides, transient laborers are generally rejected from public reaction measures, for example, wage sponsorships, advantages of government-backed retirement, and social assurance measures. Continually changing travel and well-being necessities make it hard for enlistment offices to ensure laborers during movement and after their appearance in objective nations, placing laborers in powerless and now and then risky circumstances. Travelers who have lost their positions might be compelled to get back to nations previously confronting high joblessness and neediness, while others abandoned in host nations might be in danger of double-dealing and denials of basic liberties. Loss of pay is likewise bringing about a serious decrease in settlements sent home by traveler laborers generally. At last, the emergency can touch off or worsen complaints, segregation, doubt, and a feeling of unfairness over admittance to well-being administrations, nice positions.



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## 5. Policies for recovery

In the present setting, tracking down the best way to a comprehensive recuperation requires managing the vulnerability of the planning process and execution of business policy framed by the government. The crossing point of the effect of the COVID-19 emergency and the continuous fate of work lies in the innovations, changes in demography, and environmental aspects. These factors ostensibly characterize the key strategic needs throughout the next few years. As highlighted by ILO's examination, the COVID-19 emergency has lopsidedly influenced females in various ways. The improvements concerning gender equality that were achieved in late many years have been nullified.

Moreover, the existing gender imbalances in the work market have intensified. The female workforce has been at far more serious risk than

males, especially attributable to the slump effect on the service industry. It needs to be noted that females represent a huge proportion of the workforce in front-end occupations. For example, in the healthcare and well-being areas, females represent around 70% of all jobs. Simultaneously, ladies represent a huge extent of laborers in forefront occupations, particularly in the well-being and social consideration areas where ladies address around 70% of all specialists. To counter the gender-oriented impacts of the COVID-19 emergency, policymakers need to consider how gender equality can be incorporated into public work approaches as a central goal across various strategy areas. The policy measures need to be targeted at hard-hit areas (e.g., retail, convenience) and communities (e.g., ladies, youngsters, and others, like people with inabilities), particularly those in the casual economy, during the reactivation and recuperate.

The advancement of an approach with public monetary and work recuperation programs incorporating and organizing the commitment from various services and organizations is the key to thrive in the new normal. Focusing on the creation of relevant and useful positions, including reliable data on the figures and constant monitoring should be an integral part of recuperation packages. Useful change is a basic support to higher efficiency and quality positions. It should adjust admittance to primary worldwide sources of info, innovation, and information with designated backing to create and overhaul neighborhood creation limits. This works better by proceeding with changes and key connections between government and private enterprises. A cooperative and open participatory way is required to deal with procedures, plans and strategy execution. This encompasses social discourse and cooperation between governments, managers' and laborers' delegates, the scholarly community and common society—agreeing on key needs and acquiring resources for execution and further identification of responsibility. The intervention will, in general, can have a critical effect. At the end of the day, these arrangements or intercessions will, work preferably together. The experience of formalization scenes likewise shows that its requirements should set the specific mix of financial and institutional strategies in every area. The extent of 6:4 was demonstrated to be compelling in the Latin America and the Caribbean formalization scene of 2005–15.<sup>1</sup> The coordination of numerous intercessions is, in any case, an intricate test that public institutional settings should address.<sup>1</sup>

As the pandemic hit the nations, the governments focused primarily on interim policy measures to keep businesses going and retaining employment.<sup>3</sup> Immediate financial assistance was also given to businesses to deal

with financial problems such as debts. The policies were framed to safeguard the workers and stimulate the rapid recommencement of domestic manufacturing. Several public procurement policies and subsidies for use were implemented.

Long- and medium-term policy measures are expected to take a forward seat as short-term measures in the COVID-19 did not prove their worth, as the world saw the dwindling traditional business models in the time of the pandemic. A review of African firms by UNIDO highlights that underlying changes in supply chains, like a change in demand patterns for the products and services and unmet demands, are to be impugned for the adverse effect on the industries. Therefore it is inevitable now to frame policies that strengthen the production and supply network alternatives. It is also important for the firms to invest in their production facilities and follow strategies that make them resilient for the future. The governments should frame policies that boost the efforts of the organizations to overhaul and revamp their operations toward being more resilient. Measures such as redeploying manpower, transitioning to new business models, improving productivity, and designing better products need to be implemented in full swing. The policymakers must therefore frame policies that are in line with the expected measures to transform the businesses. The case of Germany is worth mentioning in this regard. Germany, for example, has been a pioneer of Industry 4.0 and supports investments in cutting-edge technologies to foster growth and resilience.<sup>33</sup> New Zealand formulated a new manufacturing strategy as a result of COVID-19. The new policy focuses on making the energy, transport, and logistics sector more resilient. New Zealand too, like Germany, has been investing in Industry 4.0 technologies across all the sectors.<sup>34</sup> New business models' development would be in conjunction with the advancement in technological innovation, better products, and pushing these products into new markets.<sup>35</sup> All this can be achieved with the help of knowledge creation and the dissemination of technological know-how. University and industrial tie-ups would boost these initiatives. Therefore the tourism and education sector also need major attention shortly.

Recovery contributions would meet the extraordinary financial needs in the COVID-19. For example, a cess personal income tax for high-income groups can be incorporated.<sup>36</sup> Further, taxation on high profits would affirm that the organizations that prospered during and after the crisis contribute to building a better tomorrow.<sup>37</sup> The pandemic can accelerate permanent taxation movement in nations where it is desired to increase revenue for the government.<sup>38</sup>



## 6. Conclusions and future perspectives

It can be concluded that short-, medium-, as well as long-term policy measures for the industries with a spectrum of focus that ranges from relief measures to business model innovations would together pave the way for the development of a brighter future. The outcomes of the current policy reforms would be available in the medium term. The researchers and policymakers need to have a bird's-eye view of these outcomes and be ready for the iterations as required. Several unforeseeable issues would arise in the post-COVID-19 world, especially in developing countries. Continuing the businesses might be a challenge in the near future but is also a key for the well-being of the communities. To future-proof industry, policymakers need to outline the strategic fields that require immediate attention. The operations need to be made solid and should be able to withstand disruptions. Some of the action points for the manufacturing companies would include impetus on local inputs, developing local supply chains, development of new products, and reaching new markets. Technologies such as big data and predictive analytics can be utilized to locate the sources of potential disruptions and improve resilience.<sup>39–41</sup> By identifying the patterns in a vast amount of data flowing from the technology interventions can help to improve the availability of information for the key metrics and improve understanding of the complex workings of the organizations.<sup>42</sup> This could also be the first step on the way to autonomous systems that are resilient to shocks. As the restrictions that had been put in place to combat the spread of COVID-19 ease, transparency will become even more important. Companies will need to be flexible with their supply chain partners while they ensure that rising demand can be met. Therefore the foundation of the utility of technology capabilities would lie in collaboration and information sharing among the partners.<sup>43,44</sup> The internal and external actors can collaborate to make their organization equipped with information and communication technologies such as artificial intelligence, and the Internet of Things to increase collaboration.<sup>45,46</sup> The collaboration needs to be utilized in every aspect of the business, right from investing in technology capabilities to cocreation of sustainable outputs.<sup>40</sup> Therefore focusing on trust, collaboration, and technological capabilities, the global trade would be ready to face future contingencies as well.<sup>47</sup> As the United Nation (UN)'s SDGs propound to act as a guideline toward the achievement of sustainable development, SDG-17 particularly focuses on cross-sector as well as cross-country

partnerships and cooperation for the achievement of goals. The measures highlighted earlier would reinforce the means of implementing and revitalizing the global partnership for sustainable development. The journey of driving the nations toward SDGs is grounded in unbiased sharing of risks and benefits and would require actions such as collaborative planning and development, exchange of information, and coordination at various levels among the different stakeholders in the global trade.<sup>48</sup> For a sustainable future, organizations need to align their goals with the SDGs not only at the strategic but also at the operational level.<sup>49,50</sup> Policies built upon shared vision, principles, and values at every level are inevitable to drive the agenda of revival successfully.

## Acknowledgment

The infrastructural support provided by FORE School of Management, New Delhi in completing this book chapter is gratefully acknowledged.

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