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YOJANA



SPECIAL ISSUE

NOVEMBER 2020

A DEVELOPMENT MONTHLY



POST-COVID ECONOMY

LEAD ARTICLE

Preparing India for an Uncertain Post-Covid World

Sanjeev Sanyal

FOCUS

India's Monetary Policy

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SPECIAL ARTICLE

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Natural Gas Marketing Reforms



In a significant step to move towards gas-based economy, the Cabinet Committee on Economic Affairs has approved 'Natural Gas Marketing Reforms'. The objective of the policy is to prescribe standard procedure to discover market price of gas to be sold by gas producers, through a transparent and competitive process, permit Affiliates to participate in bidding process for sale of gas and allow marketing freedom to certain Field Development Plans (FDPs) where Production Sharing Contracts already provide pricing freedom.

The policy aims to provide standard procedure for sale by contractor through e-bidding. This will bring uniformity in the bidding process across the various contractual regimes and policies to avoid ambiguity and contribute towards ease of doing business.

The policy has also permitted Affiliate companies to participate in the bidding process in view of the open, transparent and electronic bidding. This will facilitate and promote more competition in marketing of gas. However, rebidding will have to be done in case only affiliates participate, and there are no other bidders. The policy will also grant marketing freedom to the Field Development Plans (FDPs) of those Blocks in which Production Sharing Contracts already provide pricing freedom.

The Government has taken transformative reforms in the upstream sector with a view to make investment easier focusing on ease of doing business. The Open Acreage Licensing Policy (OALP) which is investor-driven acreage auction process, has increased substantial acreages in the country. No blocks were allocated between 2010 and 2017 which has impacted the long-term viability of the domestic production. Since 2017, more than 1.6 lakh sq. km area under 105 exploration blocks has been allocated. This will ensure sustainability of the domestic production in long run.

Government brought a series of reforms in Gas sector and as a result investment of more than Rs. 70,000 crore is being made in the East coast. Gas production from East coast will contribute to Aatmanirbhar Bharat by meeting increasing energy needs of the country.

In February 2019, Government implemented major reforms in upstream sector and brought paradigm shift by focusing on production maximisation. Acreages under OALP rounds are being allocated based on work programme only in Cat II and Cat III basins.

The domestic gas production has complete marketing and pricing freedom. All discoveries and field development plans approved after February 28, 2019 have complete market and pricing freedom.

These reforms will build on a series of transformative reforms rolled out by the Government in last several years. These reforms in gas sector will further deepen and spur the economic activities in the following areas:

- The whole eco-system of policies relating to production, infrastructure and marketing of natural gas has been made more transparent with a focus on ease of doing business.
- These reforms will prove very significant for Aatmanirbhar Bharat by encouraging investments in the domestic production of natural gas and reducing import dependence.
- These reforms will prove to be another milestone in moving towards a gas-based economy by encouraging investments.
- The increased gas production consumption will help in improvement of environment.
- These reforms will also help in creating employment opportunities in the gas consuming sectors including MSMEs.
- The domestic production will further help in increasing investment in the downstream industries such as City Gas Distribution and related industries.



Let noble thoughts come to us from all sides
Rig Veda

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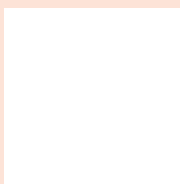
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Excellent Resource for Students and Faculty

This journal which covers articles on many international and national affairs is of immense benefit for our students and faculty at IIMC.

– Prof. Sanjay Dwivedi
Director General,

Indian Institute of Mass Communication, New Delhi

Ethics & Integrity Issue

I'm really impressed by the September issue of Yojana. It has almost covered half of the GS-4 syllabus of UPSC CSE Mains. Thanks a lot for this priceless information regarding the developments and various schemes announced by the government.

– Sayali Harkare
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Authentic Information

I just want to thank team Yojana for MCQ section. This magazine always remains the source of authentic information and all the topics are well-related to current situation. Keep doing this great work.

– Ram Kumar
Email: rkumar837392@gmail.com

Suggestion on Topics

I have been reading your monthly journal for five years and really appreciate your work. I would like to request you to please publish Yojana edition on—world organisation, essay on current topics, and social issues. I applaud the intellectual and thoughtful work of Yojana team. Keep it up.

– Purnendu Kumar
Email: purnendukr1996@gmail.com

Helpful for UPSC Aspirants

I am a regular reader of your esteemed magazine as I am preparing for Civil Services. This magazine helps me a lot in providing information and facts. I would like to thank Yojana team for their ideas that cover the current issues and helping students like me. Thanks a lot.

– Deepak Mishra
Email: er.deepakmishra14@gmail.com

Multiple Choice Questions are Praiseworthy

I am preparing for PCS examinations. Your efforts regarding the addition of Multiple Choice Questions are praiseworthy. It will be helpful for UPSC and PCS aspirants.

– Pushpender Kumar
Meerut, U.P.
Email: pushpender1601@gmail.com

Here's a suggestion that kindly increase the number of MCQs related to the present issue of Yojana magazine. Thanks.

– Suneel Kumar
Technical Branch,
Directorate Food Civil Supplies and Consumer Affairs,
Shimla, Himachal Pradesh

Eco-friendly Packaging

I am a civil services aspirant. Yojana magazine is and will always be one of the "must-haves" for CSE aspirants across the country because of its extensive coverage of important issues pertaining to governance. Just a minor suggestion as an environment enthusiast, I sincerely request substituting plastic for packing the magazine with another eco-friendly material such as postal brown paper or bio-plastic made from cassava. Thank you.

– Varun Kulkarni
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Develops Perspective

I find Yojana magazine of immense help as a civil services aspirant. The details about current schemes of government of India are given in detailed fashion. It helps readers develop a perspective about the problems people of India face and how they are to be addressed and achieved. Thank you for enlightening us through your initiative.

– Saisinduja Mannava
Email: saisindujamannava29@gmail.com

Embodiment of Knowledge

My dear Yojana, You are such a beauty and embodiment of knowledge. You are a blessing for the aspirants of various competitive exams. I would like you to adorn yourself with some issues like "internal security", "foreign policy", "federalism" and other such gems. This will only enhance your beauty and boost my admiration for you. Be healthy. Be slim. Be rich.



The Road Ahead

When the road is rough, a firm control over brake and accelerator determines how smooth the ride would be. The same holds true for the unprecedented situation we are in. It began with a complete lockdown, to contain the pandemic and ensure better preparedness, and now with the series of unlocks, the economic activities are gradually gaining momentum. The tradeoff is between accelerating economy and applying brake to control the pandemic.

Monetary and fiscal measures taken in this direction are important for this road to recovery. Though, inflation, employment scenario and the ongoing health crisis will continue to cast a shadow for a while. International cues especially the progress on the vaccine front will decide by when the international travel can resume, businesses can revitalise, offices can resume with full workforce, and economy embraces the new normal way of functioning.

The reforms and stimulus under the Aatmanirbhar Bharat initiative aim to strengthen and reboot various sectors. Based on the pillars of Economy, Infrastructure, System, Demography and Demand, the reforms resolve to provide impetus to sectors and areas which have noticed sluggish movement. The Aatmanirbhar Bharat Package includes wide-ranging interventions such as direct benefit transfer, food security, rural jobs under MGNREGS, Credit Guarantee schemes for MSMEs and Kisan Credit Card Scheme. To infuse money into the economy and boost consumption, the Government has taken various measures including the LTC Cash Voucher scheme and Festival advance to the central government employees. The extent of support in comparison with the rest of the world suggests India's intervention is wide-ranging, pragmatic and catering to the localised needs.

The Principal Economic Adviser in the lead article of this Special issue has elucidated on the "Barbell" strategy used in financial markets – i.e. hedge first for the worst possible outcome while progressing step-by-step with updating of information and has compared it with the strategy devised in India to combat the impact of pandemic and the rationale behind it. The issue discusses in detail various monetary measures to consolidate the state of economy.

It also brings out the possibility of changing landscape of industries and businesses with certain businesses losing relevance while bringing new opportunities to some service and tech-based sectors. Efforts to develop a multi-dimensional and multi-scalar response that acknowledges the contribution of migrants in the economy of cities have been highlighted.

India is uniquely placed in terms of demographic dividends. Over 62% people in the country fall in the age group of 15-59 years which is expected to rise up to 65% by 2035. Job losses due to the pandemic are a grim reality. The current situation has certainly devastated a large section of the working population. But, there has been a growing trend towards efforts to increase employment opportunities. The recent announcement by the Government regarding creation of National Recruitment Agency is likely to be a game changer in terms of streamlining and standardising the processes. It is important to focus on advancement of skills in line with the emerging economic realities of the market. Given this, there is a need for the government and private sector to work together to address skill gaps and link supply with demand and vice-versa. Equipped with the right skills to meet the emerging demand of the new industrial era, the youth will be the torchbearers of India's march to becoming a self-reliant nation.

Agriculture has already demonstrated its potential to revive the pandemic-hit economy. To sustain agricultural growth and boost rural economy in post-Covid era, it is critical to have a robust infrastructure in place to support farm and farm-processing based activities. Midst the slump, agriculture has shown a bright spot. Being an agrarian economy, agriculture is the core sector which generates employment. Spurring the rural economic growth can give new direction to the economy.

This edition of Yojana seeks views and opinions of experts to assess the current economic situation, its impact on various sectors and the road that lies ahead. □



Preparing India for an Uncertain Post-Covid World

Sanjeev Sanyal

The world has just experienced the biggest shock since World War II. The immediate response is well underway. Based on a “barbell strategy”, India’s economic and health response has been somewhat different than that of other countries in terms of sequencing and emphasis of various measures. The long-term response, however, is aimed at making the Indian economy more resilient and flexible in order to deal with the opportunities and problems of the post-Covid world.

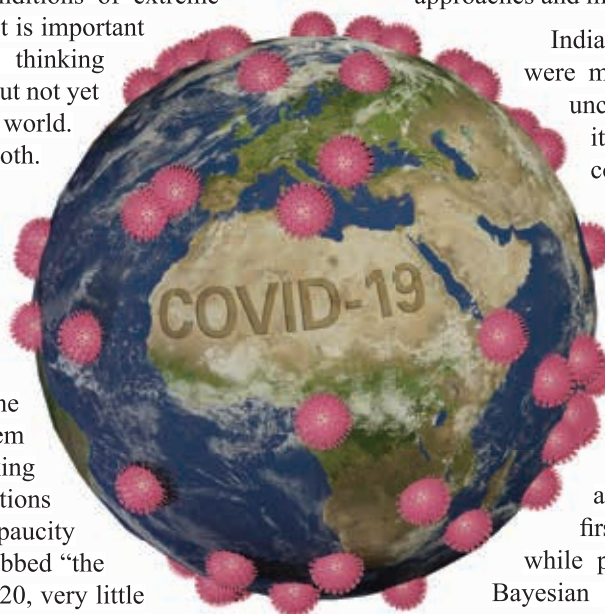
The world economy experienced a major crisis in 2020 due to the Covid-19 pandemic. This is the biggest shock to the world economy since the Great Depression of the 1930s and World War II. Not surprisingly, Indian policy-makers too faced a challenging period on both health and economic fronts. As we move past the peak of the crisis, however, it is important to record our thoughts from this time. Future historians will have the benefit of knowing the outcomes of today’s decisions but it is important to explicitly note down why certain decisions are taken while situation was still evolving and considerable uncertainty prevails. This will hopefully also help future generations when they find themselves in similar conditions of extreme uncertainty. At the same time, it is important to provide a framework for thinking coherently about an emerging but not yet clearly established post-Covid world. This essay is an attempt to do both.

The Barbell Strategy

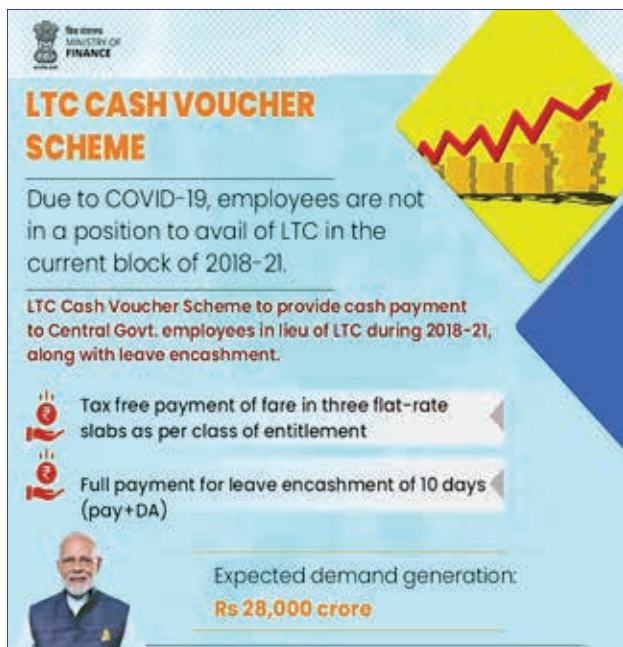
It is important, firstly, to explicitly lay out the intellectual framework of India’s response to both the health and economic challenges caused by the pandemic. The central problem in both cases related to making major decisions under conditions of extreme uncertainty and paucity of information; what can be dubbed “the fog of war”. Back in March 2020, very little was known about Covid-19 beyond the fact that

there had been a major outbreak in Wuhan, China, and that it was suddenly killing a lot of people in northern Italy. There were also signs that it was rapidly spreading to other countries. The World Health Organization, however, was far from clear in its recommendation and changed its stance repeatedly. Epidemic experts consulted by governments around the world provided wide-ranging assessments. Some advocated herd immunity, while others predicted millions of deaths unless something drastic was done. One epidemic expert, much quoted in the media, stated that India would have 200-300 million infected by July 2020 and as many as 2 million deaths. Given the wide range of expert opinion, different governments took different approaches and many changed course midway.

Indian policy-makers, consequently, were making decisions under extreme uncertainty while being aware that it would not be possible to course correct later with 1.35 billion people. Whatever strategy was adapted was a one-way street and would have to be held to the end. It was also recognised that it was probably a marathon rather than a sprint. Given these constraints, the Central Government opted for what is known in financial markets as a “barbell” strategy – i.e. hedge first for the worst-possible outcome while progressing step-by-step with a Bayesian updating of information. The initial total lockdown, therefore, should be seen



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LTC CASH VOUCHER SCHEME

Due to COVID-19, employees are not in a position to avail of LTC in the current block of 2018-21.

LTC Cash Voucher Scheme to provide cash payment to Central Govt. employees in lieu of LTC during 2018-21, along with leave encashment.

- Tax free payment of fare in three flat-rate slabs as per class of entitlement
- Full payment for leave encashment of 10 days (pay+DA)

Expected demand generation:
Rs 28,000 crore



SPECIAL FESTIVAL ADVANCE SCHEME

Restoration of the Festival Advance to Central Govt employees for any festival up to **31 March 2021**

- An interest-free advance of **Rs 10,000**, recoverable in maximum 10 instalments
- Rs 4,000 crore** is expected to be disbursed and another **Rs 4,000 crore** will be disbursed, if adopted by some State governments
- The advance will be given through a **pre-loaded Rupay Card** of the advance value
- Will ensure digital payment, result in tax revenue, and promote the domestic Rupay brand

Expected demand generation:
Rs 8,000 crore

as a hedge against the worst possible outcomes. It was bolstered by advice from some experts who argued that a strong initial lockdown could stall the epidemic at an early stage (this was not an unreasonable idea given the available information). It should be noted that this initial lockdown also gave the space to arrange a large-scale medical response in terms of equipment, quarantine and testing capacity.

As time has passed, the central government then unlocked the economy step-by-step as information as well as medical capacity both improved. Lockdowns and other responses were increasingly left to local governments. Meanwhile, better information meant that it was possible to make sensible tradeoffs between health and economic needs. This explains why the government was later willing to keep opening up despite there being many Covid-19 infected people whereas it had done an initial lockdown when there were very few patients.

The same barbell strategy was used in the economic response. The Indian economic response during the lockdown phase was oriented more towards providing a cushion to the most vulnerable segments of society and of the business sector (such as medium and small enterprises). This explains the emphasis on food availability, cash transfers to Jan Dhan accounts, government guarantees on loans to small enterprises, moratoria and postponement of financial deadlines. Every effort was made to avert a cascade of defaults in the banking

The Central Government opted for what is known in financial markets as a “barbell” strategy – i.e. hedge first for the worst possible outcome while progressing step-by-step with a Bayesian updating of information. The initial total lockdown, therefore, should be seen as a hedge against the worst possible outcomes.

system. The emphasis was on providing a safety net (i.e. hedging against worst-case outcomes) and was not an attempt to reflate demand.

Unlike many other countries that front-loaded large stimulus packages, Indian policy-makers decided that trying to pump demand during a lockdown was like pressing the accelerator when the foot was firmly on the brake. It was better to save the ammunition for later as the cycle of demand simply would not take-off in a lockdown. Instead, the time was used to put in place long-term structural reforms in anticipation of the post-Covid world.

With the economy mostly unlocked by early October, there is now a case for an appropriate demand stimulus with infrastructure investment taking center-stage. Both monetary and fiscal space exists for this push despite the widening of the fiscal deficit. Demand-driven inflation is not a major issue as almost all price increases are due to supply disruptions. With the Rupee under pressure to appreciate and a current account surplus feeding foreign exchange reserves (standing at US\$545bn in end September), there is space for allowing the transmission of an expansionary monetary impulse to reignite India’s financial system.

Meanwhile, as mentioned by both the Prime Minister and the Finance Minister, an infrastructure pipeline is being ramped up. But can a push on large-scale infrastructure investment be financed? Every financing avenue will be explored including foreign and domestic capital, asset monetisation

PM's clarion call for #AatmanirbharBharat

- A special economic package** announced
- A comprehensive package of ₹20 lakh crore** for labourers, farmers, honest tax payers, MSMEs and cottage industry
- Equivalent to **10% of India's GDP**
- Emphasis on **land, labour, liquidity and laws**

and even deficit monetisation. Indian media and academics tend to be excessively critical of monetisation. This is dogma. Carefully calibrated monetisation should be part of the financing mix.

Adapting to a Post-Covid World

The Covid-19 pandemic is the biggest global disruption in generations. The post-Covid world that emerges from this crisis will not be a mildly-altered version of pre-Covid world. This new world will have its own geo-politics, supply chains, technological innovations, institutional structures, consumer preferences and so on. All of these factors will interact in multiple, unpredictable ways. Therefore, it is

very difficult to make grand predictions about how exactly the post-Covid world will function. After all, it would have been difficult to predict in 1940 that British and French colonial empires would collapse within a decade, that global geo-politics would be dominated for half a century by a US-USSR Cold War, that man would set foot on the moon, and that televisions would become everyday items.

So, how can one prepare for an uncertain new world? Rather than invest in a rigidly master-planned response, it is better to invest in two things: flexibility and resilience. This is the context in which recent supply-side reforms need to be seen.

Even a cursory look at recently announced structural reforms would show that they have one thing in common—an attempt to encourage flexibility and adaptation in India's economy. The agriculture sector reforms free-up farmers to sell their produce as they wish while those involved in the supply chain can invest in storage without fear of being labeled “hoarders”. This will allow the farm sector and farm-related industries to adapt their activities to changes in demographics, climate change, consumer tastes and so on. India has the world's second largest stock of cultivable land and there is no reason it shouldn't be an export powerhouse in agriculture.

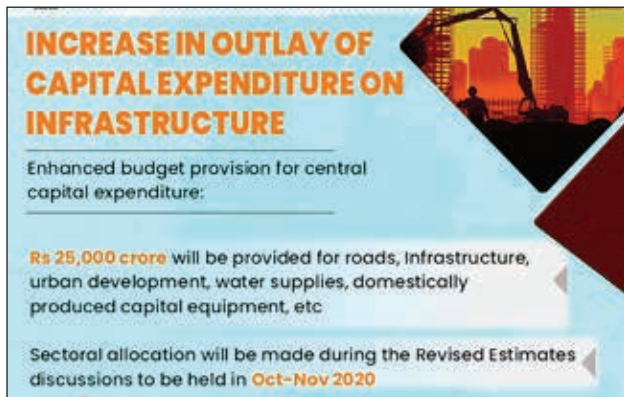
Similarly, dozens of central labour laws have been reduced to four internally consistent codes. On one hand they strengthen laws related to safety and working conditions, on the other hand they allow employers greater flexibility. Again, this is important for an unpredictable, evolving post-Covid world where the economy needs to be able to efficiently redeploy the workforce according to

LTC CASH VOUCHER SCHEME

Requirements for the LTC Cash Voucher Scheme

- Employees opting for this scheme will be required to buy goods/services worth three times the fare and one time leave encashment
- Goods/services purchased should be attracting GST of **12% or more**
- Purchase should be made from a GST registered vendor through digital mode
- Money should be spent before **31 March 2021**
- Potential private sector spending through LTC tax benefit likely to generate additional demand of **Rs 28000 cr**

Part-1	5,94,550	Part-3	1,50,000
Emergency W/C Facility for Businesses, including MSMEs	3,00,000	Food Micro enterprises	10,000
Subordinate Debt for Stressed MSMEs	20,000	Pradhan Mantri Matsya Sampada Yojana	20,000
Fund of Funds for MSME	50,000	TOP to TOTAL: Operation Greens	500
EPF Support for Business & Workers	2,800	Agri Infrastructure Fund	100,000
Reduction in EPF rates	6,750	Animal Husbandry Infrastructure Development Fund	15,000
Special liquidity Scheme for NBFC/HFC/MFIs	30,000	Promotion of Herbal Cultivation	4,000
Partial credit guarantee Scheme 2.0 for Liabilities of NBFCs/MFIs	45,000	Beekeeping Initiative	500
Liquidity Injection for DISCOMs	90,000	Parts-4 & 5	48,100
Reduction in TDS/TCS rates	50,000	Viability Gap Funding	8,100
Part-2	3,10,000	Additional MGNREGS allocation	40,000
Free Food grain Supply to Migrant Workers for 2 months	3,500	Total (Parts 1+2+3+4+5)	11,02,650
Interest Subvention for MUDRA Shishu Loans	1,500	Earlier Measures including PMGK	1,92,800
Special Credit Facility to Street Vendors	5,000	RBI Measures (Actual)	8,01,603
Housing CLSS-MIG	70,000	Grand Total	20,97,053
Additional Emergency Working Capital through NABARD	30,000		
Additional credit through KCC	200,000		



changing conditions. Other recently announced reforms related to bilateral netting, and trade finance factoring are also directly aimed at improving the flexibility of the financial system.

The other ingredient of the longer term post-Covid framework is the emphasis on resilience. This is the key to understand the Prime Minister’s vision of “Aatmanirbhar Bharat” or Self-reliant India. This phrase is often misinterpreted as a return to the inward-looking, import-substitution of the socialist era. This is explicitly not the case as the Prime Minister himself has clarified that his vision includes increased participation in global supply chains as well as a greater encouragement of foreign direct investment. This is not about an inward-looking retreat into a shell.

The main idea of self-reliance is that India should become more resilient by leveraging its internal strengths. It should also be unapologetic about pursuing its national interests. For example, the Indian government decided to opt out of Regional Comprehensive Economic Partnership (better known by the acronym RCEP) as it felt that the trade arrangement did not serve national interest. This is not an ideological opposition to trade pacts since other trade deals will continue to be pursued where India has more to gain. Similarly, India’s globally competitive pharmaceuticals industry was found to be too dependent on critical imported inputs with supply lines that can be easily disrupted (as happened during the recent pandemic). Hence, an effort is being made to bring some of the input production back to India. Again, note that this is not about protecting an inefficient industry but about the resilience of a globally competitive one.

Looking ahead, a resilient and flexible response to the unpredictable problems and opportunities of the

post-Covid world will require reforms in two further areas—administrative structure and the legal system. In both cases, an archaic rigid system is unable to deal with the needs of the twenty-first century. Some progress is now being made on administrative reforms. A big effort is being made on digitisation of records, the use of online applications and the rationalisation of defunct government bodies. A similar effort, in partnership with the judiciary,

needs to be made for upgrading a legal process with 36 million pending cases. In a complex and evolving world, the sanctity of a contract is often the only anchor of certainty. Perhaps we need a public debate on how the inability of the legal process to enforce even routine contracts may now be the single biggest constrain on economic development. Such a debate may help build a non-partisan national consensus on how to proceed on this critical area of reform.

Conclusion

The world has just experienced the biggest shock since World War II. The immediate response is well underway. Based on a “barbell strategy”, India’s economic and health response has been somewhat different than that of other countries in terms of sequencing and emphasis of various measures. The

cycle has not yet fully played out but, as the economy gets fully unlocked, the emphasis will shift towards stimulating demand using infrastructure investment. The long-term response, however, is aimed at making the Indian economy more resilient and flexible in order to deal with the opportunities and problems of the post-Covid world. Recent reforms in agriculture, labour markets and the financial system should be seen in this light. This is also the context for Aatmanirbhar Bharat. Of course, many other areas also need change but arguably the administrative and legal systems should now be the focus of next generation of reforms. □

The agriculture sector reforms free up farmers to sell their produce as they wish while those involved in the supply chain can invest in storage without fear of being labeled “hoarders”. This will allow the farm sector and farm-related industries to adapt their activities to changes in demographics, climate change, consumer tastes and so on. India has the world’s second largest stock of cultivable land and there is no reason it shouldn’t be an export powerhouse in agriculture.

India's Monetary Policy

Michael D Patra



Monetary policy is all about balancing the desirable and the feasible. Ensuring macroeconomic stability as reflected in low and stable prices is its biggest contribution to strong, sustainable and inclusive growth in India. Its main objective is to ensure that an economy grows steadily along a path in which all available resources such as labour and capital are gainfully employed, or in other words, along its potential.

Monetary policy, like fiscal policy, is an integral arm of public policy. Its main objective is to ensure that an economy grows steadily along a path in which all available resources such as labour and capital are gainfully employed, or in other words, along its potential. When the economy grows at a faster pace, it tends to overheat. Demand races ahead of supply, prices rise much more than people can tolerate, financial markets go through large fluctuations. In these conditions, the task of monetary policy is to cool down the economy so that it returns to its potential. On the other hand, when an economy is falling below potential, problems like unemployment, unusually low and unremunerative prices, depressed financial activity, and deficiency in resource use develop. In such a

situation, monetary policy has to boost the economy and revive it so that it returns to its potential. By dampening these fluctuations of the economy around its potential, monetary policy contributes to overall welfare of the people.

Monetary policy can achieve its goal by changing the availability of money – in times of overheating, it reduces the supply of money so that people spend less, while in times of depressed activity, it expands money supply so that people have more money to spend. It can also achieve the same result by changing the cost of money, which is the interest rate. When people don't spend their money and keep it instead in a bank, they earn interest. When they spend more money than they have, they have to borrow it and pay interest. When the interest rate rises, people find that spending money becomes



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costlier as they have to pay more interest. By the same token, when the interest rate falls, people can get money easily and can spend more. The cost and availability of money are the instruments of monetary policy. To draw a parallel, the instruments of fiscal policy are taxes and expenditure.

Within this broad mandate, the conduct of monetary policy in India has undergone several design alterations over the years, broadly mirroring the changes that have occurred globally, while adapting to national needs. Since 2016, as enshrined in the Reserve Bank of India (RBI) Act amended in that year, India's monetary policy framework underwent a change and a new framework described as flexible inflation targeting or FIT was instituted. Under this framework, the primary objective of monetary policy is to achieve an inflation rate of 4 percent, while keeping in mind the objective of growth.

There are several notable features of FIT. First, the inflation rate is defined as year-on-year changes (in percent) in the consumer price index (CPI) that is compiled and released to the public every month by the National Statistical Office (NSO) under the Ministry of Statistics and Programme Implementation (MoSPI). It is an all-India index and combines both rural and urban price changes. In view of the fact that the Indian economy is subjected to frequent supply shocks, such as those associated with the vagaries of monsoons or international crude price shifts due to production changes by the Organisation of Petroleum Exporting Countries (OPEC) over which national authorities have no control, a tolerance band has been prescribed around the inflation target of 4 percent. A lower tolerance limit is set at 2 percent and an upper tolerance limit is at 6 percent. The target and the tolerance limits are specified by the Government of India (GoI), providing an example of monetary-fiscal coordination as the GoI and the RBI then share a joint responsibility in setting and achieving the goals of monetary policy. This range of +/- 2 percent is intended to enable the conduct of monetary policy to deal with these unforeseen shocks that occur outside its control. Furthermore, a rigid adherence to the 4 percent target is not envisaged. Instead of achieving the target at all times, it is expected that it will be achieved over

Since 2016, as enshrined in the Reserve Bank of India (RBI) Act amended in that year, India's monetary policy framework underwent a change and a new framework described as flexible inflation targeting or FIT was instituted. Under this framework, the primary objective of monetary policy is to achieve an inflation rate of 4 percent, while keeping in mind the objective of growth.

a period of time. These aspects – a band rather than a point target; the achievement of the target over a period of time rather than at all times; and the specification of 'keeping in mind the objective of growth' – are the flexible elements of FIT.

Second, the definition of the target in terms of the CPI is noteworthy. The CPI measures prices paid by consumers at the retail level. Thus, it captures prices that the common person faces on a regular basis and by doing so, it relates the conduct of monetary policy to everyday life. The average consumer is aware of these prices since they impinge on their daily life through the cost of living. For people working in the organised sector, their salaries and wages are 'indexed' to the CPI so that whenever the CPI increases by a specified amount, they are given dearness allowance. By keeping CPI inflation at the target, which is judged to be the tolerable level of price rise, monetary policy contributes to the welfare of the lay person. By specifying that inflation will be measured in terms of the CPI, it has been ensured that the lay person can easily judge whether or not monetary policy is working for the betterment of the people of India. This is the second important element of FIT – transparency.

The infographic features the Reserve Bank of India logo at the top left and the 'myGov' logo at the top right. The main title is 'RBI Unveils Developmental & Regulatory Measures'. It lists four key measures:

- Additional credit support for housing and rural sectors:**
 - A special liquidity facility of ₹5,000 crore to National Housing Bank to improve fund flow to the housing sector.
 - ₹5,000 crore fund earmarked for NABARD to improve fund availability for NBFC & Micro Finance Institutions.
- Relieving stress of borrowers:**
 - Lenders to implement a debt resolution plan for eligible corporate debts & personal loans.
 - An Expert Committee being constituted to make recommendations on debt resolution plans.

#IndiaFightsCorona




RBI Unveils Developmental & Regulatory Measures

Further support for MSME sector:
Stressed MSME borrowers to be made eligible for restructuring their debt under existing framework, to be implemented by March 31, 2021

Reduced Capital Charge for Market Risk:
The capital charge on banks for holding Mutual Fund /Exchange Traded Fund to be brought in harmony with the charge for directly holding a debt instrument

Will result in substantial capital savings for banks and boost the corporate bond market

Banks get more flexibility in managing liquidity and cash reserves:
An automated mechanism to be introduced in e-Kuber system to provide banks more flexibility in managing their liquidity & maintenance of cash reserve requirements

called the monetary policy committee (MPC). The Governor is the Chairperson, and the Deputy Governor and an office of the RBI are appointed as *ex-officio* internal members of the MPC. Three other members are external, selected by the GoI in terms of criteria relevant to the conduct of monetary policy and specified in the RBI Act. Each member has a single vote, with the Governor exercising a casting vote in the case of a tie. The objective is to replace individualistic decision-making by a collegial process that brings in variety of experience, expertise and independence while avoiding groupthink and free-riding. The MPC is required to meet at least once every quarter. The MPC's decision is published immediately after its meeting, with its assessment of the prevailing macroeconomic and financial conditions and the outlook, its decision and voting pattern with regard to the monetary policy action and stance. The minutes of the MPC's meeting containing the statements of each individual member setting out his/her assessment, vote and reasons thereof are published within 14 days of the MPC's meeting.

Third, under the new framework, clear rules of accountability have been laid out. CPI inflation has to be kept aligned with the target, but it can deviate from the target on account of unforeseen factors, as explained earlier, up to 2 percent above or below the target. If, however, there is a continuous deviation of actual inflation from the target's tolerance bands (inflation falls below 2 percent or rises above 6 percent) by this magnitude for three consecutive quarters, the Reserve Bank of India (RBI) has to write a letter to the Government of India explaining the reasons for the deviation, the actions that will be taken to correct the deviations and the time it will take to return inflation to its target. Thus, the responsibility of monetary policy towards the target takes the form of a pre-commitment and is consistent over time.

Fourth and perhaps the most important aspect of the new monetary policy framework is its decision-making process. Hitherto, it was the Governor of the RBI who was the sole decision-maker in respect of monetary policy actions and stance. Under the new framework, the decision has to be taken by a six-member committee

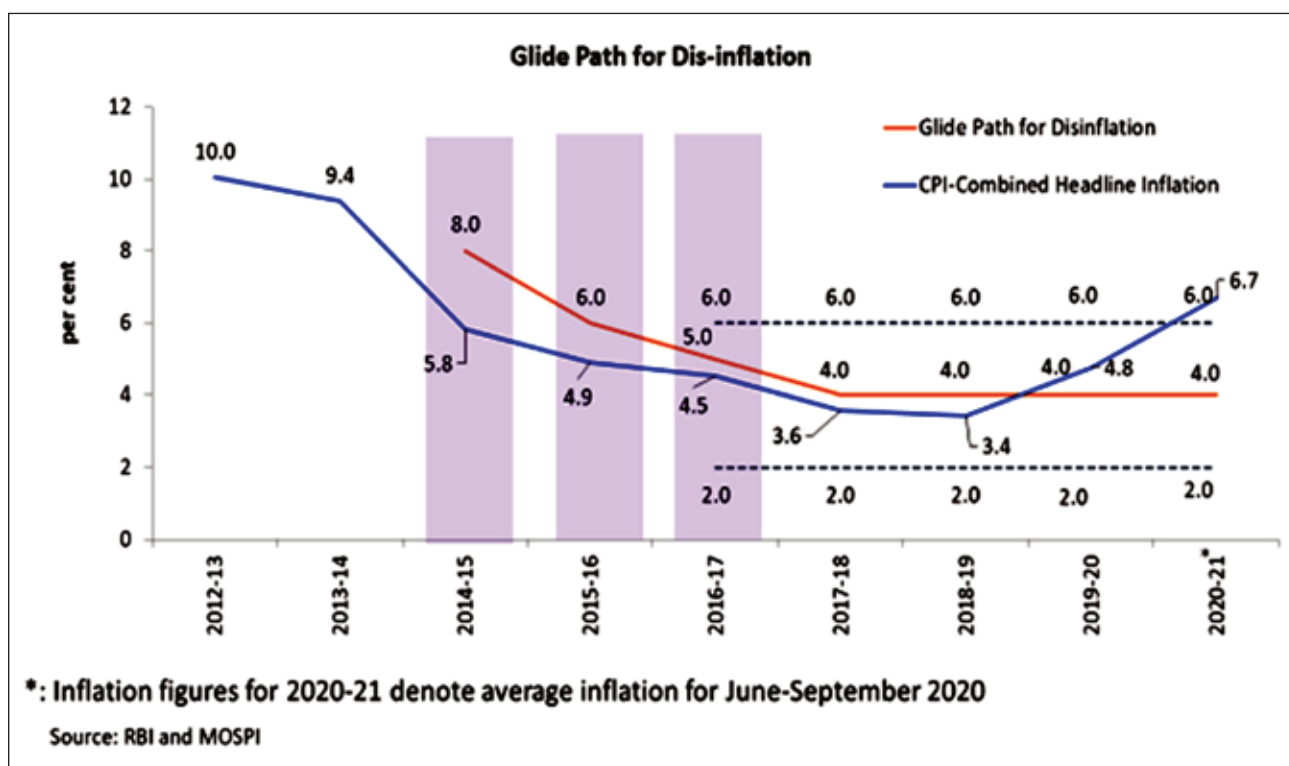
Turning to performance, the monetary policy framework has been regarded in India and internationally as an important reform in the country's economic management. India has joined 40 other countries in implementing FIT, and significantly, there has not been a single back slide in the country experience. In terms of the most important metric of performance, CPI inflation has fallen from double digits and has remained aligned to the target of 4 percent throughout the period of the

Under the new framework, the decision has to be taken by a six-member committee called the monetary policy committee (MPC). The Governor is the chairperson, and the Deputy Governor and an office of the RBI are appointed as ex-officio internal members of the MPC.

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working of the new framework – between September 2016 and March 2020, it has averaged 4.2 percent (Chart 1). With the Covid-19 pandemic, however, supply disruptions and panic mark-ups have caused inflation to deviate substantially and breach the upper tolerance band since June 2020. It may be noted that during the lockdown the situation was so dire that it was not possible to obtain price quotations and the NSO provided imputed estimates for business continuity purposes. Abstracting from this period, however, inflation ruled closely aligned with the mandated target. There is also evidence that the volatility of inflation or its variability came down during the

Chart 1 : Glide Path for Inflation



new framework’s operation. This period also came to be associated with sizable capital inflows from abroad, indicating robust investor optimism, and a strong external position of the country. It was also a period during which the Indian economy coupled with the rest of the world in a synchronised slowdown of growth from which few were immune. This was followed immediately by the Covid-19 pandemic which impacted almost every country in the world and produced a crash in economic activity not seen since World War II. Consequently, a judgement on growth performance under the new monetary policy framework cannot be definitively made until more normal conditions prevail. Nonetheless, such an assessment assumes importance as it is the secondary objective that has been set under the framework. Generally, as is the practice the world over, primacy is accorded to the inflation objective and the growth objective is interpreted as stabilising the growth path of the economy around the country’s potential.

The currently applicable inflation target of 4 (+/- 2) percent, which was set on August 5, 2016, will continue to guide the conduct of monetary policy in the RBI up to March 31, 2021. As required under the RBI Act, it will be reviewed on the basis of the experience gathered and the lessons learned so far, and re-set by the Government in consultation with the RBI for the next five years starting April 1, 2021. This is in keeping with international best practices by which across the

globe, central banks undertake periodic reviews of the monetary policy framework and goals to ensure that they remain relevant to and appropriate for the changing macro-financial conditions in the economy. In India, while FIT as a framework is still relatively new and yet to be fully tested, it has been widely accepted as a key pillar of macroeconomic policy. In response to the slowdown in the economy that commenced from early 2018-19 and was followed by the destructive Covid-19 pandemic, the monetary policy interest rate—also called the repo rate—has been reduced by a cumulative 250 basis points starting in February 2019 to 4 percent, which is its lowest level ever. The MPC has also decided to maintain with an accommodative stance as long as necessary—at least during the current financial year and into the next financial year—to revive growth on a durable basis and mitigate the impact of Covid-19 on the economy, while ensuring that inflation remains within the target going forward. These decisions are in consonance with the objective of achieving the medium-term target for consumer price index (CPI) inflation of 4 percent within a band of +/- 2 percent, while supporting growth.

Monetary policy is all about balancing the desirable and the feasible. Ensuring macroeconomic stability as reflected in low and stable prices is its biggest contribution to strong, sustainable and inclusive growth in India. □

Revival of Economy

*N R Bhanumurthy
Meera Mohan*



While the fiscal and monetary supports that are announced to overcome the pandemic situation are substantial, the impacts of these measures depend heavily on how they are implemented. Going by the present trends, one could be optimistic that these measures should help the economy to revive, although the extent of revival could also depend on how the pandemic situation is going to evolve in the coming months.

With the world facing unprecedented shock due to Covid-19 and with sudden stop of economic activities, there are expectations that there could be a permanent loss of output. Most countries have downgraded their growth expectations in the current financial year with negative growth rates. In India as well, with the pandemic situation still evolving, the growth forecasts by all the agencies have been negative with the median forecasts at close to -10%. While there are no official forecasts, off late, the Reserve Bank of India expects the GDP to contract by 9.5% 'with risks to the downside'. Under such precarious conditions, what are the fiscal policy responses that the government has undertaken and what could be its impact on the growth

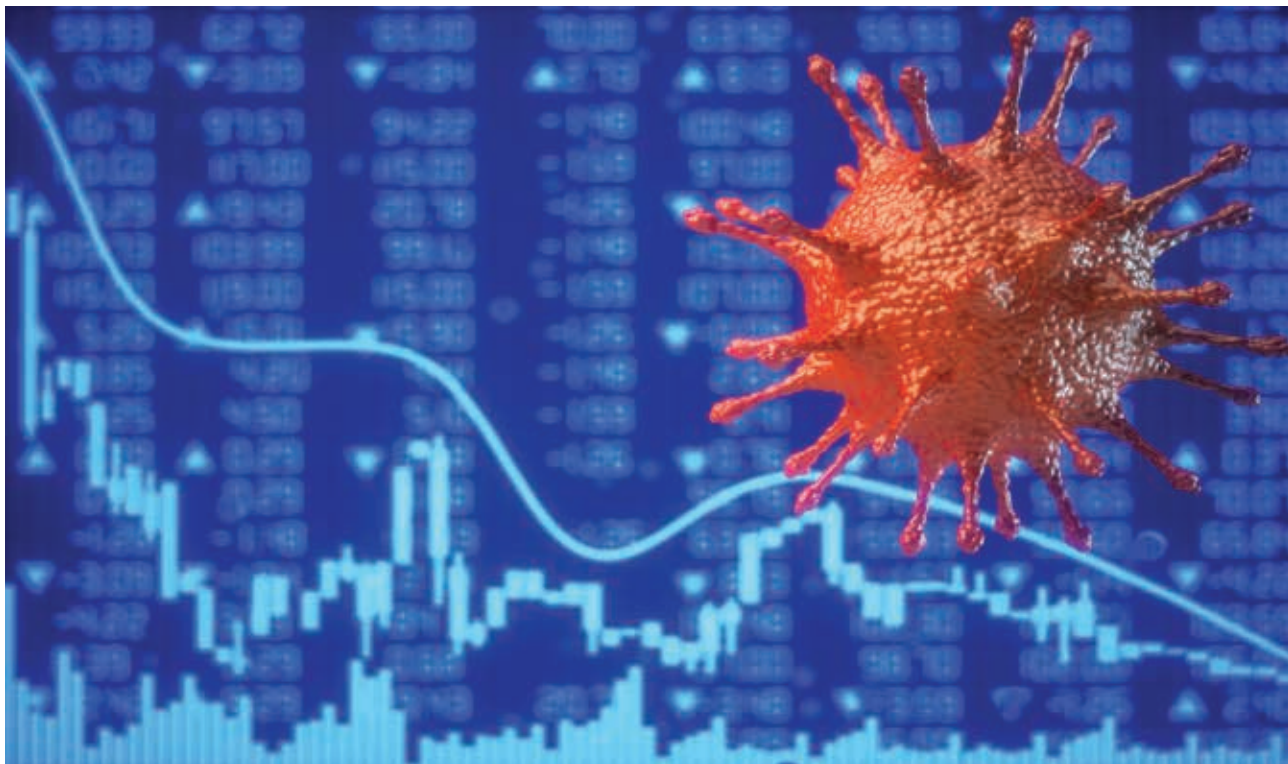
contractions? This piece would briefly look into it.

As a preamble, it is important to understand, briefly though, the pre-Covid-19 situation and to what extent there was policy space to overcome the adverse impacts of the pandemic. Indeed, the GDP growth was already in a slowdown phase even in 2019-20. It has registered a growth of 4.1%, which was the lowest in over a decade. The fiscal situation was even more precarious with the Central Government invoking the escape clause in the FRBM (Amendment) Act of 2018 for two consecutive years that allows the governments to run 0.5% more fiscal deficit than specified in the Act. Accordingly, the Union Budget 2020-21 suggested a fiscal deficit of 3.8% for 2019-20 and 3.3% for 2020-21. However, the data from the Comptroller of Government



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Accounts suggests that even for 2019-20, the fiscal deficit is expected to be 4.6% against the provisional estimates of 3.8%. On the part of state governments, most of the studies (including by RBI's Study of State Finances) suggest that the fiscal position at the states only deteriorated since 2015-16 despite higher (read as untied) devolution to the states. In a way, the government entered this pandemic phase with weak growth prospects and with a weak fiscal situation. In the last quarter of 2019-20, GDP growth was at 3.1% and the first quarter of 2020-21 registered the sharpest decline of -23.9%. While the pandemic by itself could not have led such sharp slowdown, it is the most stringent lockdown (although that was needed to protect the lives) that India has adopted in the first quarter which has led to sudden stop in the economic activities. With the gradual opening up of the activities (over six phases) there appears to be some green shoots noticeable since the end of September 2020. Now, the policy responses and its impact on growth is something that may be interesting to look into.

What are the actions that the largest democracy in the world has undertaken to address this pandemic and the subsequent economic slowdown? On the policy sphere, while the RBI was proactive initially to sooth the financial markets, there was hesitancy on the part of the fiscal policy clearly due to weak fiscal situation. The RBI has reduced the policy interest rates sharply and also pumped in more liquidity to the market. It has also introduced loan moratorium and other measures

such as increasing Ways and Means Advances (WMA) to the State Governments, Credit Guarantee Schemes and Loan restricting Committee, among many other sectoral interventions. With the monetary policy twist, unlike in the past, there is a significant improvement in the monetary policy transmission in the recent period. Following this, the central government outlined Rs. 20 lakh crore stimulus package with accompanied large scale structural reforms as part of Aatmanirbhar Bharat Package. While there were some apprehensions about the package, that it may push India back to import substitution era that led to low level of equilibrium and low growth, the Prime Minister has clarified in his Independence Day address and also during his speech to the UN General Assembly that under the package the aim is to make India a manufacturing hub for the world. Indeed, the package talks of four Ls: land, labour, liquidity and laws, with more structural reforms in all these areas. The package also aims to help the country become self-reliant and provide support to MSMEs, the agricultural and allied sectors, migrant workers, civil aviation, defence, energy, housing and social sector that are adversely affected by the pandemic as well as lockdown.

The Prime Minister also suggested five pillars of this package and they are: Economy, Infrastructure, System, Vibrant Demography and Demand. However, what has caught the eyes was the Rs. 20 lakh crore stimulus package. The Aatmanirbhar Bharat Package includes wide-ranging interventions such as direct benefit transfer,

Table 1. Details of Interventions under Aatmanirbhar Bharat Package (in Rs. Crores)

PMGKY	1,70,000
RBI Liquidity Measures	8,01,603
Tranche 1 of Aatmanirbhar Package (include Collateral free automatic loans to MSMEs, Schemes for NBFCs/HFCs/MFIs)	5,94,550
Tranche 2 of the package (includes free food grain supply to migrants, interest subvention for MUDRA loans, Scheme for NABARD, KCC)	3,10,000
Tranche 3 of the package (includes Agri infra, Fisheries, Animal Husbandry, Herbal Cultivation, etc.)	1,50,000
Tranche 4 of package (Viability Gap Funding)	8,100
Tranche 5 of the package (MGNREGS)	40,000
Others	22,800
Total	20,97,053

Source: Ministry of Finance, GoI.

food security, rural jobs under MGNREGS, Credit Guarantee schemes for MSMEs and Kisan Credit Card (KCC) scheme. The package also includes the monetary stimulus provided under liquidity measures which is to the tune of Rs. 8.01 lakh crore. The extent of support in comparison with the rest of the world suggests India's intervention is wide-ranging and comparable to most of the countries except Japan and US.

Table 1 details the policy interventions that are made under the Aatmanirbhar Bharat Abhiyan. This includes a range of interventions from credit guarantee, food security, jobs, anti-poverty program (PMGKY), etc. There are few reform measures, not specified in the table as they do not have any fiscal cost. However, one of the criticisms with regard to this package is that the fiscal cost of this package is just about 1.5% of GDP as most of them

include the monetary stimulus and credit guarantees. This stands against the demand for large fiscal stimulus that needs to be front-loaded in order to contain the sharp contraction in the GDP growth. However, it is important to understand that the credit guarantee to MSMEs and KCC, though do not directly affecting the fiscal deficit, it could add to the outstanding liabilities (broader concept than public debt) through contingent liabilities. In a way, while this measure does not put additional fiscal cost in the short term, this can help in reviving investments in the sectors that are hard hit not only due to pandemic and the subsequent lock-down, but also due to successive shocks such as demonetisation and GST implementation. Further, this would also help banks that are struggling with NPAs and provisioning can be done to businesses in these crucial sectors.

Against these fiscal policy measures, now there are discussions on what should be the extent of fiscal support provided to the economy in the current year. As discussed earlier, while the fiscal support under Aatmanirbhar Bharat is just about 1.5%, in our view, the fiscal support since the beginning of the current fiscal year could be larger than this and the combined (centre and states) fiscal deficit in the current financial year could be somewhere close to 12% of GDP. If one adds the public sector borrowing of about 2%, the total borrowing in the current year could be anywhere close to 14% of GDP. Here it is important to highlight that the fiscal package also needs to include the additional borrowing (of about 2.1% of GDP) that the Central Government announced even before the Aatmanirbhar Bharat package, to continue the expenditures as proposed in the Union Budget 2020-21. While this is due to the expected decline in the revenues, additional borrowing needs to be treated as fiscal support to the ailing economy. Further, in addition to this, the states are also allowed to borrow 2% more

Aatmanirbhar Bharat Abhiyan

Further enhancement of Ease of Doing Business through IBC related measures

- Minimum threshold to initiate insolvency proceedings raised to Rs. 1 crore (from Rs. 1 lakh, which largely insulates MSMEs).
- Special insolvency resolution framework for MSMEs under Section 240A of the Code to be notified soon.
- Suspension of fresh initiation of insolvency proceedings up to one year depending upon the pandemic situation.
- Empowering Central Government to exclude Covid-19 related debt from the definition of "default" under the Code for the purpose of triggering insolvency proceedings.

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as suggested under the FRBM Act. Although there are some conditionalities, such relaxation should help some of the states to increase borrowings to compensate for the revenue losses as well as the increased demands for health care and other expenditures to balance lives and livelihoods. It may be added here that the government has already mentioned that it is open for more fiscal support and is yet to decide 'when' and 'how much' to spend. But it is also important to decide on where to spend.

What could be the impact of these policy interventions on the GDP growth in the country? This is the most crucial question among the people. There are discussions about the shape of the recovery. Whether it would be 'V' or 'U' or 'W' or any other shaped recovery is something that is important for investors. While the government feels that there could be a 'V' shaped recovery, most analysts feel that the recovery may not be that sharp. In our view, while the slowdown was sharp due to sudden lockdown, the recovery is expected to be prolonged and that depends heavily on the implementation of fiscal-monetary packages. In a way, in our view, the recovery could look like a 'smoking pipe' shape with a sharp dip in the beginning and a prolonged recovery at the later stage. Indeed, there are few green shoots already visible in the economy that suggests a gradual recovery. Indicators related to credit offtake to MSMEs, rural development expenditures (which suggest utilisation of over 80% of annual allocation), electricity demand, etc., suggest pick-up in economic activities across the sectors.

At the state level, while the expenditures due to pandemic has increased manifold, the revenues have dwindled largely due to decline in the revenues under GST. This has led to large gap between the actual and the promised 14% increase in the GST proceeds to every state government. While this could lead to some tensions between Centre and States, the pressure on the States to borrow more could be huge and this could lead to substantial jump in the public debt at the state level. Here, as many have suggested, it is important for the Centre to help the states by borrowing from the market directly so that the interest burden on the states could reduce.

Overall, in our view, while the fiscal and monetary supports that are announced are substantial, the impacts of these measures depend heavily on how they are implemented. Going by the present trends, one could be optimistic that these measures should help the economy to revive, although the extent of revival could also depend on how the pandemic situation is going to evolve in the coming months. There is also equal concern on how these measures are going to affect the inflation management. □



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Facilitating Self-Reliance

*Anand Singh Bhal
Supriya Malik*

India's Industrial Policy has evolved over the years, and relevant changes have been introduced based on the exigencies of time. At the time of independence, development was to be led by the public sector, to create a sound industrial base for the future. The Industrial Policy 1991 was in response to a challenge, and appropriate changes were introduced to facilitate the transition from a state-regulated economy to a liberalised and globalised economy. Overtime, the thinking that started dominating policy circles was that the government, instead of directly intervening in sectors, must play the role of a facilitator to ensure competition and efficiency.

Industrial Policies of the Past

At the time of independence, the Indian economy was staring at myriad problems that seemed intractable. The main challenge that lay ahead

for Indian policy-makers was to transform a poor agrarian economy into a modern industrialised one. This was constrained by a severe resource crunch that had to be allocated across

a number of sectors. Resources being scarce in an underdeveloped country, it was difficult to develop all sectors simultaneously. Hence, a few leading sectors had to be identified

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for allocation of the scarce resources. This is what is known as the ‘big push’ asserted by Rosenstein Rodan.

A decisive effort was made in the second Five Year Plan (FYP) drafted by P.C. Mahalanobis, where the main emphasis was on state-led industrialisation, resting on the strategy of import substitution. This strategy was based on the infant industry argument wherein domestic industries can develop behind high tariffs till they become self-sustaining and are no longer in need of government support. It was to be led by the public sector, which was to reach the ‘commanding heights’ of the economy.

Concomitantly, the government spelt out its approach via different industrial policies of the time. The first important industrial policy statement was made in the Industrial Policy Resolution, 1948 issued by the government which accepted the importance of both the private and public sectors in the industrial economy of India. This was followed by the Industrial Policy Resolution, 1956 and the Industrial (Development and Regulation) Act, 1951, which laid

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stress on the cooperation between the public and the private sector, but an increasing role was envisaged for the former so that in due course of time it could attain the “commanding heights of the economy”.

Fast forwarding to the 1990s, as a policy response to the crisis brewing up since the late 1980s, wide-ranging reforms in industrial deregulation, foreign trade policy, exchange rate and payments regime, capital markets and the banking sector, fiscal consolidation were introduced. It involved with liberalising licensing

and measures to encourage foreign investments.

The National Manufacturing Policy was released by the Government in 2011. The main objectives of the Policy were—increasing the manufacturing sector growth to 12-14 percent over the medium term, increasing the share of manufacturing in GDP to 25 percent by 2022, creating 100 million additional jobs in the manufacturing sector by 2022 and increasing domestic value addition and technological depth in manufacturing.

Thus, India’s Industrial Policy has evolved over the years, and relevant changes have been introduced based on the exigencies of time. At the time of independence, resource constraints determined where resources were allocated, and special emphasis was placed on the capital goods sector. Development was to be led by the public sector, to create a sound industrial base for the future. The Industrial Policy 1991 was in response to a challenge, and appropriate changes were introduced to facilitate the transition from a state-regulated economy to a





liberalised and globalised economy. Overtime, the thinking that started dominating policy circles was that the government, instead of directly intervening in sectors, must play the role of a facilitator to ensure competition and efficiency.

Rethink due to Covid-19

The thinking that the government must reduce its role in directing investments and facilitate market forces in different sectors requires a relook in the light of the Covid-19 pandemic. The risks of this approach have come to the fore due to the fact that India is dependent on a few countries for not only medical supplies, devices, and pharmaceuticals, but also for other sectors like electronics, machinery and chemicals. The government has also announced the Aatmanirbhar Bharat Abhiyan or Self-Reliant India Movement. The idea behind it is rebuilding economic capabilities and capacities via a number of measures and incentives to reduce dependence on imports, especially imports of critical components. It does not mean isolation rather it promotes engagements with global production chains from a position of strength. The pandemic has taught us a few key lessons like reducing import-

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dependence for certain critical inputs, boosting domestic capacity and making supply chains more resilient.

Typically, an industrial policy comprises of various policy tools like direct and indirect subsidies, protection from foreign competition, preferential access to capital, guaranteed public procurement, and mandates from government on production, and import-export decisions. The government plays a proactive role to guide development of particular sectors of the economy

via these tools. The aim is to buttress domestic production capabilities.

An Industrial Policy in the post-Covid world may have the following components:

1. Making in India for the world, which requires focusing on a few sectors to build comparative advantage, so that in due course, India is a major player in the global market in these sectors. This will enable us to reduce critical dependence on any country and developing self-reliance for items like bulk drugs/APIs, power equipment, consumer goods, and defence related products. While initially we may be assemblers, we will eventually graduate to becoming components manufacturers also. At the same time, employment generation must be a key aspect behind all sectoral initiatives undertaken by the government.
2. The slogan of ‘Make in India’ for the world requires defining world-class quality standards. Quality of products and services is a key driver of competitiveness. Over the years, standards and technical regulation ecosystem in India



has not kept pace with global trends. This has resulted in challenges for Indian exporters in accessing global markets as well as for domestic producers, who face cheap or inferior imports. Domestic standards and technical regulation ecosystem is also critical for linkages with global and regional value chains. Some measures that may be undertaken in this direction are:

- a. Industry should be encouraged to drive formulation and development of voluntary standards, by using industry-driven standards setting bodies, if needed.
 - b. Regular participation of identified experts in international standards setting bodies such as International Organization for Standardization (ISO), International Electrotechnical Commission (IEC) and Codex.
 - c. Enhancing testing, inspection and certification infrastructure domestically, with private-sector participation.
3. Improving infrastructure and reducing logistics costs, which will work from the supply side

The government has also announced the Aatmanirbhar Bharat Abhiyan or Self-Reliant India Movement. The idea behind it is rebuilding economic capabilities and capacities via a number of measures and incentives to reduce dependence on imports, especially imports of critical components.

- and help in reducing production costs, thus making Indian manufactured products more competitive globally.
4. Ease of doing business (EoDB) is another key area which requires reform.
- a. The real EoDB must lie within the operations of state governments and district authorities that lie closest to where business is done. State governments can be encouraged to rank districts on the lines of EoDB at the district-level, highlighting the importance of competitive federalism leading to better outcomes.

b. There should be an institutional mechanism for regulatory impact assessment, which will provide an objective evaluation of new regulations. This exercise will aim to achieve substantial net reduction in overall burden of regulatory compliances on industry.

c. Stable and predictable policy regime creates a conducive environment for businesses to thrive, and this also lies at the centre of EoDB.

5. Technological advancement of industry in India has not kept pace with that of many other manufacturing nations. There is a strong need to encourage Indian industry to upgrade to advanced technologies and ease transfer of technology from global and Indian innovators to Indian industry. Industry 4.0 offers opportunities, such as increased productivity, reduced waste and increased efficiency but there are also concerns about the cost of adoption and possible job losses. Measures to support digitisation and facilitate access to advanced technology will aid industry to leapfrog and catch up with global peers.





STARTUP SECTORS LIKELY TO GROW POST COVID-19

a. Digitisation forms the basis for the next wave of disruptive technologies, and India is digitising at an unprecedented pace. Adoption of digitisation can be aided via measures like establishment of a National Digital Grid, robust data protection regime and facilitating market access for application of advanced technologies across sectors, including agriculture, smart cities, transport services, logistics, utility distribution etc.

b. Sustained growth in productivity via technological attainment is fundamental to acquiring global competitiveness. While emphasis on innovation and indigenous development of technology is critical, several smart technologies for production of goods and services have been developed elsewhere and would also continue to be developed. There is economic sense in acquiring these advanced and smart technologies for catch up and for further development. This can be done by first identifying certain strategic sectors where technologies can be targeted for acquisition. A Technology Deployment Fund can be created with private sector participation to support acquisition of technologies.

6. Implementing measures that prepare businesses for the new post-Covid-19 economic conditions and realities.

a. Firms can be incentivised to shift to alternate means of doing business, which include, improving web presence, advertising via social media, enhancing customer service functions online, and engaging in e-commerce.

b. Business support organisations like chambers of commerce and sector associations can play the role of being mediators among businesses. They can bring firms together and match business opportunities, which in turn can reduce costs for both buyers/sellers and create economies of scale.

Recent Measures Undertaken by the Government in this Direction

In the wake of the Covid-19 pandemic, the government has

proactively undertaken various measures around the parameters spelt above. This is still a work in progress, as the economic impact of Covid-19 is still evolving both domestically and globally.

1. Boosting Domestic Manufacturing

a. Make in India 2.0 is focussing on domestic manufacturing of 15 champion sectors like Textile and Apparels, Food Processing, Gems and Jewellery, Pharmaceuticals, Chemicals, Automotive industry, Electronics, Leather and Footwear etc., in consultation with line Ministries.

b. A number of production linked incentive (PLI) schemes in the manufacturing of mobiles and electronics, APIs and medical devices have been approved. More sectors will be considered for suitably incentivising industry.

c. Phased Manufacturing Programme (PMP) is in operation for Cellular Mobile Handsets and e-vehicles. NITI Aayog has identified LED Lights, Network Products, Medical Devices, Pharmaceutical Drugs, and Man-made fibre for implementation of PMP.

d. Twenty sectors have been identified in consultation with industry, where attention would be given to make India self-reliant.¹



e. To incentivise Make in India and domestic manufacturing, DPIIT has revised its Public Procurement (Preference to Make in India) Order with changes that will promote greater domestic value addition.

f. In order to address the issue of import surge, cheap imports, and to support domestic manufacturing, the government has effected various import restrictions in recent months. The restriction vary from (i) moving items from 'Free' to Restricted Category like palm oil, palmoline, tyres, TV sets; (ii) import monitoring system; (iii) fixing import quotas mainly for agricultural products like peas, urad dal, etc. (iv) random selection of samples for lab testing, like for toys, dolls etc.

2. Encouraging Foreign Direct Investment (FDI) to Boost Domestic Manufacturing, Investment and Technology Enhancement

a. It has been the continuous endeavor of the Government of India to put in place an enabling and investor-friendly FDI Policy. The intent has been to make the FDI policy more investor-friendly, aligning it with national interest and remove the policy bottlenecks that have been hindering investment inflows into the country.

b. The government is working to develop strategies to attract FDI, particularly for foreign firms looking to diversify their manufacturing base, and to boost investment. A two-fold approach has been adopted to attract investors from focus countries: (i) Organising one to one meetings to know their investment/expansion plans in India and extending necessary facilitation wherever required;

India's share in global value chains (GVCs) is low vis-à-vis other comparable economies. The above measures encompassing infrastructure development leading to supply-chain resilience, PMP and PLI schemes in a number of products, promoting Make in India and the sustained drive towards quality and boosting domestic capacity will pave the way for India to make its mark in GVCs in the times to come.

and (ii) Resolving the issues with reference to their existing operations.

c. The Government has approved the creation of an Empowered Group of Secretaries (EGoS) and Project Development Cells (PDCs) in Ministries/Departments of Government of India to facilitate and streamline investments into India. The objectives of the EGoS will be to bring synergies and ensure timely clearances from different Departments/Ministries, investment support and facilitation, along with policy stability. PDCs in administrative Ministries will create a pipeline of investible projects.

3. Infrastructure and Logistics

a. The government has unveiled a National Infrastructure Pipeline (NIP) covering projects worth Rs. 111 lakh crore (as per the final report of the Task Force) with about Rs. 44 lakh crore worth of projects under implementation.

b. The government is in the process of finalising a National Logistics Policy which aims to bring down logistics cost significantly.

Conclusion

India's share in global value chains (GVCs) is low vis-à-vis other comparable economies. The above measures encompassing infrastructure development leading to supply-chain resilience, PMP and PLI schemes in a number of products, promoting Make in India and the sustained drive towards quality and boosting domestic capacity will pave the way for India to make its mark in GVCs in the times to come. It will also enable India to take advantage of the opportunity created by multinational companies (MNCs) looking to diversify their supply chains and manufacturing centres. Thus, the outcomes will not only be confined within the domestic boundaries, but will also facilitate the realisation of the dream of 'Make in India for the world', as reiterated by the Prime Minister. □

Endnote

1. These include: electronics products, aluminum (for defence, construction and packaging), auto parts, electric vehicle components and integrated circuits, textiles, leather and footwear, Indian ready-to-eat segment, medical equipment, agro-chemicals, capital goods-industrial machinery and transmission lines, ethanol, TV and set top box, marine processed products (like shrimps, prawns and tuna), agro-food processing (of oranges, mangoes, potato), furniture, steel, closed circuit camera, toys, sports goods, gym equipment.

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Revitalising MSMEs

*Ketan Reddy
Subash Sasidharan
Rajesh Raj S N*

To combat the adversities faced by MSMEs, the government has introduced vital policy measures and funding schemes for the reeling MSME sector. The lockdown has had a major impact on the economy, especially in terms of loss in output, revenue, and, most importantly, jobs. As the proverbial saying goes, “Necessity is the mother of invention,” the pandemic has certainly created the need for innovative policies to rescue the ailing MSME sector.

Despite its prominent role in the economy, the micro, small, and medium enterprise (MSME) sector faces tremendous challenges to its growth. Adding to the existing set of obstacles is the onset of the Covid-19 pandemic, which has not only crippled the world economy but now poses a significant challenge to the survival of this segment of the economy. In an attempt to curb the Covid-19 outbreak, India implemented a nationwide lockdown on March 24, 2020. The lockdown has had a major impact on the economy, especially in terms of loss in output, revenue, and, most importantly, jobs. According to the recent estimates by the Centre for Monitoring Indian Economy (CMIE), the third week of April witnessed a rise in the unemployment rate to 26.2 percent, rendering around 14 crore people jobless in the lockdown period. Given the clampdown on economic activity in the past few weeks and the severe disruption the economy is

likely to encounter in the future, there is an urgent need to protect the most vulnerable segment of the economy i.e., the MSME sector through appropriate policy instruments.

MSMEs are considered as the central element of the Indian economy, given the employment, output, and export potential. They contribute nearly 30 percent of India’s GDP and 31 percent of GVA to the \$2.7 trillion economy. The sector comprises close

to 63 million enterprises, which together accounted for 48.1 percent of the total exports from India during 2018-19. According to the annual report for 2018-19 by the Ministry of MSMEs, the sector generates 21 percent of the total employment providing livelihood to approximately 111 million workers. Moreover, the MSME sector is characterised by the smaller scale of operations involving a high level of personal interaction and



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facing enormous liquidity and credit constraints. With lockdown, such interactions have come to a standstill rendering small units obsolete. Besides, a unique feature of India's MSME landscape is the widespread prevalence of the micro-enterprises (constitute 95 percent of the sector). These enterprises, mostly located in the informal economy, are likely to be the worst hit by the pandemic. Most of these units depend upon agents for collection of revenue. These firms lack access to formal finance and can fall into distress quickly when cash flow becomes irregular. They do not have the adequate information technology setup to foster the possibility of work from home, a policy taken up by many large domestic and multinational firms. Therefore, it becomes essential to develop a support system for the sustenance and revival of the MSME sector. Otherwise, the pandemic may soon turn India's demographic dividend into a demographic curse.

Major Bottlenecks

A perpetual problem plaguing the MSME sector is access to institutional finance. Several studies have unambiguously shown access to timely and adequate finance remains a major hurdle hampering the growth of MSMEs. A high-level committee appointed by the RBI (UK Sinha Committee report¹) highlights a multitude of obstacles faced by the MSME sector. The committee too singles out access to finance as the foremost constraint hindering the growth and development of MSMEs. To place this in context, the Economic Census, 2013 points out that the lack

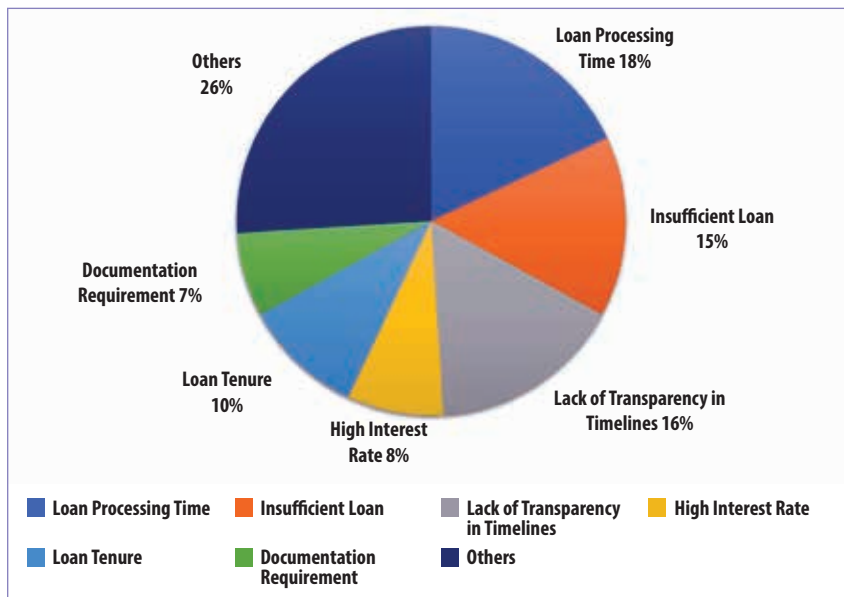
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of institutional or non-institutional sources of finance affects 93 percent of the enterprises. The Economic Survey 2017 points out that the MSME sector received just 17 percent of the total loan outstanding. Further, estimates based on survey data from the World Bank Enterprise Survey highlights that 65 percent of MSMEs surveyed report financial constraints as one of the significant obstacles faced by them. In this context, there are two principal channels of operations that restrict the flow of formal finance to MSMEs. First, the lack of established credit history and second, sufficient collateral results in

MSMEs' inability to pay, which makes lending to them risky. According to a recent study by Patnaik and Pandey (2019), micro and small enterprises receive less than 6 percent of bank credit. Further, to improve the reach of formal finance, the Prime Minister's Task Force on MSMEs recommended banks to achieve a 20 percent year-on-year growth in credit to micro and small enterprises. However, as of February 2020, the credit growth stood at 2.6 percent well below the recommended target of 20 percent. Besides, the rise in non-performing assets (NPA) is restricting banks from extending credit, especially to MSMEs, where the risk of default is much higher.² Consequently, banks prefer to extend credit to sectors with lower insolvency risk. Moreover, the lengthy loan process and insufficient level of credit extended (Figure 1) further restricts MSMEs from obtaining formal sources of finance. According to World Bank Enterprise Survey (WBES) data, 30 percent of the MSMEs facing financial constraints cite unfavorable interest



Figure 1. Factors Impeding MSMEs' Access to Formal Finance



Source: Adapted from CII (2018)

rates, high collateral requirement, and insufficient size of loan and maturity period as the impeding factors.

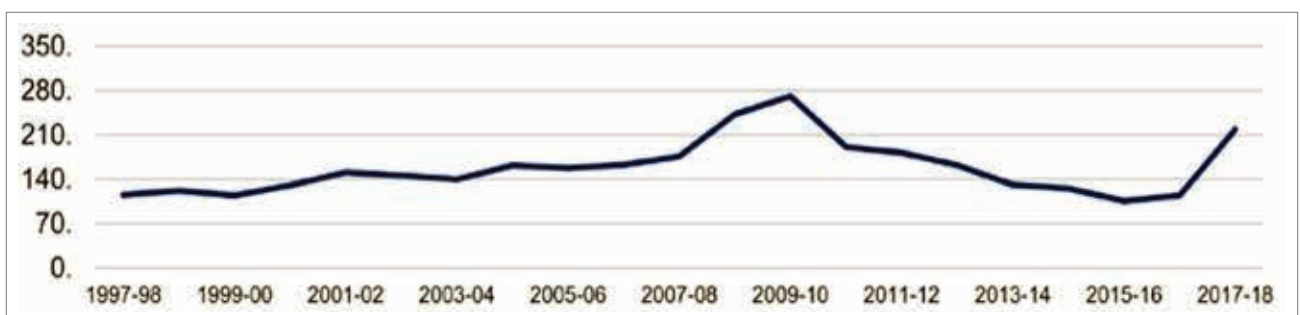
Interestingly, factors that drive MSME borrowings into non-performing assets (NPA) and liquidity crunch are identical. One such factor is the perennial problem of delayed payments. Most MSMEs partake in the supply chain as a supplier of intermediate goods and services to large firms, including public sector units (PSUs), resulting in low bargaining power. With most large corporates operating on a credit basis with MSMEs, delayed payments significantly hamper MSMEs' ability to repay loans and make wage payments. A comparison of

the 67th and 73rd rounds of the NSSO surveys on the unincorporated non-agricultural enterprises suggests that pending payments to the small firms have increased between 2010-11 and 2015-16. According to the UK Sinha Committee report, delayed payments explain 41 percent of all distressed loans in the MSME sector. Figure 2 highlights that the average number of debtor days (the time it takes to realise a payment) since 1997 has been consistently over 90 days (3 months) and reaching a mammoth 220 days by 2017. The almost doubling of debtor days is an alarming situation since such delay lengthens the working capital cycle of MSMEs. Further, the present credit mismatch for the MSME sector is estimated to be around \$20-25

trillion. This, in turn, would drive them towards informal sources of finance to bridge the cash gaps.

With the Covid-19 outbreak, the situation gets only gloomier for the MSME sector. With the nationwide lockdown, sources of revenues and cash reserves for the majority of these units have diminished, threatening the survival of the vast majority of these enterprises. The results of a survey conducted by the social media site Local Circles reveal that 47 percent of the Indian start-ups and SMEs have less than one month of cash. Probably, with the wage payments for the month of March, it is likely that most of them may have depleted their funds. The survey further highlights that only 6 percent of these firms have resources to tackle disruptions for six months, with 74 percent of these firms anticipating exit during the next six months. With the dearth of cash, MSMEs will find it strenuous to make wage payments to its employees and survive the Covid-19 pandemic. Similarly, All India Manufacturers' Organisation (AIMO) survey of 5000 MSME units report that 71 percent of them were unable to pay salaries to their workforce for the month of March. Besides, with the available resources depleting fast, resuming work with the lockdown in place would be nearly impossible for a vast majority. As a result, there has been a nationwide call from various industry organisations to the government to intervene and provide a special package to support the MSME sector.

Figure 2: Number of Debtor Days



Source: Retrieved from UK Sinha Committee report on MSME

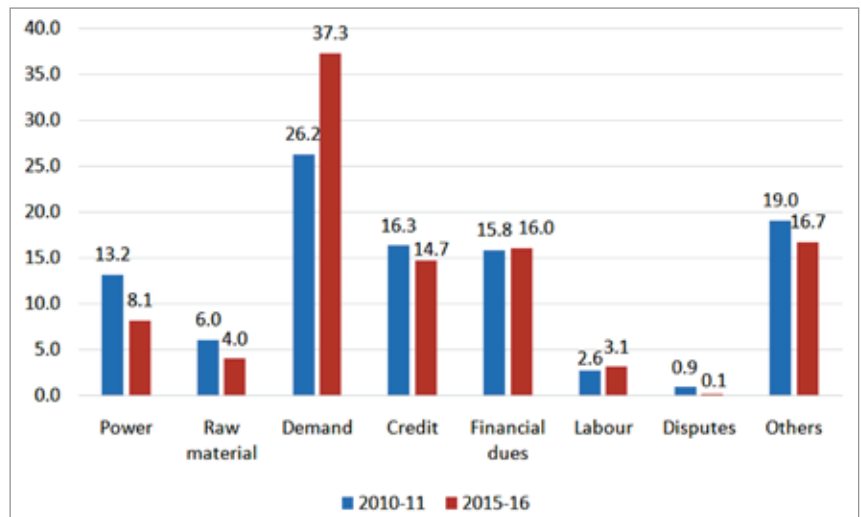
The Informal Sector Enterprises

As the measures to combat the Covid-19 crisis are underway, an important aspect would be the identification of informal units in the sector and enabling the reach of policy intervention to mitigate the current distress. With 95 percent of MSMEs classified as micro-enterprises, it is certain that the substantial share of enterprises is in the informal sector. In the case of these informal enterprises, the disruption created by the outbreak of Covid-19 may be far more severe. Given that these enterprises lack savings and face proportionately greater financial obstacles, the onset of the pandemic is likely to significantly impact their day-to-day operations. The probable longer duration of the

With the nationwide lockdown, sources of revenues and cash reserves for the majority of these units have diminished, threatening the survival of the vast majority of these enterprises. The results of a survey conducted by a social media site reveal that 47 percent of the Indian start-ups and SMEs have less than one month of cash.

pandemic and the lockdown measures are most likely to make many of these units exit. The relief measures like tax reliefs may not have much influence on these enterprises since they rarely fall under the tax net. The vulnerability of these enterprises in terms of lack of financial access is evident from the previous two rounds of the informal enterprise surveys conducted by the National Sample Survey Organization (NSSO). Estimates from these surveys suggest that about one-fifth of the firms highlight access to finance as a key constraint to the growth (Figure 3). Not surprisingly, very few firms in the sector have access to institutional sources of finance.

Figure 3: Obstacles Faced by Informal Sector Firms

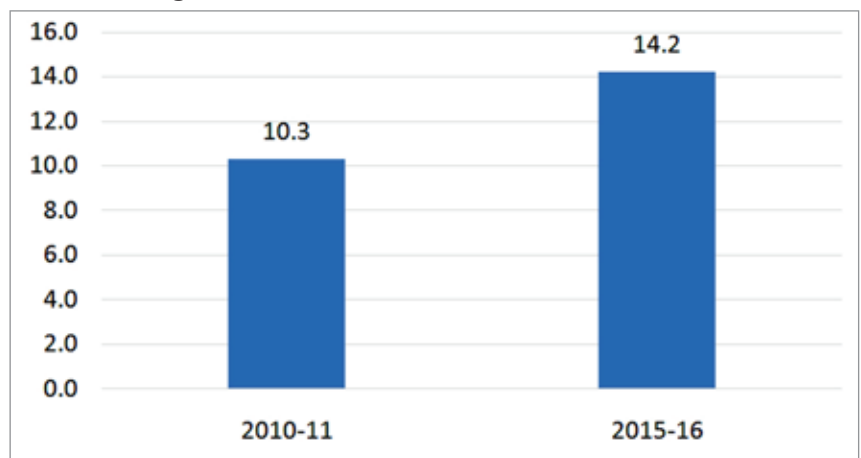


Source: Author's estimation using the 73rd and 67th round of NSSO data on unincorporated non-agricultural enterprises

According to the recent NSSO round (2015-16), only 14.2 percent of all informal enterprises report funding from external sources (Figure 4). In fact, a major chunk of them relies on non-institutional sources for meeting financing requirements (Figure 5). Small firms in the informal sector are financially more constrained, and the presence of constraints exerts a much deeper impact on the growth of such units. We find that 65 percent of informal enterprises that reported as financially constrained in 2015-16 are owner-operated enterprises (those using only family labour). When it comes to credit access, businesses

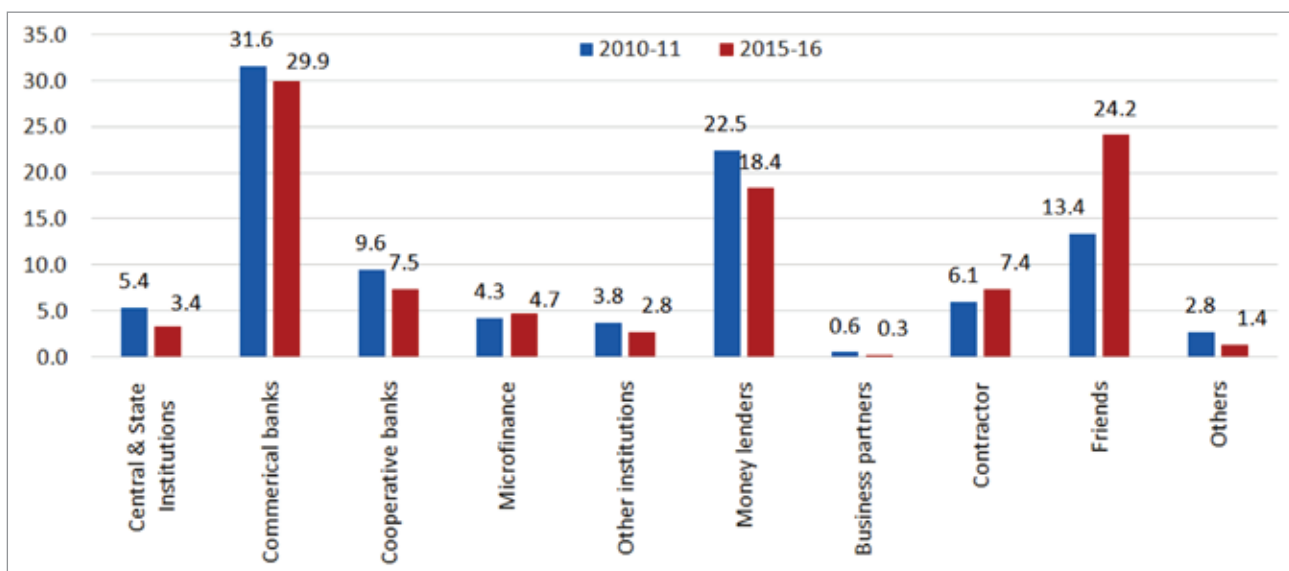
operated by hired labour seem to be the real beneficiaries, with more than 60 percent of them report to have obtained external finance (Figure 6). It could be argued that owner-operated enterprises lack credit access, possibly due to the absence of credit history along with complex application procedures, high interest rates, fear of rejection, high collateral requirements and necessity-driven may possibly be the reasons. Further, around 16 percent of the firms report recovery of past dues as another major constraint. The past dues may include payments from the delayed payments from customers. Overall our discussion

Figure 4: Share of Firms with Loan in Total Firms



Source: Author's estimation using the 73rd and 67th round of NSSO data on unincorporated non-agricultural enterprises

Figure 5: Sources of Finance



Source: Author's estimation using the 73rd and 67th round of NSSO data on unincorporated non-agricultural enterprises

suggests that the policy prescriptions that are “one size fits all” and that fail to consider the heterogeneity of firms in the informal sector is of limited relevance.

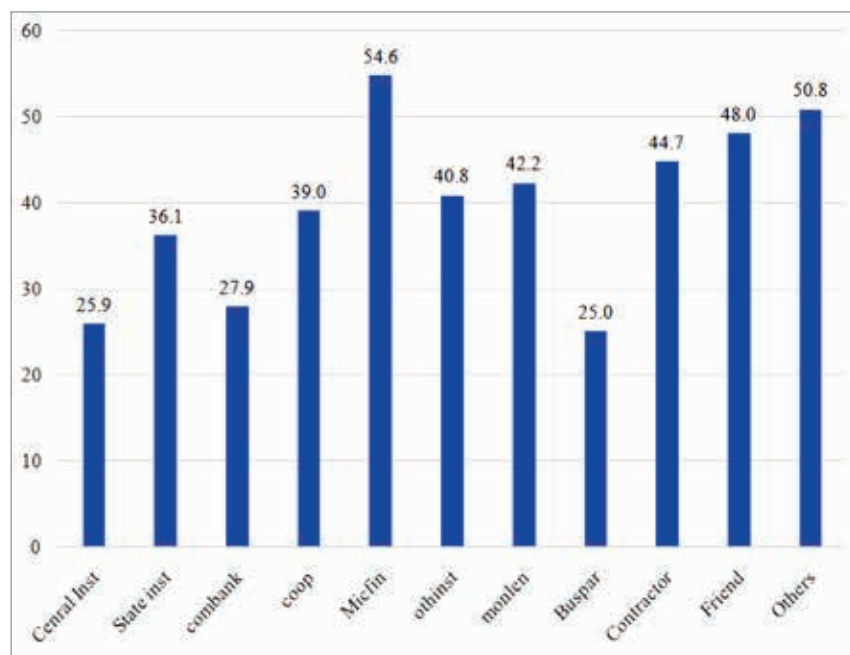
The Way Forward

To combat the adversities faced by MSMEs, the government has introduced vital policy measures and funding schemes for the reeling MSME sector. The current interventions include deferring of goods and services tax (GST) payments till June 2020. RBI has allowed deferment on interest payments on working capital loans for the next three months. MSMEs are further exempted from loan payments till June. In addition, the RBI has also introduced Long-Term Repo Operations (LTRO) worth Rs. 100,000 crore, enabling banks to lend at cheaper rate, likely to benefit the MSME sector. The public sector banks have also set up Covid-19 Emergency Credit Line (CECL) to ease the liquidity crunch faced by MSMEs. Small Industries Development Bank of India (SIDBI), a financial institute set up for the promotion and development of MSMEs have also announced a concessional interest rate loan

targeted for MSMEs engaged in manufacturing goods or services related to Covid-19. The MSME Minister stated that all payment dues of MSMEs with the government (estimated at Rs. 40,000-50,000 crore) would be released soon. Besides, the government is also in the process of delivering a \$1

trillion MSME relief package. All these measures are steps in the right direction, especially in terms of providing temporary relief through short-term liquidity infusions. A caution needs to be exercised while releasing funds to the entities. As evident from the recent experience with the loans given to the small

Figure 6: Share of Own Account Enterprises in Total Enterprises with Loan, by Sources



Source: Author's estimation using the 73rd round of NSSO data on unincorporated non-agricultural enterprises

firms in the United States show that funds flowed to the areas which were least hit by the pandemic. Therefore, while designing the package for the MSME sector, policymakers will have to ensure that funds flows to the regions and industries that require it most.

However, more is needed to be done to safeguard the survival of the rickety MSME sector, especially in terms of making amends for certain long-term concerns which the pandemic has only aggravated. As mentioned earlier, MSMEs are impaired by the issue of delayed payments, which results in uncertain cash flow cycles, impeding their operational efficiency. As much as Rs. 40,000-50,000 crore worth credit is stalled to MSMEs due to the delayed payments. Therefore, it is imperative for policymakers to address the issue of delayed payments. However, some mechanisms for timely payments to MSMEs already exist. The RBI introduced the Trade Receivables Discounting System (TReDS) for MSMEs in March 2014. The platform provided a financial arrangement from a financial intermediary in which a seller obtained an amount of the sales bill before its due, after paying a discount fee. However, the lengthy process and the burden of the discounting fee and other financial charges drove MSMEs towards informal sources of finance. In a similar vein, the MSME ministry launched the Delayed Payment Monitoring Portal-MSME Samadhaan³ in 2017, which allows MSMEs⁴ to register online complaints against delayed payments. Off the 39,897 applications filed involving Rs. 10498.5 crore, Rs. 7828.95 crore⁵ is still stuck with various agencies. Moreover, in many instances, despite the Micro and Small Enterprise Facilitation Council (MSEFC) issuing an order for payment of dues, buyers still delay payments.

RBI has also introduced Long Term Repo Operations (LTRO) worth Rs. 100,000 crore, enabling banks to lend at cheaper rate, likely to benefit the MSME sector. The public sector banks have also set up Covid-19 Emergency Credit Line (CECL) to ease the liquidity crunch faced by MSMEs.

However, the overlapping nature of these initiatives not only creates administrative difficulties and an increase in costs of such operations but also creates confusion among the beneficiaries. In this regard, the government could introduce web and an app-based platform which highlights the procedures, eligibility criterion for application, and differences among these schemes in guiding MSMEs in the right direction. This would enable the spread of timely and vital information across with greater ease. Further, through coordination with various MSME industry associations, such an app could be mandated for all the MSMEs. Moreover, the pandemic also provides policymakers with the opportunity to promote digitisation and widen the use of FinTech services. As mentioned earlier, a chunk of micro-units depends on agents to collect payments for their goods and services. Hence, mandating the use of payments via UPI (unified payment interface) would reduce payment delays due to paperwork or other disruptions such as the one created by Covid-19. FinTech services offer a solution to the financial woes of MSMEs. These FinTech services acknowledge the fact that MSMEs are constrained by a lack of collateral or credit history, which hampers their access to formal finance. In this context, these services evaluate the repayment capacity and default risk of a unit

through technology that provides a precise understanding of the time needed by MSMEs to convert investments into cash through sales of goods and services. This provides an insight into the ability of a unit to generate cash through its operation, providing an assessment of its repaying ability. For example, Capital Float, an NBFC, provides collateral-free loans for small units in India. The NBFC assesses the risk profile of the business in real-time by evaluating MSMEs cash flow and, upon meeting its criteria, provides loans to these businesses on the same day with zero paperwork. Further, the acceptance of e-KYC makes the process viable. Such initiatives help MSMEs tackle the issue of finance. As the proverbial saying goes, "Necessity is the mother of invention," the pandemic has certainly created the need for innovative policies to rescue the ailing MSME sector. □

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SANKALP for Employment

*Juthika Patankar
Dr Maneesh Mishra*

The skill training ecosystem must take an integrated view of existing and potential demand, trainees, training providers and employers. Considering the demographic, economic, cultural and resource diversity of India, putting such an ecosystem in place would continue to be an in-progress project for a long while.

The humungous reverse migration of workers during the Covid-19 lockdown, presents an unprecedented challenge for many states, the demographic dividend notwithstanding. With Uttar Pradesh, Bihar, Odisha, Madhya Pradesh, West Bengal and Jharkhand expecting the number of returnee migrant workers to run in millions, the preparedness of their home states to provide local employment is being put to test. The answer to the gainful local employment question doesn't lie in market-based opportunities alone, as there are massive regional inequalities where the regions with higher population growth have the dubious distinction of being under-developed too.

In the wake of this challenge, the governments of many of these states have announced elaborate arrangements. Registering the returnees and their skill levels and collating job opportunities in projects funded by the central or state governments are some of the measures announced. Though the process is still underway, it is becoming clear that an exercise of this nature calls for strong ground level institutions with serious capacities of planning and implementation. The situation brings old-fashioned decentralisation to centre stage. It is evident that building adequate capacities at the grassroots levels for identifying employment opportunities early and anticipating skill requirements at the level of districts

is critical for an outcome focused skills training system. But how it has to be done and why has this not been done till date, are the questions that require careful examination of the Skill Development ecosystem, its trajectory of expansion and the extent of decentralisation of its planning and operations.

India has 487 million workers and over a million join the labour force every month. However, about two-thirds of Indian employers report that they struggle to find workers with the right skills. India ranks 78 on a list of 122 countries as per Human Capital Development report of the World Economic Forum. With at least 20 government departments running skill development programmes in recent



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Knowledge awareness for Livelihood Promotion) has been rolled out to promote, inter alia, decentralisation of skill planning and implementation.

Effective decentralisation presupposes utilising the existing institutions to greater effect. At present, the Ministry of Skill Development and Entrepreneurship of the Government of India (MSDE) is responsible for national skills training policy and management and is aided by many institutions. At the level of states, State Skill Development Missions (SSDM) were launched in nearly all the states to manage their skill development. Most States have also created designated district committees (generally called DSCs but known by different appellations across states) to manage skill development. Thus, decentralised planning in skills is a concept already implicit in the Skill Development ecosystem in India. It is however noteworthy that the MSDE does not always have its exactly matching counterpart at State or district level and so one would not normally find a District Skills Officer in the way from amongst 15-20 members of a DSC.

DSCs are composed of district-level government officials of various departments. Besides, DSC can also co-opt local Chambers of Commerce and Industry, civil society organisations etc. The DSCs are expected to deliberate upon and plan for access to viable skill training and employment for district human resources based upon its economic profile, market conditions and institutional infrastructure.

years, India should be doing better than that. The outcome of skill development, unlike education, varies with employers and society. Return on investment in skill development depends on the trainees' easy access to training, apprenticeship opportunities and a smooth transition to the world of work. Therefore, the skill training ecosystem must take an integrated view of existing and potential demand, trainees, training providers and employers. Considering the demographic, economic, cultural and resource diversity of India, putting such an ecosystem in place would continue to be an in-progress project for a long while.

Decentralised skill programme formulation and implementation would systematically capture demand which in turn would result in supply re-arranging itself to meet this demand. Organisation and management of training infrastructure; with the attendant issues of labour welfare and security, thanks to the Covid-19 crisis figures prominently on state governments' agenda, now will ensure better alignment of demand and supply locally. The World Bank supported programme of Ministry of Skill Development & Entrepreneurship; SANKALP (Skill Acquisition and



DSCs are expected to, inter alia, reduce supply-demand mismatch, facilitate inclusion for all marginalised sections of society, manage labour migration issues and provide for robust monitoring.

While this conceptualisation is sound, in reality, where exactly do DSCs stand today vis-à-vis the achievement of all the above? In many cases, the DSCs have not been able to arrive at action plans to achieve their objectives. They lack leadership as well as financial resources. Most do not have a working secretariat. Their positioning and role at district-level is yet to be clearly spelled out. Their efficacy is subject to the personal engagement of individuals. In many cases, a district skill development plan (DSDP) has been produced by many DSC but in reality their real contribution or even participation in the process has been illusory.



Should DSC then be the starting point of this decentralisation? Yes, simply because they offer a ready-made platform from which all skill development planning and

implementation could be given direction and focus. Governments need to strengthen DSC by providing adequate financing. Professionals and subject matter experts must be engaged for economic potential mapping and aligning skills to opportunities. A robust working linkage is needed between state skill missions (SSDM) and DSC so that opportunities and capacity at national and state level can be factored into DSDPs. SANKALP programme is attempting to create this linkage by encouraging the SSDMs to provide guidance to DSCs with respect to preparation of district plans and build the capacities of the DSCs through technical assistance and training.

In conclusion but perhaps in what is really the beginning, decentralisation has to be logically extended beyond DSCs to Gram Panchayats. A robust DSC underpinned by Gram Panchayats who are active participants in skill planning and implementation would not only help to handle the present challenges of rural distress and need for sustained livelihood arising out of Covid-19 but also improve qualitative growth of the labour market with enhanced skills for improved productivity and a sound economic position for a more equitable share in the economy. □



मेरी सरकार

Bridging Demand-Supply Gap in Skilled Workforce

Skill Ministry Launches Aatmanirbhar Skilled Employee Employer Mapping (ASEEM) Platform

 **Candidate data coming from states & central skilling schemes to be integrated including PMKVY, Fee-based Programs, etc.**

 **Employers, agencies & job aggregators looking for skilled workforce to get required details at fingertips**

 **The portal & mobile App to have a provision for registration & data upload for workers across job roles, sectors & geographies**



A-S-E-E-M
Aatmanirbhar Skilled Employee Employer Mapping



Harnessing Demographic Dividend

*Dr Amiya Kumar Mohapatra
Dr Srirang K Jha*

The development of a nation is highly correlated to the enlargement of people's choices and people's capabilities that must add value to decent standards of living and well-being of the masses. Thus, people's participation as well as policy intervention is indispensable in dealing with various employment and growth-related issues in India and that will mark the roadmap for inclusive and sustainable development.

Inclusive growth is the need of the hour and it ensures economic, social and political equality among all the people of a country. Inclusive growth in itself does not have automatic mechanisms to reach the deprived and hapless section of the society; rather it is the result of focused and deliberate course of actions of the government. The development of a nation is highly correlated to the enlargement of people's choices and people's capabilities that must add value to decent standards of living and well-being of the masses. People's involvement and participation in various welfare schemes is indispensable for the triumph of true democracy. The success of 'Democracy and Swaraj' of our country is evaluated on the basis of how we '*plan for the unplanned*' and '*reach to the unreached*'. Democracy would lose its significance if the benefits of growth do not reach to the unreached. Thus, people's participation as well as policy intervention is indispensable in dealing with various employment and growth-related issues in India and that will mark the roadmap for inclusive and sustainable development.

The demographic profile and societal essentials of inclusive growth is skewed towards urban development. It is found that there is a clear need of uplifting of rural economy especially the rural infrastructure development. Adequate and accessible infrastructure not only enriches the quality of life but also brings betterment of rural livelihood. Better infrastructure is always positive correlation with economic development. A few researchers have observed that 1 percent increase in stock of infrastructure is associated with 1 percent increase in gross domestic product and in particular rural sector has remarkable multiplier effect. So

the progress of rural infrastructure is the key to inclusive development.

To make India "*FINE*" (*Finance, Innovation, Networking, & Entrepreneurship*), Government of India, under the leadership of Shri Narendra Modi, has undertaken a range of schemes to achieve faster socio-economic development. Initiatives like Make in India, Skill India, Digital India, Start Up India and Stand Up India, to name a few, have been successfully launched in the recent years to bring inclusive development in India. These schemes are specially designed to address the need of the youth and marginalised sections of the society.

Leveraging Demographic Dividend

India is uniquely placed in terms of demographic dividends. Over 62% people in the country fall in the



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is going to create incredible opportunities for all without any discrimination. Thus, the country is already moving on the path of inclusive growth and the critics need to look at rising number of start-ups and other small enterprises instead of just counting the number of jobs created.

Employment Scenario

There has been a global trend towards decline in the employment in recent times. Worldwide, the unemployment rate is said to be 5.5% of the total workforce. No wonder, India is also affected by the increasing rate of unemployment with about 6.1% of the working population is said to be out of job. However, the payroll data in the country indicates that the scenario is not as bad as it appears. As such, the formal sector payroll is around 91.9 million based on the number of subscribers of the employees' provident fund. Indeed, the payroll estimates show that 5.9 lakh jobs are being generated every month. Unfortunately, we do not have a comprehensive payroll data readily available to make inferences regarding incidence of employment or non-employment. It is imperative that the National Sample Survey Office (NSSO) and Labour Bureau adopt the payroll data as criterion for the purpose of estimating the incidence of employment/unemployment in the country. Already a number of developed countries have adopted the payroll data for the purpose. This will be all the more plausible as the Government is trying to bring in a large number of workers in the informal sector under the ambit of the provisions of employees' provident fund and employee state insurance. Thus the payroll data is likely to provide a clearer picture of the actual incidence of employment/unemployment.

Further, there has been a growing trend towards increasing employment opportunities in the country. Sector-wise projections of human resource requirements till 2022 are given in Table 1. It is interesting to note that overall difference in human resource requirements from 2017 to 2022 is 103.4 million. This indicates that job opportunities are likely to increase significantly in the coming years. However, to take the advantage of the emerging employment scenario, there should be utmost focus on skill development among the youth both in rural as well as urban areas. Already, the Ministry of Skill Development and Entrepreneurship has enabled creation of a number of Skills Universities to foster holistic vocational education in the country. The concept of Skills Universities is unique and innovative. Traditionally the youth in the country learnt the vocational skills from their family which restricted their upward mobility.

age group of 15-59 years which is expected to rise up to 65% by 2035. However, we have not been able to leverage the demographic dividends in true sense. It is very much possible to convert this segment of population into goldmine of productivity and prosperity by creating an entrepreneurial eco-system conducive for nurturing millions of micro entrepreneurs who may eventually become wealth creators instead of being satisfied merely with whatever comes their way. The Prime Minister has already taken up the onerous task of doubling the income of the farmers in phased manner. For this purpose, the government has enacted number laws to free the farmers from the clutches of the middlemen so that they get real value of their yields. Direct procurement of farm produce by the big business houses is likely to enrich the farmers in the long run. Successful co-operatives like AMUL has shown how eradication of middlemen has resulted in the dairy farmers augmented income.

Besides a determined focus of the Government of India to reduce the farm distress by ways of laws, policies and systems, it has also helped in building an entrepreneurial ecosystem in the country during last six years. Today, there are about 28,000 active start-ups duly recognised by Department for the Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industry. Nowhere in the world has the start-up culture thrived so magnanimously as in India, thanks to the vision of Prime Minister. Now the new mantra of being vocal for local and '*Aatmanirbhar Bharat*'

Formal vocational training through the Skills Universities is likely to resolve the persistent refrain of the industry that the job seekers are generally not employable. With formal and standard skills and vocational training, even the quality of employment is likely to improve in terms of remuneration and other benefits.

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National Recruitment Agency: A Game Changer

The recent announcement by the Government of India regarding creation of National Recruitment Agency (NRA) is likely to be

The NRA is based on the principles of inclusivity, equity and fair-play. It is a highly transparent system. As the scores are based on computer-based tests, there is no human intervention in shortlisting of candidates. The NRA is set to have test centres in each of the districts of the country. Besides, it will ensure effective implementation of affirmative policies pertaining to the Scheduled Castes, Scheduled Tribes, Other Backward Castes and Divyang Jan in government employment.

a game changer in terms of streamlining and standardising the processes. The government is one of the largest employers in the country. So the youth aspiring to join the government services can now expect a better deal. NRA envisions a computer-based test for the job aspirant with validity of scores for three years. Besides, number of attempts is also not restricted. Hence, a job aspirant can keep improving the scores just in one computer-based test to desirable level in place of appearing for several tests for different sets of jobs. Before the

Table 1: Sector-wise Projection of Human Resources Requirements till 2022

S. N.	Sector	Required Human Resources in 2017 (in million)	Required Human Resources in 2022 (in million)	Difference in Human Resources Requirements (2022 - 2017) (in million)
1	Agriculture	229	215.5	-13.5
2	Building Construction and Real Estate	60.4	91	30.6
3	Retail	45.3	56	10.7
4	Logistics, Transportation and Warehouse	23	31.2	8.2
5	Textile and Clothing	18.3	25	6.7
6	Education and Skill Development	14.8	18.1	3.3
7	Handloom and Handicraft	14.1	18.8	4.7
8	Auto and Auto Components	12.8	15	2.2
9	Construction Material and Building Hardware	9.7	12.4	2.7
10	Private Security Services	8.9	12	3.1
11	Food Processing	8.8	11.6	2.8
12	Tourism, Hospitality and Travel	9.7	14.6	4.9
13	Domestic Help	7.8	11.1	3.3
14	Gems and Jewellery	6.1	9.4	3.3
15	Electronics and IT Hardware	6.2	9.6	3.4
16	Beauty and Wellness	7.4	15.6	8.2
17	Furniture and Furnishings	6.5	12.2	5.7
18	Healthcare	4.6	7.4	2.8
19	Leather and Leather Goods	4.4	7.1	2.7
20	IT and ITeS	3.8	5.3	1.5
21	Banking, Financial Services and Insurance	3.2	4.4	1.2
22	Telecommunications	2.9	5.7	2.8
23	Pharmaceuticals	2.6	4	1.4
24	Media and Entertainment	0.7	1.3	0.6
	Total	510.8	614.2	103.4

Source: Environmental Scan Report 2016, NSDC

Table 2: Major Interventions for Revival of MSME Sector and Concomitant Implications

S. N.	Interventions	Implications
1.	Rs. 3 lakh crore collateral free automatic loans for businesses including MSMEs	45 lakh units likely to resume business activity and safeguard jobs
2.	Rs. 20,000 crore subordinate debt for MSMEs	2 lakh MSMEs likely to benefit
3.	Rs. 50,000 crore equity infusion through MSME Fund of Funds	Likely to help expand MSME size and encourage them to get listed in stock exchanges
4.	Global tender to be disallowed up to Rs. 200 crore	Increased business opportunities for MSMEs, Unfair competition from foreign companies likely to be reduced, thus increasing the opportunities for Indian MSMEs to win the bids
5.	E-market linkage for MSMEs to be promoted to act as a replacement for trade fairs and exhibitions	Increased business opportunities for MSMEs
6.	Rs. 2,500 crore EPF support for business and workers for three more months	Liquidity relief likely to 3.67 lakh establishments having 72.22 lakh employees
7.	EPF contributions reduced for businesses and workers for 3 months to the tune of Rs. 6,750 crore	Relief likely to about 6.5 lakh establishments having about 4.3 crore employees covered under EPFO

Source: Based on Aatmanirbhar Presentation Part 1: Businesses including MSMEs, Govt. of India, 2020

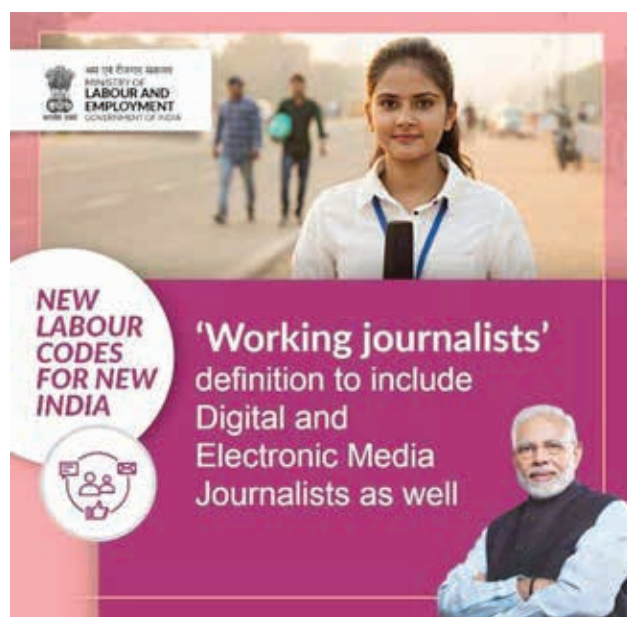
launch of NRA, a job aspirant had to prepare for different tests with dissimilar patterns. Besides, they had to wait for a long period for results and final job offers. The NRA will ensure that entering into a government job becomes all the more smoother.

The NRA is based on the principles of inclusivity, equity and fair-play. It is a highly transparent system. As the scores are based on computer-based tests, there is no human intervention in shortlisting of candidates. The NRA is set to have test centres in each of the districts of the country. Besides, it will ensure effective implementation of affirmative policies pertaining to the Scheduled Castes, Scheduled Tribes, Other Backward Castes and Divyang Jan in government employment. Indeed, NRA guarantees freedom from multiplicity of tests, delays in result announcement and nepotism as well as unfair practices which earlier characterised the government recruitments. The youth can just focus on one test and improve their chances of entering into government jobs without any hassle.

Post-Covid Employment Challenges

Covid-19 pandemic has certainly devastated a large section of the working population. The country has seen how millions of people moved back to their native places due to fear of the disease as well as job losses in the wake of pandemic. However, it is important to understand that the job losses due to the pandemic is quite temporary in nature and things are likely to improve significantly once the effects of the pandemic subsides in due course. However, in the post-Covid scenario, bringing the workers back from the comfort zones of their respective native places and providing them suitable employment opportunities is certainly a daunting task.

The Government of India has already announced a slew of interventions to revitalise the MSME sector which provides over 90% employment opportunities in the country. Table 2 presents a summary view of major interventions to put the MSME sector back on track and their concomitant implications. These interventions are likely to enable the MSME sector absorb the shock of the pandemic in terms of reduced demands in the markets and carry on their respective businesses as usual. The sooner the MSME sector is back on track, the better it is for the economy in general and employment scenario in the country in particular. MSME sector will be better placed to handle the post-Covid employment challenges thanks to the enabling ecosystem being promoted by the Government of India as well as various state





governments. The adversity induced by the pandemic has also created new opportunities which the MSME sector can leverage in order to survive the crisis and thrive in due course.

The Way Forward

Employment generation is not enough unless it helps in reducing poverty and inequality. There are cases where people are living in acute poverty in spite of being employed. It is found rampant in the informal sector. So the major concern is not only to create more jobs and



create a congenial avenue to foster employment but also how to increase productivity of these poorly employed people. So the challenges to achieve inclusive growth are basically of two types viz. 'employment generation' and 'ensuring high employee productivity'. So at the policy level the second one is more qualitative and powerful in terms of its contribution to inclusive growth process. This can be addressed through education and skill development, providing training to the already employed people and guiding them to work in the area where they can do better. So focus should be on raising the productivity, efficiency and effectiveness of the employed people so as to augment their income.

Considering Covid-19, where job creation is a big challenge, suitable employment creation strategy is appropriate and imperative. Government has rolled out a lot of initiatives to achieve inclusive growth. Digital India has brought in digital revolution and become the potent tool and technique during the pandemic. Government of India has undertaken a range of schemes and initiatives like Make in India, Skill India, Digital India, Start Up India and Stand Up India, to name a few to accomplish faster socio-economic development and in attaining inclusive growth in India.

Conclusion

The Government seems to be committed to inclusive growth and employment generation so as to accomplish the lofty goal of \$5 trillion economy while ensuring that no one is left out in the race for holistic development. The initiatives of the government of India play a crucial role in fostering entrepreneurship, innovation and inclusiveness in the country. The three 'f' i.e. funds, functions, and functionaries are needed to optimally operate to enhance the desired benefits that can percolate down to the last person in the society. Planning is fine but it needs to be properly implemented within the given time framework and within the resource constraints to get the desired outcome. However, the success of all these schemes will depend on effective and efficient governance, timely implementation and close monitoring of various schemes and adherence to accountability and transparency at all levels. □

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PPP: Bridging Skill Gaps

Dr Manish Kumar

As we move towards becoming an 'Aatmanirbhar Bharat', it is important to focus on advancement of skills in line with the emerging economic realities of the market. Given this, there is a need for the government and private sector to work together to address skill gaps and link supply with demand and vice-versa. Equipped with the right skills to meet the emerging demand of the new industrial era, the youth will be the torchbearers of India's march to becoming a self-reliant nation.

Skills and knowledge are the twin pillars of a country's economic growth and social development. For a developing economy like India blessed with a huge demographic dividend, they become all the more important to meet the aspirations of a young population. At all times, the skill gap in the country must be addressed on priority to ensure incremental growth of the economy that rests on the shoulders of a trained workforce. Equipped with the right skills to meet the emerging demand of the new industrial era, the youth will be the torchbearers of India's march to becoming a self-reliant nation. The road is strewn with challenges, but a robust system of trained and motivated professionals can easily overcome all hurdles including an ever-increasing population and rising demand in sectors that no one could have envisaged even five years ago.

The skill gap in India is sizeable, mainly due to the challenges raised above. Even after years of skill training programmes less than 5% of the workforce in India possess formal skills, compared to 38% in Mexico,

52% in the USA, 75% in Germany and 96% in South Korea. With a large population in the 20-35 age group, the working-age population in India is also likely to grow to more than 64% by 2021. The Novel Coronavirus

outbreak has added to the challenge by crippling entire set of sectors and industries that are strapped for lack of resources including human capital.

The task of imparting training in vocations to such a vast population



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has its own complexities and demands a multi-pronged approach that targets skill training and development at every level of the value chain. The government has planned programmes and initiatives methodically, ensuring skill training and entrepreneurship development get the boost, and partnerships with the private sector have played a crucial role in this effort. As we stride towards a new era of technology-fueled growth, such partnerships will only gain more importance.

In 2009, the first National Policy on Skill Development was drawn up by the Ministry of Labour and Employment with an aim to achieve rapid and inclusive growth. In a few years, paradigm shifts in the skilling ecosystem triggered by technological advances gave rise to an imminent need to revisit the existing policy. The National Skill Development Policy, 2015, was introduced to take account of the progress in the implementation of skill programmes and emerging trends in the national and international skilling ecosystem. The National Skill Development and Entrepreneurship Policy 2015 addresses the challenge of skilling at scale with speed, standard (quality) and sustainability. The policy also aims to provide an umbrella framework to all skilling activities in the country, to align them to common standards and link skills with demand.

The dual objectives of economic growth and inclusive development that have guided all our policies is predicated on a steady yet significant progress in several areas, including infrastructure, agriculture, finance, trade and commerce, healthcare, technology, etc. Building a healthy and efficient business environment has to be ably supported by a skilled workforce, which can only be realised with the synergy of the government and the private sector.

Widely regarded as an enabler for promoting sustainable economic growth, Technical and Vocational Education and Training (TVET)



create pathways for achieving relevant and high-quality education that can plant seeds of a lifelong learning agenda. There are enough evidences to establish that TVET can play an essential role in socio-economic development and is instrumental in providing direct benefits to individuals, families and local communities. The National Skill Development Corporation (NSDC) is acting as a catalyst in

The National Skill Development and Entrepreneurship Policy 2015 addresses the challenge of skilling at scale with speed, standard (quality) and sustainability. The policy also aims to provide an umbrella framework to all skilling activities in the country, to align them to common standards and link skills with demand.

promoting Vocational Education & Training (VET) by providing funding to enterprises, companies and organisations engaged in imparting skill trainings. Through its wide network of more than 600 training partners and the industry, NSDC has trained over 2.5 crore people in the last ten years.

An important feature of the public-private partnership in skilling was the need to promote apprenticeship in India. The National Apprenticeship Promotion Scheme (NAPS) was launched by the Government in August 2016 to provide financial support to establishments undertaking apprenticeship programmes. With a view to promote apprenticeship training and raise the tempo on engaging apprentices, the Ministry of Skill Development and Entrepreneurship (MSDE) has entrusted NSDC with implementation of apprenticeship in Optional Trades.

These Optional Trades cover any trade that is not regulated as Designated Trade under the Apprentices Act,



Taj Hotels, JW Marriott, Holiday Inn, etc, are some of the corporates that have engaged apprentices to help them hone their skills and learn on the job.

The ubiquitous nature of technology and the smartphone in India has provided a new dimension to skill training. Investments made in technology and digital platforms to enhance the reach, speed and scale of skilling initiatives has enabled to make skill training a continuous process, even during the pandemic. The focus has been on enabling availability of skilling content and learning resources for trainees as well as trainers, facilitating demand-based availability in regional languages and leveraging technology-based interventions to increase availability of resources. Increased demand in sectors like healthcare and logistics has paved the way for more meaningful partnerships with hospitals and e-commerce companies, such as Apollo Labs, UrbanCo, and more.

The launch of eSkill India, an e-learning aggregator portal, has ensured the training process has not suffered a break. With over 500 e-courses catalogued and access to more than 4,000 courses through affiliates, the portal has been instrumental in driving skill training among workers. As of September 2020, over 3 Lakh people registered on the portal, accessing free e-learning multimedia content in English and Hindi. The portal also supports the Pradhan Mantri Arogya Mitra (PMAM) Yojana and has content in multiple languages to cater to secondary and tertiary health workers. In a bid to make skilling more effective during these times, eSkill India has established knowledge partnerships with more than 20 organisations in the private sector, including Salesforce, SAS, BetterU, Tata Consultancy Services, Amrita technologies, Apollo MedVarsity, BSE Institute Ltd, Asian Institute of Family Managed Business, Liquid English Edge Pvt Ltd, iPrimed,

1961. NSDC has collaborated with States, Sector Skill Councils (SSC), Third Party Aggregators (TPA), chambers, industry associations and international partners and has led the effort to nudge private sector partners to increase apprenticeship engagements across sectors and regions. Today, Optional Trades comprise 29% of all apprenticeships in India and due to its characteristic flexibility and simplicity, it has evolved into a benchmark program recognised and accepted by industries

and employers. Renowned Indian and global corporates have joined hands with the government to accelerate apprenticeships in the country. Opportunities abound for young skilled workers to work as apprentices across major growth sectors, including IT, BFSI, retail, logistics and tourism and hospitality. Danske, Wipro, Concentrix, State Bank of India, Bajaj Capital, Aditya Birla Group, Future Retail, Spencer's, Biba, Walmart, Amazon, DTDC, Mahindra Logistics, Burger King, Oyo Hotels, The Lalit,

INTEGRATED, HOLISTIC APPROACH TO SKILL DEVELOPMENT

- Clean and organized approach towards Skill Development
- Over 50 skill development initiatives from 20 ministries brought under one single ministry
- India's first-ever comprehensive policy framework on skilling
- Launched National Policy for Skill Development and Entrepreneurship

Kings Learning (Enguru), ID mentors, Wadhvani Foundation and Saylor Academy. These partnerships are helping align learning modules with industry requirements and creating a bridge between the demand and supply of a trained workforce.

Swift changes in technology have necessitated the need to adopt innovative approaches to find solutions to development challenges. Sustainable development calls for deeper economic ties between nations, especially those driven by similar ambitions of all-round development. The Covid-19 pandemic has only accelerated this need to heighten international cooperation in skill development. With the objective of making India the Skill Capital of the World, the Ministry of Skill Development and Entrepreneurship (MSDE) has been working with other countries to learn and adopt global best practices, effective implementation of vocational training and skill development programs and facilitate employment of Indian youth overseas.

In October 2017, a Memorandum of Understanding (MoU) was signed between MSDE and the Government of Japan for the Technical Internship Training Program (TITP) to promote the exchange of technical intern trainees who could work in industries in another country and come back richer for the experience. NSDC also collaborated with the Emirates Driving Institute (EDI) Youth Chamber of Commerce (YCC) in the UAE to establish driver training institutes in various parts of India. In the last



two years, NSDC has signed MOUs with eight countries, including Japan, the UAE, Sweden and Russia for cooperation in vocational education and training. Moreover, NSDC has hosted several countries including such as Morocco, Afghanistan, PASET countries, Jamaica, Sri Lanka, China, Rwanda, Nigeria, Kenya and others keen on learning from the Indian skilling experience.

The role of the private sector in building a future-ready trained workforce is underscored in India's performance at WorldSkills competitions. At the 2019 WorldSkills held in Kazan, Russia, the Indian team ranked 13th among 63 nations by winning one Gold, one Silver, two Bronze medals and 15 Medallions of Excellence, impressing the world with its talent and artistry. More than 100 corporates and education institutes, including Maruti Suzuki, Mahindra & Mahindra, Toyota,

Festo, VLCC, Godrej, Axalta, Apollo, Berger Paints, Cisco, Caple, Saint Gobain, Schneider, Daikin, L&T, etc. supported the WorldSkills efforts, identifying master trainers and experts to provide hands-on-training to each competitor and monitor their progress on a day-to-day basis. WorldSkills Test Projects and Standards have now been integrated into curricula to create skilled workforce as per global standards.

Countries with higher and better levels of skills adjust more effectively to challenges and opportunities of the future of work. As we move towards becoming an 'Aatmanirbhar Bharat' (self-reliant country), it is important to focus on advancement of skills in line with the emerging economic realities of the market—the ultimate goal of any skill-oriented programme is to have a line of sight to employment. Given this, there is a need for the government and private sector to work together to address skill gaps and link supply with demand and vice-versa. Increased engagement between industry and nodal skilling bodies to capitalise on emerging opportunities in the domestic and global market will not only be instrumental in creating a future-ready workforce but will also go a long way in empowering job-seekers to turn into job-creators. That will be the realisation of the vision of an 'Aatmanirbhar Bharat'. □



Agriculture: Saviour of Economy

Dr Jagdeep Saxena

To sustain agricultural growth and boost rural economy in post-Covid era, it is critical to have a robust infrastructure in place to support farm and farm-processing based activities. Government soon launched and implemented farmer-friendly schemes, reforms and financial incentives to ensure timely agricultural operations in fields. The next step is to bring the advantages of these reforms to the doorstep of farmers for their welfare and prosperity.

Other than serious and fatal consequences on human lives, Covid-19 pandemic battered national economies world over. Among peer nations, Indians suffered the most with a significant shrink of 23.9 percent in GDP in the first quarter of FY 2020-21. The prolonged lockdown with severe restrictions to contain corona infection disrupted supply chains in nearly all major sectors that push economic growth. The grim situation induced a slump never seen before. However, one sector—Agriculture and allied activities—emerged as the only bright spot clocking a 3.4 percent GDP growth at constant prices. Economists say, had it not been a robust performance in the agriculture sector, India's GDP would have tumbled further. Being an agrarian economy, agriculture is the core sector which generates employment so that the entire circle of economic circulation goes on. Hence, to keep the wheel rotating, agriculture was the first to get relaxations for manufacture and transport of agricultural inputs, seeds, machinery, etc. Supply chains related to agricultural goods and services were allowed to function and

operate with protective measures in place. Government soon launched and implemented farmer-friendly schemes, reforms and financial incentives to ensure timely agricultural operations in fields. Efforts paid the dividends, a sharp increase of 5.7 percent in area coverage of kharif crops was registered as on September 18, 2020 (1054 lakh hectare in 2019-20 to 1114 lakh hectare in 2020-21). Amid good monsoon and adequate water storage

in reservoirs for winter crops (Rabi), the Government of India set an all time record food-grains production target of 301 million tonnes for 2020-21.

Care and Credits

When the Prime Minister announced nationwide lockdown, the knee-jerk reaction was mass exodus of migrant labours back to their rural hometowns. Majority of the returnee



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migrants were from either the landless or marginal farm households who faced immediate challenge of hunger and livelihood. This unprecedented reverse migration imperiled Indian economy along several verticals, especially the rural economy got a serious jolt mainly due to slump in demand and liquidity issues. As a long-term measure of revival, Finance Minister announced a 1.63 lakh crore stimulus package for farm sector that aimed at strengthening infrastructure, logistics and capacity building. However, Government also rolled out a slew of immediate economic benefits to protect interests of small farmers and migrant labourers. Government quickly released advance payment of Rs. 2,000 to bank accounts of farmers under PM-KISAN scheme. Wage rate for workers engaged under National Rural Employment Guarantee Scheme (NREGS) was revised with enhanced allocation for the scheme.

A special scheme, Pradhan Mantri Garib Kalyan Yojana, was launched to take care of vulnerable population during distress period. Cash and food assistance to persons engaged in informal sector, mostly



migrant labourers, was also arranged out of PM-CARES fund. Under the economic stimulus package, credit support for small farmers was ensured through various institutional mechanisms. NABARD is extending an additional refinance support of Rs. 30,000 crore for crop loan requirement of Regional Rural Banks and Rural Co-operative Banks, which are the main sources of credit for small and marginal farmers. This is over and above the normal refinance of Rs. 90,000 crore to be provided by

NABARD during FY 2020-21. Nearly 25 lakh new Kisan Credit Cards were sanctioned with a loan limit of Rs. 25,000 to gain access to institutional credit at a concessional rate of interest. In a special drive, concessional credits are being provided to beneficiaries of PM-KISAN scheme through credit cards, and that includes fisherfolks and animal husbandry farmers. Almost 2.5 crore farmers are likely to be covered from a credit flow of nearly Rs. 2.0 lakh crore. Interest subvention and loan moratorium of three months was availed by over three crore farmers. The timely credit stimulus package helped farmers to meet post-harvest requirements of the 2019 rabi crops and take care of costs of current kharif 2020 sowing season. A successful kharif sowing season will have long term gains for the benefit of agriculture, welfare of farmers and overall rural economy.

To address the issue of livelihood of migrant workers in their home states, the Prime Minister launched a special employment scheme with an outlay of Rs. 50,000 crore. Named as 'Garib Kalyan Rozgar Abhiyaan', the scheme was implemented on a mission mode in 116 districts of six most affected states, viz., Bihar, Madhya Pradesh, Uttar Pradesh, Rajasthan, Jharkhand and Odisha. Workers were engaged in 25 public infrastructure





works ranging from rural housing to rural mendis, rural roads and community toilets. ‘During the nationwide lockdown, the talent from cities returned to villages and it will now give a boost to development of rural areas,’ said Prime Minister while launching the scheme. This scheme, while focusing on development of durable rural infrastructure, also worked to provide modern facilities like internet in the villages. A total of 25,000 returnee migrant workers across six identified states were initially chosen for the campaign. To further facilitate migrant workers, Government has launched a ‘PM Shramik Setu Portal’ and ‘PM Shramik Setu App’ that help connect job seekers with prospective employers as per their skills. Jobs are provided in centre or state-run schemes mostly pertaining to rural development and ancillary works. Workers can apply online to avail benefits and job offers. In Uttar Pradesh, one of the state with most number of migrant workers, a unique ‘Aatmanirbhar Uttar Pradesh Rozgar Abhiyan’ was launched to provide employment opportunities to 1.25 crore migrant workers who face challenge of livelihood. The scheme

aims to promote local entrepreneurship by creating partnerships with industrial associations. The state government has already mapped the skill of workers to provide jobs as per their expertise/trade.

Above noted employment schemes are additional to the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) that guarantees 100 days of wage employment in rural areas in a financial year to unskilled workers. To engage many workers, Government has raised its outlay to a record level of more than Rs. 1 lakh crore this fiscal.

Investment in Infrastructure

To sustain agricultural growth and boost rural economy in post-Covid era, it is critical to have a robust infrastructure in place to support farm and farm-processing based activities. Hence, a new Central Sector Scheme, Agriculture Infrastructure Fund, was launched with the primary objective to attract investment in post-harvest infrastructure which has earlier been a weak link in the agricultural

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supply chain. While launching the Rs. 1 lakh crore fund, Prime Minister said, ‘The Agriculture Infrastructure Fund will enable farmers to make modern facilities of storage in their villages. This modern infrastructure will go a long way in setting up agro-based industries’. Under the scheme, banks and financial institutions will provide loans to Farmer Producer Organizations (FPOs), Self-Help Groups, Farmers Credit and Co-operative Societies and to individual farmers, agri-entrepreneurs and start-ups as well. All loans will have interest subvention of three percent per annum up to a limit of Rs. 2 crore, and subvention will be available for a maximum period of seven years. Moratorium for repayment may vary subject to minimum of six months and maximum of two years. Loans will be disbursed in four years, starting with sanction of Rs. 10,000 crore in current year and Rs. 30,000 crore each in next three financial years. Public Sector Banks have already signed MoUs with the Department of Agriculture, Cooperation and Farmers Welfare, Government of India for disbursement of loans on agreed terms. This fund will catalyse the creation of post-harvest management infrastructure and community farming assets, such as a cold storage, collection centres, processing units, pack houses, sorting and grading units, ripening chambers, etc. These post-harvest structures will enable farmers to get greater value for their produce, as they will be able to store and sell at higher prices, reduce wastage, and increase processing and value addition.

In a major step towards boosting rural economy, Indian railways launched a special ‘Kisan Rail’ scheme to specifically cater the transportation needs of farmers for their perishable produce. It will help build a seamless national cold supply chain for perishables inclusive of milk, meat and fish. ‘The Kisan Rail scheme will benefit farmers of the entire country as they will be able to sell their produce

in urban areas. It is an airconditioned train and it is like cold storage on rail tracks. People living in cities will get fresh vegetables. Fare of trains in comparison to trucks is also low', said Prime Minister. The first Kisan Rail made its inaugural run from Devlali in Maharashtra to Danapur in Bihar on August 7, 2020. Encouraged by response, the second Kisan Rail chugged off from Anantpur in Andhra Pradesh to Delhi on September 10, 2020. Soon, a third Kisan Rail was flagged off from Yashwantpur (Karnataka) to Nizamuddin (Delhi) and now Railway is all set to ply another Kisan Rail between Nagpur and Delhi. All these trains are running to 85 percent of their capacity and demand for many more Kisan Rails are pouring-in from various parts of the country. Meanwhile, Indian Railways is mulling over the proposal to run special Kisan Rails from Nagpur and Punjab to Delhi during seasons of orange and kinnow respectively.

Kisan Rails are multi-commodities, multi-consignors and multi-consignees trains with en-route stoppages to facilitate loading/unloading at stations. Indian Railways has procured newly

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designed refrigerated parcel vans with the carrying capacity of 17 tonnes specifically to transport highly perishable horticultural produce. In addition, it has also procured nearly 100 ventilated insulated containers (carrying capacity 12 tonnes each) for the transport of fruits and vegetables. Government is facilitating and promoting farmers to take services of

Kisan Rail by setting up temperature controlled perishable cargo centres at select areas of business such as Ghazipur Ghat and Raja Ka Talab at Uttar Pradesh and at Adarsh Nagar, Delhi (Azadpour Mandi). Kisan Rails are providing much relief to farmers, as now even small farmers can transport their 'low- volume, low-weight' parcels by train at an affordable cost. Trucks take more time than trains

that affect the quality of perishables, which in turn affects the price, leading to loss to farmers.

Quick transportation also reduces wastage. Apart from increasing income of farmers, Kisan Rails are poised to generate many new opportunities for employment and self-employment. Ministry of Agriculture and Farmers Welfare is promoting and co-ordinating new startups and new FPOs for backward integration with Kisan Rails. Information regarding Kisan Rail is being duly disseminated among all the stakeholders with development of back-end infrastructure to ensure best possible utilisation of Kisan Rails for farmers welfare. These measures will collectively herald a new dawn for the rural economy and agriculture sector in the country during post-Covid era.

Reforms and Revival

During lockdown period, when Government announced reform measures in agriculture sector, its intention was clear—freeing farmers from restrictions on sale of their produce and ending the monopoly of traders. Policy planners wanted to open the window for private capital by allowing farmers to enter into deals with large buyers, such as exporters and retailers. But the archaic Agriculture Produce Marketing Committee Acts at state level were major legislative constraints as they restricted farmers to sell their produce at farm gates, or any other sales point. Farmers were legally bound to transport their produce to Agricultural Produce Market Committee (APMC) regulated mandis and sell the produce. Unfortunately, these mandis soon transformed into local monopolies where farmers were generally duped by middlemen through various tricks. The watershed moment for agriculture and farmers welfare finally arrived on June 5, 2020 when Government of India promulgated three ordinances that have now become legislations after due parliamentary process.

Historic Decisions to Transform Agriculture Sector


The Farming Produce Trade and Commerce (Promotion & Facilitation) Bill, 2020 Passed by Rajya Sabha

- Historic-step to unlock the vastly regulated agricultural markets in the country and create One India, One Agriculture Market
- Promote barrier-free interstate & intrastate trade and commerce outside State APMC premises
- Will open more choices for farmers, reduce marketing costs & help them in getting better prices
- Electronic trading platform for ensuring a seamless trade electronically proposed

Aatmanirbhar Bharat Abhiyan

Rs 2 lakh crore Concessional credit boost to 2.5 crore farmers through Kisan Credit Cards

- **Special drive to be undertaken to provide concessional credit to PM-KISAN beneficiaries through Kisan Credit Cards**
- **Fishermen and Animal Husbandry farmers will also be included in this drive.**
- **This will enable such farmers to gain access to institutional credit at concessional interest rate**
- **2.5 crore farmers will be covered and will benefit from credit flow of about Rs 2 lakh crore**



KISAN RAIL

The train provides fast transport connectivity between Anantapur to New Delhi with **the distance of 2150 Km** being covered in approximately **40 hours**.

Anantapur is fast becoming the Fruit Bowl of Andhra Pradesh. **More than 80% of the 58 lakh MT of fruits & vegetables in the district is marketed out of the state, particularly to the North Indian States of Delhi, UP, Punjab and Haryana among others.** Earlier this was being transported by roadways.



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The Farmers Produce Trade and Commerce (Promotion and Facilitation) Act, 2020 removes all barriers for intra- and interstate trade in agricultural produce. Now farmers are free to sell their produce to anybody, anywhere for getting best price and maximum profits. The legislation is likely to end the monopoly of traders, and will also support seamless electronic trade across online platforms. The other legislation, Farmers (Employment and Protection) Agreement of Price Assurance & Farm Services Act, 2020 allows farmers to tie-up with large buyers, exporters and retailers as part of contract farming. Farmers will be able to enter into agreements with food processors to grow desired varieties of desired crops and sell the produce at assured prices. Thus, farmers will have assured price before sowing and the market risk is transferred from farmer to sponsor. This legislation will attract private investment in farming and may link farms to global markets. The Essential Commodities (Amendment) Act, 2020 removes cereals, pulses, oilseed, edible oils, onion, and potatoes from the list of essential commodities to open-up their trade for increasing profitability of farmers and traders. It also does away with imposition of stock limit

except under rare conditions, such as war, famine, etc. This provision is likely to attract private investment in cold storage, warehouses and processing facilities. Enhancement in storage facilities in rural setting will help reduce wastage, bring price stability and raise farm incomes.

These legislative reforms in agriculture sector are set to transform lives of millions of farmers and other stakeholders. Amid many concerns for welfare of farming community, Government has assured safeguarding interests of farmers at ground level and continuation of mandis with procurements on Minimum Support Price (MSP). With reference to contract farming, the legislation provides the framework for resolution of any dispute which may arise between the farmer and the trader. The penalties are also prescribed

The watershed moment for agriculture and farmers welfare finally arrived on June 5, 2020 when Government of India promulgated three ordinances that have now become legislations after due parliamentary process.

in the Act. In a nutshell, the 'One Nation, One Market' would help farmers to increase their revenues and small farmers will get benefit from the competitiveness. The next step is to bring the advantages of these reforms to the doorstep of farmers for their welfare and prosperity.

Agriculture has already demonstrated its potential to revive the pandemic-hit economy. Spurring the rural economic growth can become the savior of Indian economy. Along with immediate reforms, Centre and State Governments must act in unison to create small local growth clusters with more reliant systems of production, processing and marketing in rural areas. Further, better income-earning opportunities need to be created in rural areas to check rural urban migration. Creation of more employment opportunities in the rural nonfarm sector is also desired. The small and medium enterprises, based on agricultural produce need special attention and promotion to improve rural economy. Agriculture and rural start-ups also need to be encouraged with conducive policies and incentives. Agriculture and allied sectors are poised to lead the revival process of Indian economy in post-Covid scenario. □

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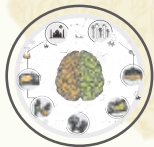
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Homecoming

Dr Amita Bhide

More than six months into the pandemic, as the economy begins to unlock and cities are limping back to a new normal; thousands of migrants are returning back to cities again. This indicates the gravity of the situation that pushes migrants to cities in search of livelihoods. Migration is usually an opportunity; a bulk of the migration in urbanising India is not powered by skills and not accompanied by a universality or portability of entitlements. Addressing the needs of particular migrant streams through coordinated state actions may be a good beginning towards the same.

The period of the lockdown announced in wake of the pandemic saw thousands of migrant workers returning home by whatever modes of travel were accessible, including walking, auto-rickshaws, hired vehicles and buses and trains. The estimates of the numbers vary widely with conservative ones placing the number at 3 crore (Tumbe, 2020) and 8 crore (estimates based on demand for schemes). The desperate journeys of the migrants were the most moving and indelible images of the impacts of the lockdown on the living and working conditions of the migrants made the scale of an issue—which has been highly invisible—visible in all its starkness. It provoked a range of policy measures from state and central governments as well as civil societies. More than six months into the pandemic, as the economy begins to unlock; thousands of migrants are returning back to cities again. The key question to ask as we move ahead is: Does this portend a fresh start, a beginning

towards a new social contract or will life and work for the migrants be as exploitative as ever? Are governments equipping themselves better to deal with the challenges of migration or are they working within the old frames of legislations that are not implemented, schemes that are not backed by delivery mechanisms or data or resources?

The return of the migrants to their home states symbolised a rupture of our city systems, but a rupture can also be a moment of creativity in which challenges become evident, are understood and creatively dealt with. Are our city systems alive to this possibility? This article traces some of the initiatives being taken by governments and civil societies to work with migrants back home or those returning to cities. While several of these initiatives are welcome, they fall far short of creating systemic and at scale solutions. An opportunity presented by the crisis may soon be lost. There is a need to activate systems for thinking through existing policies, legislations, schemes



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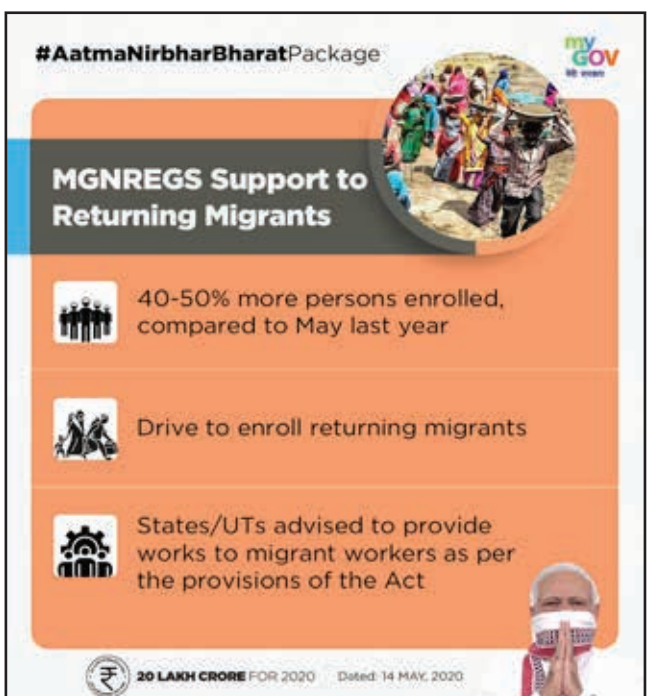
and institutions, and ensure their responsiveness to key migrant streams.

Learning from the Past

The pre-pandemic approach has been to view places through a binary of urban and rural with the assumption that people belong to one or the other and rarely circulate between them. This has resulted in a non-acknowledgement of the scale of migration in data and translated into most domains of urban policy (housing, basic services, health, education, social security) having no space to benefit migrants. Loose hypotheses connecting migration to slums and linking short-term migration to contractual labour were perhaps the only modes in which migration was being cognised. Thus, even while government policies became more accommodative of informal settlements; the living conditions of migrants in these settlements did not improve significantly. In fact, some programmes of slum improvement resulted in pushing migrant tenants out due to direct displacement by hutment owners or indirectly through gentrification.

The Inter-State Labour Act imagined to be a powerful legal instrument providing for registration of contract workers has a history of weak implementation. Provisions such as its access through establishments or contractors and conditions such as its applicability to establishments having more than five workers and contractors who employ workers for preceding twelve months has meant that there are very few registrations and more workers are out of its net than covered by its protective provisions. A similar pattern has been repeated in the case of Construction Workers Act and Domestic Workers Act. The experience of Kerala Migrant welfare scheme introduced in 2010 is instructive; it is estimated that while there are over 25,00,000 migrant workers in Kerala; only 50,000 workers are registered under the scheme and only about 500 workers have become eligible for the final benefits.

Civil society space pioneered initiatives towards recognition and social protection of migrants in the 1990s. Some of the solutions pioneered by them include micro-studies of particular streams of migrants, demonstrating



solutions such as finance exchange, facilitating source-based identity cards, community kitchens, crèches, education, nutrition and health amenities for young children at work sites, conflict mediation and contract formalisation and creation of worker hostels. Some states have experimented with some of these solutions in particular work streams; there is a lot that can be learnt from these experiments that have worked. One of the key learnings has also been that a generic policy for migrants may not work; what is required is adoption of generic principles to develop specific responses for particular migrant streams. Other lessons to be learnt from these experiments are the need to produce coordinated response across state geographies while most government policies were state government-led. Above all, the portability of entitlements such as Public Distribution System (PDS), the delinking of services from land tenures and a strict regulation of hazardous occupations emerge as key aspects of advocacy from such interventions.

Reviewing Emergent Responses

The recent past has shown a greater awareness of existence of sensitivity to issues of migrants. Thus, the Government of India launched a set of schemes which include extension of free public distribution for six months, portability of public distribution entitlements, programmes for assistance to street vendors, and assistance to small enterprises. There is also some discussion on rental housing provision for migrants. While all of these steps are welcome and portability of public distribution particularly

Several employers have taken the initiative to bring their skilled workers back. Others have initiated employment portals for migrants who have returned in collaboration with employers with built-in assurance of social protection. A review of all these efforts indicates that there is certainly a new-found sensitivity to issues of migrants but they fall short of addressing the systemic issues.

so; the operationalisation of the same will clearly take some time. Further, the structuring of most of the schemes creates apprehensions that they will largely benefit the settled urban poor while failing to reach the migrants. Some state governments have now taken steps towards registration of migrant construction workers, the extent to which these efforts are successful and result in actual delivery of services and protection to workers remains to be seen. Nonetheless these are positive steps. There are significant civil society responses as well. Several employers have taken the initiative to bring their skilled workers back. Others have initiated employment portals

for migrants who have returned in collaboration with employers with built-in assurance of social protection.

A review of all these efforts indicates that there is certainly a new-found sensitivity to issues of migrants but they fall short of addressing the systemic issues. To illustrate, groups constituted to study and suggest policy for migrant workers such as the Working Group constituted in 2015 and which had submitted its report in 2017 have not been activated to create a short-range and long-range thinking about the issues of migration. Secondly, there is no systematic effort to collect data on various migration streams and to understand vulnerabilities and policy demands of specific migrant streams. Thirdly, there is very little thinking about what kind of institutional mechanisms are necessary to reach out effectively to migrant workers. Such inadequacies may result in ineffective translation of the steps undertaken.

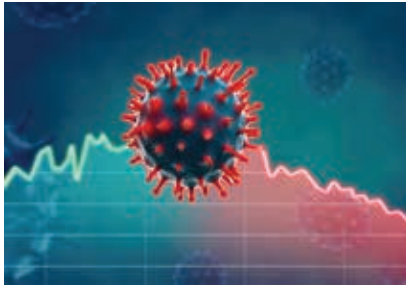
Need for Multi-dimensional and Multi-scalar Response

Migration is usually an opportunity; a bulk of the migration in urbanising India is not powered by skills and not accompanied by a universality or portability of entitlements. Further, state boundaries have often posed a political and cultural challenge for the inclusion of migrants into urban areas. The pandemic made this blind spot of city governance visible in a major way. This needs to be treated as an opportunity by developing a multi-dimensional and multi-scalar response that acknowledges the contribution of migrants in the economy of cities. Responses that offer social protection, decent living and working conditions can enhance their productivity and enable their integration and commitment to shaping the future of cities they live in. For this to happen, there is a need to think and develop more systemic policies for migrants. Addressing the needs of particular migrant streams through coordinated state actions may be a good beginning towards the same. □

The infographic features a header with the text 'Parliament Passes 3 Historic & Path-breaking Labour Codes Occupational Safety & Health Code (OSH)'. Below this is a photograph of construction workers in safety gear. The main section is titled 'Steps Taken for Migrant Workers' and lists five key measures, each accompanied by a small icon: 1. Migrant workers moving from one state to another on their own & those appointed by employer from a different state to benefit. 2. Travel-allowance once a year for migrant workers by the employer. 3. Portability of welfare schemes is being ensured. 4. Helpline for redressal of problems of migrant workers. 5. National database of migrant workers to be made.

Changing Landscape

Madan Sabnavis



The major change in the landscape of Indian business will be the irrelevance or gradual diminution in the importance of several service industries on account of the pandemic-induced lockdown which has changed the way in which businesses function. First, the future of commercial real estate has been questioned as companies have found that work-from-home (WFH) has been a convenient way of getting work done and there are savings to be made in terms of lease rentals and rent.

The shutdown in the economy announced in March after the threat of the pandemic set in has been on for over six months with gradual levels of dilution coming in. At the same time, there have been periodic lockdowns in certain zones which has impacted supply chains and hence production activity. During this period there has been a sea change in the way in which businesses have adapted to the challenge of a lockdown and limited freedom to operate. The fact that there is uncertainty in the spread of the virus has meant that the opening up of the economy is more out of desperation of saving livelihoods rather than an outcome of success in the control of the pandemic.

The concept of work-from-home which used to be a tale of luxury spoken of in the IT sector in the past has now become a habit with business continuity being maintained under these challenging times. Companies have adapted to this new

normal which also has had other consequences for the future of several industries which were premised on certain common business practices. All this has changed and there would be a new normal in future.

The Indian economy has been service-driven and hence there was the relegation of manufacturing to a secondary position. The way things have turned out in the last six months, there would be some introspection required to reconsider the future growth path for the economy especially from the standpoint of policymakers as we will have to go back to manufacturing. Let us see how this will unfold.

The major change in the landscape of Indian business will be the irrelevance or gradual diminution in the importance of several service industries on account of the pandemic-induced lockdown which has changed the way in which businesses function. First, the future of commercial real estate has been



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questioned as companies have found that work-from-home (WFH) has been a convenient way of getting work done and there are savings to be made in terms of lease rentals and rent. It has been observed that several companies have already given up on the leases and instead of having a 1-1 person to workstation ratio, they have change it to 1-3 with employees coming in twice or thrice a week. The real estate boom in the country was based on the demand being generated by offices for their staff, which will see a great amount of moderation in times to come. Companies will be less inclined to buy their premises and the concept of renting property will also become progressively less important as WFH catches on. The large stock of inventory which has built up will be a deterrent for new projects. The common workspace concept which had a boom in the last few years will have to go in for some reinvention.

Second, the hospitality business would have to reconsider options. One of the main avenues of business for the larger hotels was the business traveler as it was a perquisite after reaching a stature in an organisation. Travel coupled with stay in five-star hotels was the natural corollary of such a privilege. With several companies now learning to conduct meetings over the Internet with Zoom and Webex calls dominating everywhere, the necessity to travel and stay in hotels would get diminished. Clearly, hotels will have to work out a strategy to focus more on tourists which would mean aligning their services and costs to a different set of people. Some may have to consider the economics of converting spaces into business centres to open a new business line.

Third, related to hospitality is the conference business. One of the ways to build the brand for companies or for organisers to earn revenue through sponsorships and participation fees was the Conference. This class of business has kept the hotels chains ticking. With the use of the web-enabled media to

hold seminars and attract an audience, the mode of conduct of events will change. The same has held for entertainment too where there has been a lot of flexibility shown in hosting concerts and other shows. This service segment will have to go in for reinvention after introspection as the future will be different.

Fourth, the airlines business which is already in a challenged state will have to rework its model considering that travel will not be the same for some time. Here too, the business traveler has accounted for the bulk of the traffic and it is only after the virus spread virtually disappears or a vaccine is found, would there be confidence for such travel to take place. Also, as corporate India has been under pressure on the revenue side, it also makes sense to use this opportunity to cut down on such costs which in turn will affect the airlines business even more. More importantly, this can become a habit as it makes economic sense for companies to cut back on such expenditure when the same can be accomplished through web calls.

Fifth, the proliferation of malls in the last five years or so was on the assumption that there would be a retail boom. This would be supported by more footfalls with the younger population entering the working space and having money to spend. Even as there was saturation in the metro cities, the migration was to the smaller cities and towns. The Covid-19 impact will question the future of these plans as with the e-commerce boom, the mall became relatively less attractive for visitors except for restaurants and entertainment which would be the last in the pecking order of priority in the unlock programme of the government. These malls have been major sources of employment especially at the basic graduate or school level class and a slowdown here would have implications on the creation of jobs.

Sixth, the tourism industry would also have to be prepared for a major shift as the rules of the game would be changing substantially. This has also been a major employment source in specific states like Goa, Kerala,

The shutdown has also brought about a change in which education can be administered and the online route will catch on for sure. While, this will expand the scope for a new mode of imparting education, the traditional way of teaching through the brick and mortar structures would become less important.

Rajasthan, Uttar Pradesh etc. The global tourists would always be wary of travel especially to countries like India which could well-up having the highest if not the second highest number of cases of infection by the time the pandemic ends. Domestic tourists too would face several inhibitions at least for a year post the end of the pandemic and the return to normalcy. The question is that can the industry survive? How are jobs going to be protected and what happens to the ancillary businesses that are linked with tourism?

Seventh, the shutdown has also brought about a change in which education can be administered and the online route will catch on for sure. While, this will expand the scope for a new mode of imparting education, the traditional way of teaching through the brick and mortar structures would become less important. This will impact not just the ability of schools to charge fees but also the support systems such as internal facilities as well as schoolbooks, school buses etc., which is a part of the ecosystem. All these structures could just become redundant over time as online education catches on. While this may not be the ideal way of educating children as it is believed that social interaction is important when children are growing up, the fear factor given the vulnerability of this class can be the turning factor.

Eight, entertainment has already caught on through the non-theatre experience and the industry must be prepared for the same. The existence of entertainment halls which includes theatres and multiplexes would find it hard to survive with the consumer tastes changing. Given the number of people employed, there would be an impact on employment.

On the other side, two industries in which we see large-scale benefits on account of the changing habits of companies and individuals in this period of six months are—telecom services and e-commerce. The negatives working for industries like commercial real estate, travel, hotels would mean a big positive for the telecom industry as the consumption of data will tend to increase as more people work from home and less in offices. This can be a turning point for this industry which had reached levels of saturation after the initial burst. The regulatory environment for the telecom industry has been controversial which can deter new entrants even though the changing face of business should ideally resonate well for this sector.

The same holds for e-commerce which perforce became popular during the lockdown stage where several companies joined the bandwagon of online delivery. The upsurge in volumes spearheaded by the larger platforms of Amazon and Flipkart will continue to grow as households realise the convenience of such shopping. The visits to the local store have come down and the principle of social distancing will



also lower the footfalls in supermarket stores. Hence, there can be a major change in the way in which households' shop, which will benefit these players. This can lead to mergers and acquisitions (M&A) activity at a later stage.

What does this mean for the government? Clearly, the dynamics of business will change which will also change the way in which macro-economic variables will move. It must be recognised that the future of growth for India will now be more towards manufacturing and less on services. With several services becoming less important over time, the focus must go back to manufacturing especially when it comes to creating jobs. This also means that simultaneously attempts must be made to ensure that right kind of skills are created for the youth so that they are able to get jobs.

It may be recollected that as India transitioned from an agrarian to a service-dominated economy, we had missed an important step of an industrial revolution. Industrial growth was always secondary in terms of importance and it worked as the movement to services was smooth and seamless which required less investment and hence had a more favorable capital output ratio compared to industry. Therefore, there was an anomaly in the system where most of the engineers from the top institutes of the country preferred to take up jobs with investment banks, consultancy firms and other financial firms. This was always a challenge for core manufacturing firms which faced a shortage of well qualified engineers.

The government has already taken several steps to ensure that skills are imparted and the focus on vocational skills is a step in the right direction. This is something that needs to be given a big push at the ground level so that there is alignment between demand and supply for skills.

Another challenge for the government would be to deal with labour as the shutdown had made several industries look to leveraging technology more, which means less labour. The concept of social distancing has been one reason for giving a push here which combined with the new environment would focus a lot on AI and less on labour. This creates a problem for the government as investors are already crying hoarse for more flexible labour laws which becomes a political and social issue. With manufacturing turning towards technology progressively, this will also mean less demand for labour.

Hence, while the impact of the pandemic-induced lockdown has normally been analysed more from the point of view of the decline in several macro-economic parameters, there are several forces which have been engendered in the way in which people behave which has the potential to disrupt several industries. While this will be difficult to accept and digest to begin with, companies must be prepared for such a transformation shift and work accordingly to align their processes and businesses to remain in the game. □

Role of Handloom Households in Rural Economy

*Ranveer Singh
Yogesh Chandra*

In Himachal Pradesh, majority of population is living in rural areas having agriculture as their livelihood. Land holding is very small and scope of industrialisation is low hence, there is a large scope of developing the economy through skill development in this state. In the rural areas, people are engaged in agriculture, handloom, tailoring and rural artisan works etc. An attempt has been made in this paper to study the income and employment of handloom households in rural areas of Himachal Pradesh.

Himachal Pradesh is famous for a number of handloom and handicraft products, some of the main ones being carpets, shawls, wooden works, paintings and leather works. Himachal Pradesh State Handicrafts & Handloom Corporation Limited is established with the objective to assist and promote the interests of the poor weavers and artisans of the state. The aim of Corporation is to ensure their welfare by imparting training, design inputs, raw material, reviving the languishing crafts and providing them marketing facilities through its chain of emporia located within and outside the state¹. Handloom employs over four million weavers and allied production workers, bulk of whom belong to SC, ST, OBC and women. It is the second largest employer next to agriculture. The Census reveals that a weaver earns merely Rs. 3400 per month, as against the all India average of Rs. 4500 per month for any worker. An art dies if its artisans

fail to thrive. Weavers deserve a higher place in the society like any good painter or artist.²

The annual income of modern skilled handloom households is Rs. 4,30,619/hh whereas Rs. 3,193,84/hh is among traditional skilled handloom households. The same trend has been observed in case of per capita annual income of modern skilled households, which is relatively higher as Rs. 91621 than the traditional skilled households i.e. Rs. 66538 per capita annual income. As far as per worker number of days worked is concerned, there were relatively higher on modern handloom households (about 184 days/worker) than on traditional handloom households (about 151 days/worker).

Government needs to facilitate the access to training materials, toolkits, modern equipments and technology, and invest in teacher training, better remuneration for teachers and trainers. Moreover, to focus on the effective utilisation of

the existing talents, utilisation of local raw materials, up-gradation of the available skills and product designs, credit facilities, generation of employment opportunities and provision of some subsidies on latest modern machines to the poor traditional households are the policy issues for promotion of skills in Himachal Pradesh.

In Himachal Pradesh majority of population lives in rural areas. There is a big scope of developing the economy through skill development in this state. Skill development is characterised by a range of approaches coming from different traditions especially in rural areas of this state. In the rural areas, people are engaged in agriculture, handloom, tailoring and rural artisan works etc. There are various schemes aimed at improving employability of the vulnerable groups. In the area of skill development, the programmes so far have been state-driven and in some cases, the industry retrains the employee to make them job

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competent. The need is to have demand-driven skill development, which meets the requirement of the industry.

The National Policy on Skill Development and Entrepreneurship, 2015 envisages inclusion irrespective of any divide through equal access to skill development by marginalised groups like SCs, STs, OBCs, minorities, women, school dropouts, differently abled and those living in difficult geographical locations to enhance their employability, entrepreneurship and access to decent employment opportunities.³ The vision of 'Make in India' has given major impetus to skill development over the last year. The Government plans to skill more than 150 million youths by 2022: To understand the various skills gaps and requirements of the industry including the need of Vocational Education, the NSDC is playing an active role and has formed various sector skill councils comprising experts from the industry and other stakeholders.⁴

In fact, both traditional and modern skills play an important role in income and employment generation of all skilled handloom households. Although, nowadays traditional skills are missing day by day, still it has more importance in this modern era in terms of income as well as employment generation. Keeping these facts in mind, an attempt has been made in this paper to examine the income and employment of handloom households in rural areas of Himachal Pradesh.

Research Methodology

The study is based on primary data collected through field survey in Himachal Pradesh. The primary data has been collected through household survey in low, mid and high hills agro-climatic zones of Himachal Pradesh as Solan, Kullu and Kinnaur district respectively. For the selection of households, a multistage

Government should provide toolkits, modern equipments and the facility to access training materials. Besides, government should focus on the effective utilisation of the existing talents, utilisation of local raw materials, up-gradation of the available skills and product designs, credit facilities, and provision of some subsidies on latest modern machines to the poor traditional households.

random sampling technique had been employed. Following this procedure, at the first stage, one district in each zone was selected. Further from each district, two tehsils were selected at the second stage; drawing one tehsil from the nearby district headquarters and the second at a distance of 5-10 kms away from district headquarters. Subsequently, at the third stage, a panchayat from each tehsil was selected purposively. From each panchayat, a list of households having any skill was prepared. Thus, total samples of 160 skilled person households in three zones were taken. The data regarding various resources of family, education, occupation, income, skill detail etc., was obtained from selected households on well-designed and pre-tested schedule/questionnaire through personal

interview method. The data collected pertain to the agriculture year 2015-16.

Results and Discussions

Out of total sampled households, 120 households had traditional skills persons/workers and 40 households were trained and had modern skilled persons. The traditional and modern skilled persons in sampled households were involved in handloom trades. In this paper, we will focus on modern and traditional handloom households. The average size of family among modern handloom households is 4.7 whereas it came out 4.8 persons per family among traditional skilled households. Sex ratio is an indispensable indicator to know about the proportion of males and females in total population. The sex ratio has been worked out 948 and 889 females per thousand males among modern and traditional skilled handloom households, respectively. The analysis reveals that per household, numbers of workers are 3.55 and 3.63 among modern and traditional skilled households, respectively.

In case of literacy rate, modern skilled households have a little higher literacy rate (85.56) as compared to traditional skilled households (84.43). In case of land holdings and livestock, traditional skilled households have more land holdings as well as livestock as compared to the modern skilled households (see Table 1). It means that traditional

Table 1: General Features of Sampled Households

S. N.	Particulars	Modern Skills	Traditional Skills
1.	No. of Households	40	120
2.	Family size	4.7	4.8
3.	Literacy (%)	85.56	84.43
4.	Sex ratio	948	889
5.	No. of workers per household	3.55	3.63
6.	Land holding (bighas)	3.25	3.84
7.	Livestock owned (Rs)	5675.00	11549.90
8.	Investment (Rs)	51980.52	25754.63

Source: Own Survey-2015

Table 2: Source-wise Average Annual Income of Sampled Households
(%age of Total Income)

Sr. No.	Occupation	Skilled Artisans	
		Modern Skills	Traditional Skills
1.	Agriculture	12.07	25.38
2.	Skilled Works	44.00	31.58
3.	Service	10.64	13.26
4.	Business	31.55	25.43
5.	Wage Labor	1.74	4.35
6.	All occupations	100	100
Annual income/hh (Rs.)		430619	319384
Per capita income (Rs.)		91621	66538

of income of modern and traditional skilled households is presented in Table 2 wherein it may be seen that maximum portion of total annual income is contributed by skilled activities followed by the sampled households under study. The highest percentage of annual income came from their own skilled works activities among modern (44 percent) and traditional (31.58 percent) skilled handloom households. The contribution of petty business occupation in total income was 2nd highest percentage of annual income on modern and traditional handloom households.

households are more engaged in rearing the livestock as compared to modern households so that they can earn their livelihood. Modern skilled households have made higher investments (Rs. 51980.52/hh) as

compared to traditional households (Rs. 25754.63).

Source-wise Annual Income of Modern and Traditional Skilled Households

Contribution of different sources

The annual income was relatively higher among modern skill households (Rs. 430619/hh) than the traditional skill households (319384). The same

Plate-1.1: Handloom Items



Kinnauri Pattu



Kinnauri Patti



Kinnauri Gaachi (Paaret) and Dodhu



Kinnauri Muffler

Table 3: Income Difference of Modern versus Traditional Skill Households in Skilled Works

(Rs./household)

S.N.	Particular	Modern Skills	Traditional Skills	Difference	Difference (in percentage terms)
1	Annual Income	189472	100861	88611	87.85

trend has been observed in case of per capita annual income of skill households, which was also relatively higher (Rs. 91621 per capita) among modern skill households than the traditional skill households (Rs. 66538) under study. Some of the handloom items which were made by modern as well as traditional skills handloom households are shown in Plate 1.1.

Impact of Modern Skill in Increasing Household Income

Skill works in rural households contributed a large share in total income from various sources. On an average, annual income from skill works was relatively higher at Rs. 189472 in modern handloom households than the traditional handloom households at Rs. 100861 (see Table 3). The income of modern skill over traditional skill estimated to Rs. 88611 per household in handloom households.

The difference in income of modern skill over traditional households is 87.85 percent in handloom households. Hence, it is clear from the analysis that households having modern skill are earned higher income by adopting modern equipment, tools and training as compared to traditional skill households.

Employment Pattern on Modern and Traditional Skill Households

The workers of family are involved in various economic activities for livelihood of persons in the family. Occupational pattern of modern skill households is presented in Table 4 wherein it may be seen that the skill work activities were provided near about fifty percent of total employment among sampled households under study.

In these households, petty business and service were also 2nd major economic activity of sampled households. Workers of handloom households worked as wage labour in agriculture and non-agricultural activities. On an average, all economic activities have generated 652 and 549 man days on modern and traditional handloom skill households, respectively. The per worker number of days worked were relatively higher on modern handloom households than the traditional handloom households.

Impact of Modern Skill and Women Contribution in Increasing Gainful Employment

Skilled work activities are major employment provider as large number of workers are engaged in these activities. On an average, per

household number of days worked in skill work activities, was relatively higher about 324 days annually in modern handloom households as compared to about 256 man days in traditional handloom households. (see Table 5). The difference percentage in employment in modern and traditional skill work activities was 26.53 percent in these households.

Modernisation of skill attracted women to work in handloom activities in the study area. In handloom activities, women employment has increased by about 18 percent after modernisation of the skill in these professions.

Conclusion and Policy Implications

Both traditional and modern skills play an important role in income and employment generation

Table 4: Annual Employment in Various Activities on Skill Handloom Households

(%age of total)

S.N.	Occupation	Skilled Artisans	
		Modern Skills	Traditional Skills
1.	Agriculture	11.13	12.21
2.	Skilled Works	49.66	46.61
3.	Service	14.00	17.94
4.	Petty Business	23.58	16.52
5.	Wage Labour	1.63	6.72
6.	Total Employment	100.00	100.00
7.	Employment (days):		
	Per household	652	549
	Per worker	183.60	151.31

Source: Own Survey-2015

Table 5: Annual Employment of Skilled Handloom Households in Skilled Works

Particulars	Modern Skills	Traditional Skills	Difference	Difference (in percentage terms)
Annual Employment	323.78	255.89	67.89	26.53
Women Annual Employment	160.75	136.45	24.30	17.81



Kulluvi Shawl

for handloom households. However, a big threat comes from the power loom and mill sectors. Still, more and more tourists are very curious to purchase the old traditional handloom products like designed muffler, designed shawls, designed patti etc. just because of their unique and elegant skills. The households that use modern techniques of skills generate more income as well as employment

because of their time saving, easier and mass production characteristics of these skills.

The study concludes that modern skilled households are relatively more economically sound as compared to traditional skilled households in the state. As far as employment generation is concerned, the modern skills handloom households have gained more employment than

the traditional skilled households. Government should provide toolkits, modern equipments and the facility to access training materials. Besides, government should focus on the effective utilisation of the existing talents, utilisation of local raw materials, up-gradation of the available skills and product designs, credit facilities, and provision of some subsidies on latest modern machines to the poor traditional households. Awareness about vocational education, employability through organising awareness camps / sensitising workshops / motivational trainings and all skilled works research; innovations in process which save human effort, time and energy, and emphasis on the skill development programmes/schemes with modern technologies along with protecting the traditional skills are the major policy implications suggested for improving the income and employment of skill households in Himachal Pradesh. □

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DO YOU KNOW?



SVAMITVA

(SURVEY OF VILLAGES AND MAPPING WITH IMPROVED TECHNOLOGY IN VILLAGE AREAS)

Benefits

-  Drone digitally map all the assets of the inhabited area of the village
-  Creation of Property cards on the exact area of each property in the village
-  Proprietary rights to the Village household owner
-  Property as a financial asset for taking loans and other financial benefits
-  Reduce property disputes and legal cases
-  Determination of property tax
-  Creation of accurate land records for rural planning
-  Better GDP – leveraging GIS database/ maps created for better planning and execution of plans

SVAMITVA Scheme is a Central Sector scheme launched on National Panchayat Day i.e April 24, 2020. The Ministry of Panchayati Raj (MoPR) is the Nodal Ministry for implementation of the scheme. In the States, the Revenue Department/ Land Records Department is the Nodal Department and shall carry out the scheme with support of State Panchayati Raj Department. Survey of India shall work as the technology partner for implementation.

The scheme aims to provide an integrated property validation solution for rural India. The demarcation of rural abadi areas would be done using Drone Surveying technology. This would provide the 'record of rights' to village household

owners possessing houses in inhabited rural areas in villages which, in turn, would enable them to use their property as a financial asset for taking loans and other financial benefits from Bank.

The scheme seeks to achieve the following objectives:

- i. To bring financial stability to the citizens in rural India by enabling them to use their property as a financial asset for taking loans and other financial benefits.
- ii. Creation of accurate land records for rural planning.
- iii. Determination of property tax, which would accrue to the GPs directly in

States where it is devolved or else, add to the State exchequer.

- iv. Creation of survey infrastructure and GIS maps that can be leveraged by any department for their use.
- v. To support in preparation of better-quality Gram Panchayat Development Plan (GDP) by making use of GIS maps.
- vi. To reduce property related disputes and legal cases.

The Prime Minister launched physical distribution of property cards under SVAMITVA scheme on October 11, 2020. With this, the country has taken another major step towards an Aatmanirbhar Bharat, as the scheme helps in making rural India self-reliant. One lakh beneficiaries from Haryana, Karnataka, Madhya Pradesh, Maharashtra, Uttarakhand and Uttar Pradesh have been handed over the legal papers of their houses. □



Benefits of SVAMITVA

Issuance of Property card

- i. Villagers can easily avail Home / Property loans.
- ii. Coverage of Properties by property tax.
- iii. Automatic creation of Property Tax Determination Sheet.
- iv. Automated Tax collection.
- v. Increase in liquidity of land parcels in the market
- vi. Increase the financial credit availability to the village.

Minimise Property Disputes

- i. Protection of civil rights of villagers.
- ii. Prevention of the encroachment by identifying public land.
- iii. Exact area of revenue will be known
- iv. Records and map for taxation of the village, construction permits etc. will be available at Gram Panchayat

Better quality GDP

Using the maps created under survey for preparing GDP.

Maps provide decision support system and helps in development and execution of planning activities.

-  Provide an integrated property validation solution for rural India
-  Leveraging property as a financial asset by the citizens of rural India
-  Creation of accurate land records for rural planning.
-  Determination of property tax
-  Creation of survey infrastructure and GIS map that can be leveraged by any other department for their use.
-  Reduce property disputes and legal cases



Greener Highways

Dr Dinesh Chand

This paper examines the environmental impact of highway construction projects, green highway concept and definition, initiatives undertaken world over to reinforce knowledge and awareness of green highway construction projects. Moreover, it discusses the studies conducted by various researchers around the world and the sustainability issues regarding the highway construction projects in order to adopt balance among social, economic and environmental development.

The roads and highways are very important component of human mobility and the growth engine of economic development of any nation. Intrastate and Interstate road infrastructure facilitates trade, promotes tourism and bridges the geographical gaps amongst cities and rural areas. In India, the government has issued the policy document hoping that when this policy is implemented, in letter and spirit, India will become a nation with “Natural Highways”. In this paper, an attempt has been made to address the issues that relate to the “roads and highways development” and pave “a journey towards sustainable road development”.

India features an entire 46.99 lakh kms of road length and out of

which over 96214 kms are National Highways, accounting 2% of total road length. The Highways carry about 40% of the traffic load. The Ministry has decided to develop all of existing National Highways and 40,000 kms of additional roads within the next few years as Green Highways. Clearance of forest and tree felling activities are inevitable consequences of highways development. Although to counter these losses Highways projects are bundled with median and avenue plantations but they’re seldom like the natural ecosystem existing before the development.

The situation becomes critical with incessant movement of vehicles on these roads contributing further in release of Greenhouse Gases (GHG) and other suspended particulate

matters. High level of greenhouse gases and extended dust particles in air pose an imminent health threat for the commuters and also endangers the biodiversity of the region. Under such circumstances, it is vital to adopt proactive reduction measures for pollution control on highways. One among the ways is to develop green corridor which works as vegetation buffer around the pollution source and helps in absorption of GHG gases and collection of dust particles. It also reduces sound pollution and provides much needed shade on glaring hot roads during summer. Plantations arrest soil erosion at the embankment slopes, moderate the effect of wind and incoming radiation, prevent glare from the headlight of incoming vehicles etc.

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Use of Alternative Clean Energy-Based Transport System

Since the rate of vehicle ownership has been increasing every year, the necessity to use alternative cleaner fuels to decrease the GHG emissions in the country is inherent. In addition, promoting clean energy-based alternate transport, converting public utility vehicles to LPG, CNG, electrical and renewable energy, promoting non-motorised transport especially the dedicated bicycle lanes and walkway facilities and conducting public awareness activities are some measures which may be taken to reduce the increasing stress (GHG emissions and air pollution) to the environment.

In India, the transport sector is the third-largest energy consumer at 17% of TFC (Total Final Consumption) in 2017, dominated by oil fuels (96%) while 3% natural gas and 1% electric driven transport which accounts for 40% of NO₂ and 13.5 % of total CO₂ emissions. Transport energy demand has more than doubled in a decade (2007-2017), accounting for one-quarter of TFC growth (India's Energy Policy Review-2020 by NITI Aayog).

Through various programmes, the GoI is focusing on creating charging infrastructure and a policy framework so that more than 30% of vehicles in India are electric by

2030. While EESL's LED programme was a significant success, the implementation of the general public EV fleets has been challenging and thus, the uptake is much below policy ambitious. India sold only 22,000 battery EVs in 2016, well short of the sales growth needed to meet the 6-7 million hybrid and electric vehicle sales target for 2020 (IEA, 2018e).

The country is slowly transitioning toward cleaner fuels. Numerous policies have emphasised the kinds of fuel for clean energy transport services, ranging from electricity to hydrogen fuel cells, that require to be introduced in the country. The share of environment-friendly vehicles to extend twenty percent of the entire vehicle fleet by 2020. In addition, the policy emphasises establishing charging stations and manufacturing plants to encourage the utilisation of local resources.

Introducing Green Highways Design

The Ministry of Road Transport and Highways (MoRTH), Government of India has promulgated on September 29, 2015 "Green Highways (Plantations, Transplantations, Beautification and Maintenance) Policy- 2015" to develop green corridors along National Highways for sustainable environment and inclusive growth. This policy envisages "development of eco-friendly National Highways with participation of the communities, farmers, NGOs, private sector, institutions, government organisations and also the Forest Departments for economic and sustainable

The Highways carry about 40% of the traffic load. The Ministry has decided to develop all of existing National Highways and 40,000 kms of additional roads within the next few years as Green Highways.

development."¹ MoRTH has constituted National Green Highways Mission (NGHM) NHAI being a nodal agency for overall planning, implementation and monitoring of Green Highways projects. To ensure quality plantation and maintenance, a corpus "Green Fund" with 1% of the entire project cost (TPC) of all National Highways projects has been earmarked for the highway plantation and its maintenance. Thus, about Rs. 1000 crore per annum are going to be made available for plantation purpose. Plantations are an integral part of highway development projects. Agro-climatically suitable species are recommended for plantations along the highway alignments, including the highway medians, as per the IRC: SP:21-2009 (Guidelines on Landscaping and Tree Plantation).²

This Mission has decided to formulate comprehensive guidelines for implementation of Green Highways initiatives. These guidelines will assist project authorities, plantation agencies and other stakeholders in effective implementation and monitoring of plantation, transplantation, beautification, and landscaping and maintenance activities along National Highways. These guidelines are applicable for all upcoming and developed National Highways regardless of their administrative agency (i.e. MoRTH, NHAI, NHIDCL, State PWDs, RDC, BRO etc.). The subsequent objectives are:

Policy Interventions and Guidelines

i. Green Highways Policy 2015

As stated above, the policy will address the problems that dwell in the road development and pave the way towards sustainable development. Under guidelines, National Green Highways Mission (NGHM) in NHAI—a nodal agency for overall planning, implementation and monitoring of Green Highways projects has been constituted. The key features of the policy and activities are:



Objective: To develop a scientific framework for Integrated Green Corridor Development along the National Highways aiming to scale back the impact of pollution and dirt by planting area specific trees and shrubs along the National Highways. This might act as natural sink for air pollutants, reduce sound pollution & dirt and stop soil erosion at the embankment slopes. Additionally, the Green Highways Mission is self-sustainable and provides additional benefits like shade on glaring hot roads during summers thereby reducing the glare of oncoming vehicles and the impact of wind and incoming UV radiation.

Stakeholders: Contracts for greening highways are going to be given to NGOs, agencies, private companies and government organisations. These stakeholders are going to be liable for the survival and health of trees. Planting of trees in any particular area will support the soil suitability and climate.

Monitoring and Performance Audit: The agency is going to be liable for monitoring the plantation status on continuous basis by periodical site visits for on-spot verification to determine survival, growth and size of plantation and its maintenance.

Performance audit of executing agencies are going to be regularly conducted by an agency on an Annual basis and new contracts etc., are to be awarded to the agencies supported by their past performance audit.

Implications: The policy will strike a balance between highways development and environmental protection. This might also help to provide employment to the rural people.

The National Forest Policy envisages 33% of the geographic area should be under forest or tree cover, but the notified forest cover is simply about 22%. The implementation of

new Green Highways Policy can help in bridging this gap. 1% of the entire project cost of all highways projects is proposed to be kept aside for the highway plantation and its maintenance.

Thus, about Rs. 1000 crore annually are made available for plantation purpose. Under the policy, the local communities in the plantation work are to be engaged and its further emphasis will not only be on the trees planted, but also on their survival and usefulness to the local communities. This might additionally generate employment opportunities for about five lakh local rural people and communities. The Green Highway Policy will help in making India pollution free and should also help in curtailing the road accidents in India.

ii. Guidelines for the Rural Road Development

Another set of Guidelines for the rural road development using plastic have been issued by the Ministry of Rural Development. The Indian government has made it mandatory for road developers to use waste plastic alongside bituminous mixes for its construction to beat the growing problem of disposal of plastic waste in India's urban centres.

In India, the transport sector is the third-largest energy consumer at 17% of TFC (Total Final Consumption) in 2017, dominated by oil fuels (96%) while 3% natural gas and 1% electric driven transport which accounts for 40% of NO₂ and 13.5% of total CO₂ emissions. Transport energy demand has more than doubled in a decade (2007-2017), accounting for one-quarter of TFC growth.



developed as green corridors not only sustain biodiversity and regenerate natural habitat but also benefit all stakeholders, from its users to local communities and spur eco-friendly, economic process and development.

The lifecycle of a highway construction is supported by the planning, design, construction and maintenance processes. Throughout the analytical overview of existing research conducted by other researchers so far, indicate that the definition of green highway itself varies from the attitude of every country and organisation. Normally, the three important components of sustainability are identified in Figure 1.

These components are inter-dependent closely to each other and are also correlated with its sub-components as explained within the Figure 2–3.

The India has defined a green highway that is constructed using materials that emit no or low concentration of pollutants and are environment-friendly. As per *Green Highways Policy 2015*, it aims to develop a systematic framework for Integrated Green Corridor Development along the National Highways aiming at to eliminate the impact of air pollution and dirt by planting trees and shrubs along the National Highways. It will also act as

Use of waste plastic and bitumen hot mixes are encouraged for constructing roads within 50 km of a periphery of any city having a population of over five lakhs under these guidelines. Further, the government stated that if waste plastics are not available, the developer has permission for constructing only bitumen roads. Urban local bodies (ULBs), which face a crunch for financial resources, can make money by selling the waste plastic collected by such cities to road developers. ULBs could take a cue from some best practices followed in cities like Bangalore where Dry Waste Collection Centres have also proved to be a self-sustainable business model.

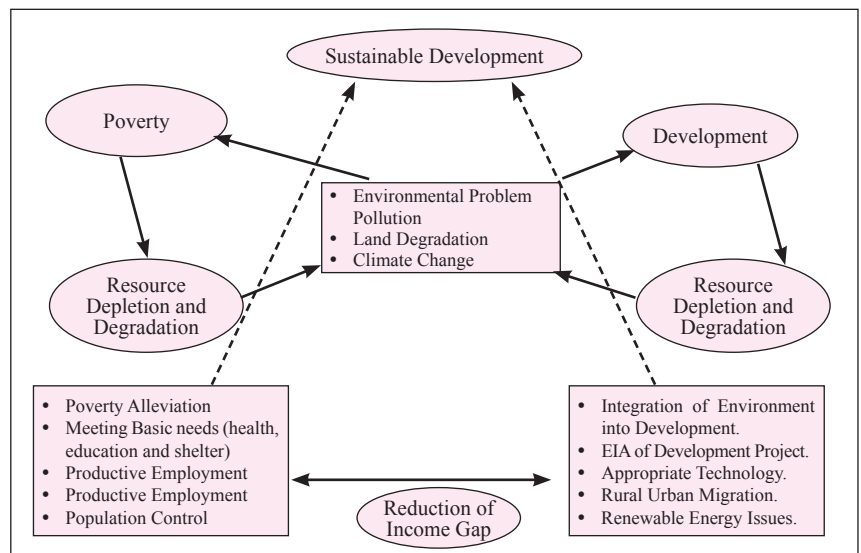
Basic Concept of Green Highway

The roads and highways can be built in any area, by digging soils and rocks which consequently affect flora, fauna, soil etc., and promote erosion and land slide. Therefore, it is necessary for the environmentally sustainable highway projects that the natural resources lost within the development of highways are restored or compensated during a process. There is urgent need that ecology, economic and community issues are taken into consideration from the conception stage of project planning, designing and its execution. Thus, the roads and highways

Figure 1: Sustainable Development Components



Figure 2: Sustainable Development Model Interdependency and Mutually Reinforcing



Source: Uprety BK, 2008⁸

Figure 3: Green Road Approach for Sustainable Environment

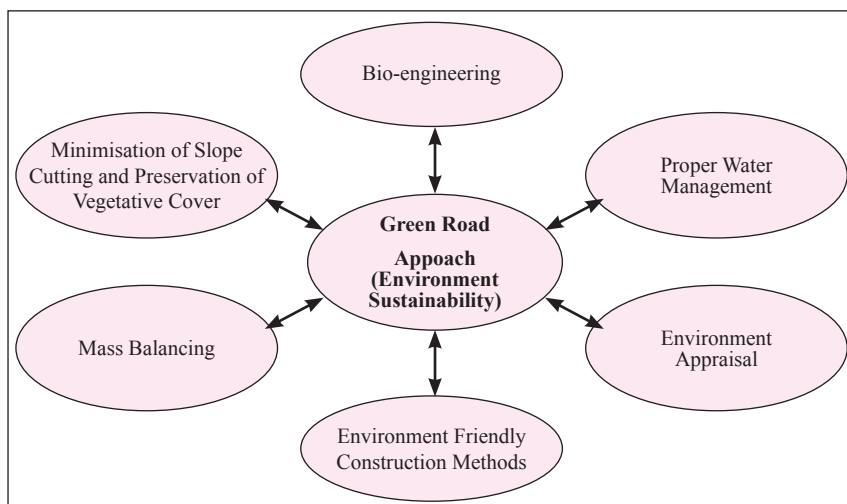


Table 1: Green Road Approach for Sustainable Environment

Country	Definition of green
1. Malaysia ^{6,7}	<ol style="list-style-type: none"> Green highway is often defined as: the watershed driven storm water management; life cycle energy and emission reduction; recycle, reuse and renewable; conservation and ecosystem management and overall societal benefits. Green highway could also be a roadway design supported a comparatively new concept for roadway design that integrates transportation function and ecology.
2. United States ^{8,9,10}	<ol style="list-style-type: none"> Green highway is an initiative to promote the utilisation of cleaner fuels. Green highway is defined by an attempt to adopt “beyond compliance” and leave the project area “better than before” through community partnering, environmental stewardship and transportation network improvements in safety and functionality. Green highway includes more sustainable practices than modern construction techniques, and consists of maximising the lifetime of a highway.
3. Singapore ¹³	Green highways or green roads are defined as roadway project that has been designed and constructed to a level of sustainability that it is above current common practices in the ladder.
4. India ¹⁴	A green highway is that the highway constructed using materials that emit no or low concentration of pollutants and are environment-friendly.
5. China ¹⁵	Green highways are defined as an approach for helping developers achieve friendly environment, ecological responsiveness and social responsibility to reinforce long-term profitability and gain sustained competitive advantage.

Source: Abhiman Das 2009

natural sink for air pollutants, reduce dust particles and sound pollution and arrest erosion of the embankment/slopes. The various definitions are followed in several country for outlining green highway and are summarised in Figure 3.⁴

Singh et al.¹² set the definition for “green highways” as a roadway project that has been designed and constructed to a far better level of sustainability as compared to substantial level of current common practices. Ismail et al.⁷ defined the green highway as a roadway design supporting a comparatively new concept for integrating transportation functionality and ecology. According to him, green highways have sub-elements of ecology, landscaping, waste reduction and materials, conservation and efficiency of water and energy in making them green.

Krebs¹⁰ has described the green highway as an attempt to develop the project area better than before through community partnering, environmental stewardship, and transportation network improvement in safety and functionality. Bryce considered the green highway to incorporate more sustainable practices alongside modern construction techniques, and encompasses maximising the lifetime of a highway. Reddy¹³ had also defined green highway which is developed using materials that emit no or low concentration of pollutants and are environment-friendly. Zhang et al.¹⁴ defined green highways as an approach for helping developers to accomplish friendly environment with social responsibility to reinforce long-term profitability and gain sustained competitive advantage.

Techniques Used for Greening Highway

People need highways and roads for their mobility in daily lives. As an uppermost infrastructure, they play a vital role as a “backbone” of the nation’s social and economic development of the country. The initial

R&D on green highway technology was found in 2002 in United States of America.¹¹ One of the key issues that is brought into focus is the development of sustainable green highway for the long-term needs. The efforts mostly relate to the sustainable development of green highway. However, the necessity to be ready to quantify the consideration of the environment impact towards sustainable green highway was still undermined.⁵ There are various methods involved in development of green highway and these are listed below:

i. Watershed Borne Runoff-Water Management

Watershed borne storm water/runoff-water management is required a process to scale down the runoff water on the highway and collect the runoff water and divert it to the place where the water is often pre-treated before infiltrated into the ground for recharging the water table or impounding purposes. Watershed runoff-water management techniques viz. bio-slopes, bio-swales, bio-retention cell, permeable pavers, vegetated filter strip and street trees, are widely utilised in highway construction. These initiatives are carried out suitably and economically with an appropriate design and analysis for runoff water management and treatment alongside the highway.⁴

ii. Energy and Emission Reduction

Along the Green Initiatives, energy sectors play a crucial role for the economic process. The energy and emission reduction techniques are the replacement of cement or bitumen in highway and road construction with fly ash, rice husk ash or blast furnace slag or foundry sand, waste rubber tyres and rubber pieces that were proven to wastage and save a lots of energy about 6.4 billion gallons of gas per annum.¹⁵ Similarly, plastic waste also can be

Features of Green Highways Policy 2015

- The community involvement through Panchayats, NGOs and other Self-Help Groups (SHGs), in tree plantation and maintenance directly benefits local people by generating employment.
- The region-specific plant species may be selected depending on local conditions like rainfall, climate, kind of soil etc. Possibly, transplantation of existing trees could even be given preference while widening the roads.
- The policy aims at changing the entire process for the avenue plantation and landscape improvement. As per the new policy, the necessity of land for tree plantation should be included within the Land Acquisition Plans to enable the pre-planning of the plantation activities in systematic manner in pre-construction phase of National Highways.
- In the new policy, the clear provisions are made for the responsibilities of the planting agency to make sure that the condition of the site is good enough for the successful establishment of grasses. The agency is additionally responsible to supervise all field operations like preparation of surface, sowing of seeds or saplings and quality of planting material used.
- The monitoring agency will monitor progress of planting and its status on continuous basis. It shall perform on-site visit for field verification in respect of survival, growth and size of plantation and its maintenance.
- The monitoring agency will conduct audit for performance of executing agencies for completed projects on an annual basis and award of fresh contracts to those agencies will be decided supported by their past performances.
- The plantation and its maintenance could even be implemented through outsourcing bidding process following as per standard protocol of procurement of Ministry of Road Transport & Highways (MoRTH) and its designated agencies for the stretch/ROW not notified as protected forest under Forest Conservation (Act) 1980.
- The MoRTH/NHAI will appoint the authorised agency for empanelment of Plantation Agencies and such agencies will bid for planting work on the National Highways.
- In new policy, a new insight to the approach of development is given. Such initiatives indicate that the approach of development is not exclusive of environment protection aspects. The developments are often sustainable when systematic and conscious decisions are taken.
- The provision of 1% of the entire civil cost of the road projects has been provisioned for developing green corridors.

utilised in development of bitumen roads by replacing bitumen by it (up to 8-10%).^{16,17}

However, recycling process needs significant amount of energy so as to supply an alternate product but it manages waste to support environment protection otherwise generally left unattended to form menace.

iii. Recycle, Reuse and Renewable

Usage of recycle materials derived from industrial by product is not only significant in reducing the green house emissions and reducing the energy consume by a highway but it also economises the general construction cost of roads and highways.⁷ In European Region, the high rate for virgin material pits

required in highway construction was proven to cut the volume of highway construction waste material into the landfills. Another advantage of recycle, reuse and renewable of highway construction material is increasing the water saving and reducing the carbon emission. Sometimes, demolition materials are also utilised in road construction.

iv. Conservation and Ecosystem Management

Grumbine¹⁸ believed that ecosystem management awakens the restorative action techniques which can emphasise a healthy future environment for the entire biotic life at the time of the biodiversity crisis. The conservation and ecosystem management in green highway act as buffer zones for wildlife and also animal crossing structures and underpass that concern on reducing the collision / accidents of vehicle and wildlife.⁶

v. Societal Benefits

In order to accomplish the sustainability in highway construction, overall societal benefits should be taken into consideration due to its positive effect on the local area and economic development.¹⁹ Consistent with Schweitzer and Tonn,²⁰ there are three types of societal benefits viz., environmental benefits, economic benefits and social benefits that lie under the scope of non-energy benefit. However, during a road or highway construction projects, the highways are often classified as a serviceable road for the society if it's designed as per the quality standard which can improve the economy through significant local job opportunity and affordable taxation income to the community.

Introducing Green Highway Rating System

Recently, sustainable development issues have been widely discussed especially in housing and construction industry. Sustainable

People need highways and roads for their mobility in daily lives. As an uppermost infrastructure, they play a vital role as a “backbone” of the nation’s social and economic development of the country.

development is a key factor in order to satisfy the environmental objectives and fulfils the demand of the massive infrastructure projects due to increasing population and urban density.²¹ Sustainable highway and road design are one of the factors that will minimise the impacts of the highway to the environment e.g. sound, air and ground water pollution, habitat disturbance, land use, climate change, vibration and contamination to plant and wildlife, are the consequences of construction activities and automobile emissions in post construction period.²² The impacts are often minimised by better design, construction and management of road, parking and other facilities. The green highway rating system was introduced to determine the extent of greenery and environment-friendly aspects of the highway. Since roads run through the landscape, roads have point source impact and linear effect.

Green roads are the first green highway rating system which

has been introduced in United States. Many other countries have developed their own green building rating system e.g. Canada, Australia, United Kingdom, Hong Kong, Japan, Taiwan, Singapore, Philippines, Europe, Korea, India and Australia. With the successful implementation of green building rating system, the rating system has been extended to the highways. It is a voluntary third-party rating system for road projects which seek to acknowledge and reward the roadway projects that exceed the general public expectation for environmental, economic and social performances.²³ In the rating system, in order to maintain, support or endure the long-term maintenance responsibility, sustainable design becomes one of the foremost important criteria for giving a credit.²⁴ Washington Internship for Students Engineering (WISE) has introduced the green highway rating system to ensure that the highway design is sustainable, environment-friendly and provides lesser impact on environment²³ which can be used for developing and classifying an environmentally and economically sustainable highway. In the modern highway design, the new technologies like advance planning, intelligent construction and transport system, and maintenance technique are used to reduce the impact of highway development on the environment.²³



Conclusion

In this paper, review of the literature and research associated with highway construction has been done to understand the green highways aspects and elements. The findings are summarised below:

1. At the beginning of this paper, the researcher diagnosed the green highway definitions followed by other countries or organisations, and eventually concluded with suitable and applicable definition of green highway.
2. The briefly explained five aspects which cover green highways viz. the watershed-based storm water management; life cycle energy and emission reduction; recycle, reuse and renewable; conservation and ecosystem management and overall societal benefits.
3. The green highway initiatives are taken by the Indian government so as to deal with the sustainability criteria for the green highway development.
4. The community involvement to promote its awareness towards beneficial aspects so that they are fully aware of apparent advantages of the green highway design and development.
5. The communities should know that it is their responsibility to get involved from beginning of the development and they also participate in the process of protection of environment/nature. The Government can frame policies, provide standards, but success of projects depends on strong monitoring which is not possible without active community participation and community ownership.
6. The Case study approach is often adopted in the long-term so as to redefine and enlarge the scope of the green highways and make legally valid the green highway concepts in highway construction.

7. The Green Road approach strongly addresses the social inequalities and disparity within the society. It adopts the poverty alleviation measures by way of the employment creation during construction to the income generating activities through the self-help promotion or local level capacity building. Once the Green highways and roads fully satisfy various sustainable development indicators defined under the three themes i.e. social, economic and environment of the sustainable development, the locals would be encouraged to take the ownership of the green roads for the sustainable maintenance. □

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Achieving SDGs & NDCs

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This article discusses the challenges thrown by Covid-19 against the achievements of Sustainable Development Goals (SDGs) and Nationally Determined Contributions (NDCs) which have normally operated in silos at national level despite their greater interrelations requiring an aligned implementation of the two processes for meeting international sustainable development goals and climate commitments. It further probes into the opportunities visible in the actions of different actors to tackle this pandemic that can be continued or replicated for combating the menace of climate crisis and achieving sustainable development in post-Covid times.

The enlightenments enshrined in the expression, “Earth provides enough to satisfy every man’s needs, but not every man’s greed” by Mahatma Gandhi came much before the Brundtland Commission which is credited to have given an official and most widely accepted definition of Sustainable Development. This Commission was constituted by the United Nations (UN) in 1983, which published its report ‘Our Common Future’ in 1987 defining Sustainable Development as the “...development that meets the needs

of the present without compromising the ability of future generations to meet their own needs”. The Brundtland Commission (constituted by the UN originally as World Commission on Environment and Development during 1983-87) also showcased Sustainable Development as a “...process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations”. These



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efforts of the UN were a culmination of the concerns and contributions of the work of thinkers across plethora of disciplines throughout the subsequent centuries starting from the 16th century with respect to sustainable use of resources in general and natural resources in particular vis-à-vis overpopulation of humans and their accelerated interventions, despite the existence and evolution of the concept of sustainability dating back to the ancient philosophy across the globe. Nonetheless, the decades of 1970 onwards and the year of 2015 occupy significant places in the timelines of sustainability pathways.

The subsequent decades starting from 1970 are considered significant for bringing the sustainability issues to the limelight and providing them with truly global attention under the auspices of the UN with the active support of multitude inter-governmental and non-governmental agencies and the national governments. The decade of 1970, for the first time, drew attention to the realisation about the widening gaps between developed countries and developing countries in terms of growth, and between natural hazards and anthropogenic disasters in terms of frequency and severity requiring thereby a significantly different approach towards global developmental issues. The decade of 1970—with the underpinnings of Stockholm Declaration making all the major public and private parties realise that present human developmental activities cannot be sustained on our planet indefinitely—also witnessed the notably significant Conference on the Human Environment in Stockholm which presented to the global community the visions of Sustainable Development in 1972 which is also famous for the publishing of the landmark ‘Limits to Growth’ by the ‘Club of Rome’ underscoring the need of a model output representing a sustainable world system capable of

satisfying the fundamental material requirements of every person without abrupt and out of control collapse.

The decade of 1980 also proved significant not only because of the seminal Brundtland Commission (1983-87) and its report ‘Our Common Future’ (1987) showcasing the three pillars of People-Planet-Profit encompassing social equity-environmental protection-economic growth as three dimensions of Sustainable Development; but also because of the birth of the Intergovernmental Panel on Climate Change (IPCC) in 1988 by the World Meteorological Organization (WMO) with the support of the UN Environment Programme (UNEP) for collating and assessing scientific evidence on climate change. The decade of 1990 was marked with the impactful event of Earth Summit in Rio (1992) and emergence of the UN Framework Convention on Climate Change (UNFCCC) (1994), as well as Kyoto Protocol (1997). The decade of 2000, the first of the new millennium, witnessed the emergence of 8 Millennium Development Goals (MDGs) in the UN Millennium Summit (2000) and acceptance of Kyoto Protocol as an international law (2005). Subsequently came the most significant decade of 2010, informally mentioned as a decade with the ‘Turbulent Teens’ because of multiple human-induced contributions forcing climate change to be rechristened as climate crisis, which was marked by the purposeful event of the UN Conference on Sustainable Development in Rio commonly referred to as Rio+20 (2012), Sustainable Development Summit in New York (2015), and Paris Climate Agreement in COP21 (2015).

While during all these years since 1970, the UN has provided a multilateral dialogue platform for member countries to engage in fruitful discussions on the global agenda of national and global developmental paths,





the culmination of these efforts was witnessed in the significant year of 2015 in which came to existence the Sustainable Development Goals (SDGs) and the 2030 Agenda in the Sustainable Development Summit of the UN; and Nationally Determined Contributions (NDCs) and the Paris Climate Agreement as an actionable agreement in the COP21 of the UNFCCC for strengthening global climate efforts to limit the global temperature rise below 2°C above pre-industrial benchmark levels by the end of this century while pursuing to limit it to 1.5°C.

SDGs and NDCs nurture the intent to tackle social-environmental-economic challenges collectively by the entire world ensuring peace and harnessing partnership calling on different member countries to tackle climate crisis by accelerating their actions and enhancing their investments for a sustainable future. The expedition of Sustainable Development towards Sustainable Development Goals has witnessed the inclusion of more dimensions (Peace-Partnership) in addition to the 3Ps (People-Planet-Profit) with the aim to combat climate crisis effectively garnering support of more dimensions (Recover-Redesign-Remanufacture-Rethink-Refuse-Replace-Repurpose) in addition to the 3Rs (Reduce-Reuse-Recycle). This may also lead to attain another R i.e. Rejoice (complete blissfulness) as the Prime Minister emphasised while encouraging its citizens to implement them in their routine lives to lessen problems, enhance appropriateness of solutions, and achieve development in a sustainable manner.

Addressing climate change means taking appropriate climate action at the appropriate time. NDCs represent climate plans at the national level submitted by member countries to the UNFCCC as per Paris Climate Agreement outlining their actions to address climate change including mitigation and adaptation actions. Climate change relates significantly to SDGs, which recognises its importance not only directly in the 'SDG 13: Climate Action', but also indirectly across different SDGs as a cross-cutting issue to be resolved for successful achievement of all the 17 SDGs considering it as a major threat to Sustainable Development with increased severity in future. The threat includes undermining development gains, hindering further progress, lowering incomes and opportunities of

vulnerable people, rising sea levels, changing patterns of rainfall and droughts, acidifying oceans, increasing frequency and intensity of natural hazards, lessening water availability and access, reducing food security, increasing migration, reducing livelihoods, deteriorating health, and damaging infrastructure amongst many others.

Climate change continues for decades or longer having caused by the nature, and human-induced activities responsible for generation of greenhouse gases (GHGs) emissions primarily from energy production, agriculture, industry, transport, buildings, deforestation, and land-use changes; and for an accelerated global warming. The SDGs and NDCs adopted in 2015 by different member countries of the UN across the globe represent two of the most significant universal and holistic international development result frameworks which should not be considered as isolated from each other while evaluating them on the basis of vision, principles, implementation and follow-up mechanisms covering the 5Ps and 6Rs. Although SDGs and NDCs are not legally binding, actions defined to meet them have the potential to contribute towards each other. At the national level, therefore, both the processes should not be operated in silos, given that as an aligned implementation offers huge opportunities at this juncture when the global mean temperature has already exceeded 1.1°C above the benchmark.

Any further delay can only cost much higher tomorrow if climate change is not tackled today keeping in view the urgent need to understand and harness the synergy existing between global climate actions and sustainable development in the long term. Adoption of an integrated approach gets further encouragements from the underlying synergy underlined by the Global Sustainable Development Report-2019 also highlighting the need



for a systemic approach to keep countries on the right track. The SDGs and NDCs both represent ambitious plans of action as the most comprehensive blueprints to date for the entire planet including member countries and all other actors in the UN system motivating them to adopt transformative and proactive actions in order to lead the world on to a sustainable path. They are built on the premise that enjoyment of fulfilling lives by all human beings can be ensured by developments occurring in harmony with nature which can maximise opportunities and minimise disruptions. They emphasise that the Ps and Rs need to be harnessed optimally to attain universal sustainable development with the active support of co-creation and collaboration along with innovations, representing a holistic approach to manage developmental challenges.

Climate change, which has also been recognised as a cross-cutting issue in the 2030 Agenda of the UN for its effect on 5Ps, is found to have the capacity to set back the developmental achievements in the past, present and future if not addressed properly through appropriate mitigation and adaptation mechanisms. Here, mitigation represents reduction of GHGs emissions by taking resource of, for e.g., conservation of forests-ocean ecosystems and using renewable energy sources; whereas adaptation represents protection of human population and their livelihoods and settlements from the negative consequences of climate change. The statements— of the Executive Secretary of the UNFCCC, Patricia Espinosa underscoring climate change as the biggest threat facing humanity over the long-term today; and of the UN Secretary-General, António Guterres that climate change has assumed the top position, far and away, in the list of global mega trends putting countries and communities under immense pressure—receive massive underpinnings from the revelations made by the WMO Secretary General, Petteri Taalas that following the current emissions path, the world is moving to see a global mean temperature increase between 3°C–5°C by the end of century.

Addressing climate change by limiting global temperature to 1.5°C instead of 2°C above benchmark levels has the potential to decrease exposure of people to climate risks and vulnerability to poverty by 62 to 457 million. The Global Sustainable Development Report 2019, however, shows the silver lining appearing in the possible solution pathways and huge opportunities brought forward by handling climate crisis through



appropriate adaptation and mitigation mechanism with the inherent potentialities for Sustainable Development outcomes. These outcomes broadly include improved energy access, health benefits, sustainable livelihoods, employment opportunities, resilient economies, and reduced poverty through mitigation measures and investments in renewable energy, conservation of forests and oceans ecosystems, and through other adaptation measures.

The World Business Council for Sustainable Development (WBCSD) President & CEO, Peter White, a few years back, had emphasised the willingness of big corporations, as major parties, in extending support for accelerating the transition to a sustainable future with the science-based targets making good on global initiatives of the UN referring the decade of 2010 as the ‘Turbulent Teens’. He further hinted that the aim of the business community was to move from the ‘Turbulent Teens’ to the ‘Transformation Times’ when the new decade would start in 2020. The ‘Turbulent Teens’ nomenclature appears to be apt for this period as it, amongst plethora of environmental risks and challenges, mainly witnessed the warmest five-years (2015-19) and ten-years (2010-19) periods on record, highest recorded temperatures for oceans, several warmest years on record, most acidic sea water, lowest Arctic sea ice and Antarctica ice, and to top it all the announcement of the president of the US exiting the Paris Climate Agreement.

“Out of the frying pan into the fire”, goes a popular proverb. While each old decade is given a befitting farewell and each new decade is welcomed with great fanfare, the similar warm welcome the time-honoured arrival of the decade of

The expedition of Sustainable Development towards Sustainable Development Goals has witnessed the inclusion of more dimensions (Peace-Partnership) in addition to the 3Ps (People-Planet-Profit) with the aim to combat climate crisis effectively garnering support of more dimensions (Recover-Redesign-Remanufacture-Rethink-Refuse-Replace-Repurpose) in addition to the 3Rs (Reduce-Reuse-Recycle).



collectively and maximum of the member countries individually were already lagging behind the scale and speed to meet SDGs and NDCs, the beginning of the decade of 2020 had to face an unprecedented Covid-19 crisis responsible for huge loss of human lives, and unparalleled collapse in economy leading it to an unforeseen conundrum witnessing huge investment outflow from emerging economy to the tune of USD 90 billion in only three months of 2020 with the IMF projecting fall of global

2020 too received but all has not been well afterwards. We are now in 20s of the century having exited its 'Turbulent Teens' with the aspiration of entering 'Transformation Times' without accounting for the tentative adverse effects of the anthropogenic actions in its 'Turbulent Teens' which were likely to unfold many an unprecedented consequence. We might fail by inflated estimation of our own wisdom by pondering that we are set to reap the rich harvest of development without thinking that development can be sustainable only if it does not try to outpace nature. Nonetheless, the national level reports warn that despite progress being made in some or the other indicators of these result frameworks of SDGs and NDCs, the overall actions are not as per the desired scale and speed to achieve these ambitious goals and commitments in this significant decade which we have already ushered in. This laggardness assumes greater significance in view of the challenges such as—projection of 43 mega cities mostly in developing countries by 2050; estimation of 50% of the global population living in fragile contexts in extreme poverty with an expected percentage increase to 80% by 2030 etc. It would be pertinent to mention that for the first time in the last 10 years, the annual 'Global Risks Report' published in 2020 by World Economic Forum has found that all of the 'top five global risks in terms of likelihood' are environmental while there was none related to environment in the year 2010. The reports also hints that global mean temperatures are set to exceed 3°C by the end of century, double of what is prescribed by UNFCCC and IPCC to avoid the maximum impact severity of the social-environmental-economic consequences.

As if these were not enough, at this crucial time when the world

growth to 3% indicating, the worst recession of all times. The Asia-Pacific region which has most of the vulnerable population of the planet is feared to witness huge drop in global demand and GDP, weakening fiscal position and exacerbating new debt crisis in addition to the already weak private investment and tax revenues. While all the experts including scientists would concur that we were at the crossroads to make all possible efforts to maintain a sustainable planet, the Covid-19 pandemic has pushed us in the 'Turbulent Times' catching us unprepared, rather than making an entry into 'Transformation Times' after exiting the 'Turbulent Teens'. Covid-19 has threatened the entire world having emerged as a global pandemic which requires massive investments in the healthcare system in different countries. Rejuvenating economies after Covid-19 would also require greater investments, which would compulsively be diverted from the potential investments in climate mitigation and adaptation activities, further pushing forward the deadlines delaying these mitigation and adaptation projects.

Nonetheless, taking a significant cue from what Winston Churchill once said after World War II while contributing to the formation of the United Nations that, "Never let a good crisis go to waste", his insight can be applied to these 'Turbulent Times' the world is going through, by taking Covid-19 as a test case in the context of climate crisis. Risks and challenges related to climate change appearing similar to Covid-19 on various counts are unevenly distributed across the globe with greater impacts on vulnerable disadvantaged population and communities. In these situations, while the investments are compulsively to be diverted to healthcare system and economic recovery, they can

Climate change relates significantly to SDGs, which recognises its importance not only directly in the 'SDG 13: Climate Action', but also indirectly across different SDGs as a cross-cutting issue to be resolved for successful achievement of all the 17 SDGs considering it as a major threat to Sustainable Development with increased severity in future.

be directed towards low-carbon opportunities in different sectors. As the more efficient SDGs and NDCs are founded on the learning received from the failures and successes of MDGs and Kyoto Protocol, similar learning from Covid-19 can also demonstrate us the right pathways and directions for tackling the climate crisis.

At the time, when the health emergency situations sparked by Covid-19 forecast worst economic scenario of the century, right policy responses are key to obviate any risk arising from the deepening of climate crisis any further. Moreover, these ‘Turbulent Times’ have given us the time to redefine and rediscover our relations with the nature. In the prevailing situations, the incentives for adopting more climate-friendly practices should be encouraged by the governments. Corporate sector which has shown their responsibilities towards society during Covid-19 can continue/be encouraged to continue to optimally utilise these approaches—such as Corporate Social Responsibility (CSR), Life Cycle Assessment (LCA), Climate Strategy Proactivity (CSP), Circular Economy, to name a few—even after the Covid-19 is gone if incentivised properly by the governments. The NDCs already have incorporated provisions to incentivise private sectors adequately in order to secure their support for meeting the climate action commitment. At a time when ‘Work from Home’ (WFH) and ‘Online Conference and Meetings’ have not only gained traction but have emerged significantly as viable models as new normal; can reduce emissions from different modes of transport including heavily polluting flights remarkably if harnessed properly in future. Companies across the world too have made the reassessment of the viability of the short and simple supply-chains to avoid the impact of shortages on their business during imposed lockdown, which could also have

ODL can optimally be utilised for the specific purpose of providing education-training-awareness as it can adequately align the Open Educational Resources (OERs), Massive Open Online Course (MOOC) portals, Podcasting, e-libraries and Social Media contents to harness appropriately the future online teaching-learning opportunities. Engagement of premier ODL institutions such as IGNOU which has been successful in its attempts emphasising the effective and efficient combination of all of these attributes can help government harness ODL to achieve the desired speed and scale.

positive impact on the emissions and operational risks in future.

Although Covid-19 has further delayed the process of finalising the much-awaited rulebook of Paris Climate Agreement as the COP26 to be held in Glasgow in November, 2020 stands postponed to November, 2021 due to Covid-19, the delay has undoubtedly provided the UNFCCC and member countries with extra time of as much as one full year to revisit the processes and models of COP, the hectic annual schedules of which have never given them such extra time, not a moment, in the last 25 years. For example, the Article 12 (of Paris Climate Agreement) and Article 6 (of the UNFCCC), enshrining the agenda of education-training-awareness (Action for Climate Empowerment, (ACE)) requiring member countries to take appropriate steps for relevant educational initiatives, have not been accorded priorities by them which can be revisited to reach a meaningful

end. The way Covid-19 has transformed the teaching-learning process with shifting ample focus on the Open and Distance Learning (ODL) system. ODL can optimally be utilised for the specific purpose of providing education-training-awareness as it can adequately align the Open Educational Resources (OERs), Massive Open Online Course (MOOC) portals, Podcasting, e-libraries and Social Media contents to harness appropriately the future online teaching-learning opportunities. Engagement of premier ODL institutions such as IGNOU which has been successful in its attempts emphasising the effective and efficient combination of all of these attributes can help government harness ODL to achieve the desired speed and scale. Revisiting and rethinking during these times might also facilitate us in critically evaluating, for example, of the usage of the words “...exploitation of resources...” in the definition of Sustainable Development given by the Brundtland Commission indicative of the mindset of taking resources for granted, and in being vocal for substituting it with more suitable words such as “...judicious utilisation of resources...”. Sustainability—considerably associated with the concept of ‘Tragedy of the Commons’—which highlights that good for all is good for each of us—cautions us against having a myopic vision which restricts to look at calendar and facilitates us to start considering clock as the true representative of time. However, long-term goals must not fall beyond the realm of our poor vision. Further, the usage of the term “...common but



differentiated responsibilities...” in the Paris Climate Agreement for the purpose of facilitating joining of hands effectively by different actors, suitable mechanisms to obviate the risk of ‘responsibility of everybody is responsibility of nobody’ need to be put in place to fix the accountability while harnessing the benefits of partnerships.

The recent measures outlined by the UN along with its partner organisations for addressing the new challenges include urging policymakers, governments and monetary authorities for showing immediate and coordinated response to negate the impact of Covid-19, and ensuring channelisation of adequate finance to SDGs and NDCs—using coordinated stimulus package, allowing immediate suspension of debt payments, reassessing debt sustainability, stabilising financial markets with the injection of adequate liquidity, partnering with financial institutions to roll over debts, facilitating public and private investment in Sustainable Development, strengthening social protection systems, investing additionally in crisis prevention/risk reduction/planning, and removing trade barriers affecting supply chains. It is also notable that during Covid-19 pandemic, the global emissions have reduced significantly and is expected to be between 4.4 to 8% marking the largest annual emissions reduction since World War II. Without justifying the occurrence of global pandemics of this scale, these actions which have been responsible for the emissions reductions could be replicated in the new normal situations as enough scientific evidences would be available to support such emissions reducing initiatives which otherwise would not have been available in normal situations.

Further, as envisioned by the Prime Minister in promulgating the adoption of model of ‘Aatmanirbhar’ (self-reliant) and call for ‘Vocal for Local’ during and post-Covid-19 times, the similar appropriate interventions with the participation of various actors at the local levels can bring forth suitable climate solutions also, in a bottom-up approach integrating the participation, engagement, leadership, innovation, co-creation and collaboration as per the need of the local people. Such local and participative approach might give birth to such climate actions which do not compromise economic development. Mahatma Gandhi’s ‘Sarvodaya’ too had emphasised the need for local sustainable agricultural and small-cottage industry methods and challenged the need for unsustainable rapid industrialisation methods which highlight that he was

Mahatma Gandhi’s ‘Sarvodaya’ too had emphasised the need for local sustainable agricultural and small-cottage industry methods and challenged the need for unsustainable rapid industrialisation methods which highlight that he was in favor of providing support to the production and consumption at local level with local resources finding them as most sustainable which he focused in his seminal book the ‘Hind Swaraj’ which is considered informally by many as a Manifesto of Sustainable Development.

in favor of providing support to the production and consumption at local level with local resources finding them as most sustainable which he focused in his seminal book the ‘Hind Swaraj’ which is considered informally by many as a Manifesto of Sustainable Development. Effective continuation of ‘Aatmanirbhar’ (self-reliant) and ‘Vocal for Local’ used in Covid times for economic recovery—also in post-Covid times—might have inherent potentialities in terms of tackling climate crisis, for example by decreasing carbon footprints resulting from lesser ‘food miles’ and transportation of non-local products, in addition to acquiring global competitiveness and finally achieving sustainable development.

It is true Covid-19 has posed huge economic challenges and it might appear to be derailing the ambitious climate plans, we instead of being pessimistic rather consider it as an opportunity to boost clean technology, green productions and responsible consumptions while trying to bring about economic recovery using the experience of Covid-19 as an impetus to harness optimally the cooperation and multilateralism. Covid-19 has amply indicated towards existence and emergence of the political leaderships at different levels which pay sincere attention to the scientific suggestions to be replicated in combating climate change too. Meanwhile, Covid-19 era has witnessed the remarkable facilitation of collaborations with global implications which will be helpful in the battle with climate crisis. Nonetheless, these ‘Turbulent Times’ call all the major parties for making the right choices of policies and decisions to ensure better healthcare system for one and all, without ignoring the goals and commitments under SDGs and NDCs for a sustainable future so that the world community could enter the much-needed ‘Transformation Times’.

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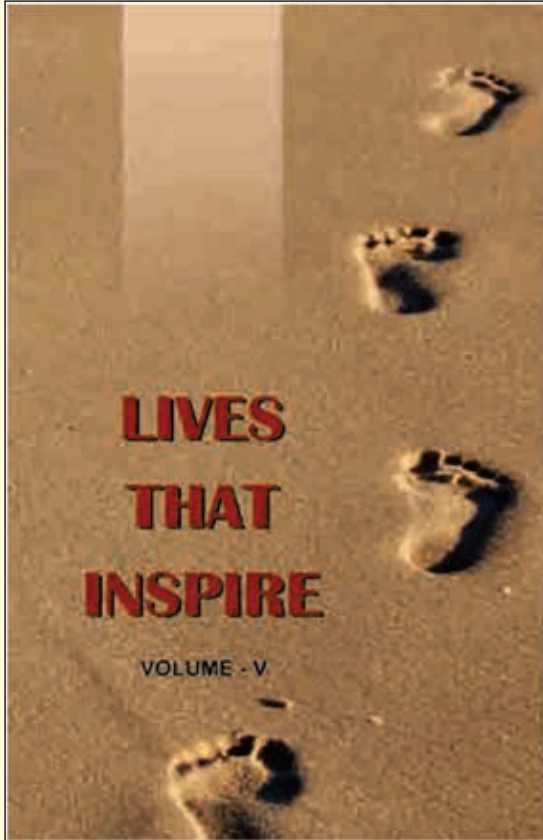
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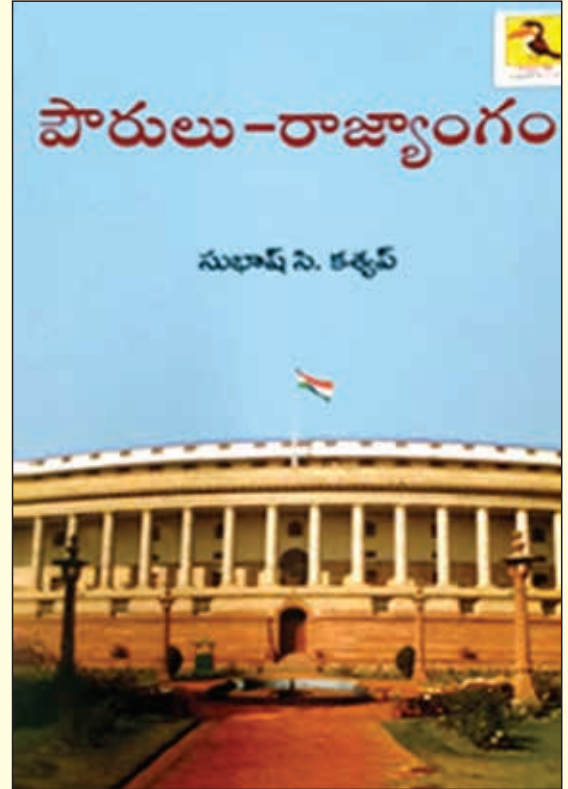
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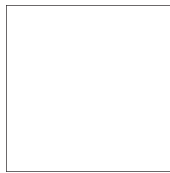
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