A review of resource management and self-reliance for sustainable development of India under COVID-19 scenario

Asraful Alam1 | Amir Khan2 | Nilanjana Ghosal3 | Lakshminarayan Satpati4

1Department of Geography, Serampore Girls' College (Affiliated to the University of Calcutta, Kolkata), Hooghly, India
2Department of Geography, University of Calcutta, Kolkata, India
3Computer Aided Design (CAD) Centre, Jadavpur University, Kolkata, India
4Department of Geography & Director, UGC-HRDC, University of Calcutta, Kolkata, India

Correspondence
Dr. Asraful Alam, Department of Geography, Serampore Girls' College (Affiliated to the University of Calcutta, Kolkata),
13, T.C. Goswami Street, Serampore,
Hooghly - 712201, West Bengal, India.
Email: alam5asraful@gmail.com

The rapid spread of COVID-19 pandemic has caused a severe disorder in the global economy. The sudden imposition of lockdown is expected to largely impact the global as well as Indian economy. To overcome serious economic fallouts, the honorable Prime Minister of India, Sri Narendra Modi in his address to the nation called for “Atmanirbhar Bharat Abhiyan” or “Self-reliant India” as self-reliance would help in making pragmatic developments of the economy. According to WHO, COVID-19 is a new strain found among humans that are caused by SARS-CoV-2, mainly a respiratory tract infection. As a consequence, the COVID-19 pandemic gives India a unique situation to face this period of crisis boldly for optimum utilization of the available resources, and shift towards a more resilient and sustainable economy. Attainment of self-reliance and sustainable resource management will also help the nation to overcome various global challenges. The present study mainly focuses on two objectives: Firstly, to understand the different possibilities which will secure India to become self-reliant; and secondly, to know the prospects of self-reliant of India in the post-COVID-19 scenario. It has to be kept in mind that Covid-19 may not be the last viral infection that the world might see. Therefore, Novel Coronavirus sets a distinctive chance for India and the countries alike to utilize the available resources strategically and transform its dreams of “local” India into “Glocal” India for a better and brighter future of her people.

KEYWORDS
COVID-19, resource management and self-reliance, sustainable development

1 | INTRODUCTION

Throughout human history, viruses, bacteria, and parasites have always acted to be destructive as they cause diseases. Novel Coronavirus marks the return of this very old and familiar threat (Jain, 2020). There are various symptoms and illness caused by Coronavirus (CoV), ranging from common cold to severe illness, such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV), as they (CoV) hail from a large family of mutating and adaptive viruses (Campos & Emilie, 2020). Coronavirus can also be termed as Zoonotic disease as they are transmitted between animals and humans (Anon, n.d.-b). COVID-19 is a new strain found among humans that are caused by SARS-CoV-2, mainly a respiratory tract infection according to doctors (Ghosh, 2020). The origin of COVID-19 is found to be associated with pneumonia cases, of unknown cause, occurring close to a seafood market in Wuhan, capital of Hubei Province, China on December 8, 2019. After further research and information, it was later identified to be caused by a new coronavirus and was termed as Covid-19 by the World Health Organization (WHO) (Qiu et al., 2020). According to scientists, SARS-CoV-2 originated in a bat, that possibly hopped to a pangolin which in turn passed to human beings (Bryner, 2020). Eventually, WHO has declared the COVID-19 outbreak as a global pandemic on March 11, 2019 (Liu et al., 2020). As per WHO, the pandemic has affected 210 countries claiming more than 100,000 lives so far (Jribi et al., 2020). The Coronavirus pandemic has caused...
significant destruction in both economy and society at an unprecedented rate (Liu et al., 2020). This pandemic situation has also brought human lives and works to a complete halt. According to a report of the United Nations, it has been stated that the outbreak of Covid-19 has shifted from a health crisis to the "worst human and economic crises of our lifetimes" (Dominguez & Fiona, 2020). The pandemic condition has failed in meeting the basic needs of human lives. The current state of Covid-19 Pandemic has displayed contrasting results, whereas it threatens the socio-economic progress of the society (Guterres, 2020), it also begets some positive impacts on the world environment by reducing air pollution and emission of greenhouse gases, for example, CO₂, N₂O, CH₄, etc. (Chakraborty & Maity, 2020). Unpredictable changes in climate and an increase in inequality in the economy within countries have ended up making things worse (William & Broom, 2020).

Covid-19 has caused mayhem in the global markets (Jain, 2020). The pandemic has created an enormous disruption all over the world (Deshmukh & Haleem, 2020). With the entire world being under the grip of this deadly disease with no cure and proper treatment, locking down entire countries for months and asking people to maintain social distancing are the only short term solutions to stop the cascading growth of this infectious disease (Bajaj, 2020). The present condition has brought unparalleled international crises with a serious impact on people's health and economic activities. Due to the outbreak of the Novel Corona Virus, the entire globe is going through an economic slump and uncertainties related to global political and economic orders (Ghosh, 2020). The colossal disruption all over the globe caused by the pandemic has massively affected the production supply chains. The abrupt stoppage of demand disturbed the supply chain and even calls for medical products, production, and consumption supply networks have become highly disordered. It is estimated that among the 1000 fortune listed companies, 94% have been affected by the crisis period. The prolonged lockdown period, stoppage of national and international flights for months, and closure of manufacturing units have largely contributed to disruptions in the global chain worldwide (Deshmukh & Haleem, 2020). The grinding halt of economic activities has resulted in unemployment, a decrease in the supply of goods, and a low GDP growth rate (Bajaj, 2020). The health care system faced unprecedented challenges due to Covid-19. Sudden triggers in health care costs, shortages of protective equipment like N-95 masks, low number of ICU beds, and ventilators in various regions exposed the weaknesses of the healthcare industry. What has also been observed that especially in developing countries, the education sector has also faced a lot of troubles during the crisis period (Nicola et al., 2020).

Despite all these adversities we have to give our best efforts towards tackling the inescapable challenges that we expect to face in the future (Jain, 2020). We need to remember that the present pandemic situation is temporary, but developmental processes in the world are continuous. It is believed that the pandemic, by itself, through various economic, social, and political avenues will affect the global development objectives at a much broader scale. Post Covid-19, it is a chance for every country to start production at the national level. The period marks the effective start of delocalization (Deshmukh & Haleem, 2020). The present situation has compelled us to think about “Safe living” giving high priority to the principles of sustainable development for a “Safe Future” (Kumar & Surya, 2020). Countries like India after this pandemic situation are also making efforts to make themselves self-reliant so that self-dependency can be attained. The rise in the magnitude of the virus’s threat and the size of India’s population has compelled to double up its efforts to equip hospitals with ventilators, oxygen cylinders and beds, N-95 masks, and Personal Protective Kits (PPE) (Yadav, 2020). The production of Hydroxychloroquine in India as a cure to Covid-19 has been greatly supplied to many countries which set the example of India embarking towards self-reliance (Naidu, 2020). It is time for developing countries like India to encourage people to start building their start-ups and invest more in Research and Development (Bajaj, 2020). The current global pandemic has opened doors towards reconfiguration and a positive transformation status of a country. Lack of planning regarding the sudden outbreak of this pandemic disease has demonstrated the importance of resilience. Resilience can be termed as the ability of human beings to anticipate, cope, and adapt (Florizone, 2020). Management of resources through various Sustainable Development Goals (SDGs) and self-reliance are now the only way-outs to overcome global adversities. It should be kept in mind that today's crisis period should not allow us to compromise our efforts to tackle the other inexorable summons. Changes for a better future will also depend on individual actions and responsibilities. We need to capitalize on the opportunity of becoming self-reliant and help to accelerate it (Jain, 2020). Therefore, proper application to manage nature and resources for “safe living” would be the beginning for setting in motion of new development principles for a better and brighter future ahead (Kumar & Surya, 2020).

2 | SUSTAINABLE RESOURCE MANAGEMENT

The word “resource” stands for all means and tools that fulfill our needs. Resources are the backbone of any kind of development in society. SDGs provide a new and enlarged understanding of sustainability to beat the economic, social, and environmental challenges. According to the Brundtland Report, Sustainable Development is defined as the development that meets the need of the present without compromising the ability of future generations to meet their needs (Krol, 2020). Hence, the Sustainability of resources and progress of a nation is interlinked with a fine thread of balance. The COVID-19 pandemic has presented huge challenges to the international community. But Novel Coronavirus has also opened doors towards unique opportunities to rebuild economies that recognize and reinforce close links between human wellbeing and a healthy environment. The pandemic has helped in curtailing various environmental anthropogenic activities that have to lead to a comparative improvement in air quality, reduction in greenhouse gases, repairing the ozone layer, healing of the marine ecosystem, and reduction in
noise pollution (Bisht, 2020). The crisis period has addressed various global environmental threats that have undermined the capacity of humanity and our planet to survive and thrive. Hence, the emphasis has been given mainly on four following SDGs for a truly sustainable recovery (UNEP, 2020).

| Climate goals | Though climatic disasters may be seen as a slower moving crisis than the global pandemic, its long term effects are far more threatening. A rise in global temperature is directly linked to a rise in pandemics, extreme weather events, a rise in natural hazards, and destabilization in global food, security, and economic systems. In the present situation, as plans are being formulated for countries to rebuild their economies, this is an opportunity to embrace green technology, renewable energy, and sustainable new sectors to put this planet on a fast track path to decarbonation. Thus UNEP is into making policies to achieve climate stability (UNEP, 2020). |
| Life on land | It is assumed that zoonotic diseases such as Covid-19 will rise due to the unprecedented destruction of wild habitats by human beings. To prevent these pandemic outbreaks further, sustainable pathways have to be achieved. Hence, UNEP is trying to provide an understanding of the root cause of transmission of these zoonotic diseases and inform policymakers on how to protect people from threats of unchecked environmental destruction (UNEP, 2020). |
| Life below water | The decline and degradation of marine, coastal, and freshwater ecosystems combined with increased ocean warming, ocean acidification, and widespread pollution present a serious concern. As waste ends up in oceans and other sources of water, UNEP’s immediate concern is on safe chemicals and proper waste management. UNEP is also supporting countries to ensure a “Sustainable Blue Economy” that is recognized as a post-COVID-19 economic recovery (UNEP, 2020). |
| Responsible consumption and production | Unsustainable production and consumption have led to the depletion of natural resources, disruption of the ecosystem as well as environmental health issues and diseases. The pandemic has shown where the weaknesses in our system lie. Hence, UNEP is working on recovery policies and investments for sustainable consumption of resources. This is a real opportunity to meet the demand with stimulus packages which include renewable energy, smart buildings and cities, green and public transport, sustainable food, agriculture systems, and lifestyle choices (UNEP, 2020). |

India is going through a tuff time due to this sudden pandemic situation. Due to the rapid spread of this infectious Covid-19 virus, the decision to impose lockdown was taken in face of deep uncertainty with respect to the consequences people will face related to their livelihoods against the risk of an uncontained outbreak (Reddy, 2020). The crisis has demonstrated both governments’ and peoples’ capability of taking strong action in face of overarching challenges (Srivastava, 2020). For safe living and a stable economy in the coming future, the lockdown provides strategic opportunities for planned sustainable development in the following ways:

| Improved government policies in job creation | The manufacturing industry is highly diversified in India. The majority of industrial workers are engaged in small-scale handicraft enterprises and about 30% of the industrial workers depend on daily wages. However, the current lockdown has disrupted the livelihoods of many people. Hence, this is the time when the government can focus on job sectors by strengthening labor schemes, local start-ups, and small to medium enterprises to ensure employment for laborers (Jain, 2020). |
| Adapt strategies to go digital | Due to infinite days of lockdown period, Covid-19 has encouraged to adopt strategies related to going digital. Therefore it is expected that in the future, organizations will encourage employees for various digital activities such as work from home and conducting video conferences instead of face to face meeting (Jain, 2020). |
| Investments related to sustainable infrastructure | This is an opportunity for India to increase support for renewable energy. For example, solar power in remote regions can be distributed as critical services if capital constraints can be addressed. Similarly, scaling up electrification and the adoption of public transport can be done to reduce traffic congestion and air pollution (Srivastava, 2020). |
| Encourage long term behavioral changes | The current crisis has changed our consumption patterns. Patterns of electricity usage have changed as people are now mostly working from their homes and thus have more flexible schedules. Even non-essential purchases have temporarily been ceased. Therefore, the crisis offers an opportunity for implementing demand-side solutions leading to long-term behavioral changes for more sustainable development (Srivastava, 2020). |
| Regulate the able technologies | The pandemic situation has made one thing clear that in the future greater employment will be seen in the e-commerce sector. Hence, technologies are required to be adopted accordingly. While encouraging the development of these sectors, it is essential that our technologies ensure data as well as consumer privacy (Srivastava, 2020). |
| Government’s focus towards the development of sustainable buildings | The government’s main focus is now towards the development of Sustainable buildings also known as Green Buildings such as GRIHA, IGBC, LEED, and more as green buildings reduce or eliminate the negative (Continues) |
becoming self-reliant will help in making pragmatic developments of

| Scope and strategic opportunities in agricultural sector | More than 70% of the Indian population, directly and indirectly, depends on agricultural activities for their livelihood (Guest, 2020). This is means that the country cannot have a development model that ignores its agriculture. India is not self-reliance on various essential agricultural commodities and it heavily depends on imports, for example, India imports around 15 million tons of edible oil, more than 9 million tons of palm oil, and about 2.5 million tons of soy oil and sunflower oil every year from Indonesia, Malaysia, Argentina, Brazil, Ukraine, and Russia (Guest, 2020). To achieve a self-reliant economy and sustainable development, India should think about its agricultural development first, and it is easier and more cost-efficient than other sectors (Singh & Ranjith, 2020). The possible measures should be, branding of local farms products to be sold globally and employing the CSA (Climate Smart Agriculture) technologies, the practices and services of which would ensure stability and suitability in agricultural production, and enhance output, yield and income (Roy, 2020). |

After getting over the present pandemic scenario, India needs to focus more on the above-mentioned policies as these will help in securing a lasting economic recovery, increase resilience and ensure long term pathways towards sustainable development (Srivastava, 2020).

### 2.1 Self-reliance

The term “self-reliance” was first coined by Ralph Waldo Emerson, an American lecturer in the year 1841. According to Emerson, self-reliance refers to the trust of one’s present thoughts, skills, originality, belief in own capability, and living from within (Marinova & Hossain, 2006). In the last few months, major economies of the world have been hit hard due to the fast spread of the pandemic Covid-19. To control the disease, the entire world including India instituted lockdown. It is assumed that the lockdown will result in serious economic fallout all over the world; the pandemic situation has created real difficulties for everyone as the entire world is interconnected and interdependent. The spread of Covid-19 has disrupted the global supply chains hence various ways have to be mitigated to overcome the negative impact of the economic downfall. Though the Novel Coronavirus has created an unprecedented crisis, it has also created a chance for India to become self-resilient. It is a big opportunity for India to plan its economy strategically and think out of the box (Naik, 2020). The Prime Minister of India, Narendra Modi on May 12, 2020, in his address to the nation called for “Atmanirbhar Bharat Abhiyan” as becoming self-reliant will help in making pragmatic developments of the economy (Naidu, 2020). According to our Prime Minister, Self-reliance is not isolationism but a key solution to easing our path post-COVID-19. Self-reliant India will mainly stand on the following five pillars that is, economy, infrastructure, system based on 21st-century technology-driven arrangements, Vibrant Demography, and finally Demand–Supply chain (Deshmukh & Haleem, 2020). This is a unique opportunity for the local, Small, and Medium Enterprises (SME) as well as Micro, Small, and Medium Enterprises (MSME) to ramp up the investments rather relying on the MNCs to make their investments. The government should also take initiatives to restructure the defense manufacturing PSUs (Naik, 2020). Self-reliance will help in making the best use of natural, human, and technological resources. During this time of emergency, India has scaled up the production of essentials to fight against this disease. Even India has supplied it’s Hydroxylorquine to various nations as the medicine has been identified as a cure for Novel Coronavirus (Naidu, 2020). Therefore this is a good chance for India to overcome all the hurdles on its own and achieve self-reliance. Hon’ble Prime Minister of India, Sri Narendra Modi has announced an economic package of Rs.20 lakh crore to help India achieve Self-reliance (Deshmukh & Haleem, 2020). India is a country blessed with a vast array of natural resources. We have got all the ingredients for success. The AtmaNirbhar Bharat Abhiyan is a golden opportunity to transform our dreams of “local” India into “Glocal” India. Hence, Self-reliance or being “Atma Nirbhar” acts as a launch pad for fostering entrepreneurship, encourage innovations, and create a balanced ecosystem by using our resources wisely and strategically (Naidu, 2020).

### 2.2 Linking between sustainable resource management and self-reliance

Sustainable development and self-reliance both involve natural life fulfilled with basic needs (Marinova & Hossain, 2006). The world today has become a global village drawn by principles of “knowledge economy,” “digital transaction,” “connected society,” and “home delivery” (Kumar & Surya, 2020). The occurrence of Novel Coronavirus has created a huge crisis across the world but it has also opened opportunities for all the governments to design their economic revival packages. Investments play a huge role in kick-starting an economy and contribute significantly towards economic growth (Kedia et al., 2020). The Prime Minister of India during his address to the nation on May 12, 2020 called for “Atma Nirbhar Bharat Abhiyan” or “Self-reliant India Mission” and stressed on using “local products” (Kedia et al., 2020). Post Covid-19, India mainly needs to focus on three themes. Accelerating job opportunities and job security, sustainable livelihoods, and economic growth should be the first focus of the government. Secondly, Sustenance should be provided to people especially the ones belonging to lower-income class groups through relief packages, recovery packages, and economic stimulus packages. Finally, changes like a demand by the people should also be taken care of. Changes in nature of demand should be adapted according to circumstances of the present (Kedia et al., 2020). The Indian government
should also show willingness towards investment in the renewable energy sector. Developing skills in farming and reaching self-sufficiency in domestic food production must be the center of every country's plan for a sustainable recovery. Stress should also be given on the growth of the agricultural infrastructure as it will help in generating employment (Hinduja, 2020). It has to be kept in mind that the economic packages need to be utilized properly as it will help in fostering economic growth on one hand and create jobs on the other that will help in building a sustainable living. Stable economic growth and a sustainable living need to be attained post-COVID-19 as it will lead to a greener recovery (Kedia et al., 2020).

2.3 | Self-reliance in rural India

Though the rising number of COVID-19 cases in India and the following lockdown period has impacted the economy the pandemic situation has also imparted valuable lessons towards attaining self-reliance so that none remains inter-dependent on the other and therefore achieves self-sufficiency (Shreya, 2020). After overcoming the crisis period, it is an opportunity to remake a resilient and harmonious society (Hinduja, 2020). Rural India has been coping with the pandemic situation very potentially from the beginning. The simple mantra of Do Gaj Doori (two yards separation) commonly known as Social Distancing by the world is being followed efficiently and sincerely by rural India (Hebbar, 2020:12). Panchayats across all the villages in India are playing a key role in spreading awareness about the coronavirus disease by making door-to-door campaigns. Stitched masks, sanitizers, and other basic services are also being provided to the village people by the Panchayats (Bisht, 2020). On Panchayati Raj Day which is celebrated on every 24th April in India, the Prime Minister launched the following two programs for the progress of the villages in India:

| e-Gram Swaraj | This program is launched for monitoring rural infrastructural works and e-governance (Hebbar, 2020) |
|---------------|----------------------------------------------------------------------------------------------------------------------------------|
| Swamitva Programme | This program involves mapping of rural households and land holdings via using technologies like drones (Hebbar, 2020) |

Some unique stories of rural India during the pandemic time are also attracting the attention of the people as to how rural India is gaining Self-reliance efficiently with every passing day. For example, a Women Sangha, active in 75 villages of the Telangana region has helped thousands of women from a casteist, patriarchal society to revive dry land, millet-centered farming, and gain control over land, seeds, water, and knowledge. Having achieved Anna Swaraj (food sovereignty) and self-sufficiency, the women are feeding others during this period of crisis. It has also come to notice that Adivasi (Hindi: “Original Inhabitants”; in India officially recognized as the Scheduled Tribes) villages of Central India through community funds are taking care of the migrant workers who have returned home (Kothari, 2020). According to the Prime Minister, Sanghamoolam Mahabalam or unity and organized unified effort is the need of the hour (Hebbar, 2020). Improved farm incomes and climate-induced uncertainties will also minimize the migration of villagers in urban areas and will encourage them to stay back in their villages (Warrier, 2020). The efforts of the villagers towards the attainment of self-sufficiency in food, livelihood, and other necessities have proved that it’s high time we shift from economic globalization to localization (Kothari, 2020).

2.4 | Self-reliance in urban India

The occurrence of Coronavirus has made us realize that it is time to promote environmental sustainability, social justice, and economic growth to attain self-reliance (Kedia et al., 2020). The government first needs to focus on generating jobs for people, sustainable livelihood, and economic growth for survival post-COVID-19 (Kedia et al., 2020). This is an opportunity to reshape the ‘Make In India ‘that was announced back in 2014 giving importance to proper industrial policies (Baru, 2020). The pandemic has created a huge impact on globalization. Hence, in the present challenging time, self-reliance is the key factor that will help the economy to drive towards sustenance (Luthra, 2020). It has been observed that rural India is more self-reliant than urban India and has been handling the crisis period with greater efficiency. That is the reason why the Prime Minister called for people from “cities to village” to learn to be self-sufficient and never depend on anyone for anything we need in our daily lives (Shreya, 2020). Manufacturing has been recognized as the main engine towards the creation of a vibrant economy. There is the availability of competent human resources in India and technology plays a unique role in achieving an improved quality of economy (Deshmuk & Haleem, 2020). This is a chance for Indian manufacturers to produce their domestic products and hence keep the flag of manufacturing alive. Post Coronavirus, it is an opportunity for the Information and Communication Technology (ICT) and telecom sectors of India to show their huge domestic potential as goods related to these sectors are mainly imported from outside due to faulty policies (Bajpai et al., 2020). ICT not only contributes towards economic growth and employment generation but also helps in gaining supremacy towards cyberspace (Bajaj, 2020). It has come into account that if private sectors are left free to rejuvenate production, supported with adequate finance and government spending, it will help the economy is regaining its momentum (Baru, 2020). This is a chance for the Small and Medium Enterprises (SMEs) as well as MSMEs to ramp up their investments with the help of government and build globally competitive products to meet the country’s need. It is expected that Covid-19 will lead to a delay in rolling out of 5G networks worldwide. Therefore, it is a golden opportunity for the indigenous telecom sectors to build their 5G telecom gear (Naik, 2020). The appeal for self-reliance aims towards utilizing the best of our natural, human, and technological resources. It seeks to galvanize our hidden potentials. Hence, the new Atma Nirbhar Bharat Abhiyan aims to reduce imports in every sector and chase our dreams of going “Local” by utilizing our assets strategically and wisely (Naidu, 2020).
2.5 Present scenario of economic conditions of India and essence of economic self-reliance (ESR) in the present context

In the present context, though economic repercussions are felt all over the world it impacts are observed more in the 3rd world countries (Bachman, 2020). India’s ability to recover from the after-effects of Covid-19 and its economic fallout depends on the ability to protect industries and focus more on economic self-reliance (ESR). ESR is based upon access and management of material and monetary assets. It also provides a base for the establishment of Durable Solutions, a foundation working for the Millennium Development Goals and capacities contributing towards the realization of the Agenda for Protection (UNHCR, G. Self-reliance) ESR represents a different way of thinking about the processes and outcomes of economic development. An individual can garner and hold economic resources to meet our basic needs. ESR is context-specific; it emphasizes how “basic needs” for someone in a developed country differ drastically from someone in a developing country. But the core principles of economic development are the same throughout the world. Economically self-reliant individuals have greater resilience against negative economic shocks. Those with greater resilience will suffer less economic severity and quicker recovery (Godfrey, 2008). ESR represents a type of insurance against the disruptions caused by adverse economic events. More important than its insurance value, ESR provides a solid platform from which people can develop and reach their full human potentiality. Once people possess a sustainable surplus, they can turn their attention towards chasing Self-Actualization, a term given by psychologist Abraham Maslow which is defined as developing and expressing talents, skills, emotions, and values to the fullest extent (Godfrey, 2008). That is why it’s important to promote the essence of ESR in India in the present context, which would help us to get sustainable economic development and establish a self-sufficient economy with the help of its ability and proper resource management.

India as a country has maintained a trade deficit as imports are more than its exports (Figure 1). This is because of the high domestic demands compared to the local production of those goods. Thus to fulfill these domestic demands, India always imports more products from different countries. Even in sectors where India has its production capabilities, the country depends on others for raw materials like the bulk of active pharmaceutical ingredients for the pharmaceutical sector is imported from China. Self-reliance in the present context refers to a specific task of improving self-efficiency, competing with the world, and helping the world (Bhasin, 2020). Thus there has been a long need for efficiency-enhancing reforms that could make Indian producers competitive in the global market. But these reforms are critical for the creation of domestic production capabilities and to compete with the world. The disruption in supply chains due to the COVID-19 outbreak and lockdown in China has had an adverse effect on several world economies mainly on import-dependent developing countries like India (Guan et al., 2020). Now more countries like India, are adopting strategies to boost up their domestic production and become Self-sufficient. As a result, “Atmanirbhar Bharat Abhiyan” or “Self-reliant India” has become an important topic of discussion in the present situation. This move is also important in terms of strategic and geopolitical considerations, as India looks to punch above its weight in international affairs (Bhasin, 2020).

If we see India’s present import and export sceneries, we can make an inference that how much India depends on other countries. India runs a huge trade deficit as its imports are more, hence create a good market for the other countries, especially China, the biggest exporter to India (Kapoor, 2020; Saraswat, 2020). In the financial year 2019–20 (FY19–20), the foreign trade data indicates that China was the biggest importer for India accounting an import value of 14.09%, whereas 5.78% of imports were from the U.S.; UAE (6.39%); Iraq (4.95%) and so on (Figure 2). In the case of foreign trade export data of India for the same financial year (FY19–20), China accounted
for over 5.33% of India’s total exports (3rd biggest exporter to India); 16.93% export was from the U.S.; UAE (9.32%); Hong Kong (3.4%) respectively (Figure 3) (Kapoor, 2020).

If we specifically look into India-China trade statistics, it could be easier to understand that, how much the Indian economy depends on China. China is Asia's largest and the world's second-largest economy with a GDP of about $13.6 trillion whereas India holds 3rd position in Asia and 7th position in global GDP ranking with a value of $2.7 trillion (Anon, 2020b; Kapoor, 2020; Nandi, 2019). From supplying industrial components and raw materials to making investments in India’s startups and technology firms, China is India's biggest trading partner after the U.S (Kapoor, 2020; Makhdoomi, 2020; Saraswat, 2020). India has always maintained a trade deficit with China (Figure 4), as it has invested a huge amount of money for importing various products such as Smart phones, electrical appliances, power plant inputs, fertilizers, auto components, finished steel products, capital goods like power plants, telecom equipment, metro rail coaches, iron and steel products, pharmaceutical ingredients, chemicals, plastics, engineering goods and many more as per the Ministry of Commerce (Kapoor, 2020). According to a report of Gateway House, it has been studied that in the case of Smartphone’s, Chinese brands led by Xiaomi, Vivo, and Oppo, are the kingpins of the Indian market holding an estimated share 72%, leaving Samsung and Apple behind, according to a report by Gateway House (Anon, 2020a; Kapoor, 2020; Peeromohamed, 2020). India’s bulk imports of drugs from China also indicate our high dependency on them. Though worldwide India ranks 3rd in pharmaceuticals in terms of volume and 10th by value, its two-third imports of pharmaceutical ingredients or key ingredients of drugs are from China (Anon, n.d.-a; Jadhav, 2020).

What has also been observed that even Indian tourists in China have increased with time and that Indians travel more to China than the Chinese visit India according to reports of the Ministry of Tourism (Figure 5). From just 1371 Indian travelers arriving in China in the year 1981, the number rose to 281,768 lakhs in 2018, growing at an annualized rate of 32.4%, according to the data available from the Indian Ministry of Tourism. As per figures, while nearly, 48% of the arrivals of Indian tourists in China are due to business purposes, and another 48% are for leisure (Kapoor, 2020).

As the foreign trade statistics of India shows that the economy is more import oriented, hence we need to be more focused on the ESR. However, it has been studied that in the 2019–20 financial year, India’s trade with China significantly reduced from over $53 billion in the fiscal year 2018–19 to $48.66 billion (Agrawal, 2020). Though these changes look small in number, in near future it is expected to be an excellent economic strategy for India’s economic development and will help in achieving ESR.

The overall economic activity of India can be divided into three major parts. Firstly, sectors that are heavily dependent on imports and cannot immediately scale up production domestically. Secondly, sectors that are partially dependent on imports and thirdly sectors have minimal dependence on imports and have the possibility to instantly
scale up their domestic production. A detailed list of these products is given below:

| Sectors heavily dependent on imports | Sectors partially dependent on imports | Sectors that have minimal dependence on imports |
|--------------------------------------|----------------------------------------|-----------------------------------------------|
| 1. Electrical and Electronics industry: | 1. Pharmaceutical industry: | 1. Textile sector: |
| • The equipment such as smartphones and computers play a key role in India’s import bill. | • These industries are capable of making finished formulations, and also have domestic manufacturers of several key ingredients that are required to make the related products. | • India is not dependent on imports for some textile components like yarn. |
| • The value addition in India’s electronics industry is limited to mostly assembling | • But the industry also imports some key ingredients such as antibiotics and vitamins which are currently not manufactured in India. | • India’s share in textiles worldwide has been going up. |
| • The country depends on imports to access most of the primary and critical components that are required for their assembling, including printed circuit boards (PCBs). | • India is presently trying to encourage domestic firms to make these key ingredients, known as fermentation-based APIs. | 2. Other products: |
| • For example, around 88% of the components used by the mobile handsets, industry are imported from other countries, mostly China | • India imported around Rs 249 billion worth of key ingredients, including fermentation-based ingredients, in FY19, and this accounted for approximately 40% of the overall domestic consumption. | • India currently does have the capacity to domestically make products like hot water bottles, mercury thermometers, hypodermic needles, wheelchairs, and patient monitoring display units. |
| 2. Medical devices: | 2. Some medical devices: | |
| • Over 60% of the country’s medical devices are imported from outside. | • Devices like ventilators also rely on imports of several crucial components like solenoid valves and pressure sensors | 3. Automobile industry: |
| 3. Solar sector: | 3. Other products: | • Some auto manufacturers depend on imports for various components. |
| • Cells and modules used by the country’s solar power industry are the products heavily imported from outside countries. | | • On the other hand, India’s electric vehicles industry is dependent, “to a large extent” on Chinese imports for chemicals that are used to make cathodes and battery cells. |
| 4. Dyes and dyestuff industry: | 4. Other products: | 4. Dyes and dyestuff industry: |
| • Local dyestuff units in the country are also heavily dependent on imports of several raw materials. | | • Special chemicals for textiles like denim are also imported in India. |
| 5. Special chemicals | 5. Other products: | |
| • Some auto manufacturers depend on imports for various components. | | 4. Dyes and dyestuff industry: |
| • On the other hand, India’s electric vehicles industry is dependent, “to a large extent” on Chinese imports for chemicals that are used to make cathodes and battery cells. |

Source: Analysis of import dependency of India’s industries, prepared by jatinverma.org; Information source from https://indianexpress.com/article/explained/self-reliant-india-which-are-the-sectors-dependent-on-imports-which-are-not-6408407/.

Achievement of ESR may also lead to the facing of several problems due to immediate scaling up of domestic production by the import intensive sectors. For instance, the manufacturing of certain key products that India imports mostly such as semiconductors, display, and other very capital intensive electrical equipment may not be possible to produce at a sooner time, as these products need a large, stable source of clean water and electricity (RagHAVAN & Singh, 2020). They also need a high degree of policy certainty as these require high upfront investments. Even Indian industries also suffer from skyrocketing input costs such as higher electricity and logistics charges than Chinese firms. This is also true for fermentation-based APIs as Indian industries became less competitive when China began receiving more infrastructure and logistic support to produce and sell them at cheaper rates (RagHAVAN & Singh, 2020; Sen, 2020). India needs to work more on making industries run efficiently, as it is necessary to have flexibility in labor laws, availability of land resources, innovative government policies, technology transfer, skill development, human resource management, and more productive infrastructural developments.
2.6 Effects of Covid-19 on resources and self-reliance of the people

The Covid-19 has made us realize that growth must be both inclusive and sustainable in the long run. Faced with one of the disruptive situations in recent human history, each country is trying to overcome the pandemic in their ways (Naidu, 2020). The crisis period has brought to forth the limitations and inevitability of globalization (Baru, 2020). This is the time when self-reliance is necessary. The Prime Minister of India in his address to the nation on May 12, 2020, announced that self-reliance would be the central objective and the “new normal” for India (Luthra, 2020). It is a throwback to the economic policies that India and other independent countries followed in the last century before the high tide of globalization swept in Baru (2020). According to Krishnamurthy Subrahmanian, the Chief Economic Advisor of India, the Coronavirus outbreak is an opportunity for India to expand trade and increase the country’s exports (Mallikarjunan, 2020). India is a country with a vast array of natural resources. People need to internalize the concept of valuing local products and promote them (Naidu, 2020). The crisis period has taught us the importance of local manufacturing, the local market, and local supply networks (Deshmukh & Haleem, 2020). The government also needs to increase its investments towards renewable sources of energy (Yadav, 2020). Due to the availability of vast natural resources and India having the advantage of its demography, if high quality technical and vocational training is given to its people then the critical bottlenecks constricting economic growth can be identified and solutions can be ascertained to overcome the restrictions (Naidu, 2020). The concept of Self-reliant India has been introduced to stand by the idea of Swadeshi: the notion of supporting primary domestic products and companies including safeguarding national products from foreign competition (Iwanek, 2020). Hence, this is an opportunity to go vocal for local, boost supply chains in the country and promote local commodities that will help in achieving self-reliance which will further lead to happiness, satisfaction, and empowerment (Deshmukh & Haleem, 2020).

3 CONCLUSION

It is now certain that this Covid-19 global crisis will last in our living memories forever (Weible et al., 2020). The pandemic has created a huge disruption all over the world (Deshmukh & Haleem, 2020). The fast spread of Covid-19 has created a worldwide impact across all the sectors and strata of society. Due to this crisis period, most countries restricted their borders and even travel within borders. New challenges are being faced with every passing day that is mainly associated with decision making, public information, accountability, learning, and reforms (Weible et al., 2020). The biggest lesson that the pandemic situation has taught the world is to be self-reliant and self-sufficient for the majority of its needs (Hebbar, 2020). The pandemic has forced every government to adopt new public policies with a range of designs and contents (Weible et al., 2020). It is estimated that the prolonged lockdown periods will create a serious impact on the economy worldwide, but the crisis period gives a unique opportunity to think strategically about the revival of the local economies (Naik, 2020). Developing countries like India are eager to convert the period of crisis into an opportunity and are looking forward to upsurge the economy with the available resources towards a more resilient and sustainable economy (Srivastava, 2020). Besides protecting precious human lives, promoting a green and sustainable economy is also required (Bishit, 2020) at this period of serious crises. Some recommendations can be made for making the Indian economy more self-reliance in future. Firstly, the Covid-19 pandemic has exposed the weakness of public health care facilities and therefore, the Government of India should focus on more investment in public health care sector and make India’s domestic pharmaceutical market self-dependent. Secondly, India has a great potentiality in its telecom and electronics industry, instead of importing from other countries India should invest more in domestic IT sectors and software development will give more value to the local supply chain and will push the Indian economy in a better direction. Thirdly, the government should encourage local small-to-mid-size enterprises (SME) and MSMEs to ramp up investments, instead of more focusing on the multinational corporation (MNCs). It will help them to build globally competitive products and promote the local ecosystems of economy.

Going back to the history of India, great personalities like Swami Vivekananda always advocated in favor of a Self-reliant India (Iwanek, 2020). Now, this is an opportunity for the country to chase the dream of “Local” India into “Glocal” India by using its resources very strategically (Naidu, 2020). Therefore, the time has come to give up the conservative approaches and make bold decisions to use the Covid-19 crisis as an incredible chance to move towards equity and sustainability (Kothari, 2020).

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ORCID

Asraful Alam https://orcid.org/0000-0001-7683-9206

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**AUTHOR BIOGRAPHIES**

**Dr. Asraful Alam** is an Assistant Professor at the Department of Geography, Serampore Girls’ College, University of Calcutta, West Bengal, India. He received his M.A.& Ph.D. degrees in Geography from Aligarh Muslim University, Aligarh and Allahabad University, Kolkata, India respectively and also completed PG Diploma in Remote Sensing & GIS. Dr. Alam completes his Post Doctorate (PDF) from Department of Geography, University of Calcutta, Kolkata, India. Earlier he was an Assistant Coordinator in PG Department of Geography, Calcutta Women’s College, University of Calcutta, Kolkata, India. His research interests include Population Geography, Agricultural Geography, Climatology, Health Geography and Remote Sensing & GIS and Developmental Studies. He has published three books (two books in Springer) and more than 27 papers in peer-reviewed journals. Dr. Alam has served as a reviewer for many International journals.

**Amir Khan** is pursuing his Ph.D. degree from Department of Geography, University of Calcutta. He completed his B.Sc. degree in 2016 and M.Sc. degree in 2018, in Geography from University of Calcutta. He qualified West Bengal State Eligibility Test (WB-SET) and UGC-NTA based National Eligibility Test (NET) with Junior Research Fellowship (JRF) in 2018. Mr. Khan has diversified interest pertaining to Climate, Water Resource, Agriculture, Socioeconomic Studies, Remote Sensing & GIS and its Multi-disciplinary Approach. He has published different article in edited books and reputed journals.

**Nilanjana Ghosal** is a Post Graduate in Geography from University Of Calcutta. She has also completed a Post Graduate Diploma on Applied Geoinformatics from CAD Center, Jadavpur University, Kolkata, India. Presently pursuing Bachelor of Education from University of Calcutta as well as a Masters Course on Rural Development from Indira Gandhi National Open University (IGNOU), her research interest includes condition of women in the rural villages of India such as educational status of women in the villages, child marriage situations that are still prevalent in a developing country like India, social inequality as well as role of women and tribes in achieving environmental and social sustainability.
Prof. Lakshminarayan Satpati obtained Ph. D. degree in Geography from the University of Calcutta for his thesis entitled ‘An Approach Towards Rational Water Resources Management of the Rupnarayan River Basin, West Bengal’. Prof. Satpati has an experience of teaching of geography for about 26 years in schools, colleges, universities and institutes of higher education in West Bengal. He has presented more than 80 research papers and chaired sessions in national and international platforms, of which the 32nd IGU Conference in Cologne, Germany (2012), 8th IAG Conference in Paris, France (2013) and PRSCO-2019 of RSAI, Bangkok are notable. Besides, he has been invited to deliver lectures in various faculty development programmes of UGC, ICSSR, DST etc. He has to his credit more than fifty publications in the form of research papers and articles published in reputed national and international journals and books. His research and teaching interests include climatology, geomorphology, hydrology, environment, population & development, quantitative geography and curriculum development in geography. He has edited 2 books from the University of Calcutta and Springer publishing House. Fourteen scholars have already obtained their Ph.D. degrees under his supervision. He has successfully completed two UGC sponsored research projects and organized three national workshops on Climate Science. Prof. Satpati is associated with a large number of academic and professional organizations of teachers, geographers and climate scientists of India. He has been the Hony. Assistant Secretary (Administration) of the Geographical Society of India, Kolkata since 2009. He has been elected as the Hony. Secretary, Indian Meteorological Society (IMS), Kolkata Chapter for the period 2018-20. Prof. Satpati has performed the responsibility of the Chairman, High Powered Committee to restructure NATMO. Currently he is the honorary Editor of UGC recognized peer reviewed biannual ‘Indian Journal of Landscape Systems and Ecological Studies’ of Indian Institute of Landscape, Ecology and Ekitics, since 2017.

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