MUKUL ASHER
ON
ECONOMIC REASONING AND PUBLIC POLICY: CASE STUDIES FROM INDIA

Editors
V.K. Ahuja
Ajay B. Sonawane

DELHI SCHOOL OF PUBLIC POLICY AND GOVERNANCE
(INSTITUTION OF EMINENCE)
UNIVERSITY OF DELHI
DELHI-110007

First Edition 2021

Publishers :
Delhi School of Public Policy and Governance,
Institution of Eminence,
University of Delhi, Delhi-110007

ISBN : 978-81-952281-1-9

Released in the format of E-book reader in 2021 in India by Delhi School of Public Policy and Governance, Institution of Eminence, University of Delhi, Delhi-110007.
Website : www.dsppg.du.ac.in

MUKUL ASHER

ON

ECONOMIC REASONING AND PUBLIC POLICY: CASE STUDIES FROM INDIA

Editors

Professor V. K. Ahuja
Faculty of Law University of Delhi
Joint Director
Delhi School of Public Policy and Governance
Institution of Eminence, University of Delhi

Dr. Ajay B. Sonawane
Assistant Professor
Faculty of Law
University of Delhi

DELHI SCHOOL OF PUBLIC POLICY AND GOVERNANCE
(INSTITUTION OF EMINENCE)
UNIVERSITY OF DELHI
DELHI-110007

PROFESSOR MUKUL G. ASHER: A PROFILE

Professor Mukul G Asher is an internationally recognized scholar. Even after the institutional retirement, Professor Asher continues to research and study more than many younger academics and researchers. Professor Asher enjoys wide respect in academia and in policy circles throughout the world.

Professor Asher, a humble personality, was born in Mumbai. He did his B.A. (Hons) in Economics from Mumbai University, and then proceeded to the USA for further studies. He did M.A. (1968), and Ph.D. (1972), both in Economics, from Washington State University, U. S. A.

Professor Asher was a faculty member with the Department of Economics, and later with the Lee Kuan Yew school of Public Policy at the National University of Singapore for over four decades, stepping down in June 2018. He is a Senior Associate for Executive Education at the Lee Kuan Yew School of Public Policy, National University in Singapore. He has been a Visiting Faculty at the Asian Public Policy Program at Hitotsubashi University in Tokyo since the early 2000s.

His research focuses on public financial management, including the public private partnerships (PPPs); social security reforms, particularly pensions and health care, in Asia; and on application of economic reasoning to public policies.

He has published extensively in national and international journals; and has authored or edited more than fifteen books. He has published in all around 400 articles, chapters in books, conference papers, and columns. He is on the Editorial Board of several Journals, including Poverty and Public Policy. He has made presentations at many conferences, seminars, workshops, and webinars at various universities, professional associations, and institutes throughout the world.

He has been a consultant or advisor to several Governments in Asia on tax policy and pension reforms; and to multilateral institutions including the World Bank, International Monetary Fund, Asian Development Bank, World Health Organization, Pension Fund Regulatory and Development Authority of India, Government of Gujarat, Government of Haryana. He is a member of an Expert Committee on Social Protection set up by NITI Aayog.

He is actively involved with various research organizations and think tanks, including ERIA (Economic Research Institute for ASEAN and East Asia) in Jakarta. He co-led several projects for ERIA, including on Financing Infrastructure in Asia.

He served as Chairman, 5th State Finance Commission of Haryana from May 2016 to September 2017, when the Report was submitted. In May 2020, he was appointed as chairperson for Task force on Resource Mobilization for the State of Haryana.

He is currently serving as Senior Advisor, Strategy, to Government of India's International Financial Services Centres Authority, GIFT City, Gandhinagar, Gujarat.

He has led or participated in numerous Executive Development Programs for government officials at all levels. These include programs for the states of West Bengal, Assam, and Madhya Pradesh, Indian Railways, CAG (Comptroller and Auditor General of India), Indian Revenue Service; as well as for government officials from Bangladesh, Brunei, Cambodia, Dubai, Indonesia, Kazakhstan,Russia, Sri Lanka, and Vietnam.

He serves on the Board of two companies, one of which is a listed company on the NSE (National Stock Exchange) and BSE (Bombay Stock Exchange).

It is a matter of great pride that in view of scholarly achievements of Professor Asher, the University of Delhi has nominated him as a Member of the Governing Body of Delhi School of Public Policy and Governance (Institution of Eminence).

Professor Asher may be contacted at mukul.asher@gmail.com.

INDEX

PREFACE

The e-book titled "***Mukul Asher on Economic Reasoning and Public Policy: Case Studies from India***" is a collection of recent columns authored or co-authored by Professor Mukul Asher on applying economic reasoning to public policies in India. As India progresses towards USD 5 trillion economy, and as it addresses its socio-economic challenges, public policy discussions which are based on appropriate context-specific analytical frameworks and concepts, using empirical evidence in a judicious manner to advance public interest, have become vital.

The book also helps fill a gap in the literature as analysis of India's Post-2014 public policies and initiatives have not received deserved interest from the academics, think tanks, and researchers. This e-book represents a small step towards redressing this imbalance.

The DSPPG plans to publish a series of books on a diverse set of public policy issues India, with a view to improve the quality of public policy education and dialogue in India. The present e-book is first in the series. All books are to be uploaded on the Website of Delhi School of Public Policy and Governance (DSPPG), University of Delhi and made freely available to all.

The significant number of writings of Professor Mukul Asher which were being published at different online and other platforms on a regular basis, inspired us to bring out this edited e-book under the banner of DSPPG. The DSPPG has been established as a part of the ***Institution of Eminence***, a status conferred by Ministry of Human Resource Development (now Ministry of Education), Government of India. The DSPPG was established to conduct research, undertake projects, impart education by offering various courses on public policy and governance, and conduct other academic activities such as faculty development programs, conferences, seminars, workshops, etc.

On behalf of DSPPG, we requested Professor Asher to allow us to publish his works in the form of an e-book, as the e-book will not only comprise his analysis on various aspects of economic policies of India but also categorise them under various themes to make it more coherent. This edited e-book may become a prescribed or recommended reading for the students of public policy and governance in India and other countries. We are extremely thankful to Professor Asher for giving us the necessary permission and assisting us in the organisation of this book.

The e-book contains 28 chapters, each based on his columns. It is divided into four parts. The first part is *Economic Growth and Sustainable Development* (ten columns). The second part is *Public Financial Management* (six columns). The third part is *Social Protection, Pensions, and Health Care* (six columns). The fourth and the last part is *India and the Global Economy* (six columns). These columns have been left as they were published, except for very minor changes in some of them.

All but two columns have been published at Myindmakers (https://www.myind.net/). The remaining two columns have been published at Lokmaanya (https://www.lokmaanya.com/why-some-indian-states-will-descend-in-their-economic-rankings/); and Money control (https://www.moneycontrol.com/news/personal-finance/epfo/).

On behalf of DSPPG, we express our gratitude to Professor Asher for getting us the permission from Myindmakers, Lokmaanya, and Moneycontrol for re-publishing his work in the form of an e-book. We also express our gratitude to them for permitting DSPPG to publish the work of Professor Asher in this edited book. We arethankful to all the co-authors of columns included in this e-book for their permission to publish them. Their affiliations are stated in the respective columns.

The editors have been diligent in ensuring that the book is well-organized for accessibility and policy-relevance, with high standards in editing. The book is designed to be useful to policymakers, students and researchers, professors and other academics, and those interested in understanding and improving India's public policies.

Professor V. K. Ahuja
Faculty of Law University of Delhi
Joint Director
Delhi School of Public Policy and Governance
Institution of Eminence, University of Delhi

Dr. Ajay B. Sonawane
Assistant Professor
Faculty of Law
University of Delhi

May 07, 2021

PART I
ECONOMIC GROWTH AND SUSTAINABLE DEVELOPMENT

CHAPTER 1

UTTAR PRADESH STATE EMERGING AS A KEY GROWTH NODE*

I. Theme

There is increasing recognition that individual states in India have considerable leeway, especially if they operate with a constructive and cooperative mindset, to improve household welfare and help take the state to a higher level of development. In recent years, but especially since the Covid-19 Pandemic, the Uttar Pradesh government, led by Yogi Adityanath, has taken several initiatives which have the potential to turn the state into a key diversified growth node for India. The state has a population of about 240 million, about 17 percent of India's population. In 2020-21, the GSDP (Gross State domestic product) of the Uttar Pradesh state is projected to be INR 17.9 trillion (equivalent to USD 256 billion).[1]

The State has an ambitious vision to raise its GSDP to USD 1 trillion by 2025, when India aims to become USD 5 trillion economy. This represents a quantum leap in the State's contribution to 20 percent of India's GDP from about 8.5 percent in 2020-21. The above very ambitious goal in turn requires transformative changes in the State's economic, social, and political management. Even if the State achieves good progress towards its ambitious goal, the State would help facilitate India's broader geo-economic and geo-strategic goals. This column discusses some of the major initiatives undertaken by the Uttar Pradesh government, and their implications.

II. A Growth Diagnostics Framework: An Overview

The initiatives taken by the Uttar Pradesh government have been consistent with a framework to increase outcome and income per household as suggested in a growth diagnostics framework in Figure 1. It should be noted that a framework is designed to aid thinking and focus on key areas. It is not a blue print to be followed as would be the case for building a bridge or a building. The column is not intended to suggest that the Uttar Pradesh has taken initiatives with the framework in Figure 1 in mind. The column argues that the initiatives are consistent with what the framework suggests in the context of conditions in Uttar Pradesh state.

There are five key elements in the Framework, which need to be integrated in a context-specific manner. These are: physical investment; knowledge application and productivity; productive livelihoods; skill-sets; and cooperative federalism.

---

*This was published on November 8, 2020.
The link is: https://myind.net/Home/viewArticle/uttar-pradesh-state-emerging-as-a-key-growth-node/

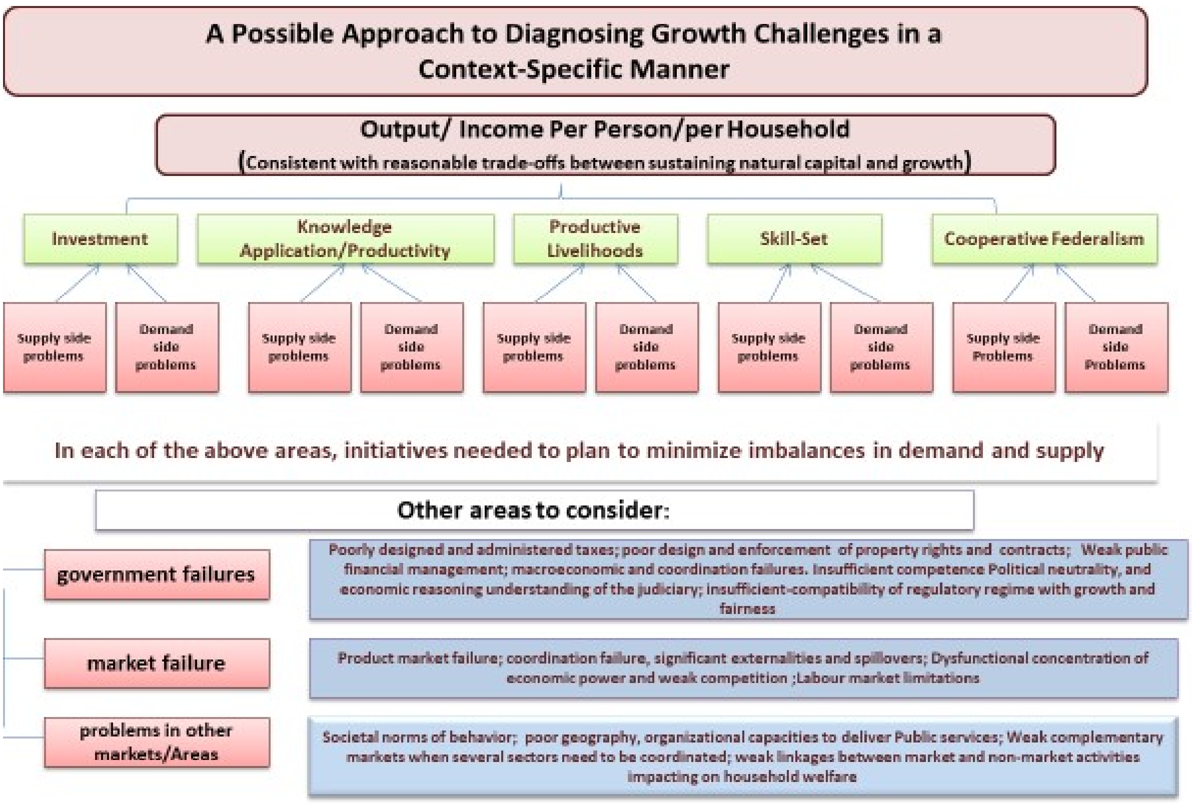
[1] https://www.ibef.org/states/uttar-pradesh-presentation accessed on 20 October 2020.

In each of these areas, it is essential to calibrate demand and supply factors, avoiding large imbalances between the two. Thus, initiatives, which expand demand for healthcare, or for specific skills, but without commensurate increases in the supply of these services, create considerable distortions, adversely impacting on the desired outcomes.

The Framework suggests that besides addressing relevant market and government failures, complementary markets also need to be addressed, especially for large infrastructure projects. Among the government failures, improving numerical skills, legal and regulatory skills, economic literacy levels, and technocratic rather than partisan political orientation of the government institutions, and officials, including the judiciary, are essential for the country and individual states to progress.

The Framework envisages a coordinated use of market, state, not-for-profit sectors, social enterprises, and others to help the state (and country) progress towards desired outcomes. Each of the elements of the Framework is discussed separately for expositional convenience. In fact, they are interrelated. Thus, investment initiatives have major implication for productive livelihoods generation, skills set, and introduction of new knowledge and ideas.

Figure 1: A Growth Diagnostic Framework



Source: Adapted and modified in November 2020 by Mukul Asher based on Dani Rodrik (2010) Diagnostics before *Prescription. Journal of Economic Perspective, Vol. 24(3). Pp. 33-44*

III. Initiatives of the Uttar Pradesh state

a. Investments

Only select initiatives of the Uttar Pradesh government designed to attract domestic and international investments are provided below.

The State is undertaking major public infrastructure projects, while facilitating investments by the private sector in the State. There have been major investment proposals in infrastructure and industrial development projects from foreign companies involving about ten countries. These companies are reportedly planning to invest INR 450 Billion (USD 6 Billion), and are likely to generate around 0.13 million livelihoods across the State. These companies have already been allotted 426-acre land. The investors are being provided 166 services through *'Nivesh Mitra'* portal, which is a single-window system of the Uttar Pradesh government for ease-of-doing business.[2]

According to Zurich Airport International Asia, winner of the project, phase-I of the Jawar airport project is expected to be completed by early 2024. On completion, the airport, under phase-I, will cater to 12 million passengers.[3] The airport is expected to lead to substantial crowding-in of other investments, especially in the real estate and logistic sectors.

Uttar Pradesh State has announced plans to build a full-fledged Film City near Hastinapur area on the Yamuna Expressway. The location is around 6 km from the proposed Noida International Airport in Jawar, and is well connected with the rail. It is also close to the Eastern Peripheral Expressway and is nearby India's only Formula One track, the Gautam Buddha International Circuit. Services and creative industries expand livelihood opportunities and enhance skill sets as well.[4] Competition for film production and related activities in different cities augurs well for the industry, as competition is a single most important factor in improving efficiency, and in better utilization of resources.

The State is also planning to establish a Financial City in the western region of the state near a proposed Film City. The intention is to make it a financial hub, where facilities exist for different financial institutions and services so that they can make it their headquarters. The aim is to provide a single platform for all financial

---

[2] https://zeenews.india.com/india/up-likely-to-generate-over-1-35-lakh-jobs-after-foreign-companies-invest-in-state-2321613.html'Accessed accessed on 1 November 2020.

[3] https://www.proptiger.com/guide/post/how-the-upcoming-jewar-airport-will-change-the-face-of-ncr-real-estate accessed on 4 November 2020.

[4] https://zeenews.india.com/india/indias-biggest-film-city-to-be-built-near-hastinapur-it-will-be-symbol-of-nations-identity-uttar-pradesh-cm-yogi-adityanath-2311521.html accessed on 23 September 2020.

services and requirements.[5] Learning financial skills will augment skills sets available in the State, and help provide livelihood opportunities, while attracting talent to the State.

The State government is planning to develop an Electronics City spread over 1,000 acres in the National Capital Region (NCR). The facility would come under the jurisdiction of the Yamuna Expressway Authority and showcase UP as the emerging electronics manufacturing hub of India. Under ESDM (Electronic System Design & Manufacturing), the government had targeted investment of about INR 200 billion and 0.3 million new job opportunities over the next few years.[6]

The process of land acquisition has begun for the ambitious project of developing Ayodhya as a global pilgrimage city. This could assist in employment generation, and in enhancing India's civilizational ethos.[7] In 2018, domestic tourist arrivals in the State were 285 million and it stood second in the country. Foreign tourist arrivals were 3.8 million and it ranked third.[8]

Uttar Pradesh government has received a total of 92 applications from domestic toy manufacturers to set up units at the toy manufacturing industrial hub which is being developed near the upcoming international airport at Jewar. A total of 100 acres of land spread across 155 plots of different sizes is to be awarded to toy manufacturers, with projected investment of INR 30 Billion.[9]

Uttar Pradesh government plans to construct about 5,000 warehouses to allow farmers to store their produce safely and get a fair price for their efforts. According to reports, at least one warehouse will be constructed for every 10 villages.

The scheme is expected to cost INR 25 Billion, and expected to increase the storage capacity of the state by 8.60 lakh tons. This will help farmers protect their

---

[5]https://indianexpress.com/article/cities/lucknow/financial-city-come-up-west-up-adityanath-6607387/ accessed on 25 September 2020.

[6]https://www.business-standard.com/article/economy-policy/yogi-govt-plans-1-000-acre-mega-electronics-city-as-part-of-rs-200-bn-plan-118091400715_1.html#:~:text=The%20Uttar%20Pradesh%20government%20is,electronics%20manufacturing%20hub%20of%20India accessed on 15 September 2020.

[7]https://swarajyamag.com/news-brief/adityanath-initiates-land-acquisition-process-for-new-ayodhya-project-samajwadi-party-joins-farmer-protests-over-airport-land-compensation accessed on 15 October 2020.

[8]https://www.ibef.org/states/uttar-pradesh-presentation accessed on 20 October 2020.

[9]https://swarajyamag.com/insta/up-govt-receives-92-applications-from-toy-makers-to-set-up-units-near-jewar-airport-land-to-be-allotted-within-15-days accessed on 21 September 2020.

produce during natural calamities like rain and fire, and help them obtain better rates as storing food grains properly will help preserve their quality.[10]

The State intends to develop defence and aerospace industry with the aim of generating 0.25 million jobs and expects an investment of INR 500 Billion (USD 7.46 billion) over the next five years.

b. Knowledge Application and Productivity

Uttar Pradesh is the fastest growing state in terms of green building projects. It has more than 570 such projects (nearly 10 percent of total such projects in India), covering over 1,400 million square ft area, according to the Indian Green Building Council (IGBC).[11]

As a part of reviving 19 rivers in the State, a Chennai-based company has been partnered by the state to clear the Pandu river through bioremediation technology, which involves using living organisms like microbes and bacteria to remove contaminants, pollutants and toxins from water. At the same time, four drains carrying industrial and domestic waste are being tapped. The company is to start treating the water at the origin point from November 2020 before it gets into the river.[12]

c. Productive livelihoods

As a part of the 'One Village One Pond' initiative, Jhansi district in Uttar Pradesh has revived 406 ponds by early October 2020. The initiative has provided employment to about 11,000 migrant workers who had returned to their villages during the pandemic. The work on remaining 90 ponds is likely to be completed by the end of October 2020. The revival of water bodies would help in improving the ground water level in drought-hit Bundelkhand. Thus, this initiative will help broaden economic and livelihood choices of the people, facilitating their rootedness in the district.[13]

---

[10]Pronhttps://krishijagran.com/agriculture-world/good-news-uttar-pradesh-to-set-up-5000-warehouses-for-farmers-amid-protest/?utm_source=izooto&utm_medium=push_notifications&utm_campaign=Good%20News!%20Uttar%20Pradesh%20to%20Set%20up%205000%20Warehouses&utm_content=&utm_term=ami accessed on 27 October, 2020.

[11]https://economictimes.indiatimes.com/news/economy/infrastructure/uttar-pradesh-among-the-fastest-growing-states-in-green-projects-says-igbc/articleshow/77563825.cms?from=mdr accessed on 15 August 2020.

[12]https://swarajyamag.com/insta/yogi-govt-revives-two-rivers-working-on-17-other-endangered-rivers-in-the-state accessed on 16 October 2020.

[13]https://swarajyamag.com/insta/one-village-one-pond-initiative-over-400-water-bodies-revived-in-ups-jhansi-district-in-past-four-months accessed on 9 October 2020.

One of the requirements for facilitating productive livelihoods is to ensure safety of girls and of women. It is widely accepted that this requires societal change, but also impartial law enforcement. It is therefore essential to reach the people at all levels of urban and rural society. Among the major initiatives in this direction is the Mission Shakti Program. In the first phase, awareness concerning women safety is the focus. In the second, legal action is contemplated. In the third phase, action against people who are a threat to the security of women and against those who are promoting wide scale corruption in the schemes meant for the welfare of women.

Shakti Program envisages a two-fold effort to ensure women's safety. First is to build a defence system for women's safety over policing efforts. The second is for endeavours through campaigns, the involvement of teachers and self-help groups, and most importantly, the village chiefs.[14]

The State has had a major success in controlling the encephalitis disease. This is indicated by significant decline in deaths due to encephalitis in the State. The death in 2014: 661, in 2015: 521, in 2016: 694, 2017: 747, (CM Adityanath Yogi became Chief Minister of the state in March 2017), 2018: 255, 2019: 147, and 2020 (Till September): 31. Back in 2011, the encephalitis during monsoons in the state used to be called "season of death".[15] This health achievement implies potential to lead more productive lives.

d. Skills Sets

Application of new techniques in agriculture is likely to improve skills sets, help provide productive livelihoods, improve soil health, and generate other environment benefits. One such initiative is promotion of cattle-based Zero Budget Natural Farming. The state is planning to develop destitute cowherd shelters into cow-based natural agriculture and other cow products training centres in the state.

The state aims to develop Bundelkhand as the main centre for Zero Budget Natural Farming so that the economic development of the entire region will be possible through agriculture. To encourage natural farming, the state is also planning to include it in the curriculum of agricultural universities. This will enhance the skills sets of the agriculturalists. Under *Namami Gange* project on both sides of the Ganges, natural farming is being encouraged. In the first phase, master trainers are being prepared in 1038-gram panchayats, who will go to the villages and give training to farmers on cow-based farming. Ganga Plain, Ganga Udyan

[14] https://swarajyamag.com/politics/yogi-adityanaths-mission-shakti-aims-for-cultural-change-in-villages-using-hindutva-and-this-is-exactly-where-bjp-was-expected-to-place-its-fight-against-gender-atrocities accessed on 3 November 2020.

[15] https://hindi.swarajyamag.com/politics/encephalitis-uttar-pradesh-cm-yogi/N accessed on 10 September 2020.

(Garden), Ganga Forest, and Ganga Talab are also being developed along the Ganga river to facilitate natural farming.[16]

e. Cooperative Federalism

The State government is working on the revival of as many as 19 rivers that were almost dead and could well have been termed as endangered. Two of the rivers, Mandakini and Tamsa, that have mythological significance, have already been revived, while work is progressing on the remaining 17 rivers. The Rural Development Department of the State has been working in close coordination with the Union Jal Shakti Ministry for reviving the rivers, a good example of Cooperative Federalism.[17]

As the State government has been cooperating and implementing various infrastructure and social sector schemes of the centre in a constructive and competent manner, no separate examples are given. Most of the initiatives of the State do require cooperation and support of the Centre, which has been forthcoming. This complementarity between the Centre and the State is an important contributing factor in the State's impressive performance.

Administrative reforms at the Centre and in the States are long overdue. The State government is therefore strongly urged to leverage the Centre's Karmayogi Scheme to help significantly enhance competencies and skill-sets of its public sector organizations and officials, and of the political party operatives, including officials. This also applies to state judiciary. Without leveraging on the scheme such as Karmayogi, whose goals are of medium-term nature, Uttar Pradesh State will find it difficult to achieve its ambitions.

The Karmayogi scheme of the Centre is expected to cover 46 lakh Central government employees, at all levels, and involve an outlay of INR 51 billion over a five-year period. The capacity building is to be delivered through iGOT Karmayogi digital platform, with content drawn from global best practices. The platform will act as a launchpad for the National Programme for Civil Services Capacity Building (NPCSCB). The Karmayogi scheme is expected to support a transition from "rules-based to roles-based" Human Resource Management (HRM) so that work allocations can be done by matching an official's competencies to the requirements of the post.[18] This represents a major paradigm shift in the public sector.

---

[16] https://krishijagran.com/agriculture-world/know-how-up-farmers-will-become-self-dependent-through-natural-arming/?utm_source=izooto&utm_medium=push_notifications&utm_campaign=Know%20How%20UP% accessed on 1 October 2020.
[17] https://swarajyamag.com/insta/yogi-govt-revives-two-rivers-working-on-17-other-endangered-rivers-in-the-state accessed on 16 October 2020.
[18] https://pib.gov.in/PressReleseDetailm.aspx?PRID=1650633 accessed on 25 September 2020.

IV. Concluding Remarks

This column has provided selected examples how the initiatives of the Yogi Adityanath led government in Uttar Pradesh is consistent with the Growth diagnostic Framework presented in Figure 1. The analysis suggests initiatives to broad-base the economy of the State, and to enhance opportunities for productive livelihoods and skill sets. The State is emerging as a key growth node, and this is helping India's aim to become a major global power. The other states could adept the framework and structure their initiatives to be consistent with the above Framework.

Prime Minister Narendra Modi in his address to IIT (Indian Institute of Technology), Delhi, made profound but succinct observations for being relevant in the 21st century. These observations are vital not just for Uttar Pradesh state but also all other states, for India, and for private, public sector organizations, and social enterprises. They are also relevant to individuals, particularly those in whom society has put trust.

The Prime Minister urged the IIT graduates to focus on quality, ensure scalability, make innovations work on a mass scale and direct them to the needs of common people, assure reliability, build long term trust in the market (and for government and institutions among citizens and stakeholders), bring in adaptability, and finally be open to change and expect uncertainty as a way of life.

The above remarks of the Prime Minister Modi rightly suggest that in economic development, intangible factors, such as trust and reliability, are as critical as the tangible factors, something that the current leadership of Uttar Pradesh has recognised. Sustaining the current initiatives and other reform efforts will continue to be a challenge for the State policymakers and test their skills in political economy management.

CHAPTER 2

RECENT EXAMPLES OF STRATEGIC CONCEPTS OF ATMANIRBHAR BHARAT AND BE-VOCAL-FOR–LOCAL*

I. The Context

In response to the Covid-19 Pandemic, India's economic policy has been guided by strategic concepts of Atmanirbhar (self-reliant) Bharat Abhiyan (ABA), and Be-Vocal-for Local (BVFL). Variants of these concepts have been applied globally, as the Covid-19 Pandemic has underscored the urgency of not being over-reliant on one economic partner, and not becoming over-dependent on narrowly-based elaborate supply and logistic chains. There is a fundamental rethinking around the world about how a country should participate in the globalization process in the changed global environment, while simultaneously pursuing democratic practices, and maximizing national sovereignty. Geo-politics and diplomacy surrounding covid-19 vaccine supply chain underscores the need or rethinking globalization. Very difficult trade-offs are involved in such balancing, and there is no one correct response. The ABA and BVFL, a major part of India's balancing act, have the potential to substantially expand trade, investment, and cross-border manpower flows, as it lays the foundations for higher and more broad-based and resilient growth in India.

II. Interpreting ABA and BVFL

Atmanirbhar Bharat Abhiyan (ABA) literally means a movement to make India (Bharat) more self-reliant. Self-reliance in this context is meant to embark on a path of India pursuing enhanced global competitiveness and competence in sectors and activities of key importance for India's geo-economic and geo-strategic goals.

The Principal Economic Advisor, Government of India, Sanjeev Sanyal has argued that "…the idea of self-reliance is about resilience, leveraging internal strengths, personal responsibility, and a sense of national mission (or "Man Making") to use the late 19th century expression of Swami Vivekananda".

ABA is designed to enhance the ability of Indian companies to create world-class products and capture the domestic market and then use the strength of the domestic market to penetrate into the global market. ABA encourages Indian businesses to move into new technology areas, and to adept existing technology to suit the Indian conditions and context through context specific sectoral incentives. India is also attempting to bring about attitudinal and behavioural change to facilitate ABA.

---

*This was published on 20 December, 2020.The link is: https://myind.net/Home/viewArticle/shining-examples-of-strategic-concepts-of-atmanirbhar-bharat-and-be-vocal-for-local/

NITI (National Institution for Transforming India) Aayog's CEO Amitabh Kant, in a recent webinar has argued that India's approach is not about turning inwards, but about creating global champions. "It's not about protection but promotion combined with performance. There are certain benchmarks set and the incentives are based on that. Additionally, there is terminal date for these incentives."

The BVFL is designed to enhance the importance in policies and behaviour by stakeholders given to home-grown products, management, ideas, and techniques, and to the indigenous expertise. The BVFL requires a behavioural change, which does not come about automatically or quickly. It is a process which must be sustained, and underpinned by solid capabilities. The ABA and BVFL are to be applied with technology-centric efforts to the economic sectors, including infrastructure, agriculture, and business regulation, expanding economic freedom and use of markets; and to social sectors such as health care.

One example which underlines the need for BVFL is that while Indian have not given sufficient recognition to the country's recent initiatives to transform the economy and society, it has taken Mr. Bill Gates of Microsoft to state at Fintech Festival in Singapore in early December 2020 that:

> "If people are going to study one country right now, other than China, I'd say they should look at India. Things are really exploding there and innovation around that system is phenomenal".
>
> The above two strategic ideas represent an optimistic, confident outward looking world view, opposite of what was contained in the earlier import substitution policies which were based on export pessimism, weak macroeconomic and external sector indicators, and lack of confidence in Indian capabilities by those in leading positions in the society. But these are not the defining characteristic of new India, its people, and its leadership today. This is regularly documented in a bi-monthly New India Samachar.[1]

The possibilities of technology-centricity are suggested by Kunal Kapoor's statement of 12 December 2020 on Twitter.

> "Got off a zoom call with two 15-year-old persons who are starting a tech company to improve water management. The entrepreneurial energy of this country is unbelievable. Every street from the big cities to the smallest of towns is dreaming and working for this tech enabled future."

---

[1]http://www.davp.nic.in/NIS/nisall.htm accessed on 17 December 2020.

III. Key Policy Instruments of ABA and BVFL

One of the key policy instruments adopted by India is the globally competitive corporate tax rate (CIT), accompanied by tax administration reforms. While effective Corporate Income Tax (CIT) rate ranges from 26.0 to 34.94 percent depending on the turnover of the company, CIT rate of 22% (plus surcharge of 10% and applicable health and education cess of 4%) was announced with effect from tax year 2019/20. This rate is at the option of the company and is applicable on satisfaction of certain conditions.

The Taxation Laws (Amendment) Act 2019 has announced a beneficial CIT rate of 15% (plus surcharge of 10% and applicable health and education cess of 4%) with effect from tax year 2019/20 for newly set-up domestic manufacturing companies. The benefit of concessional tax rate of 15% has been extended to domestic companies engaged in the business of generation of electricity from tax year 2020/21.

Another key policy instrument is the Production -Linked -Incentive (PLI). The budget allocation for PLI is estimated to be INR 2 Trillion (around USD 13 Billion) covering 10 labour-intensive manufacturing sectors. The sectors include automobiles and auto components, pharmaceuticals and drugs, advanced chemistry cells (ACC), capital goods, technology products, textile products, white goods, food products, telecom and specialty steel, electronics and telecom equipments.

PLI gives companies incentives on *incremental* sales from products manufactured in domestic units. Apart from inviting foreign companies to set up shop in India, the scheme also aims to encourage local companies to set up or expand existing manufacturing units. The scheme envisages providing an average of 5 per cent of the production value as an incentive. *Swarajya* magazine reports that BNP Paribas research report suggests that minimum production as a result of the PLI scheme is likely to be around $520 billion over the next five years.[2]

Financial outlays have been allocated over a five-year period for the 10 sectors, and the aim of the scheme is to provide a boost to the Indian manufacturing sector, promote exports and make India an integral part of the global supply chain. The government hopes that Production Linked Incentive (PLI) Scheme for Telecom and Networking Products with a budgetary outlay of ₹12,195 Crore will attract large investments from global players and at the same time encourage promising domestic companies to seize the emerging opportunities. Some states such as Uttar Pradesh, Karnataka, Tamil Nadu and Gujarat have provided their own additional incentives to attract domestic and foreign investments.

[2] https://swarajyamag.com/insta/pli-scheme-to-potentially-add-520-billion-to-gdp-in-5-years-report accessed on 19 December 2019.

The new policy on mapping provides that Indian entities, whether in government or outside, will be free to create maps of any spatial accuracy within the territory of India, including underwater. Foreign mapping services such as Google Maps will be restricted to an accuracy of one meter. If they want more accurate maps, they will have to license these from Indian companies and will only be able to use them to serve customers in India. All non-classified geospatial data produced using public funds will be made "easily accessible for scientific, economic and developmental purposes to all Indian entities, without any restrictions on their use." Bengaluru start-up Pixxel is to launch India's first private remote sensing satellite, Anand. Such satellites are used for, among other things, creating maps. It has been argued that liberalization of the mapping industry and democratization of existing data bases could encourage domestic innovation and enable companies in the global mapping ecosystem.

IV. Select Examples of Application of ABA and BVFL

There are many examples where application of ABA and BVFL are transforming the Indian economy and society. But only the select examples are given in this Chapter. Those examples where global participation is evident are given preference to underline that BA and BVFL are designed to further integrate India with the global technology, finance, markets, talent and management, and ideas.

India is continuing to attract investments from sovereign funds. While Gulf SWFs such as the UAE's ADIA, Saudi Arabia's PIF and Qatar's QIA have large investment exposure to the Indian market, in what would be a first for the country, Singapore's sovereign wealth fund GIC is planning to establish an India-dedicated public market fund, whose estimated size is USD 3 billion. The fund will be the first dedicated pool of capital for domestic equities set up by a large global financial institution. Japan is also reportedly working on a USD 200 million fund- of -funds for start-up investments in India.

V. Energy Sector

The proposed hybrid renewable energy park in the district of Kutch is expected to attract an investment of INR 1500 Billion (USD 20 Billion), and provide livelihood to about 0.1 million. The first of its kind energy project is spread over 72,600 hectares of waste land. It is expected to play a major role in fulfilling the nation's vision of generating 450 gigawatt of power by the year 2030.[3]

Mukesh Ambani led Reliance Industries Limited (RIL) and British multinational oil and gas major BP Plc have announced their first gas finding in

[3]https://www.financialexpress.com/infrastructure/bigger-than-singapore-bahrain-worlds-biggest-hybrid-renewable-energy-park-in-gujarat-to-attract-huge-investment/2150904/ accessed on 16 December 2020.

what is Asia's deepest offshore field. The partners have struck gas at the ultra-deep-water gas field called R Cluster of the Krishna Godavari (KG) D6 basin. Other than this, the partners are also developing two more deep-water gas fields in KG D6 block, called the Satellites Cluster and MJ. Once operational by 2023, the production from the three gas fields will together meet 15 per cent of India's gas demand.[4]

VI. Electronics and Electric Vehicle Sector

Example 1

Tata Sons, a large conglomerate with global presence, plans a capital expenditure of USD $1.5 billion for building manufacturing capacity in the country to cater to Apple's sourcing needs for components. It is looking to secure USD 750 million to USD 1 billion in external commercial borrowings, while mobilising the remaining sum through internal accruals. The plant may eventually scale up to meet the requirements of other original equipment manufacturers from South Korea and Japan. This illustrates global partnership for electronic technology, accessing global finance, and plans to scale up to cater to requirements of several countries.

Example 2

Samsung is to make an investment of INR 48 Billion to relocate its mobile and IT display production unit from China to NCR in Uttar Pradesh. The state cabinet has approved special additional incentives for the project.[5]

Example 3

It is reported that Micron has agreed to set up a Centre of Excellence in memory and storage systems in India in partnership with Government of India.[6]

Example 4

With an aim to make India a manufacturing hub for electric vehicles, Ola, on 14 December 2020, signed an MoU with the Tamil Nadu government for an investment of INR 2,400 crore in setting up its first factory in the State. Upon completion, the factory will create almost 10,000 jobs and will be the world's largest scooter manufacturing facility, which will initially have an annual capacity of 2 million units. The factory will also galvanize India's EV ecosystem and establish India as a key player in the EV manufacturing space. Ola believes that India, with its unique skill sets, manpower and demography, is well-placed to be a global hub for the

---

[4] https://swarajyamag.com/insta/big-boost-for-indias-energy-independence-reliance-and-bp-find-gas-in-asias-deepest-offshore-field accessed on 19 December 2020.

[5] https://telecom.economictimes.indiatimes.com/news/samsung-to-invest-rs-4825-crore-to-shift-mobile-display-unit-from-china-to-india-up-govt/79682488 accessed on 11 December 2020.

[6] https://telecom.economictimes.indiatimes.com/news/rs-prasad-meets-micron-ceo-company-to-set-up-centre-of-excellence-in-india/79718592 accessed on 14 December 2020.

cutting-edge manufacturing of EVs. Ola's factory will cater to customers not only in India but also in markets around the world including Europe, Asia and Latin America. The company is gearing up to launch the first of its range of electric scooters in the coming months.[7]

Example 5

In a move aimed at incentivising and attracting investment for setting up of chip manufacturing in India, the Union Ministry of Electronics and Information Technology (MeitY) has issued a notice inviting Expression of Interest (EoI) for setting up / expansion of existing Semiconductor wafer / device fabrication (FAB) facilities in India or acquisition of Semiconductor FABs outside India. MeitY asked the interested firms to indicate the kind of financial support desired from the Government of India, including Grant-in-Aid (GIA), Viability Gap Funding (VGF) in the form of Equity and / or Long-Term Interest Free Loan (LIFL), tax incentives, infrastructure support, etc. MeitY said that despite India building a thriving Fabless Design ecosystem, it lacks a robust electronic components and semiconductor manufacturing ecosystem.[8]

VII. Infrastructure

Example 1

According to Zurich Airport International Asia, winner of the airport project, Phase-I of the Noida International Airport project, located in Uttar Pradesh, is expected to be completed by early 2024. On completion, the airport, under Phase-I, will cater to 12 million passengers. Due to its location in the National capital region (NCR), the airport is expected to lead to substantial crowding-in of other investments, especially in the real estate and logistics sectors.[9]

Example 2

The Uttar Pradesh State is seeking Foreign Direct Investment (FDI) for INR 360 Billion (USD 4.8 Billion) Ganga expressway project whose total length is 1020 KM

---

[7] https://www.thehindubusinessline.com/companies/ola-to-set-up-worlds-largest-scooter-factory-in-tamil-nadu/article33326228.ece?utm_source=email&utm_medium=Email&utm_campaign=Newsletter accessed on 14 December 2020.

[8] https://swarajyamag.com/insta/indias-big-push-for-small-chips-union-government-invites-companies-to-submit-eoi-by-jan-21-for-setting-up-semiconductor-fabrication-fab-plants-in-india accessed on 16 December 2020.

[9] https://www.proptiger.com/guide/post/how-the-upcoming-jewar-airport-will-change-the-face-of-ncr-real-estate accessed on 4 November 2020.

when both phases are completed. 100 Percent FDI is permitted in this project. It is expected to begin in June 2021 and completed by 2024.[10]

VIII. Agriculture, Food Processing

PM Modi, addressing the 93rd AGM of FICCI (Federation of Indian Chambers of Commerce and industry), on 12 December 2020, noted that:

> "We had seen walls between the agriculture sector and other areas associated with it - be it agriculture infrastructure, food processing, storage or cold chain. We don't want walls. We want bridges. All walls and obstacles are being removed now."

India and UAE are partnering to build food-corridor with projected investment of USD 7 Billion. It aims to secure the Gulf country's food security needs. Eight food processing units are to be set up in the Indian state of Madhya Pradesh with UAE funding. The corridor is expected to benefit 2 million Indian farmers and create an additional 200,000 jobs through the establishment of logistics infrastructure and agricultural projects. India's Production Linked Incentive (PLI) scheme will give firms incentives on incremental sales from products manufactured at manufacturing and processing units.[11]

IX. Textiles and Leather

India has about 200 manufacturers of N-95 masks and exported over 40 million of these masks and 20 million personal protection equipment (PPE) suits. India has domestically produced over 60 million PPE suits and till October 2020, and 150 million N-95 masks from zero in March. At an event organized by the Institute for Competitiveness, the Textile Minister remarked that,

> "We didn't dilute any technical standards…In a lockdown state, we have now ensured 0.5 million sustainable direct jobs."

The country has over 1,100 companies to produce PPE suits and has become the second largest exporter of PPEs to the world.[12] India plans a major revamp of the textile sector. The policymakers are pushing the industry out of their comfort zone towards man-made fibre and technical textiles, the areas of future growth. A new ecosystem is being implemented through production-linked incentives and the new textile policy. The Textile Ministry hopes that what has been accomplished in PPE,

---

[10]https://economictimes.indiatimes.com/industry/transportation/roadways/uttar-pradesh-government-to-seek-foreign-investment-for-rs-36000-crore-ganga-expressway/articleshow/79419926.cms?from=mdr accessed on 26 November 2020.

[11]https://gulfnews.com/business/investors-start-to-line-up-for-india-uae-7b-food-corridor-project-1.1607420397506 accessed on 8 December 2020.

[12]https://technocodex.com/over-40-million-n-95-masks-20-million-ppes-exported-till-now-smriti-irani/ accessed on 11 December 2020.

can be replicated in man-made fibre and technical textiles sector by enhancing competitiveness.

The Indian Cabinet in November 2020 approved an INR 107 Billion Production Linked Incentive (PLI) scheme for man-made fibre and technical textiles. The government has also undertaken a Rs 1,480 crore National Technical Textiles Mission (NTTM) to improve penetration level of technical textiles in the country which has a four-year implementation period from 2020-21 to 2023-24.

The Textile Ministry has launched 'India Size' Project. It is an initiative to have India's own size chart will benefit both manufacturers and consumers. It also has potential to facilitate textile exports. Website (https://nift.ac.in/indiasize/) invites people to register for the survey that will be carried out for sizing standardization.

X. Leather Park

The Uttar Pradesh government is set to establish India's first mega leather park in Kanpur. The project is expected to generate around 50,000 employment opportunities and indirectly provide livelihood to almost 1,50,000 individuals.

The leather cluster will be built in Kanpur's Ramaipur village across 235 acres at a cost of INR 58 Billion, and is expected to attract further investments worth INR 130 Billion.

A treatment plant will be located within the park to stop the pollution of the Ganga River due to the manufacturing of leather products.[13]

XI. Concluding Remarks

In a changed and fragile global environment where countries are attempting to find different ways and select context specific instruments to manage globalization, India's strategic concepts of ABA and BVFL are designed to transform its economy and society.

This Chapter has provided select examples of projects in diverse sectors and from various parts of India which are consistent with the ABA and the BVFL, and which further India's integration with the global economy. It is the cumulative effect of many projects widely spread across sectors, and across geographies, and which build scale economies that will help transform India.

Building a new confident India on these foundations is a process and not an event, and the path may not always be smooth in the desired direction. Managing political economy and exhibiting greater political maturity by the current opposition parties would help facilitate building new India. To progress toward using ABA and

[13]https://swarajyamag.com/insta/up-yogi-govt-to-set-up-indias-first-leather-park-in-kanpur-to-create-around-2-lakh-direct-and-indirect-job-opportunities accessed on 17 December 2020.

BVFL to transform India's economy and society, cooperation between individual states and the Union government, in the spirit of cooperative federalism is essential. Those states which exhibit different priorities, not consistent with ABA and BVFL are likely to find themselves at a relative disadvantage over time.

CHAPTER 3

HOW GUJARAT CAN SUSTAIN ITS CRITICALITY AND RELEVANCE BOTH DOMESTICALLY AND GLOBALLY*

I. Motivation

Massive disruption globally and in India brought about by the Covid-19 Pandemic, India's ongoing transformative reforms in economic, social, and political spheres, and greater responsibility devolved to the states at the time when their fiscal position has been severely constrained, have led many states, including Gujarat, to rethink their economic development strategy to prepare for the future. This column discusses some of the reforms which Gujarat could consider to sustain high growth, and navigate the current and prospective disruptions.

II. The Goal for Gujarat

The foreseeable global and domestic dynamics provide Gujarat state an opportunity to substantially enhance its criticality and relevance to India as well as globally. Gujarat contributed 7.7 Percent (5^{th} largest) of India's GDP in 2017-18, (USD 203 Billion), but constitutes around 5 percent of India's population. It is suggested that Gujarat develop a strategy and competently implement specific measures to achieve a goal of contributing 10 percent of India's GDP (twice its population share) well before the end of this decade. This implies that if India achieves USD 5 trillion economy goal around 2026 or 2027, Gujarat's GDP should by then be at least USD 500 Billion. The planning must take this into account.

III. Global Changes

Key global changes, whose specifics will evolve overtime, may be briefly stated as follows. There has been a trend towards weaponization of economics, trade, finance and technology flows by key countries. Therefore, issue-based alliances with like-minded countries are needed, requiring nimble policy responses. Restructuring of supply and logistics chains for both goods and services, largely towards reducing their elaborateness and complexity, and those favouring technology-enabled shorter, simpler, and more manageable and reliable supply and logistics chains is needed. Increasing recognition of the need to reduce over-dependence on one country, China, for intermediate inputs, markets, technology, and finance needs to be addressed by businesses and policymakers.

Covid-19 pandemic has greatly complicated these more fundamental changes, as it has created great uncertainty in global economic performance in 2020 and beyond, and is testing social resilience in many countries. Trust in leadership has

*This was published on 19 October 2020. The link is: https://myind.net/Home/author archives/2097 become a key factor in managing the ongoing pandemic and in being able to pursue citizen-centric reforms.

IV. Developments in India

The national level policy responses, before the pandemic, and in response to it (see Chapters 2, 11, and 12 of this e-book) have major implications for Gujarat. India is evolving policies in response to global changes, captured by Atmanirbhar Bharat Abhiyan and Be-Vocal-for-Local (see Ch. 2 of this e-book for explanation of these concepts). These are designed for greater global competitiveness and enhanced confidence in Indian made products. Gujarat has brands like AMUL which are in good position to take advantage of this new thrust.

India's policy responses give substantially greater space than before to the states in structuring its economic, public financial management, regulatory (for agriculture, health, labour etc) responses. There is a shift towards greater economic freedom to economic agents, and towards greater competition, and opening up of the economy to the Indian private sector in Défense, Finance, Chemical, Space, Education and other sectors, with key role assigned to technology adaptation and innovation. The indications are that within India, there will be signification relocation of economic activities, and of labour. Being able to attract human resources at all levels will become more important factor in location attractiveness.

Going forward, health infrastructure, including capabilities to produce intermediates for medicines, medical equipment of all types, and vaccines and their management, will be a strategic factor for economic and national security, and for social resilience. Gujarat has the potential to increase its critically in these areas for India and the world.

V. Suggested Initiatives for Gujarat

Gujarat should continue to nurture its traditional strengths in petrochemicals, pharma, chemicals, tiles, diamond and jewellery, agriculture and handicrafts. Some of these sectors are likely to witness subdued demand (e.g., diamonds and jewellery). So, focus will need to be on diversification, and shifting to more value-added activities.

In chemical industries (and in agricultural products and agricultural inputs), Gujarat must be alert that its (and India's) competitive advantage is not eroded by counterproductive regulatory and other administrative measures, domestically or internationally. An example is the ongoing policy discussion of banning 27 agricultural chemicals proposed by the Ministry of Agriculture and being opposed by the Ministry of Chemicals and Fertilizers. Gujarat has an important economic stake as it is a major producer of these chemicals.

The use of domestic individuals and organizations to achieve commercial goals of external forces, as happened in the endosulfan case, a pesticide which has been successfully used for decades, will become more common in chemical and other areas. As a result, farm community is forced to use more costly, less satisfactory products from abroad. Gujarat must develop a mechanism to guards against such regulatory risks.

In pharmaceutical sector, greater focus should be on producing APIs (Active Pharmaceutical ingredients). Developing APIS in a competitive manner will greatly enhance Gujarat's criticality to India and to the world. Gujarat must strategize as to which APIs, and which chemical ingredients or intermediates its industry is capable of producing competitively, and use well designed but limited industrial policy to achieve it.

Mohandas Pai and Nisha Holla have argued that "Gujarat is the only top-5 state with high industrial dependence at 51.8% GVA. If business-as-usual continues, Gujarat might find it problematic to keep growing when automation and other factors kick in. Instead, it must develop its services sector to augment its high industry output."[1]

For an accelerated growth, Gujarat must leverage on Delhi-Mumbai Industrial Corridor (DMIC), which links to key Gujarat ports, and to JNPT (see Map 1). It also contains Special Investment region, including Dholera. This is where the opportunities are for new domestic and foreign investment in manufacturing, and in Urban infrastructure and smart cities management systems. Gujarat is highly urbanized state, with majority of the population likely to be urban by 2030. It can increase its criticality by better urban management practices. The Special Investment Region (SIR) provides this opportunity. Gujarat should fully leverage SMART city and AMRUT schemes designed for developing cities and urban areas for this purpose Tata Power has been awarded a contract to develop 100 MW solar project at Dholera Solar park. With this, the state's renewable energy capacity under development has reached 620 MW, with 400 MW coming from Dholera Solar Park.[2]

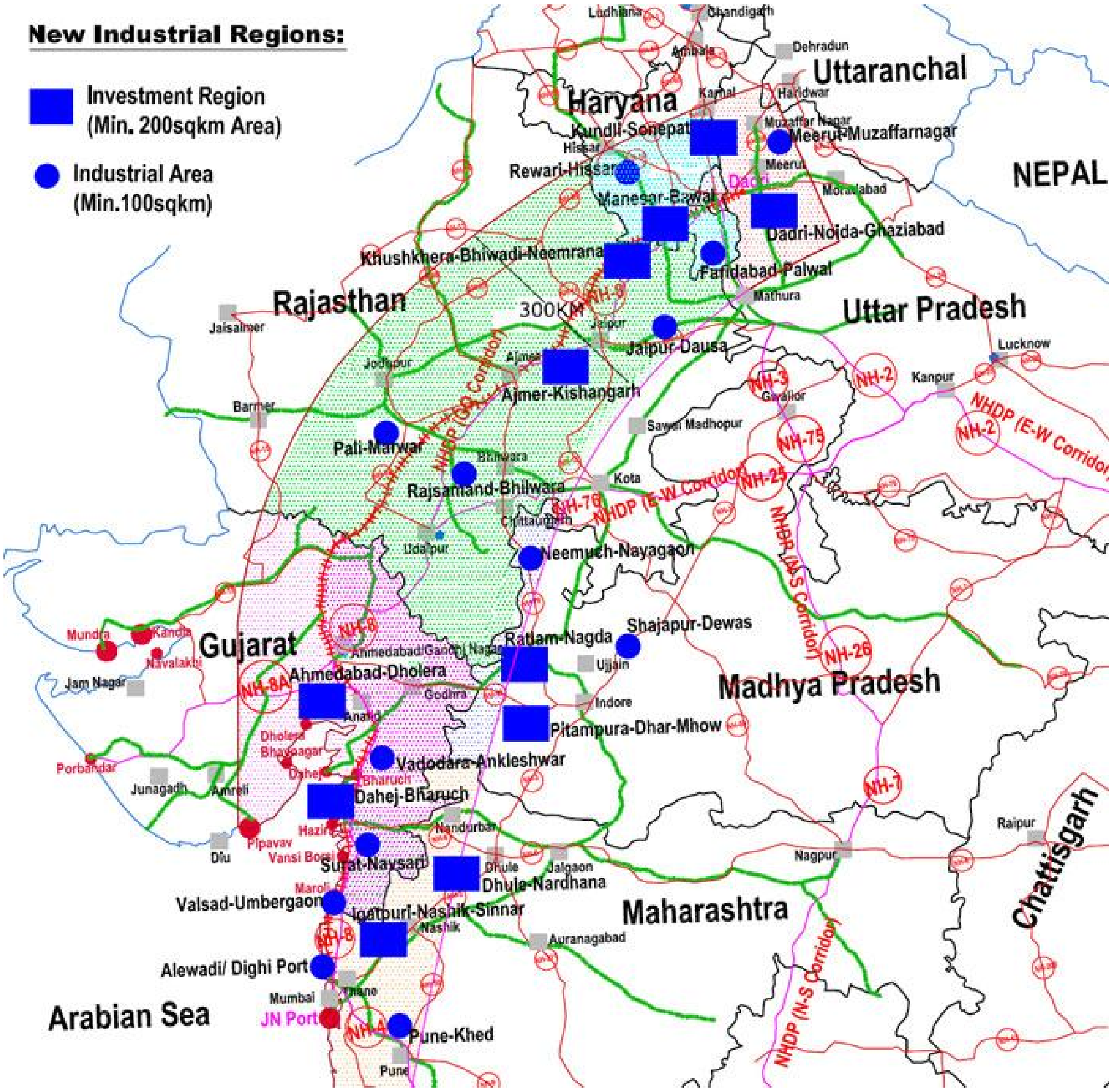
Gujarat should aim to obtain value- addition by becoming a key hub for supply chain and logistics of the Defense industries, a new rising sector, which has become essential in the new environment. India aims to expend its defence industry exports, and Gujarat and its ports can benefit from this. Similar efforts should be made for the space sector.

---

[1] https://www.financialexpress.com/opinion/indias-5-trillion-gdp-journey-contribution-of-each-state-crucial/1886918/ accessed on 17 October 2020.

[2] https://www.power-technology.com/news/india-tata-power-receives-letter-award-develop-solar-project/ accessed on 15 October 2020.

Map 1[3]



India has been experiencing deficit in international trade in financial products and services. This is expected to grow significantly in the coming years as large infrastructure projects are being undertaken. The new environment provides solid opportunity to give impetus to GIFT City (Gujarat International Finance Tech City) for accelerating the development of international financial services. India's relatively underdeveloped corporate bond markets, and its miniscule municipal bond market can also be given encouragement in the GIFT city. It is already a SMART city, with excellent infrastructure, but it needs to be developed as an international financial

[3]https://inhabitat.com/india-to-build-24-green-cities-in-delhi-mumbai-industrial-corridor/dmic/ accessed on 10 October 2020.

services centre. There is now an opportunity to develop a Fin-Tech hub in the GIFT city, bringing technology and financial talent to Gujarat.

The International Financial Services Centres Authority (IFSCA), which will provide uniform regulations for international financial transactions, has been headquartered in Gandhinagar, Gujarat.[4]

Gujarat can play an important role in India's Blue Economy plans. India is beginning to use its vast coastline, inland waterways, and ocean space for creating economic opportunities, and growth nodes. Innovative initiatives involving Sabarmati river have yielded good results. Other rivers, and ports (both major and minor) need to be focused upon for obtaining greater economic value. Kandla is witnessing major investments, but Gujarat should also encourage using other ports and rivers.

One of the crops of immense potential value for Gujarat is cultivation of seaweed as part of the Blue Economy programs. There is ample literature about potential of seaweed, and mangroves. These can help in achieving the goal of enhancing income of farmers in coastal areas, which addressing nutritional deficiency.

Shorter supply lines and coastal and inland shipping could provide opportunities for Gujarat ship building industry. National Authority of Ship Recycling is being set up in Gandhinagar, Gujarat. The location of the office will benefit the Ship Recycling yard owners situated at Alang, Gujarat, which is home of Asia's largest ship breaking and ship recycling industry in the world.[5]

Gujarat has the potential to take lead in on-line education along with traditional education. Gujarat's humane treatment of Shramiks, workers from other states, and its traditional welcoming and practical outlook, have created a goodwill which will help to make it an educational hub as well.

Gujarat has been rated as best performer overall in start-up survey by NITI (national Institution for Transforming India) Aayog in 2018 and 2019.[6] But in some of the components, institutional leaders, procurement leaders, seeding innovation leaders, and regulatory champions, it does not figure in the top 3 states. Gujarat therefore will need to be even more strategic to sustain its ranking as other states, such as Karnataka are taking strategic initiatives in this area.

---

[4] https://www.deshgujarat.com/2020./04/28/indias-ifsc-authority-to-be-headquartered-in-gandhinagar/ accessed on 30 August 2020.

[5] https://www.deshgujarat.com/2020./10/15/national-authority-for-ships-recycling-notified-with-its-office-in-gujarat/ accessed on 15 October 2020.

[6] https://www.myind.net/Home/viewArticle/2019-start-up-ecosystem-rankings-of-indian-states accessed on 30 September 2020.

Gujarat's initiative to build an incubation centre for 1400 start-ups at Knowledge Consortium of Gujarat is a step in the right direction.[7] Setting up of INR 100 million fund by GUSEC (Gujarat University Start-Up and Entrepreneurship Council), with the support of the National science and Technology Entrepreneurship Development Board (NSTEDB) is also a step in the right direction.[8]

VI. Transformative Reforms

To pursue the areas of opportunities sketched above and raise Gujarat's share to 10 percent in India's GDP, major reforms will be needed. The first set of broad reforms concern governance and administrative reforms at all levels. The need for such reforms has been recognized, but has not been pursued meaningfully. Many states have not devolved the functions mandated in the 73rd and 74th Amendment to the Constitution, and have not enhanced the capacities of sub-state levels of government.

The Centre has introduced Karmayogi scheme as a part of broader civil service reform. Among the key aims are to address lack of linkages between "Role" and 'Competency" of the civil servants; and to make available to all civil servants, an opportunity to continuously build and strengthen their Behavioural, Functional and Domain Competencies in their self-driven and mandated learning paths.[9] Gujarat state should try to leverage on the Centre's scheme to progress towards a more capable government through better human resource management.

The second set of reforms concern judicial reforms, especially those within the powers of the State. These deserve attention as a competitive tool for better governance.[10] The third broad set of reforms concerns Public Financial Management (PFM) reforms. Generating fiscal space requires understanding and planning. There are many assets of the State, including land, and better treasury management of surplus funds of urban and rural bodies, which have scope for revenue generation. Public enterprise reforms, including utility reforms, and procurement reforms hold promise for generating fiscal space.

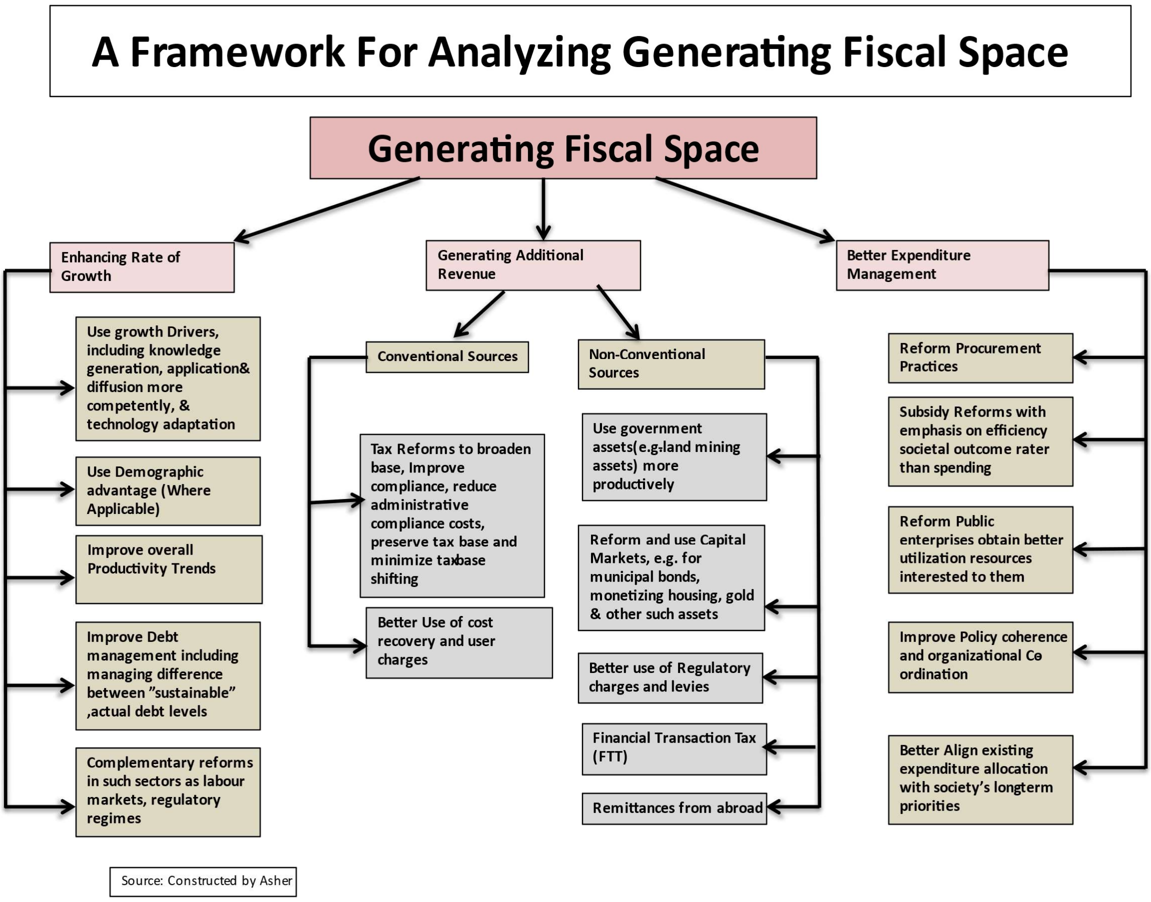
Figure 1 provides a suggested framework for generating fiscal space and strengthening public financial management. There are four components of the

---

[7]https://ahmedabadmirror.indiatimes.com/ahmedabad/cover-story/forget-silicon-valley-gujarat-is-creating-its-own-innovation-hub/articleshow/78116197.cms accessed on 15 September 2020.
[8]https://ahmedabadmirror.indiatimes.com/ahmedabad/others/gusec-sets-up-rs-10-crore-seed-fund-for-startups/articleshow/78445542.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst accessed on 2 October 2020.
[9]https://pib.gov.in/PressReleseDetailm.aspx?PRID=1650633 accessed on 15 September 2020.
[10] (Harsh Madhusudan and Rajeev Mantri, "A New idea of India" Westland Publications, 2020., pp. 231-247 provide a good discussion of judicial reforms needed in India)

framework which need to be integrated. First is sustaining high growth, which also involves developing new growth nodes and niches. Second is to improve collection of conventional taxes, particularly GST, excise tax, and property tax levied by the state. Third is becoming more competent at unconventional sources of revenue including treasury management, and monetizing land, air space and other assets. Fourth is public expenditure management, including greater competency in procurement (Gujarat should leverage its procurement with GeM (government electronic Marketplace of the Centre)[11], reforming public enterprises, and expenditure management.

Figure 1A Framework for Integrated Generation of Additional Fiscal Space



Going forward, risk management, particularly fiscal risk, and regulatory risk will become key aspects of management of a state's economy. Fiscal risk management will require setting up a Gujarat Fiscal Management institute (GFMI), which works on state fiscal issues and challenges on a continuing basis. The Institute

[11]https://www.india.gov.in/spotlight/government-e-marketplace-procurement-made-smart#tab=tab- accessed on 15 October 2020.

however should have some autonomy in obtaining required human talent on a contractual basis, but should be overall guided on research priorities by key government officials.

Fourth, the regulatory risk, which could affect Gujarat's industries, need to be monitored from the Chief Minister's office (CMO). The CMO should also contain a technology risk assessment office. Among others, its role should be to accelerate adoption of technology in governance, and to help procure, adopt, most suitable technology for a given public policy challenge.

The above reforms will not be easy, but they will need to be competently undertaken if Gujarat is to continue to be among the leading state in the country, and maintain its criticality and relevance both domestically and globally.

CHAPTER 4

WHY SOME STATES WILL EXHIBIT SIGNIFICANT RELATIVE DECLINE IN THEIR ECONOMIC RANKINGS?*

As the year 2021 begins, there are strong indications that some of the states in India will exhibit significant relative decline in their rankings unless their current revealed public policy choices are swiftly and energetically reversed, and the reversal is sustained. For the benefit of the residents of these states and of the country, it is very much hoped that such a reversal occurs.

Among the States falling in the above category are, in alphabetical order, Kerala, Maharashtra, Punjab, and West Bengal.

Professor Shamika Ravi has noted that Punjab has been missing out on rapid economic growth across India. The richest state of the union for years, is now significantly behind Haryana, Gujarat, Karnataka, Tamil Nadu, Himachal Pradesh, and Maharashtra, all poorer in comparison 20 years back. Punjab economy needs basic structural reforms.

According to the Central Ground Water Board, Ministry of Jal Shakti, data for groundwater in Punjab in 2017 also strongly indicates the need for structural reforms in its water usage patterns, including in the use of water by agriculture. Thus, of the total blocks assessed in 2017 for groundwater level in Punjab, four-fifths were over-exploited, as compared to only 17 percent for India as a whole. In contrast, in Punjab, only 16 percent were found to be in the safe category, as compared to 62 percent for India as a whole.[1]

While context specific reasons vary in each State, such as Kerala being severely affected by Covid-19 pandemic related impact on migration remittances, particularly from the Gulf Region, this column highlights certain common public policy choices portending significant decline for these four States.

The first factor are poor public policy choices that are likely to adversely affect flow of new investments, which often embodies newer technologies and management concepts, and new talent, two vital ingredients for future growth, into these states. These States have given priority to catering to their core vote base, giving priority to subsidizing them (through electricity, water, and other subsidies, and through budgetary allocations, and encouraging rent-seeking which increases costs of doing business and prevents better reconfiguration of existing ways of doing

---

*This was published on 7 January 2021. The link is, https://www.lokmaanya.com/why-some-indian-states-will-descend-in-their-economic-rankings/

[1] http://cgwb.gov.in/Ground-Water/GW%20YEAR%20BOOK%202019-20%20ALL%20INDIA%20FINAL%20752021%20(1).pdf accessed on 2 January 2021.

things. The opportunity cost of these choices has the relative neglect of investment in social and physical infrastructure.

These choice of policy priorities has also meant that growth inducing allocation of public expenditure has not been occurring. As an example, an Expert Group formed by the Punjab Government in April 2020, which gave the Report (not in public domain as of 1 January 2021) urged the State Government to move away from free power policy to agriculture. Punjab spends INR 6500 crore each year on this item. The report lists out three damaging consequences of free power policy. First, it has led to an unsustainable burden on the budget and limits the state government's ability to incur other expenditures essential for development. Second, the policy has very damaging environmental consequences because it promotes water intensive paddy cultivation, leading to an excessive use of groundwater. Third, only big farmers were really benefitting from the scheme.

The Report also urged Punjab to reduce the area under paddy by about 25 lakh acres (out of total 76 lakh acre under paddy) over the next 6-7 years; and like Haryana, give incentives in overexploited blocks to help them diversify their cropping patterns. This would reduce the use of electricity, resulting in big saving on the subsidy front.

But by instigating the farm laws agitation by groups in the state who are not actual farmers, but who are middlemen, an agitation which has resulted in huge losses to the state and to the country, and which are solidifying current unsustainable agricultural practices in the State, the leadership of Punjab is moving in the opposite direction to what the Report has suggested. This is likely to lead to its further relative economic decline.

Flow of investments and talent is highly contingent on trust in the functioning of the State. Poor record on public safety and order, and in managing the Covid-19 Pandemic are likely to have eroded trust in these States, whose adverse economic effects are likely to be felt over time. Trust, once eroded, is difficult to restore. As of 1 January 2021, official data suggest that Maharashtra and Kerala together accounted for about 47 percent of total Covid-19 cases; and Maharashtra alone accounted for about one-third of total deaths from Covid-19 in the country.

Maharashtra Government's decision to shift Metro car shed from Aarey Colony (stayed by High Court), an issue which the expert groups had strong consensus on, will not only significantly increase the cost of Metro project, but will delay it, further inconveniencing the commuters. It is also contributing to the erosion in trust in the functioning of the State. It is noteworthy that in December 2020, Kerala collected less GST (INR 1,776 Crore) than the 'poor' states of Jharkhand (INR 2,150 Crore) and Chhattisgarh (INR 2,349 Crore). Once rich Punjab collected less GST (INR 1, 353 Crore) than even Kerala.

The second factor is disregarding the spirit of cooperative federalism with constructive competition among states. India is a Union of States, and both the Centre and the States need to cooperative with each other for solid foundations of future growth. The refusal by the West Bengal government to join Ayushman Bharat, among the largest health insurance scheme globally, covering nearly 500 million persons for hospitalization and for non-hospitalization care is detrimental to the people of West Bengal. Similarly, poor public policy choice has been made by west Bengal government in not joining the PM Kisan Scheme stared in 2018 under which income support of INR 6000 per year is provided to marginal farmers. This has meant that marginal farmers of West Bengal have been deprived of income support whose costs are borne by the Union government. This strongly suggested skewed priorities of the State's public policies.

Kerala and West Bengal governments have not been cooperating with the Union government in such areas as 2021 Census of population, a routine and much needed task for better governance and planning of amenities. At the time, when empirical-evidence based public policies are globally practised, and potential for data-analytics is immense, such opposition can only emanate from poor public policy priorities. Such choices also erode trust and credibility of the policymakers.

The third factor is that there are states such as Uttar Pradesh, Karnataka, Madhya Pradesh, Tamil Nadu, Assam, and Gujarat, which have exhibited determination to improve their state's rankings by laying foundations for future growth, embracing technology, and cultivating trust of the stakeholders. Kerala, Maharashtra, Punjab, and West Bengal need to recognize that there is competition among States to strengthen their economic base and attract talent. Only if they pursue positive sum policies and embrace changes appropriate for the 21st century new India, can they provide better ease of living and quality of life for their citizens.

CHAPTER 5

STATUE OF UNITY IN GUJARAT DEVELOPING INTO A DIVERSIFIED TOURIST HUB*

I. The Context

Tourism sector is an important growth node globally. In 2019, total contribution, direct and indirect, of Travel and Tourism Sector is estimated at USD 9250 Billion.[2] Select indicators of India's tourism sector provided below, suggest that the sector makes significant contribution to India's economy and livelihoods, and it has lot more untapped potential as a growth node. Unless otherwise stated, data are for 2019, and are obtained from the official source.[3] The number of international tourist arrival in India was 17.9 million, 1.23 percent of the global total, with a global rank of 23rd. The above figure includes arrival of 7.0 million NRIs (Non-resident Indians). India's foreign exchange earnings were USD 30.1 billion (2.0 percent global share, and 12th rank globally).

Average duration of stay of international visitors to India was 22.7 days. Thus, the total number of days by international visitors was 406.3 million. Visitors from North America (31.7 days), Africa (27.2 days), Australasia (26.2 days), and West Asia (23.4 days) stayed longer than the average. NRIs (Non-Resident Indians) tend to stay longer, impacting the average. This number should therefore be interpreted in a nuanced way. Even then, average stay in India is likely to exceed global average by a wide margin. A study by Gossling and Hall found that in select key European countries, with large tourism flows, length of stay on average ranged between 2.3 nights in Germany and Belgium, to 6.8 nights in France.[4]

The policy implication is that India' tourism strategy should not just focus on increasing inbound tourists, but also on number of days spent, and expenditure per tourist per day. This applies to domestic tourism policy by each state as well. Number of Indian departures for overseas destinations was 26.9 million. There is thus a large gap between Indian departures and international arrivals, which should be narrowed.

---

*This was published on 19 October 2020. The link is: https://www.myind.net/Home/viewArticle/statue-of-unity-in-gujarat-developing-into-a-diversified-tourist-hub

[2] https://www.statista.com/topics/962/global-tourism/ accessed on 30 October 2020.

[3] https://tourism.gov.in/sites/default/files/2020.-09/ITS%20at%20a%20glance_Book%20%282%29.pdf accessed on 30 October 2020.

[4] Stefan Gossling , Daniel Scott and C. Michael Hall, "Global trends in length of stay: implications for destination management and climate change", Vol. 26, No. 12 ,*Journal of Sustainable Tourism* 2018, 2087–2101available on https://doi.org/10.1080/09669582.2018.1529771accessed on 30 October 2020.

Number of domestic tourists within the country was 2321.9 million, about 130 times more than the international arrivals. Nearly one-fourth of domestic tourists went to Uttar Pradesh, and over one-fifth to Tamil Nadu. Gujarat had only 59 million domestic visitors (ranked ninth) with only 2.5 percent share. Large domestic tourism provides scale to India's tourism industry, including feasibility of using artificial Intelligence (AI) and data analytics.

India's heritage and culture are spread evenly across the country. Indians wish to explore more of the architecture and its history through visiting tourist places. New attractions (such as explained in this column), and much improved connectivity and infrastructure has made it much easier to explore India.

II. Theme

To increase number of visitors, both domestic and international, and average nights (days) spent at the tourist destinations, there is a need to invest in creating many affordable tourist hubs, with visitor-friendly connectivity, infrastructure, attractions, and amenities. This column discusses one such tourist hub which has been developed in Kavedia, Gujarat, around Statue of Unity, honouring Sardar Vallabhbhai Patel. He was India's first Home Minister whose invaluable contribution to India's unity is symbolized by his statue, designated as Statue of Unity. Hindol Sengupta in his Kindle e-book "The Man Who Saved India", 2018, has examined Sardar Vallabhbhai Patel's contribution to India. The title of the book suggests Sengupta's overall assessment.

III. An Overview of Integrated Tourism and Visiting Facilities and Amenities

a. The Statue of Unity:

The Statue of Unity Area Development and Tourism Governance Act, 2019 Act 33 of 2019 was passed by the Gujarat Government for developing the area in an integrated manner.[5] There are several attractions around Statue of Unity, thus catering to diversified interests, needs, and preferences of the visitors, and helping to lengthen average stay.

Indian infrastructure company Larsen & Toubro (L&T) won the contract on 27 October 2014 for the design, construction and maintenance of the statue. L&T commenced the construction on 31 October 2014. The scale of the project is reflected in the staggering size and weight of its materials: the statue's construction took 2.5 million cubic feet of concrete, 5,700 tons of steel structure and 18,500 tons of reinforced steel rods. There are approximately 12,000 bronze panels covering the structure, weighing around 1,700 tons. Except for outermost layer in form of bronze cladding, which carries intricate details of Sardar Patel's clothes, posture, and facial

[5] https://prsindia.org/files/bills_acts/acts_states/gujarat/2019/2019Gujarat33.pdf accessed on 20 October 2020.

expressions, representing 9 percent of the value of the project, and won by a Chinese company in global tender, all the other work was done in India.[6]

The statue located in the state of Gujarat, is the world's tallest statue with a height of 182 metres (597 feet). It is located on the Narmada River, about 3.5 KM downstream from Sardar Sarovar Dam, in the Kevadia area. It was built at a cost of INR 29.9 Billion (about USD 400 Million). The Statue of Unity was opened to the public on October 31, 2018 to mark the birth anniversary of the country's first Home Minister. This day is commemorated as Rashtriya Ekta Diwas (National Unity Day).

Between 31 October 2018 and November 16, 2019, 2.9 million persons visited the Statue, an average of 8,500 tourists per day. Thus, even without additional amenities and attraction being opened in October 2020, about 3 million visitors per year have been attracted. The revenue earned during the above period was INR 0.82 Billion.[7] The Statue of Unity website in all UN official languages and the Kevadia App have been launched, making it easier to access the Statue and the facilities and attractions. Promoting international tourism is one of the objectives, giving overseas visitors additional choice.

b. Connectivity to the Statue

The two initiatives for better connectivity to the Statue and the amenities and attractions are sea plane and railway line. The sea plane service was initiated on October 31, 2020 by Prime Minister Narendra Modi. The Statue of Unityis now connected to the riverfront of Sabarmati in Ahmedabad,200km away from Kevadia. It takes about four hours when travelling by road. With sea plane, the time is cut to about one hour. The government is providing incentives and facilities for the sea plane services via the central scheme Udaan (*Ude Desh ka Aam Naagrik*), started in April 2017. Udaan is a regional airport development and "Regional Connectivity Scheme" of Government of India, with the objective of making it affordable and accessible for the common citizens of the country to fly.

A sea plane amenity has been implemented under a tripartite agreement between the Ministry of Civil Aviation, the Gujarat government, and the Airports Authority of India (AAI). The sea plane service does not require elaborate infrastructure, and so is especially suitable for India's hilly states, and the North Eastern region. The state governments of Andhra Pradesh, Assam, Telangana along with Andaman and Nicobar administrations were also asked to submit proposals for potential locations where water aerodromes can be set up to boost the tourism sector.

---

[6]https://swarajyamag.com/politics/was-the-statue-of-unity-really-made-in-china-here-are-the-facts accessed on 30 October 2020.

[7]https://www.livemint.com/news/india/gujarat-statue-of-unity-attracted-2-9-mn-tourists-earned-rs-82-cr-in-one-year-11575993073934.html accessed on 30 October 2020.

The Railway Minister has announced that by 31 December 2020, death anniversary of Sardar Vallabhbhai Patel, the statue of Unity will be linked with the Indian Railways network. This will greatly improve accessibility and affordability of the citizens to visit the Statue and its other attractions and amenities.

c. Attractions and Amenities Around the Statue

The attractions and amenities which have become operational are briefly noted below.

(1) Arogya Van (Herbal Garden): This Garden, developed near the Statue of Unity, is spread over an area of about 17 acres. The Arogya Van has a rich variety of flora, with about 0.5 million plants of 380 distinct species. It exhibits a wide range of medicinal plants and health-related landscapes. The Garden aims to raise awareness about the important role played by plants in the wellness of human beings. The Garden also lays an emphasis on Yoga, Ayurveda, Meditation and how they are an integral part of a person's well-being.[8] The entry gate of Arogya Van has all 12 postures of Surya Namaskar of human size, to emphasise on the importance of yoga. A digital information centre has been set-up to acknowledge visitors and make them understand the heritage and the importance of medicinal plants in our day-to-day life.

The key highlight at Arogya Van is the '*Aushadh Manav*.' This is a giant three-dimensional layout of a human body in a resting posture. Each human organ is represented by a medicinal plant which is beneficial for that particular organ. These plants have been planted on the specific part of the body to make the visitors understand the specific plants used for therapeutic treatment of that particular organ. There are five gardens inside Arogya Van–Garden of Colours, Aroma Garden, Yoga Garden, Alba Garden and Leutea Garden.

(2) Children Nutrition Park: Malnutrition is India's key challenge now, not hunger. It is a technology-driven park, spread over 35,000 square feet. The park has 47 attractions providing "infotainment" to children with the underlying theme of "*Sahi Poshan Desh Roshan*" (Correct Food, County Benefits). A Nutri-train takes visitors to various thematic stations, such as Annapoorna, and Swastha Bharatam, where educational messages are conveyed through various activities and exhibition.

(3) The Sardar Patel Zoological Park: This is popularly known as Jungle Safari. It is spread over 375 acres, and has seven levels. The Zoo houses over 1,100 indigenous and exotic birds and animals of more than 100 species, brought from all over the world. The Safari also houses two large geodesic dome aviaries. Jungle Safari also has a Petting Zone, where visitors can touch and pet animals.

---

[8] https://www.gujarattourism.com/central-zone/narmada/arogya-van.html accessed on 31 October 2020.

(4) Ekta Mall: Spread over 35,000 square feet, it will house a diverse range of handicrafts and traditional items from all over India symbolising Unity in Diversity- A hallmark of Indian culture.

(5) Ekta Cruise Service: This has been launched in river Narmada between the statue and Shreshth Bharat Bhavan, around 4km away.

(6) The Unity Glow Garden: This is a unique theme park spread over an area of 3.61 acres. It has a glimmering array of installations, figures, and optical illusions that will welcome tourists to experience the joy of night tourism.

VI. Concluding Remarks

This array of well-conceived and executed attractions and amenities can be expected to enhance the attractiveness of visiting the statue and the Kevadia region. Domestic tourism in particular, will be given greater encouragement by the development of the Kevadia region, and it could become one of the growth nodes of Gujarat.

Visitors from the neighbouring countries and from Africa may also find the development of the Kavedia region more accessible, affordable, and attractive. During the Covid-19 pandemic period, tourism sector has had to face severe challenges. Gujarat policymakers and authorities deserve to be commended for taking initiatives to make the Statue and the Kavedia region more attractive for tourists and visitors.

CHAPTER 6

ONE SUN- ONE WORLD -ONE GRID: INDIA'S TRANSFORMATIVE INITIATIVE FOR SUSTAINABLE DEVELOPMENT*

India has been taking initiatives to encourage 21st century relevant international organizations to locate in India. Thus, the launch of the International Solar Alliance (ISA) was announced by India's Prime Minister Narendra Modi, and then Prime Minister of France, Mr. Francois Hollande on 30th November 2015, at the 21st session of United Nations Climate Change Conference of the Parties (COP-21) in Paris, France. ISA is headquartered at Gurugram, in Haryana, India.[1]

ISA's vision is to make the sun brighter with international cooperation, and its mission is that every home no matter how far away, should have a light at home. The premise is that the renewable energy development, and reducing per unit cost of solar, wind and other renewable sources of energy are critical elements of sustainable development. All members of the United Nations are eligible to be members. As of end July 2020, 87 countries have fulfilled the requirements of becoming a member of the ISA.[2] The ISA is to hold First World Solar Technology Summit (WSTS) on 8 September, 2020. India is playing a leading role in organizing this event. Such knowledge-transfer is a key component of Atmanirbhar Bharat (see chapter 2 of this e-book).

I. The OSOWOG Initiative

As International Solar Alliance (ISA) becomes more established and expands its reach and scope, the initiation of 'One-Sun-One-World-One-Grid' (OSOWOG) represents another initiative by India for transformational, sustainable and lower-cost renewable energy for sustainable development. The OSOWOG project, envisages an inter-connected power transmission grid across nations for the supply of clean energy with the mantra Sun-Never-Sets. In June 2020, the Ministry of New and Renewable Energy in India initiated a Request for Proposal (RFP) to hire consultants for converting this mantra into policy. The project will link as many as 140 countries through a common grid that will be used to transfer solar power.

*Mukul Asher and Amit Soni, Assistant Professor, Department of Economics, Shaheed Bhagat SIngh Evening College, University of Delhi. This was published on 31 August 2020. The link is: https://myind.net/Home/viewArticle/one-sun-one-world-one-grid-indias-transformative-initiative-for-sustainable-development

[1] https://isolaralliance.org/ accessed on 29 August 2020.

[2] https://www.mea.gov.in/press-releases.htm?dtl/32866/Universalization+of+the+Membership+of+the+International+Solar+Alliance+ISA) accessed on 29 August 2020.

However, this has been put on hold due to Covid-19 pandemic. But once the pandemic is under control the RFP is expected to be pursued.

Envisaging common ownership and sharing of sun, the initiative aims to achieve near zero marginal cost with harmonised distribution of electricity from surplus to deficit countries. This will substantially enhance global energy security, particularly for 700 million people without electricity. It will also help achieve better accessibility and cleaner renewable energy to estimated 2 billion women using non-renewable energy for cooking. The OSOWOG initiative is expected to positively impact poverty dynamics in India and globally, and is expected to help mitigate water, sanitation, food and other scarcities, thereby helping to address socioeconomic challenges, and enhance environment sustainability.

ISA, the nodal agency of OSOWOG, has targeted the cost of solar power equivalent to be the grid parity i.e., the cost of solar power to be equivalent to the cost of coal. This has subsequently been revised to the kerosene parity i.e., the cost of solar power be not more than the cost incurred by the poor people for the use of kerosene. ISA then targets the marginal cost to be near zero, which is an integral element of the Third Industrial Revolution based on Internet-of-Things (IoT).[3] The Third Industrial Revolution is also known as the digital revolution. It focuses on electronic systems, IT (information technology) systems and automation. The Internet of Things (IoT) refers to a system of interrelated, internet-connected objects that are able to collect and transfer data over a wireless network without human intervention. The Fourth Industrial Revolution, currently in progress, blurs the boundaries between the physical, digital, and biological worlds. It's a fusion of advances in artificial intelligence (AI), robotics, the Internet of Things (IoT), 3D printing, genetic engineering, quantum computing, and other technologies.

The OSOWOG initiative is to be pursued in three phases. Phase I interconnects the power deficit regions of Middle East, and Southern Asia. In the second phase, solar and other renewable energy resources rich regions would be interconnected. The third phase would pursue global interconnection of the power transmission grid to achieve the one grid vision.

To access the cost-effective finance and to encourage technology innovation for OSOWOG, India has suggested establishing World Solar Bank (WSB), headquartered in India. India has expressed its desire to be a lead member (taking a 30% stake). The WSB is designed to help set up solar projects in member countries and aims to disperse $ 500 billion over 10 years. The setting up of WSB may require a total equity capital of USD 10 billion and a paid-up capital of USD 2 billion. This can be leveraged with blended financing and technology collaboration from the

[3] The link to You Tube video https://www.youtube.com/watch?v=QX3M8Ka9vUA&feature=youtu.be accessed on 29 August 2020.

multilateral institutions such as the World Bank, and other multilateral development banks.

In 2019, the Central Electricity Regulatory Authority (CERA) approved new regulations of 'Cross-border electricity trade', thereby making the trade of electricity to neighbouring countries more seamless. This included setting up of nodal agency for bilateral trade of electricity, monitoring and planning by central agencies, and similar technology interface at both ends.[4] India has already initiated power trade with Bhutan and hydropower project development pact with Nepal. It is also trading electricity with Bangladesh.

The above discussion suggests that OSOWOG is consistent with basic elements of the strategic concept of Atmanirbhar Bharat (see Ch. 2 of this e-book for explanation of this concept), as it aims to increase India's domestic capabilities in the sector, and to strive to obtain knowledge, capital, partnerships, and linkages in this sector globally.

II. Challenges

The first challenge is to coordinate such a huge project, and to obtain financing based on economic viability, especially when the underlying technologies are changing rapidly. Would those countries innovating such technologies share them or regard them as their competitive advantage over others? Past experience is not encouraging, especially in this current uncertain global economic and trading environment.

The second challenge is that in pursuing OSOWOG goals, economic viability of existing fossil fuel, thermal, coal and other power plans however need to be addressed. This is especially true in India where many generating, distribution, and transmission companies are exhibiting poor financial health due to political, regulatory and other reasons. There are already indications that some states in India are not advancing towards renewable technology as rapidly as feasible for the fear of their energy companies losing customers who are currently paying higher prices. But lower prices of power are a significant competitive factor and constructive competition among the states can help mitigate this tendency.

The third challenge is that the existing energy companies will need to be significantly restructured to be consistent with the Third Industrial revolution of Internet-of-Things. There are substantial business and employment opportunities in such a restructuring. But this will require leadership and national goal setting as

[4] https://www.business-standard.com/article/current-affairs/one-sun-one-world-one-grid-all-you-need-to-know-about-solar-strategy-120081500417_1.html accessed on 28 August 2020.

Germany, for example, has done. Germany has set a target of generating 65 percent of its power from renewable sources by 2030, from the current 40 percent.[5]

Germany has promised to transform its electricity supply to 100 percent renewable energy by 2050. According to German Advisory Council on the Environment (Sachverständigenrat für Umweltfragen, SRU) the conversion of the electricity supply system towards the use of 100% renewable energies by 2050 is possible; these technologies include renewable energy such as wind, solar, biomass and geothermal energy, nuclear power, and fossil fuel power generation using carbon capture and storage technology.[6] Germany thus has to be a key technology partner in pursuing OSOWOG goals. Some energy companies in India are taking tentative steps to redefine their operations. In early July 2020, it was reported that Coal India and NCL (National Chemical Laboratory) are planning to develop solar power assets worth 3000 MW, with a project cost of INR 120 billion. (USD 1.6 Billion). Such examples need to be multiplied. A business model more consistent with OSOWOG goals and processes need to be developed by the Indian energy companies. This represents a huge challenge for India.

The fourth challenge is that the OSOWOG goals involve implementing many projects successfully, for which project management capabilities are vital. The ISA could consider special program to develop project management skills in India and other countries which currently have skill-deficits in this area, but with good potential to enhance them, and to reduce demand-supply gap.

III. Concluding Remarks

India has embarked on initiatives to locate 21st century relevant multi-country organizations in India, and to play a pro-active role. ISA, OSOWOG, and the World Solar Bank are complementary to each other. They require collaboration with other to attract finance and technology. Germany's leadership in renewable energy could hold lessons in implementing OSOWOG goals. The challenges in pursuing OSOWOG goals, briefly enumerated here however should be addressed.

---

[5]https://www.reuters.com/article/us-germany-electricity-climate/germany-needs-to-ease-rules-to-hit-2030-renewables-target-idUSKCN1TJ20C#:~:text=Germany%20has%20set%20a%20target,account%20for%20about%2040%25%20now accessed on 28 August 2020.

[6]https://sustainabledevelopment.un.org/index.php?page=view&type=99&nr=24&menu=1449 accessed on 28 august 2020.

CHAPTER 7

THE CHANGING ROLE OF NABARD UNDER INDIA'S NEW AGRICULTURE SECTOR ENVIRONMENT*

India's recent major reforms in the agriculture and related sectors represent a decisive break from the past practices, and mind-set, and ushers-in a different dynamic for the sector. This column discusses the changing role of NABARD (National Bank for Agriculture and Rural Development), established on 12 July 1982 by an Act of Parliament, under the new dynamics. NABARD is the agency with the responsibility for developing India's agriculture sector, not in just undertaking banking functions of providing credit, but also developing the agriculture sector through various development-oriented initiatives. As of March 2020, NABARD's balance sheet amounted to INR 5.3 trillion (2.6 percent of GDP), out of which advances were INR 4.8 trillion (2.4 percent of GDP). During 2019-20, NABARD set up a new subsidiary, NAB FOUNDATION, to pursue more innovative development partnerships domestically and internationally.

In India's new agriculture transformation policy, NABARD has been assigned a critical role. Ashok Gulati has argued, "…NABARD has a lot of heavy lifting to do, else they will fail the country by not realising the full potential of these legal changes. NABARD must get its act together, take professional advice and work with implementing agencies in the private sector, including various foundations already working with farmers. The payoff will be very high. It will make Indian agriculture globally competitive, and benefit farmers and consumers alike".[1]

I. Key Developments Portending a Decisive Break in the Agriculture Sector

These developments may be briefly summarized as follows:

First, the passage of three laws relating to agriculture by the Parliament which came into effect in September 2020. The laws are the Farmers Produce Trade and Commerce (Promotion and Facilitation) Law 2020 (FPTC); The Farmers (Empowerment and Protection) Agreement on Price Assurance and Farm Services Law, 2020 (FAPAFS); and The Essential Commodities (Amendment) Law, 2020 (ECA). The three laws should be viewed as a package. The FPTC law allows farmers to sell their produce anywhere in the country as part of "one country one market", thus breaking the monopoly of the APMCs (Agriculture Produce Marketing Committees). The FAPAFS law allows contract farming. It removes the ceiling on storage of commodities. The removal of the ceiling will help processors and

---

*This was published on 3 October 2020. The link is: https://myind.net/Home/viewArticle/the-changing-role-of-nabard-under-indias-new-agriculture-sector-environment

[1] https://indianexpress.com/article/opinion/columns/farm-bills-farmer-protests-parliament-rajya-lok-sabha-6618353/ accessed on 29 September 2020.

industrial users to buy and store farm commodities without any fear during the peak arrival season. The ECA is a relic of the 1950s decade of socialist shortages. As a result, the market for most food stuff is now deregulated. This law would restrict any government intervention in the agricultural market to exceptional circumstances. Ban on onion exports imposed in September 2020, however, is not consistent with the spirit of this law. It is hoped that this is an aberration which will be corrected soon.

The second development is the launch of a scheme for developing the fisheries sector, a sector holding considerable potential to improve India's nutrition standards, and help expand India's exports. The scheme is called Pradhanim Mantri Matsya Sampada Yojana (PMMSY). It aims to increase India's fisheries sector fish exports to INR 1 trillion by 2024-25.[2] (see Ch. 9 in this e-book for more details of PMMSY).

The third development is the launch of the Bharatiya Poshan Krishi Kosh (BPKK) initiative in November 2019. This project has two components– Development of a Food Atlas and Documentation of promising practices for Jan-Andolan for POSHAN Abhiyaan.[3] The Agro-Food Atlas is to act as a repository of diverse crops across 127 agro-climatic zones of the country having three parts-crops currently being grown, agro-ecological conditions (soil, organic carbon content, ground water availability etc) and guidance on how a greater diversity of crops could be encouraged in a particular district or block to promote dietary diversity and nutrition. The project also documents social, behavioural and cultural practices that promote and reinforce healthy dietary behaviour. BPKK also helps in harnessing traditional knowledge of India about crop diversity and nutrition; and aims to accelerate hitherto neglected public investments in necessary infrastructure to make India a major agriculture power globally.[4]

In essence, these three path breaking developments expand economic freedom of the farmers and others involved in the agriculture sector; introduce new technologies in all aspects of agriculture activities, including technology of the Third Industrial Revolution, based on Internet of Things. The video link in footnote 59 explains the implications of the Internet of Things.[5]

---

[2]https://www.myind.net/Home/viewArticle/pradhan-mantri-matsya-sampada-yojana-pmmsy-initiative-designed-to-modernise-and-enhance-indias-global-presence-in-the-fisheries-sector accessed on 15 September 2020.

[3]https://pib.gov.in/Pressreleaseshare.aspx?PRID=1595250 accessed on 1 September 2020.

[4]https://www.nabard.org/auth/writereaddata/tender/1008203730Nabard%20English%20Annual%20Report%20for%20Website.pdf accessed on 10 September 2020.

[5]https://www.youtube.com/watch?v=QX3M8Ka9vUA&feature=youtu.be accessed on 2 September 2020.

These development in the agricultural sector are a part of India's application of strategic ideas, the Atmanirbhar Bharat Abhiyan (ABA), and Be-Vocal-for-Local (BVFL), and for the world, to be applied to five pillars, economy, infrastructure, technology driven systems and structures, favourable demographic features, and demand.

The literal meaning of the term Atmanirbhar Bharat Abhiyaan is Self-Reliant India Movement. But this self-reliance is in the context of India being highly globally integrated, and India pursuing further integration based on enhanced global competitiveness and competence. As Amitabh Kant, Chief Executive Officer of NITI (National Institution for Transforming India) Aayog has argued, "ABA is not anti-globalisation. It is about making India self-confident and self-reliant to take on global competition. It is about driving India's socioeconomic transformation".[6] The vision for BVFL is to encourage local producers to innovate, create better products, not just for the domestic markets but also for global markets. The aim is the emergence of regional, national, and global brands.

II. Suggested Responses from NABARD

The new dynamics needs newer responses, departing from 'business-as-usual' mind-set from all the stakeholders, including from NABARD. The following suggestions warrant serious consideration of the NABARD management.

First, NABARD has appropriately been so far largely domestic oriented. But now it needs to reorganize and re-skill to also help expand India's global agriculture footprint, and make India relevant for the global market. Greater global dependence for agricultural consumption and capital goods and for services on India would provide India an important leverage. This, as in the pharmaceuticals sector, can be used constructively to expand India's economic and strategic space and leverage. India's share in global agriculture trade is only 2.4 percent, and this needs to increase markedly.

Official estimates suggest that in 2020-21, India is likely to produce around 305 million tons of food grains, and about 400 million tons of fruits and vegetables, medicinal herbs, and flowers. India is expected to substantially raise the output of fish products in the next few years. Dairy production, which already processes around one-third of the milk production, and has been outside of restrictive agriculture laws and practices, is also set to increase substantially. Besides milk, only a small fraction of output of grains, horticulture, and fishing products are currently processed. Therefore, value addition through food processing, while being competitive in global markets through meeting global hygienic standards, and others, would be an important part of NABARD's responsibility. There is also

[6] https://www.hindustantimes.com/analysis/a-blueprint-to-make-local-indian-brands-truly-global/story accessed on 20 September 2020.

substantial wastage of food from farm to consumers, and at the point of consumption as well. Addressing this aspect could also be considered by NABARD.

The Chairman of NABARD, and other with long experience in agriculture sector, have suggested an Export-Import Bank of India (EXIM) type of structure to help expand India's agriculture exports through export credits and others tied to procuring from India and helping Indian companies set up agricultural production and processing plants abroad. This proposal merits serious consideration.

Second, NABARD's operations also need to be linked to India's Blue Economy initiative, designed to encourage port-led development, and expand coastal development with a view to transforming India's agricultural sector. The key component of the Blue Economy initiative is the Sagarmala project, the prime objective of which is to promote port-led direct and indirect development and to provide infrastructure to transport goods to and from ports quickly, efficiently and cost-effectively.[7]

The 2019-20 Report of NABARD, Chapter 2, titled Blue *Revolution* analyses the fisheries sector, and does recognize investments needed in this sector.[8] But the Chapter does not link it with the Sagarmala project and with the Blue Economy. NABARD will need to devise explicit goals and outcomes for the fisheries sector, and for encouraging seaweed production, an important source of protein as well as income generator. India's main food consumption issue is no longer hunger, but mal-nutrition.

Third, given the emphasis on technology. Financial Technology, FIN-TECH and other start-ups relating to agriculture need to be encouraged by NABARD. In Gandhinagar, there is Gujarat International Financial Tech City (GIFT), with whom NABARD could consider collaborating to set up innovation hub, focusing on agriculture. Fourth, given a new environment facing NABARD, it may consider whether Mission Karmayogi type initiative of the Centre should be adopted by it as an organization, even as NABARD help in enhancing skills of other stakeholders in the agriculture sector. Mission Karmayogi"- National Programme for Civil Services Capacity Building (NPCSCB) aims at comprehensive reform of the capacity building apparatus at individual, institutional and process levels for efficient public service delivery.[9]

The fifth and the final suggestion concerns facilitating data gathering and data analytics. This is an ideal opportunity when new data base can be created on behaviour of farmers about credit obtained, crops, technology, supply-chain,

---

[7] http://pib.nic.in/newsite/PrintRelease.aspx?relid=117691 accessed on 4 September 2020.

[8] https://www.nabard.org/auth/writereaddata/tender/1008203730Nabard%20English%20Annual%20Report%20for%20Website.pdf accessed on 20 September 2020.

[9] https://pib.gov.in/PressReleseDetailm.aspx?PRID=1650633 accessed on 23 September 2020.

including through FPOs (Farmer Produce Organizations which are given a major thrust), post-harvest practices, contract farming and others.

NABARD, perhaps with SBI (state Bank of India's YONO (mobile banking and life-style app) could create a separate entity for data collection and analysis, and explore ways to monetize the data. This will help in providing high quality data to them to fine tune their operations, to policymakers, and after addressing privacy concerns, to researchers.

III. Concluding Remarks

The path breaking agriculture reforms have given NABARD an unprecedented opportunity to help shape the future dynamics of the agriculture sector in India. By considering the five suggestions, and by refining them, and adding more initiatives from its own analysis, NABARD can be true to the spirit of Atmanirbhar Bharat Abhiyan, and Be-Vocal-for-Local (and for the world) as these apply to agriculture.

CHAPTER 8

JAL JEEVAN MISSION WILL SUBSTANTIALLY ENHANCE EASE OF LIVING WITH A POSITIVE IMPACT ON HEALTH STATUS AND WOMEN EMPOWERMENT*

I. The Context

India's population is about 17.5 percent of the world population, but it is endowed with only 4 percent of the global freshwater resources. Moreover, inadequate use of modern demand-supply management tools, and of technology, and lack of emphasis on preparing the policy and decision makers, and other stakeholders of the need to treat water as a precious natural resource with economic value and not as a free gift of nature, has exacerbated water security issues in India. Many districts and cities in India face water scarcity, and this is likely to become more acute unless transformative initiatives are taken involving all stakeholders.

Research by NITI Aayog (National Institution for Transforming India) suggests that nearly 600 million Indians already face high to extreme water stress. 21 cities, including Delhi, Bengaluru, Chennai and Hyderabad, are projected to run out of groundwater by 2020, affecting 100 million people. NITI Aayog has argued that without transformative initiatives, water security will worsen as the country's water demand is likely to double by 2030 due to sustained high growth, and India's vision of becoming a USD 5 trillion economy before then. Unless corrective measures are taken, involving all stakeholders, India's economic and social ambitions will be adversely affected.

Better quality water is not only a necessity for humans, but also for crops and for animal health, and for the fisheries sector. It is an essential component of sustainable broad-based development. One of the major challenges facing the JMM is addressing groundwater contamination. In many rural areas, groundwater contains fluoride, arsenic, iron, salinity, nitrate and heavy metals.[1]

II. The Design and Structure of the JMM

It is in the above context that this column discusses the Jal Jeeven Mission (JJM) launched in August 2019, among the key initiatives of the Prime Minister Narendra Modi-led government. JMM aims to bring about greater ease of living throughout the country by fulfilling an essential need of providing good quality piped water to the households across the country (*Har Ghar Nal Se Jal* in Hindi) on a regular and

---

*Mukul Asher and Kruti Upadhyay, Independent Researcher. This was published on 22 November 2020. Link: https://www.myind.net/Home/viewArticle/jal-jeevan-mission-will-substantially-enhance-ease-of-living-with-a-positive-impact-on-health-status-and-women-empowerment/

[1] https://www.newindianexpress.com/nation/2019/dec/16/groundwater-contamination-a-challenge-for-jal-jeevan-mission-report-2076695.html accessed on 15 November 2020.

long-term basis by 2024. Robust systems and public health system reengineering are being undertaken to achieve the goal.

The JMM also aims to reduce the burden of the women who need to walk many kms. to fetch water, in some cases endangering their safety. The JMM can be expected to address this aspect, and enable use of saved time for improving household welfare through market-based home production, or other pursuits. These aspects however need to be subjected to rigorous decentralized context-specific empirical policy-relevant research. As on 15 August 2019, only 16.9 percent of rural households, or 32.3 million, out of the total 191.1 million rural households in the country had piped water connection.[2] The task therefore is challenging. Given the low level of water connections, for many rural households, JJM has the potential to significantly improve the quality of life as well.

The completion of JMM is expected to fulfil the Social Development Goal number 6 of the United Nations. Technology for achieving the JJM objectives has been part of the stock of global knowledge for decades. But in India, what has been lacking is the vision of the leadership, and the determination to organize with competence and system-based approach across the country, with coordination among many layers of government and with stakeholders. Thus, the Prime Minister, underling their pivotal role in the implementation, has strongly urged all sarpanches and village heads of the country to ensure more effective implementation of the JJM.

On October 2, 2020, the government launched a 100-day Jan Andolan (People's Movement) to ensure potable water supply in all schools and Anganwadi centres across the country. Anganwadi is a type of rural mother and child care centre in India. They were started by the Indian government in 1975 as part of the Integrated Child Development Services program to combat child hunger and malnutrition. A typical Anganwadi centre provides basic health care in Indian villages. It is a part of the Indian public health care system. Basic health care activities include contraceptive counselling and supply, nutrition education and supplementation, as well as pre-school activities.

To underline the determination, and to signal mind-set change, a new Ministry Jal Shakti to address all water issues has been established since May 2019.The Ministry is formed by merging existing Ministries and divisions of Water Resources, River Development, Ganga rejuvenation, and Ministry of Drinking water and sanitation. Jal Shakti ministry has the responsibility for issues ranging from providing clean drinking water, international and inter-states water disputes, to the *Namami Gange* project aimed at cleaning Ganga and its tributaries, and sub-

[2]https://ejalshakti.gov.in/jjmreport/JJMIndia.aspx accessed on 22 November 2020.

tributaries.[3] It is given the task of undertaking management of water resources and drinking water supply in a systemic and integrated manner.

Another positive design feature of the JMM is the openness to new technologies in delivering the citizen-centric outcomes. It is reported that the JMM has constituted a Technical Expert Committee to prepare a road map for measurement and monitoring of water service delivery system in rural areas. The JMM, in partnership with State Governments and sector partners, has started facilitating a sensor-based water supply system on a pilot basis in various villages. Gujarat has begun navigating the sensor-based rural water supply systems in 1,000 villages spread across five districts. The other States have also started pilot projects.[4]

The JMM has in collaboration with Ministry of Electronics and Information Technology, announced Information and communication technology contest to develop innovative, modular and cost-effective solution to develop a smart water supply measurement and monitoring system to be deployed at the village level.[5]

The primary KPI (Key Performance Indicator) of JMM is Functional Household Tap Connection (FHTC). This is supplemented by others such as the water quality, length of period during the day when water is available, and others.

III. Funding Arrangements

The JMM is projected to cost INR 3.5 trillion (USD 47 Billion) over a five-year period. Funds for regular Operations and Maintenance (O and M), often neglected in many infrastructure projects, have also been included as an integral part of project costs and funding. This is an example of sound design.

Various local committees such as Gram Panchayat/Village Water and Sanitation Committee/ Paani (water) Samiti or User groups are to play an important role in the operations and maintenance of the infrastructure developed under the mission, and in cost recovery and governance. The inclusion of cost recovery for maintenance in another feature of good design of JMM. The above project cost does not include voluntary contributions, and labour and other services and materials supplied by the beneficiaries. Such efforts enhance acceptability of JMM to the community.[6]

---

[3] https://www.drishtiias.com/daily-updates/daily-news-analysis/jal-jeevan-mission-2 accessed on 2 November 2020.

[4] http://www.businessworld.in/article/Jal-Jeevan-Mission-to-create-smart-eco-system-to-measure-monitor-water-supply-in-rural-areas/30-08-2020.-314693/ accessed on 15 September 2020.

[5] http://www.agrospectrumindia.com/news/103/1462/ict-grand-challenge-under-jal-jeevan-mission-receives-impressive-response.html accessed on 20 November 2020.

[6] https://jalshakti-ddws.gov.in/sites/default/files/jal_jeevan_samvad_october_2020..pdf accessed on 20 November 2020.

In the funding arrangements, principle of co-funding is applied. This is another positive feature of the JMM design as such co-funding reduces incentives for states and local bodies towards inefficient behaviour, what economists call reducing moral hazard. Thus, for the Himalayan and North-eastern states, Centre and State share the cost in the ratio of 90:10. For all the remaining states, funding ratio is 50:50. This arrangement takes into account differing geographies and capacities of different states, albeit in a rough manner. Union territories receive 100 percent funding from the Central government, as their budgets are borne by the Central government.

The inherent nature of the Indian administrative structure, with 28 States 9 Union Territories, and 739 Districts (as of 2020), implies that coordination task for JMM is complex, and variations among the administrative entities is to be expected. It is reported that the 15th Finance Commission, whose Report (as of 22 November 2020) is not publicly available at the time of writing, has allocated tied grants of INR 58.2 Billion to the states to be spent mandatorily on (a) supply of drinking water, rainwater harvesting and water recycling and (b) sanitation and maintenance of ODF (Open Defecation Free) status. Fund disbursement to the states has been kept flexible in this program. States that are performing better are entitled for the additional resources available from the centre. This motivates the states to achieve their targets in time bound manner and encourages them to build sustainable water resources.

IV. Progress in Achieving JMM Goals

The JMM has constructed very detailed dashboard which enables monitoring of progress, and detailed data for researchers and others to conduct micro-level surveys and analysis of extent of achievement of not just the broad goals, but also the intended health and economic impacts and behavioural change. The JMM also has political behaviour implications which could be researched.[7]

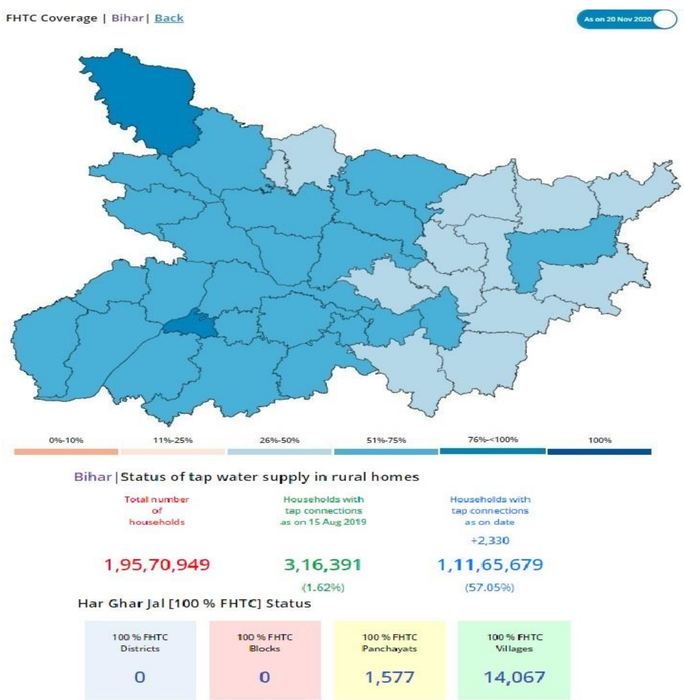
The JMM dashboard reports that out of 191.1 million rural households in India, as of 15 August 2019, there were only 32.3 million households (16.9 percent of the total) which had tap water supply in the homes. This has increased to 58.6 Million (30.7 percent of the total) by 21 November 2020.In absolute numbers, in a period of about 15 months, during Covid-19 pandemic period, 26.3 million households have been provided tap water, a very encouraging progress.[8]

Among the states targeted for 2021 to achieve JMM goals, Goa is first state in the country to achieve 100% households' tap water supply connections. In Telangana, the FHTC coverage has increased from 28.8 percent on 15 August 2019 to 98.8 percent as on 21 November 2020. Thus, it is also going the meet the 2021 target timeline.

[7]https://ejalshakti.gov.in/jjmreport/JJMIndia.aspx accessed on 22 November 2020.
[8]https://ejalshakti.gov.in/jjmreport/JJMIndia.aspx accessed on 22 November 2020.

Bihar has also made encouraging progress as evidenced in Figure 1. Its FHTC coverage has increased from only 1.6 percent of rural households to 57.0 percent by 20 November 2020. This augurs well for Bihar meeting its completion date of end 2021. The JMM is likely to significantly empower women in Bihar, and enhance their safety. There is scope for much policy relevant empirical research on the JMM progress in Bihar.[9]

Figure 1: Progress of JMM in Bihar[10]



A State where progress of JMM needs to be accelerated is Uttar Pradesh. It has 26.3 million households to cover, but the FHTC coverage has increased only from 2.0 percent of the total households on 15 August 2019 to 6.2 percent of households as on 21 November 2020. The target date for Uttar Pradesh is 2022. This would require much greater focus on JMM in the state.[11]

V. Concluding Remarks

The JMM, launched in August 2019, is among the transformative initiatives of the Prime Minister Narendra Modi-led government. As the column suggests, JMM has many features of good design and structure. To deliver potable water supply to all households in the country by 2024 will not only substantially improve ease of living, but also improve health status, and empower women. Freeing women from the task

---

[9] https://ejalshakti.gov.in/jjmreport/JJMIndia.aspxaccessed on 22 November 2020.
[10] https://ejalshakti.gov.in/jjmreport/JJMIndia.aspxaccessed on 22 November 2020.
[11] https://ejalshakti.gov.in/jjmreport/JJMState.aspx accessed on 22 November 2020.

of fetching water, which sometimes created safety issues, will also potentially provide them with opportunities to improve household welfare by market-based home production, and other activities. It may bring about positive social and political behavioural change.

These however need to be ascertained through rigorous objective empirical evidence-based research on a decentralized basis. The JMM has developed an excellent dashboard[12] providing almost real time progress of the JMM throughout the country. It is up to the research community, both those in technological and scientific fields, and those in social sciences, to utilize it, and constructively contribute to the goal of ensuring potable water to all households, and good quality water for animals, crops, and fisheries sector. It has been said that in the 21st century water as a natural resource will be what oil was to the 20th century. Everyone in the country has a stake in helping to achieve the goals of JMM.

[12] https://ejalshakti.gov.in/jjmreport/JJMState.aspx accessed on 22 November 2020.

CHAPTER 9

PMMSY Initiative: Designed to Modernise the Fisheries Sector, Enhance India's Global Presence in the Sector*

I. Introduction

Agriculture sector covers a wide range, crops, fruits and vegetables, flowers, sericulture, honey, medicinal herbs and plants, livestock and poultry, fisheries, seaweeds and others. Initiatives by the Union and State governments, private sector, not-for-profit sector, and individual citizens are poised to usher in wide ranging transformation of India's agricultural sector in the next decade. See chapter 7 in this e-book). The focus of agriculture policies has shifted from mitigating hunger to mitigating malnutrition, while enhancing profitability and incomes of those engaged in agriculture and related activities; and to making India a major agriculture power globally.

Overarching premises behind these initiatives are expanding economic freedom of the farmers and others involved in the agriculture sector; introducing new technologies in all aspects of agriculture activities, including technology of the Third Industrial Revolution, based on Internet of Things (The video link explains the implications of the Internet of Things[1]) and harnessing traditional knowledge of India about crop diversity and nutrition; and accelerating hitherto neglected public investments in necessary infrastructure to make India a major agriculture power globally.

Fish and fish products are appropriately regarded as contributing to healthy and nutritious balanced diet. Fisheries sector, if properly managed, is also less harmful to environment than production of red meat such as beef. Fish provides around 3.3 billion persons globally about one-fifth of daily animal protein.[2]

This Chapter provides a brief exposure to the recently launched PMMSY (*Pradhan Mantri Matsya Sampada Yojana*) initiative. 21 states are participating in the initiative. The initiative aims to modernise the fisheries sector and enhance India's global presence in the sector.

A report by Omnivore, entitled, "The future of Indian Agriculture and Food Systems: Vision 2030", argues that there will be eight trends that will disrupt the

---

*This was published on 13 September 2020. The link is: https://www.myind.net/Home/viewArticle/pradhan-mantri-matsya-sampada-yojana-pmmsy-initiative-designed-to-modernise-and-enhance-indias-global-presence-in-the-fisheries-sector

[1] https://www.youtube.com/watch?v=QX3M8Ka9vUA&feature=youtu.be accessed on 2 September 2020.

[2] http://www.fao.org/3/ca9229en/CA9229EN.pdf accessed on 10 September 2020.

status quo of the Indian agricultural system by 2030, while meeting the objectives of climate-smart agriculture.[3]

Among the eight, two specifically apply to the fisheries sector. First, rising animal protein and dairy consumption will push technology adoption across the animal and fisheries value-chain, increasing diversity of diets, driving up efficiency and lowering costs in a safe and conscious manner. Second, food science will pursue consumer-centricity, yielding affordable processed products that address malnourishment, lifestyle diseases, and ecological concerns. The same Report estimates than in 2018, value added in agriculture sector in India was USD 150 Billion in crops; USD 70 Billion in livestock and poultry, and USD 16 Billion in Fisheries.

II. India in the Global Fisheries and Aquaculture Sector

The Report divides fisheries sector into two components, they are "capture", involving both marine and inland production; and aquaculture. Aquaculture is the breeding, rearing, and harvesting of fish, shellfish, algae, and other organisms in all types of water environments. Pisci culture involves only the culture and rearing of fish.

This section relies on the 2020 Report by the Food and Agriculture Organization (FAO) titled *"The State of World Fisheries and Aquaculture"*. The data in the Report are for 2018.[4]

In 2018, total fish and aquaculture production globally was 178.5 million tonnes (live weight). Capture of fish, both marine and inland contributed 96.4 million tonnes (54 percent) to the total production, while aquaculture contributed 82.1 million tonnes (46 percent). The Report projects that India's total fish production is expected to increase from 12.4 million tonnes in 2018 (6.9 percent of the global total), to 15.6 million tonnes in 2030. This represents 26 percent increase as compared to projected 42 percent increase in aquaculture production.

Between 1990 and 2018, globally, growth in "capture" production was only 14 percent, but in aquaculture was 524 percent, suggesting the later to be driving total production. 88 percent of production globally was used for human consumption. Globally, per capita fish consumption has increased from 13.4 Kilogram during the 1985-1995 period to 20.5 kilogram in 2018. The Report estimates that India's fish consumption is between 5 and 10 Kilograms per year; and India's fish protein intake per person per day is less than two grams. This underperformance provides potentially significant opportunities for India's fisheries sector.

---

[3] https://www.omnivore.vc/wp-content/uploads/2020./09/Vision-2030-report.pdf accessed on 3 September 2020.
[4] http://www.fao.org/3/ca9229en/CA9229EN.pdf accessed on 10 September 2020.

Globally, 38 percent of fish production was exported, with a total value of USD 164 Billion. This represents a large export sector. India accounts for four percent of global exports, third largest after China (14 percent) and Vietnam (5 percent). The Report however projects that between 2018 and 2030, India's exports are expected to decrease by 3 percent, and imports will increase by 96 percent. US (14 percent), and Japan and China (9 percent each) are the largest global importers.

World employment in fisheries sector was 59.5 million, with Asia accounting for four-fifths of the total. Thus, substantial human skills in this sector are in Asia. India should aim to account for a substantial share of human skills in Asia. The Report suggests that a large proportion of fish production is wasted. The Report estimates that only two thirds of global fish stock is within biologically sustainable levels, sharply down from 90 percent in 1990.

The above overview strongly suggests that India should take initiatives, consistent with Atmanirbhar Bharat Abhiyaan (ABA) and Be-Vocal-for-Local (BVFL) strategic ideas (see Chapter 2 in this e-book), to modernise India's fishing sector and enhance its role in the global fisheries sector in an environmentally sustainable manner.

Asher and Soni (2020) argue that ABA, whose literal meaning is Self-Reliant India Movement, should be in the context of India being highly globally integrated, and India pursuing further integration based on enhanced global competitiveness and competence. BVFL is designed to bring about attitudinal and behavioural change about value-addition generated to activities and products by domestic and foreign entities within India.[5]

III. The PMMSY Initiative

It is in the above context that the PMMSY initiative has been launched. The initiative does incorporate the three overarching premises underlying agriculture sector reform noted above. The PMMSY initiative is expected to revolutionise the fisheries sector as it will invigorate it with the latest technology, infrastructure and ensure financial assistance, while improving sustainability. The PMMSY initiative is expected to establish a robust fisheries management framework and check gaps in the value chain. It is hoped that initiative will also help reduce wastage of fish production.

The initiative is be implemented during a period of five years from FY 2020-21 to FY 2024-25. It consists of two components namely, Central Sector Scheme (CS) and Centrally Sponsored Scheme (CSS), at a total estimated investment of INR 201

[5] Asher and Soni (2020.) https://www.myind.net/Home/viewArticle/modi-governments-two-strategic-ideas-atmanirbhar-bharat-abhiyaan-and-be-vocal-for-local-for-post-covid-era accessed on 10 September 2020.

Billion, comprising of Central share of INR 94.6 Billion, State share of INR 48.8 Billion, and Beneficiaries' share of INR 57.6 Billion.

The Government has made it clear that 'Blue Revolution' or `*Neeli Kranti*' has the potential for India to attain the first place in the world in fish production. It includes MoFPI (Ministry of Food Processing Industries) schemes such as Food Parks, Food Safety and Infrastructure. It is estimated by the authorities that the PMMSY initiative is expected to increase fish production by 0.7 million tonnes, and increase exports to INR one trillion (USD 13.3 Billion) by 2024-25. The estimated additional livelihood generation is 0.55 million.

The government has set a fish production target of 15 million tonne by 2020 under the Blue Revolution, and raise it to about 20 million tonnes by 2022-23. These are significantly higher targets than projected by the FAO Report noted above. The importance of fisheries in the public policy agenda is also underlined by the creation of separate Ministry for Fisheries. It will facilitate dealing with various issues concerning fisheries.

The PMMSY initiative fits well with the broader and much larger initiative of promoting the Blue Economy. The term Blue Economy refers to utilization of a country's coast-line, inland waterways, and sea connectivity globally for more sustainable and broad-based economic development. This area to create new growth nodes, and expand exports and save on logistics costs, has been traditionally underemphasized in India. India's 7,500 km coastline, 14,500 km of potentially navigable waterways and maritime sector deserves better utilization to create new growth nodes, livelihood opportunities, and global connectivity.

A key component of the Blue Economy program in India is the Sagarmala program, initiated in 2016. It aims to use port-led development as an additional growth-node and as an avenue to expand exports. There are 12 major ports and around 200 notified non-major ports in India. The navigable waterways are 14500 KM, with a coastline of 7500 KM, involving 13 (out of 36) States and Union Territories.

The blue Economy initiative aims to change India's modal mix, increasing the share of coastal and inland waterways in India's total cargo from 6 percent in 2015 to 12 percent by 2025. Under the Sagarmala program, 577 projects, with an estimated project cost of INR 8700 Billion (USD 126 billion) have been identified for implementation between 2015 and 2035 continuing.[6] In NITI (national Institution for Transforming India) Aayog's 2020 Export preparedness index, among the top five states, four were coastal states. This underlines the importance of the Blue Economy program and of PMMSY.

---

[6]http://sagarmala.gov.in/sagarmala-overview accessed on 1 September 2020.

IV. Concluding Remarks

The PMMSY is a very timely and well-integrated initiative for the fisheries sector which has been usually neglected. The initiative however needs to be documented in much greater detail as only its broad outline is available at the time of writing in September 2020.

The initiative needs strong Monitoring and Evaluation (M and E) system, preferable located in NITI Aayog. Such a system in turn requires robust system of data collection, data analytics and other capacities. Moreover, the data should be accessible widely so that not just the direct sector stakeholders but also researchers and policy analysts get opportunities to provide empirical-evidence based inputs to policy makers, as well get academic publishing opportunities. It is not clear to what extent these have been integrated in the PMMSY scheme. If not, urgent consideration should be given to this aspect. The initiative involves the Centre, participating states, and beneficiaries. Therefore, coordination between them is essential. The coordination mechanism needs to be more explicitly considered and regularly monitored.

CHAPTER 10

START-UP ECOSYSTEM RANKINGS OF INDIAN STATES, 2019*

I. The Context

The start-up India initiative was launched in January 2016 by the Indian government.[1] India has the third largest start-up ecosystem in the world, with about 32 Unicorns (market valuation pf each is greater than USD one Billion), and about 28,000+ recognised start-ups; with USD 50 Billion raised by the start-ups between 2014 and 2019.[2] In the 2020 ranking of global start-up ecosystems by StartupBlink,(https://www.startupblink.com/) India dropped by six ranks to twenty third among 100 countries. For better ranking, internet speeds and power quality issues need to be addressed, and so does greater focus on improving ranking of its top cities for start-ups such as Bangalore, Delhi, and Mumbai.[3]

It is in the above context that the Department for Promotion of Industry and Internal Trade (DPIIT) conducted the States' Start-up Ranking 2019 Exercise (Second edition), with key objective of fostering competitiveness and propel States and Union Territories to work proactively towards uplifting the start-up ecosystem. The Report was published in 2020.[4] This Report provides an overview of the start-up system of each state and Union Territory (UT). Start-up enterprises are crucial for the development and competitiveness of a state, region, or a country as they bring in new entrepreneurs with new ideas and technology which can be adapted to a variety of economic and social areas, raising efficiency and productivity. It is urged that key states take the initiative to construct data on formation of net start-ups (new start-ups less those exiting).

The underlying premise of the rankings, which is strongly supported by the academic research and by experience, is that ideas are among the most important factors of production. The DPIIT has appropriately argued that the purpose of such rankings is to develop capacity building among the states, and to encourage mutual learning among all states, thus providing support in policy formulation and implementation. A state, regardless of the ranking, should have a standard policy of how to use them to improve in those areas where it is deficient.

---

*Mukul Asher and Vivek Singh, Policy Research Foundation, New Delhi. This was published on 20 September 2020. The link is: https://www.myind.net/Home/viewArticle/2019-start-up-ecosystem-rankings-of-indian-states

[1]https://www.startupindia.gov.in/content/sih/en/about-startup-india-initiative.html accessed on 16 September 2020.

[2]https://www.startupindia.gov.in/ accessed on 15 September 2020.

[3]https://www.businessinsider.in/business/startups/news/india-drops-six-places-in-the-ranking-for-worlds-best-startup-ecosystems/articleshow/76057610.cms accessed on 23 July 2020.

[4]https://www.startupindia.gov.in/srf/index.html accessed on 19 September 2020.

II. Methodology of Rankings

In the 2019 rankings, 22 States (out of 28 states) and 3 Union Territories (UTs) (out of 8) participated. To establish uniformity and ensure standardization in the ranking process, States and UTs have been divided into two groups. Category Y comprises all UTs except Delhi, and all States in North East India except Assam. Category X comprises all other States and UT of Delhi.

The score for the 2019 rankings has a weight of 76 percent on the feedback on reforms obtained, with remaining weightage based on the reporting by the states. This emphasis on findings from users of start-up initiatives by each state should be welcomed. But it requires judicious and objective interpretation. This is the second set of rankings, with the first set for 2018 published in 2019.[5]

The State/UT Start-up Ranking Framework' 2019 is spread across seven areas of intervention with a total of Thirty action points, as compared to the Thirty-Eight action points in the previous year's ranking Framework.

There were seven areas, with action points for each area, and weightage as shown in Table 1.[6]

Table 1 DPIIT Framework: Areas, and weightage for 2019 Used for State Rankings

	Framework Pillar	**Number of action points**	**Area- wise score**
1.	Institutional Support	8	24
2.	Simplifying Regulations	3	12
3.	Easing Public Procurement	6	14
4.	Incubation Support	4	23
5.	Seed Funding Support	3	11
6.	Venture Funding Support	2	8
7.	Awareness and Outreach	4	8
	Grand Total	30	100

[5] https://www.startupindia.gov.in/content/dam/invest-india/Templates/public/State%20Startup%20Ranking%20Report%2020.18.pdf accessed on 15 September 2020.

[6] https://www.startupindia.gov.in/srf/index.html accessed on 19 September 2020.

III. Rankings

To ensure seamless dissemination of information and transparent system for collection of responses from the states and Union Territories (UTs), the Start-up Ranking portal was launched on 6 February 2018 alongside the launch of State Start-up Ranking Framework, 2018.

Portal link https://www.startupindia.gov.in/srf/

The States and UTs were classified as: Best Performers (100 percentile), Top Performers over 75 but less than 100 percentile), Leaders between 30 and 74 percentile), Aspiring Leaders (between 10 and 30 percentile) and Emerging Start-up Ecosystems (less than 10 percentile). These are rather generous grades designed to encourage states to continue efforts to improve, and give substance to cooperative but constructively competitive federalism.

Table 2: Category "X" States: Ranking[7]

BEST PERFORMER	Gujarat

TOP PERFORMERS	Karnataka	Kerala

LEADERS	Bihar	Maharashtra	Odisha	Rajasthan

ASPIRING LEADERS	Haryana	Jharkhand	Punjab	Telangana	Uttarakhand

EMERGING STARTUP ECOSYSTEM	Andhra Pradesh	Assam	Chhattisgarh	Delhi
	Himachal Pradesh	Madhya Pradesh	Tamilnadu	Uttar Pradesh

Category "Y" States: Ranking

BEST PERFORMER	Andaman & Nicobar Islands

TOP PERFORMERS	-

[7] https://www.startupindia.gov.in/srf/index.html accessed on 19 September 2020.

LEADERS	Chandigarh

ASPIRING LEADERS	Nagaland

EMERGING STARTUP ECOSYSTEM	Mizoram	Sikkim

In the 2019 rankings, there are only three states, Gujarat, Karnataka, and Kerala, and one UT, Andaman and Nicobar Islands, which score above 75th percentile. Gujarat topped the ranking in 2018 as well. Ranking of Uttar Pradesh, which is emerging as a dynamic state with potential to contribute positively to India's growth, as only Emerging Start-up (score of less than 10 percent) is surprising. The policymakers in Uttar Pradesh (and seven other states and 2 UTs in this category) need to take specific initiatives in areas where they received low scores to improve their ranking. (Table 2).

When ranking of seven pillars in Table 1 are examined individually, rankings differ. Gujarat is a leader in only three out of seven areas. These are incubation Hubs (weight of 23 percent), awareness and outreach campaigns (weight of 8 percent), and scaling innovation leaders (not shown separately in Table 1). Karnataka is a leader in institutional support (24 percent weight), procurement (14 percent support), and regulatory change 12 percent weight). Kerala is among the leaders in institutional support, procurement, seeding innovation leaders, regulatory change, and scaling innovations. It thus has a strong start-up ecosystem. Bihar ranks well, leading in seed innovation leaders. There are eleven states which are leaders in at least one category (Table 3). This suggests that the state start-up ecosystem is well diversified. It also suggests that each state has something to learn from the others, and to strive to improve.[8]

[8] https://pib.gov.in/PressReleasePage.aspx?PRID=1653368 accessed on 19 September 2020.

Table 3: Leaders across Seven Reform Areas in 2019 in DPIIT Rankings

Reform Areas	States			
Institutional Leaders	Karnataka	Kerala	Odisha	
Procurement Leaders	Karnataka	Kerala	Telangana	
Incubation Hubs	Gujarat	Karnataka	Kerala	
Seeding Innovation Leaders	Bihar	Kerala	Maharashtra	
Awareness and Outreach Champions	Gujarat	Maharashtra	Rajasthan	
Regulatory Change Champions	Karnataka	Kerala	Odisha	Uttarakhand
Scaling Innovations Leaders	Gujarat	Kerala	Maharashtra	Rajasthan

The on-going constructive competition among the states is illustrated by the reports that Gujarat is building an incubation centre, which can accommodate 1400 start-ups in an area of 12700 SQ metres, on the premises of Knowledge Consortium of Gujarat (KCG). It is to be completed by 2022.[9] Other states are also likely to be taking similar initiatives. The rankings can therefore change, and quality of governance and leadership of the state are crucial.

The DPIIT Report has suggested that there is a need to ease the access to funding to Start-ups, especially those from small cities and the need for simplification of regulations. The central and state governments would have to invest heavily in Research and Development and in upcoming technologies, to build further on their competitive value addition to sustain and improve their rankings.

[9] https://ahmedabadmirror.indiatimes.com/ahmedabad/cover-story/forget-silicon-valley-gujarat-is-creating-its-own-innovation-hub/articleshow/78116197.cms accessed on 19 September 2020.

IV. DPIIT Survey on Ease of Doing Business: 2019 Rankings

DPIIT also conducts annual survey of states concerning Ease of Doing Business (EODB).[10]
Its components are:
Getting Credit
Paying Taxes
Resolving Insolvency
Construction Permits
Getting Electricity
Registering Property
Enforcing Contract
Starting a Business
Trading Across Borders

There is an anomaly in the ranking in the two surveys.

Top three states in its 2019 rankings are Andhra Pradesh, Uttar Pradesh, and Telangana, while Gujarat is ranked tenth out of 36 entities ranked. But in the start-up survey, Gujarat is ranked number one, Telangana is ranked as aspiring leader, the second lowest category, and Andhra Pradesh and Uttar Pradesh are ranked in the lowest category of Emerging Start-up Ecosystem.

The above findings represent an anomaly which needs to be researched. While analysts and think tanks could devote their resources to explaining the anomaly, it is also urged that DPIIT as agency responsible for both surveys also undertake analysis of its results to better guide the states about the policy reforms and their implementation. The states should also carefully examine their rankings across various surveys, consistency of results, and policy implications arising from them.

V. Concluding Remarks

The purpose of ranking of states, whether for start-up ecosystem, Ease of Doing Business (EODB), or other areas, is to help states improve their competitiveness and enhance efficiency and productivity, while learning from other states. It does require a mindset and attitude among the government leaders and among the bureaucracy as well as private and civil society stakeholders which are constructive and outcome-oriented.

As complexities of management increase, states are strongly urged to consider how they can adapt the Centre's Karmayogi scheme, designed to create requisite skills and attitudes among the government officials, create link between the role civil

[10] https://eodb.dipp.gov.in/ accessed on 19 September 2020.

servants are expected to play and their competency, to address lack of standardization in training priorities, competencies and pedagogy across institutes. It will be for the first time that the Prime Minister will be Chairing Human Resources Council.

As Sajeev Sanyal, Principal Economic Advisor, Government of India has argued:

> "The overall direction of the reform effort should be clear — to improve the inflow/outflow of personnel, rationalise processes, weed out redundant bodies and upgrade the interface with the citizen. The momentum is only going to accelerate."[11]

[11]https://www.hindustantimes.com/analysis/transforming-public-administration/story-PZEGbLXbUIAR9Q3fQ0XmvJ.htmlaccessed on 15 September 2020.

PART II
PUBLIC FINANCIAL MANAGEMENT

CHAPTER 11

AN ANALYSIS OF INDIAN GOVERNMENT'S STIMULUS PACKAGE FOR THE COVID-19 PANDEMIC*

It is widely recognized that the corona virus COVID-19 pandemic is the defining global health crisis of our time. International Monetary Fund has projected that the contraction in the global economy is likely to be much worse and more prolonged than the 2008-09 financial crisis. It has urged the governments to take swift concerted action with fiscal tools taking a prime role to contain the COVID-19 spread and limit the damage to growth and livelihoods.

I. India's fight against Covid-19

India, is a middle-income country, with the second highest population in the world, and has relatively limited health infrastructure, is also facing the challenge of managing this pandemic. However, due to the proactive measures taken by the government under the leadership of Prime Minister Narendra Modi, the outspread of the virus has been contained with much success. Thus, on May 22, 2020, India's cases per million population were 86 as compared to global average of 666; and deaths per million were 3 as compared to 42.9 globally.[1] According to the same source, India's recovery rate was 41.1 percent as compared to global average of 40.1 percent.

There is a trade-off between addressing covid-19 pandemic on the one hand and maintaining economic activity and livelihoods on the other. Recognizing the severe impact of lockdowns and other measures designed to deal with the pandemic on the bottom- half of the Indian population, the government has regularly shown sensitivity to their needs. In the address to the nation on 12th May 2020, Indian Prime minister declared that India is in a state of war against the corona virus pandemic. Recognizing Covid-19 as an unprecedented crisis; he said that we have to protect ourselves and move ahead as well. So, to protect the livelihood of citizens and move ahead to bring economy on the track, he announced a special economic package of INR 20 lakh crores (INR 20 trillion), which is nearly 10 percent of gross domestic product (GDP).

II. Self-reliant India in the Globalization Context

Recognizing the gloomy global economic prospects, and rising nationalism of major powers, PM Modi rightly suggested that making India self-reliant *(Atmanirbhar Bharat)* is the only way to manage the pandemic, and emerge stronger as a country. (see Chapter 2 of this e-book for an analysis of this concept.) In the Indian

---

*This Chapter was written in late May 2020, so reflects condition at that time..

[1] https://www.worldometers.info/coronavirus/ accessed on 22 May 2020.

context, Atmanirbhar Bharat should not mean distancing from integration with the global economy in its many aspects, including trade, investment, cross -border labour flows, and technology transfer. It also does not mean not constructively participating in the international fora. India will continue to seriously engage with many regions and the world, but at the same time strengthen its own domestic industry by streamlining the governance system and undertake reforms to improve global competitiveness which go far beyond relatively minor amendments and changes to existing regulations.

Swadeshi does not and should not be interpreted as isolation. For Mahatma Gandhi, swadeshi was the rejection of the colonial exploitation of India to add to British coffers. Similarly, in the present context, India should more strategically engage with foreign multinational companies and countries which could negatively impact India economically, socially, and politically, while improving the country's strength and leverage. In the similar tone, RSS **(***Rashtriya Swayamsevak Sangh* founded in 1925, which in Hindi translates to National Volunteer Organization) chief Mohan Bhagwat advocated the principle of Swadeshi in his annual Vijayadashmi address. He suggested that the country must create and expand trade relations with the world on the basis of our strength and terms. His advised that India must try to consume first what we as a household can produce, then we should look for the commodity with in the village and only in the last, we should trade it from the outside village. PM Modi's appeal of self-reliance at country level incorporated relevant parts of the above advice.

III. Five pillars of self-reliant India

According to Prime Minister Narendra Modi, the five pillars of India's self-reliance are economy, infrastructure, technology driven system, vibrant demography and demand. The features and role these five pillars are explained below.

First Pillar: An economy that is poised to take quantum jump and does not just rely on incremental change. This is important as rapid growth of Indian economy in the recent decades helped in mitigating poverty on a massive scale. When the size of the economy increases, there are more resources to take care of the development needs of the nation and welfare of the citizens.

Second Pillar: Infrastructure that should be world-class and become the identity of a modern India. This pillar is indispensable because good infrastructure not only attracts economic activities by reducing the cost of production and distribution but it also enhances connectivity and leads to improved standard of living of citizens.

Third Pillar: A system that is based on the technology-driven arrangements, fulfilling the dreams of the 21st century, not the policy of the past century. Its significance can be understood by the examples during this pandemic. Government could directly transfer money in the bank accounts of 410 million needy citizens through the help of JAM trinity (combination of Jan Dhanyojna, Aadhar card and mobile phone technology) and, in many cases, bank *mitras* (friends) or the post office personnel delivered the money at home. This could be done without the engagements of government offices in public dealing. Earlier, the direct benefit transfers of INR 6,000 under Pradhan Mantri Kisan Samman Nidhi have proved that technology-driven arrangements can bring efficiency in the delivery of services and curtail corruption.

This technology has unprecedented and the revolutionary impacts. Government must act with great urgency to connect all the remaining persons and households the (JAM) mechanism. In this crisis and lockdowns, new technologies have helped people to stay connected and reduced the damage by letting the economic activities continue in some sectors like education, e-commerce, IT, financial services, and international trade.

Fourth Pillar: A vibrant demography which is the source of energy for a self-reliant India. Where, on the one hand, a large population in India is believed to be the burden on resources and the cause of most of the management/administration complexities; on the other, India has 62.5% of its population in the working age group of 15-59 years which is rising, and will be at the peak around 2036 when it will reach approximately 65%. So, in comparison to other nations, India has demographic dividend in terms of abundance of working hands and lower dependency ratio (persons in 15-59 group divided by persons over 60 years on age). The young Indian population, which can significantly contribute to the production activities, can also create huge demand for the products with the earned income. So, PM Modi is absolutely right in counting dynamic demography as one of the pillars. However, it is relevant to educate and impart marketable skills to the Indian labour force for their contribution in economic activities so that maximum demographic benefits can be obtained. There is also a need to increase the labour force participation rate, particularly of women.

Fifth Pillar: Demand, whereby the strength of India's demand and supply chains should be utilized to full capacity. PM Modi underlined the importance of strengthening all stakeholders in the supply chain to increase, as well as fulfil, the demand. In Economics, there is a powerful concept of multiplier. According to this concept, one-unit increase in demand in an economy could generate more than one-unit increase in the GDP. This works in a cyclical fashion. If person A demands and purchases a commodity X worth INR 100 from B, then INR 100 is the income of person B. Suppose with her earned income, she purchases another commodity Y from another person C worth INR 100. Then total demand in the economy is Rs 200 (INR 100 of X and INR 100 of Y) and the total purchasing power in the economy is also INR 200 (INR 100 of B and Rs 100 of C). As this chain goes on, further demand

and purchasing power are created overtime. This creation however does not occur instantly but over time and needs to be empirically estimated. Moreover, income and demand do not necessarily translate into Gross Domestic Product (GDP), as there are intermediate products (not counted in GDP), and other leakages, such as saving, and imports, also not counted in GDP. But the chain does create GDP of more than 100 id the purchase is on financial goods and services. It also generates more livelihoods and employment in the economy. So, it is important by the government to ensure that demand in the economy should be robust. It is also equally important that supply of the products chain keeps up with demand as otherwise higher demand may lead to price increases, i.e., to inflation. If there is demand, but if it is not supported by the domestic production or if it is fulfilled by imports then the multiplier becomes weak. As a result, it hampers employment generation and income earning capacity of people. In light of the above, the direct benefit transfers to low income citizens are fully justified not only for them to survive but also to create high demand per unit of transfer.

Thus, Prime Minister Narendra Modi in his 12 May 2021 address suggested that the special economic package of INR 20 trillion will have emphasis on land, labour, liquidity (availability of cash in hand), and laws based on the above five pillars. This package would be a combination of immediate relief to various sectors, including cottage industries, Micro, Small and Medium Enterprises (MSMEs), labour, middle class, industries; measures for speedy recovery of the economy; and bold reforms across the sectors to drive the country’s push towards Atmanirbhar Bharat.

IV. Summary of Covid-19 economic package

The economic stimulus of INR 20 trillion (or INR 20 lakh crore) is a combination of fiscal stimulus and structural reforms by Finance Minister (FM) and monetary policy stimulus by Reserve Bank of India (RBI). The amount and announcement of the package also include the measures taken before the PM’s address on 12 May 2021 but after the outbreak of Corona virus in India. These measures with the amount are summarized below.

Table 1: Elements of Covid-19 INR 20 Trillion Package

S. No.	Measures (Pillars addressed and other goals)	Amount (INR Billion)
1	Revenue foregone due to tax concessions since March 22nd 2020 (Economy, demand, survival and livelihood)	78
2	Pradhan Mantri Garib Kalyan Package (PMGKP): For poor to help	1700

	them fight the battle against Corona virus. 80 crore poor people given benefit of 5 kg wheat or rice per person for 3 months and 1 kg pulses for each family every month for 3 months Rs 500 per month for next 3 months to 20 crore women Jan Dhan account holders Gas cylinders free of cost for 3 months to 80 million low-income families Ex-gratia (assistance) of Rs 1,000 to 3o million low-income senior citizen, poor widows and poor Divyang. Increase in Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS) wage to INR 202 a day from Rs 182 to benefit 136 million families Insurance cover of INR 0.5 million per health worker Other than above measures under PMGKP, under PM-Kisan scheme Rs 2,000 each was transferred to 8.19 crore farmers (total Rs 16,394 crores). Under National Social Assistance Program(NSAP), the target amount of INR 30 billion is almost achieved. 22 million building and construction workers together to get financial support of INR 39.5 billion 85% of train transportation cost and food to take migrant workers to their respective home states were provided by the central government.	
3	Prime Minister's announcements for the Health Sector Released to states: INR 41.1 billion Essential items: Rs 37.5 billion Testing labs and kits: Rs 5.5 billion With the help of technology-driven arrangements, rollout of e-Sanjeevani Tele-consultation services and virtual learning models and Aarogya Setu app Increase in domestic manufacturers from 0 to 300 for the	150

	production of PPEs and N95 masks to serve Indian health workers and also production of crores of HCQ tablets Amendment in Epidemic Diseases Act (Survival and livelihood of poor and vulnerable people)	
4	Emergency working capital facility for businesses including MSMEs: To meet old dues, buy raw material and restart business, (any standard) MSMEs can take collateral (security) free bank loan with 100% government guarantee Targeted to benefit 45 lakh units which in turn can benefit 12 crores employees of these units. (Demand, economy, maintaining supply chain, survival)	3000
5	Subordinate debts for stressed MSMEs: Targeted to 2 lakhs (financially) stressed MSMEs Here also government is giving partial guarantee if enterprises take loans from the banks (Demand, economy, maintaining supply chain, survival)	200
6	Fund of funds for MSMEs: A corpus of fund to be set up to provide equity funding Targeted to MSMEs with growth potential and viability for them to expand in size and capacity and get listed in any stock exchange (Demand, economy, capacity building, maintaining supply chain, survival)	500
7	Employees Provident Fund (EPF) support for Business and Workers: Under PMGKP, payment of 12% of employer and 12% employee contributions was made by the government for salary months of March, April and May 2020. This applied to an establishment with up to 100 employees and at least 90% of employees having salary up to Rs 15,000. The above support is extended for 3 more months. Targeted to benefit 3.67 lakh establishments (employers) and 72.22 lakh employees. (Demand, liquidity, maintaining supply chain)	28
8	Reduction in EPF rate: Targeted to those establishments which are not covered in the above scheme and which are not central or state public sector units.	67

	Reduction of EPF rate for both employers and employees (including central and state PSU employees) from 12% to 10% for next 3 months. Targeted to benefit 6.5 lakh establishments and 4.3 crores employees. (Demand, liquidity, maintaining supply chain)	
9	Special liquidity scheme for Non-Banking Financial Company (NBFC)/Housing Finance Company (HFC)/ Micro Finance Institutions (MFIs): Investment made in the debt papers of NBFC/HFC/MFIs (the loans given by these institutes not necessary of high quality) would be fully guaranteed by the government This will ensure liquidity in NBFCs, HFIs and MFIs which would further help to MSMEs and housing sector. (Demand, economy, infrastructure, maintaining supply chain, liquidity)	300
10	Partial credit guarantee scheme 2.0 for Liabilities of NBFCs/MFIs This is extension of existing scheme to cover the investment on the bonds/commercial papers issued by the NBFCs and MFIs which are not rated well or are unrated. Government would partially guarantee this investment with the guarantee to cover first 20% of the loss incurred in the investment. (Demand, economy, infrastructure, maintaining supply chain, liquidity)	450
11	Liquidity injections for DISCOMs Power distribution companies (DISCOMs) revenue declined massively as many states have not paid their dues to DISCOMs. As a result, they are unable to pay Power generation and Transmission companies of Rs 94,000 crores. Demand reduction of electricity due to Covid-19 further deteriorated their cash flow problem. To maintain regular supply of electricity, a must for self-reliant India, DISCOMs will be provided loans of Rs. 90,000 through Power Finance Corporation/Rural Electricity Corporation against state guarantee. (Demand, economy, infrastructure, maintaining supply chain)	900
12	Reduction in Tax deduction at source (TDS)/ Tax collection at source (TCS) rates: TDS/TCS rate for non-salaried specified payment shall be reduced by 25% of the existing rates for the period 14/05/20-31/03/21. This will apply to the payments for contract, professional fees,	500

	interest, rent, dividend, commission, brokerage, etc. (Demand, liquidity, economy)	
Total	Stimulus provided by announcements in Part-1 (13/05/20)	7873
13	Free Food grain Supply to Migrant Workers for 2 months: Central government released Rs 11,002 crore of its contribution in advance to all states on 3rd April 2020, to supplement funds in their State Disaster Response Fund (SDRF) and permitted states for setting up shelter for urban poor and migrants and providing them food and water etc. This is in addition to the ration provided to the card holders under PMGKP. Targeted to 8 crores migrants who are neither National Food Security Act or State card beneficiaries. Migrants will be provided 5 kg of grains per person and 1 kg gram per family per month for two months. (Demand, survival, livelihood)	35
14	Interest Subvention for MUDRA Shishu loans: RBI already provided suspension of EMI for 3 months on MUDRA shishu loans (loan of up to the amount Rs 50,000) to small businesses. After the end of loan moratorium, government will provide interest subsidy of 2% for prompt payees for a period of 12 months. (Demand, economy, maintaining supply chain, liquidity	15
15	Special Credit Facility to Street Vendors: Rs 10,000 credit targeted to 50 lakh street vendors for initial working capital (Demand, economy, maintaining supply chain, liquidity)	50
16	Housing Credit Linked Subsidy Scheme (CLSS)- Middle Income Group (MIG) Program: This scheme is extended up to 31/03/21. Expected to benefit 2.5 lakh MIG having annual income of Rs 6-18 lakhs. (Demand, economy, Infrastructure, capacity building)	700
17	Additional Emergency Working Capital through NABARD: Expected to benefit 3 crore small and marginal farmers during post Rabi harvest and current Kharif preparatory works. (Demand, economy, maintaining supply chain, liquidity)	300
18	Additional credit through Kisan Credit Card (KCC):	2000

	To cover remaining 2.5 crores small farmers who can collectively access bank loan amount up to Rs 2,00,000 crores at concessional rate. In last 2 months 0.25 million new KCCs were approced. Through these new cards, marginal farmers can collectively avail bank loan amount up to Rs 25,000 crores at concessional rate. Fishermen and Animal Husbandry farmers will also be included. (Demand, economy, maintaining supply chain, liquidity	
Total	Stimulus provided by announcements in Part-2 (14/05/20)	3100
19	Micro Food enterprises: Targeted to help 2 lakh small entrepreneurs running food processing units to attain the goals of getting technical upgradation to attain FSSAI food standards, build brands and marketing. Existing micro food enterprises, farmer producer organization, self-help groups and cooperatives to be supported along with cluster-based approach indifferent parts of the country. (Capacity building, economy, infrastructure, maintaining supply chain, liquidity)	100
20	Pradhan Mantri Matasya Sampada Yojana: Aimed for integrated, sustainable, inclusive development of marine and inland fisheries INR 90billion for infrastructure related to fisheries and aquaculture INR 110 billion for activities in marine, Inland fisheries and aquaculture Targeted to create employment to over 55 lakh persons (Capacity building, economy, infrastructure, maintaining supply chain	200
21	Operation Greens: Operation Greens will be extended from Tomatoes, Onion and Potatoes (TOP) to all fruits and vegetables (TOTAL). This is aimed to prevent distress sale and reduction of price of perishable fruits and vegetables at the farm level. 50% subsidy on transportation from surplus to deficient markets and 50% subsidy on storage, including cold storage. (Maintaining supply chain, price realization for farmers, demand)	5
22	Agri Infrastructure Fund:	1000

	During March 2020 a support of INR 4,2 billion was provided under Rural Infrastructure Development Fund to states for rural infrastructure. Provision of the fund to aggregators, primary agriculture societies, Farmer Producer organization, agriculture entrepreneurs including start-ups etc. to strengthen the farm-gate infrastructure such as cold chain, post-harvest management infrastructure, yards etc. (Infrastructure, capacity building, maintaining supply chain, price realization for farmers, demand, economy)	
23	Animal Husbandry Infrastructure Development Fund (Infrastructure, capacity building, maintaining supply chain, price realization for farmers, demand, economy	150
24	Promotion of Herbal Cultivation: Additional 1 million hectare area will be covered under Herbal cultivation in next two years 800-hectare area along the banks of Ganga would be developed as a corridor for medicinal plants. (Infrastructure, capacity building, maintaining supply chain, price realization for farmers, demand, economy	40
25	Beekeeping Initiative Aimed to increase income of 0.2 million beekeepers, increase quality production of honey and wax and get help in the pollination of crops in the vicinity. (Capacity building, maintaining supply chain, price realization for farmers, demand, economy)	5
Total	Stimulus provided by announcements in Part-3 (15/05/20)	1500
26	Viability Gap Funding for social infrastructure Gap funding up to 30% each of total project cost in social infrastructure by private sector as VGF by Centre and the state bodies. It will remain 20% in other infrastructure projects. (Infrastructure, capacity building, economy)	81
27	Additional MGNREGS allocation: Annual provision for MNREGS is Rs. 61,000 crores. Now additional Rs. 400 billion is given due to the crisis. Drive being undertaken to enroll returning migrants in MGNREGS 40-50% more persons enrolled in MGNREGS, compared to May 2019	400

	Plan for continuation of MGNREGS works in Monsoon in plantations, horticulture and livestock related sheds. (Demand, survival, livelihood, environment)	
Total	Stimulus provided by announcements in Part-4 & 5 (16 and 17/05/20)	481
	RBI Measures (Actual utilized) (Increase in liquidity for banks and industries, Supply chain, demand, economy)	8016
	Grand Total	20970

In addition to the above stimulus of INR 20.97 trillion, other measures, details below have also been initiated.

Definition of MSMEs (Micro-Small-Medium Enterprises**)** was revised in favour of MSMEs so that they can invest more, grow in size but still can get the benefits of MSMEs without fear. In this way, now they can employ more labourers and contribute more in GDP and exports.

Table 2: Revision of MSME Definition

Existing MSME Classification			
Criteria: Investment in Plant & Machinery or Equipment			
Classification	**Micro**	**Small**	**Medium**
Manufacturing Enterprises	Investment < INR 0.25 million	Investment < INR 50 million	Investment < Rs 10 million
Services Enterprises	Investment < INR 0.1million	Investment <INR 20 million	Investment < Rs 5 million
Revised MSME Classification			
Composite Criteria: Investment and Annual Turnover			
Classification	**Micro**	**Small**	**Medium**
Manufacturing and Services Enterprises	Investment <INR 10 million Turnover <INR 50 million	Investment <INR 100million Turnover <INR 500 million	Investment <INR 200 million Turnover <INR 1000 million

For government procurement, tenders up to INR 2000 million will no longer be on global tender route. This will benefit MSMEs as they could not match big companies for supply to mother/large units with the criteria of global tenders.

Urban poor:

With the indirect help of the government, 12,000 self-help groups (SHGs) produced 30 million masks and 0.12 million litres of sanitizers. This gave additional employment opportunity to urban poor.

7,200 new SHGs of urban poor with increased fund limit of INR 0.2 million per SHG have been formed since 15/03/20 to generate employment opportunities.

Migrant families:

Using technology-driven arrangements, migrants can access ration from any fair price shop in India by March 2021 (one nation, one ration card). This will significantly reduce transaction and hassle costs, and enhance food security of cross-border workers.

Construction of Affordable Rental Housing Complexes for migrant labourers by incentivizing industries and state agencies under PM Awas Yojana (PMAY).

Job creation through CAMPA funds:

Plans worth INR 60 Billion to be approved under Compensatory Afforestation Management & Planning Authority (CAMPA) funds. These funds will be used by state governments during monsoons for a forestation and other conservation works.

This will immediately create job opportunities in urban, semi-urban, rural and tribal areas.

Dairy cooperatives:

During the lockdown, a new scheme to provide interest subvention (subsidy) @ 2% per annum was announced for dairy cooperatives for the year 2020-21.

There is additional 2% per interest subvention on prompt payment of EMIs.

This will benefit 2 crores farmers with unlocking INR 50 billion additional liquidity.

National Animal Disease Control Program:

Since January 2020 15million cows and buffaloes got tagged and vaccinated. The aim of this programme is 100% vaccination of total 530 million animals for major diseases with total outlay of INR 133 Billion.

Health reforms and initiatives:

This pandemic has posed challenges for the health infrastructure. To face the challenge of pandemic in future, the infrastructure, both in terms of hospitals and testing laboratories by both the public, private and not-for profit sector organizations, need to be strengthened. Public expenditure on health needs to be increased. The 30% gap viability fund will help in this. Investment in grass root health institutions, especially health and wellness Centre in rural and urban areas, to prepare India for any future pandemics, and infectious diseases will be a priority. Hospital blocks will be made in all districts. The pathology lab facilities are not adequate in small towns and rural areas. So, to address this gap, public health labs will be provided at the block level.

Education:

During the COVID-19 crisis technology has been used to the maximum in education sector. PM eVIDYA programme for multi-mode access to digital online education to be launched immediately.

It will consist of DIKSHA for school education in the states/UTs. DIKSHA will provide e-content and QR coded energized textbooks for all grades (one nation, one digital platform).

12 additional channels were added, one each for each class in SWAYAM PRABHA DTH channels (one class, one channel). Private DTH operators and states were involved to share the airtime on the educational DTH channels to telecast education related content.

Provision is also made for telecast of live interactive sessions with experts through the Skype from home.

200 new text books are added to e-Paathshaala. (In Hindi, it means school)

Special e-content for visually and hearing impaired have been provided.

Top hundred universities will be permitted to automatically restart online courses from next session.

Manodarpan:

An initiative for psychological support of student's teachers and family on mental health and emotional well-being to be launched immediately.

V. Make in India Drive

Make in India initiative laid foundations for Atmanirbhar Bharat. Make in India was launched as an initiative to change the mindset of business person for doing business in new ways to make sure that India becomes attractive on its strengths. Many investors have found India very attractive due to the size of Indian market, aspirational middle class, rule of law, and its talent pool. Incentive schemes for promotion of new champion sectors such as solar PV manufacturing, advanced cell battery storage, etc. have been introduced. (see Chapter 2 in this e-book for the details)

Information about industrial land/land bank is available on industrial information system with GIS mapping. This is one striking example of technology driven arrangement. 3376 industrial Park/estates/SEZs in 5 lakh hectares got mapped on IIS.

To encourage Make in India drive for self-reliance in defence sector, a list of weapons is to be banned from imports. This will help in the reduction of huge import bill and government will give money for their capital procurement. Corporatization of ordinance factory board and stock exchange listing of ordinance factories to improve efficiency in their operations are to be considered.

VI. Giving Comfort to Businesses

Due to COVID-19 induced lockdowns, business enterprises have been severely affected. To give immediate and long-term comfort to them, minimum threshold to initiate insolvency proceedings has been raised to INR 10 million (from IMR 0. 1 million, largely insulating the MSMEs). There has been suspension of fresh initiation of insolvency proceedings for one year. A provision empowering central government to exclude COVID-19 related debt from the definition of default under the code has been included. There has been decriminalization of Companies Act violations involving minor technical and procedural defaults

Majority of compoundable offences sections are to be shifted to internal adjudication mechanism and power of regional director for compounding enhanced (58 sections to be dealt with as compare to 18 earlier). The amendments will de-clog the criminal courts and NCLT (national company Law Tribunal).

Seven compoundable offences have been dropped completely and five others will be dealt with other mechanisms. Companies can list themselves directly in foreign jurisdictions. Private companies which list non-convertible debentures on stock exchanges need not be regarded as listed companies.

VII. Structural Reforms in Various Sectors

The list below of structural reforms is only partial, but it clearly illustrates that the government intends to combine relief measures for the Covid-19 pandemic with structural reforms designed to lay strong foundations for future growth. India is one of the few countries to combine pandemic relief with structural reform.

A. Reforms in the Coal Sector:

To make India self-reliant in the production of coal, government has decided to end monopoly of the government and start commercial mining on the revenue sharing basis with the private sector. Government would like to introduce competition, transparency and private sector participation to bring efficiency in this sector. This step has been taken because India has the third largest coal reserves, but still, it is a coal importing country. Regulation is required when the resources are scarce. However, here there is abundance of coal available but still industries face shortage of coal. Incentive is being given for gasification of coal as coal is not very environment friendly. INR 500 billion has been allocated for infrastructure development in the coal sector designed to help reduce environmental impact.

B. Reforms of the Mineral Sector:

The objectives are to boost growth and employment, and avail of a state-of-the-art technology, especially in exploration. The measures are: (a) introduction of a seamless composite exploration-cum-mining-cum-production regime. As of now, the auction for exploration, mining and production take place separately. As a result, players in this sector face uncertainty in obtaining licence for each of the activities. When new auctions system is operational, then the license holder could plan accordingly for all activities; (b) 500 mining blocks would be offered through an open and transparent auction process; (c) introduction of joint auction of more than one mineral is to be implemented. This will help in the acquisition of all the required resources used in the production by a particular industry. It will again mitigate uncertainty in the production process and hence, the cost of production may be reduced; (d) to allow transfer of mining leases and sale of surplus unused minerals, leading to better efficiency in mining and production; (e) development of the mineral index, and (f) reduction of stamp duty at the time of award of the license.

C. Reforms in the Civil Aviation Sector:

As of mid-2020, only 60% air space is available for civil aviation. Restrictions on utilisation of Indian airspace are to be eased so that civilian flying becomes more efficient, reducing import bill, more affordable and environment friendly.

D. Reforms in the Utilities Sector:

DISCOMS (electricity distribution companies) in Union Territories are to be privatized to bring efficiency and improve reliability and quality of electricity services, while improving the financial position.

E. The Space Sector:

Consistent with Atmanirbhar Bharat, the government will provide level playing field for private companies in satellites and space-based services. It will also provide predictable policy and regulatory environment to private players. Private players will also be allowed to use ISRO (Indian Space Research Organization) facilities and other relevant assets to improve their capabilities. Government will also provide remote sensing data to tech-entrepreneurs with the liberal Geo-spatial data policy, but with some conditions.

F. Reforms in Atomic Energy Sector:

Government will enable private sector and public-private partnership (PPP) mode to participate in such atomic energy related fields as medical isotopes, conservation of perishable food and related areas. In this context, the start-up ecosystem would also be connected to nuclear science.

G. Incentives to State Governments to Permit Additional Borrowing but Linked to Reforms:

The Centre has increased borrowing limit for states from 3% of GSDP (Gross State Domestic Product) to 5%. However, after 0.50% of unconditional increase in borrowing, each additional 0.25% of borrowing will be linked to clearly specified measurable and feasible reform actions, such as universalization of 'one nation one ration card', ease of doing business, power distribution and urban local body revenue generation. The states can further borrow additional 0.50% pf GSDP if milestones are achieved in at least 3 out of 4 reform areas.

H. Reforms in Public Sector Enterprise Policy (PSEP):

All sectors including strategic ones are open to private sector while public sector enterprises will play an important role in only selected strategic areas. This is to provide level playing field to private sector and there will be no need in future to regulate about in which sector private enter private players can participate. To minimize wasteful administrative cost, number of enterprises in strategic sectors will ordinarily be only 1 to 4. Others will be privatized/ merged/ brought under holding companies.

I. Amendment in Essential Commodities Act:

These have been made to enable better price realisation for farmers by attracting investment and making agriculture sector competitive, agricultural food stuffs including essential ones like cereals, edible oils, oilseeds, pulses, onions and potato, are to be deregulated.

J. Agriculture Marketing Reforms:

Farmers have traditionally been required to sell agricultural produce only to Licensees in Agricultural Produce Market Committee (*APMC*). This causes less price realisation for farmers, hindrances in free flow of agricultural produce and fragmentation of markets and supply chain. Such restrictions are not there for any industrial product. A central law has been formulated (a) to provide adequate choices to farmers to sell produce at attractive prices, (b) for free inter-state trade and (c) to establish a framework for e-trading of agricultural produce.

K. Facilitative Legal Framework for Contracts in Agriculture:

Farmers do not know at the time of sowing of the crops what returns they will get after the harvest. There is no mechanism currently to ensure an assured price. Government will bring amendments to enact facilitative legal framework to enable farmers to engage with processors, aggregators, large retailers, exporters, and others in a fair and transparent manner. This engagement or contract can bring assured returns and risk mitigation for farmers with access to quality inputs, capital and technology.

VIII. Concluding Remarks

The underlying principle in all the measures taken by the Finance Minister (FM) Nirmala Sitharaman under Covid-19 economic package is to empower people and to give them resources so that they can produce for themselves and have livelihood for themselves rather than being dependent only on entitlements (of cash transfers, subsidies etc.). Here, the focus primarily is making sure that Indians should be helped to stand up on their own and generate livelihoods.

CHAPTER 12

INDIA'S 2021-22 BUDGET: FACILITATING INDIA'S RISE*

I. Introduction

The 2021-22 Budget is India's first paperless digital budget. It is hoped that this practice continues in the future. Presentation of the Union Government Budget is the prime economic event of the year. But economic and other policies, some very major, are undertaken throughout the year. This is likely to continue. Some examples are the major reform of corporate income tax (CIT) structure in September 2019; agriculture law reforms, labour code reforms, and accelerated positive organizational transformation of the Indian Railways.

It is reported that since the Budget, NITI (National Institution for Transforming India) Aayog has asked for a study to be conducted on the economic impact of the judgments delivered by the Supreme Court, high courts, and quasi-judicial bodies such as the NGT (National Green Tribunal) set up in 2010. There is a huge scope to enhance economic reasoning skills of the above bodies, and their judgements have been widely perceived to have adversely affected India's progress, even as their transparency and accountability remains low. Such a study is therefore long overdue.

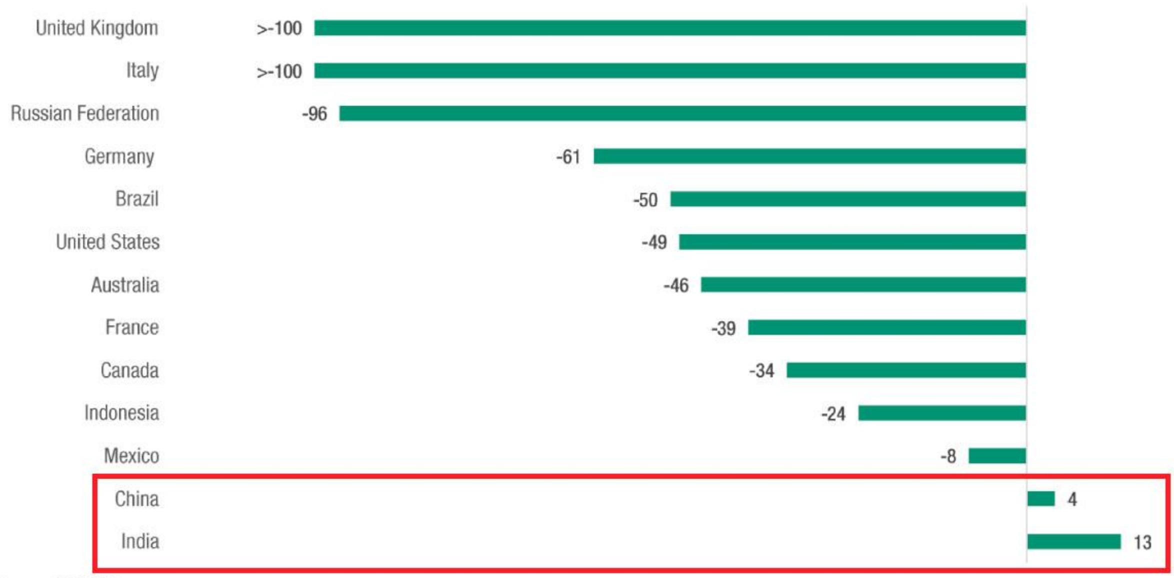
It is the steady stream of activity, sector, organization-specific seemingly small reforms on a continuous basis which cumulatively lead to major transformation of the economy. A small, but significant example from the Budget is that for the first time since independence, the kerosene subsidy is recorded as zero. Reform process must always be on going as new challenges, new bottlenecks, and new priorities emerge.

India's 2021-22 Budget has been constructed under very unusual circumstances of global Wuhan pandemic (covid-19 pandemic); significant geo-economic shifts and geo-strategic risks; and acceleration of digital economy, accompanied by financialization of the global economy. Many analysts have argued that after the Pandemic, an altered world order will emerge, in which India may be able to position itself more advantageously. United States State Department spokesperson commented that "…we welcome India's emergence as a leading 'Global Power' and its role as a net security provider in the Indo-Pacific region".

*This was first published on 12 February 2021. Link is https://www.myind.net/Home/viewArticle/indias-2021-22-budget-facilitating-indias-rise

Indian economy was experiencing a growth slowdown even before the Covid-19 Pandemic became evident in February-March 2020. This budget is structured amidst sharp contraction in GDP projected in 2020-21, making laying foundations for broad-based high growth a priority. The budget speech must be read with accompanying documents for a more rigorous analysis. Examples are: Economic Survey; Budget at a Glance; the Finance Bill; The Macro Economic Framework; Medium Term Fiscal Policy and Strategy Statement; and Output-Outcome Framework for Schemes.[2] For the 2021-22 budget analysis, the Report of the 15th Finance Commission (FC) is also relevant.

Figure 3. Changes in 2020 FDI inflows for selected top 2019 recipient economies
(Per cent)



Source: UNCTAD.

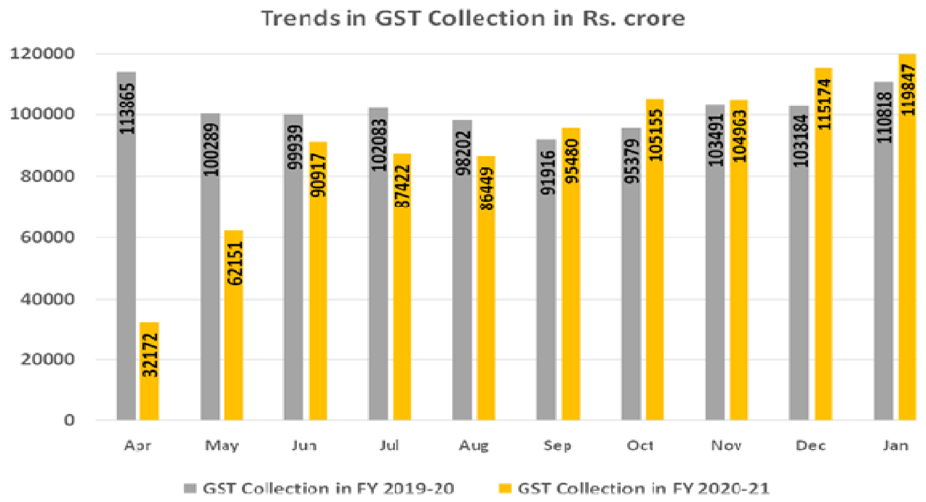
II. The Context

Before the Budget presentation, some positive economic indicators were evident. In 2020, India exhibited the largest positive change in FDI inflow, when most countries registered an outflow as shown in Figure 3.

India's GST (Goods and Services Tax) collections have also been improving, with January 2021 registering highest ever monthly collection of INR 1.20 trillion (chart 1). This trend is expected to continue, supported by administrative reforms of GST, and increased economic activities.[3]

[2]https://www.indiabudget.gov.in/ accessed on 1 February 2021.
[3]https://pib.gov.in/PressReleseDetailm.aspx?PRID=1693779 accessed on 1 February 2021.

Chart 1[4]



Three key ideas from the Economic Survey 2020-21 are reflected in the Budget. They are:

(i)Bet on growth to check both poverty and inequality

(ii)Emphasise Capital expenditure rather than consumption to stimulate demand, and enhance capacities for future growth;

(iii) augment skills-sets.

Arvind Virmani has suggested dividing India's economic response to the pandemic since march 2020 into three phases. They are:

Survival: It is widely acknowledged that overall, India has competently managed the survival phase, though some states such as Kerala, Delhi, Chhattisgarh, and Maharashtra, could have managed much better. India is currently administering world's largest vaccination drive within the country. India has (as of February 11 2021), agreed to supply vaccines, some donated, some on commercial basis, to the following 16 countries, spread across the globe. Afghanistan, Bangladesh, Seychelles, Barbados, Dominica, Mauritius, Morocco, Maldives, Sri Lanka, Bahrain, Bhutan, Algeria, Kuwait, Brazil, and Mexico. It is reported that request of some high-income countries, such as Canada, is under consideration (as of 11 February 2021).

Revival: 2021-22 is the revival year. This is indicated by projected high growth in real GDP ranging from 7.5 to 12.0 Percent, albeit from a low base of 2020-21.

Re-Growth: This refers to the period of three to four years from 2022-23 fiscal year. Re-growth requires both continuing substantive reforms, and stimulative fiscal and monetary policies.

---

[4]https://pib.gov.in/PressReleseDetailm.aspx?PRID=1693779 accessed on 1 February 2021.

As may be expected, there were large number of suggestions on many macro and micro activity/sector specific areas for possible inclusion in the Budget. Most were self-interest pleas, but some were relevant from larger public policy and public interest perspective. Both types however received attention of the policymakers as budget is also an exercise in political economy.

The analysts suggested focusing on faster growth, with special attention to hard-hit service sub-sectors, rationalizing poverty targeted programs and schemes, public health related expenditure, and expenditure on key priorities such as Jal Jeevan Yojna, (See Chapter 8 in this e-book), and PM Awas Yojna.

The Finance Minister had raised expectations by noting that the "… forthcoming Budget for the financial year 2021-22 (FY22) will be like no other in the past and will help India emerge as an engine for global growth".

III. Macro-Economic Projections

IMF (International Monetary Fund), in its January 2021 report, made following projections for real GDP growth, with an upward bias.

2020 India -8.0 % World -3.5 %
2021 India 11.5 % World 5.5%
2022 India 6.8% World 4.2%
Three-year simple average: India: 3.43% World: 2.07%

For the full fiscal year 2020-21, the Economic Survey 2021 projects a contraction in real GDP of 7.5 Percent in 2020-21, and positive growth of 11 percent for 2021-22, both with upward bias. For nominal GDP, inflation must be added to the above figures. In 2021-22, nominal GDP is projected to grow by 14.4 percent, with upward bias. This implies nominal GDP of INR 222.9 trillion (USD 3.05 trillion) in 2021-22, while it is projected to be INR 194.8 (USD 2.67 trillion) in 2020-21.

The Economic Survey projects an optimistic scenario for India's government debt sustainability (Chart 2). The key economic relationship for debt to be sustainable is that nominal growth in GDP must exceed the interest paid on public debt to prevent debt to GDP ratio from rising.

Chart 2

Source: Government of India, economic survey 2020-21[5]

Assessing the 2021-22 Budget Proposals

India's 2021-Budget is organized around six themes. They are: Health & Well-Being; Physical and Financial Capital and Infrastructure; Inclusive Development for Aspirational India; Reinvigorating Human Capital; Innovation and R&D; and Minimum Government- Maximum Governance.

It is noteworthy that Health and Well Being comes first, even though health is a state subject under the Constitution. This reflects the new reality that the Wuhan Pandemic (technically Covide-19 Pandemic, has made robust public and private health care system, and its governance essential for sustained economic growth and for national security. There are proposals to shift health care to a Concurrent list in the Constitution, making the Centre and the States jointly responsible.

The budget proposals, and subsequent statements in the Parliament by the policymakers strongly suggest that India cannot afford a status quo, and change in thinking, behaviour, and focus on governance outcomes have become an imperative. The 2021-22 Budget is expansionary, whole simultaneously laying solid foundation

[5] https://www.indiabudget.gov.in/economicsurvey/

Accessed on 1 February 2021

for future broad-based good quality sustainable growth, enhancing ease of living and improving prospects for meeting citizen aspirations.

IV. Expenditure:

The government proposes to spend INR 34.8 Trillion (15.7 percent of realistically projected 2021-22 GDP) in 2021-22. As per the revised estimates, the government spent INR 34.5 Trillion in 2020-21, (17.7 Percent of GDP), 13 percent higher than the budget estimate. Sharp increase in capital expenditure allocation, mainly for infrastructure, is a significant feature of this budget.

V. Receipts:

The receipts (other than borrowings) are expected to be INR 19.8 Trillion in 2021-22, (8.9 percent of realistic GDP projection for 2021-22) which is 23 percent higher than the revised estimates of 2020-21. In 2020-21, revised estimates for receipts were 29 percent lower than budget estimates.

Chart 3 Composition of Tax Revenue: Central Government, India

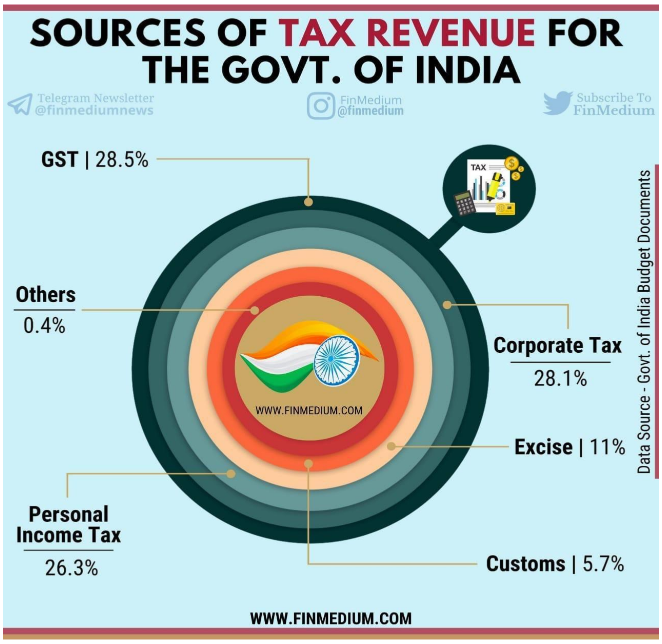


Chart 3 provides composition of tax revenue. A notable feature is the narrowing of the tax share from corporate income tax (28.1 percent), and personal income tax (26.3) percent. In most high-income countries, the share of the latter significantly exceeds the share of the former. India is moving towards that outcome. The Chart also indicates that the GST at 28.5 percent is the single largest source of tax revenue. (see Chapter 15 in this e-book for an analysis of GST revenue trends). It is estimated that Taxes subsumed under GST were 6.3 per cent of GDP in the pre-GST period (2016-17).

VI. Budget Deficits:

Revenue deficit (current receipts minus current expenditure) is targeted at 5.1% of GDP in 2021-22, which is lower than the revised estimate of 7.5% in 2020-21 (it was 3.3% in 2019-20). Fiscal deficit (total receipts, net of borrowing minus total expenditure) is targeted at 6.8% of GDP in 2021-22, down from the revised estimate of 9.5% in 2020-21 (it was 4.6% in 2019-20). The government aims to steadily reduce fiscal deficit to 4.5% of GDP by 2025-26. There appears to be some rethink on deficit targets as a major indicator guiding fiscal policy. This could lead to rethinking of the content of FRBM (Fiscal Responsibility and Budget Management) Act overtime both at the Centre and in the states.

VII. Ministry allocations:

Among the top 13 ministries with the highest allocations, the largest annual increase over 2019- 20 is observed in the Ministry of Jal Shakti (64%), followed by the Ministry of Consumer Affairs, Food and Public Distribution (48%) and the Ministry of Communications (31%).

VIII. A Shift Towards Non-Government Sector

The Budget argues that at this juncture, there is a need to shift the balance away from public sector ownership toward encouraging private sector to play a more prominent role, while focusing on contestability/competition, organizational improvements, redesigning individual incentives, and technology upgradation and infusion to improve public sector organizations.

A concrete example of such reforms is provided by the Parliament passing the Major Ports Authority Bill, 2020. The new law supersedes a 1963 Act governing the country's 12 major ports. Shipping and Waterways Minister argued that the new Act was not intended to privatise major ports but aimed at boosting their decision-making powers in order to compete with private ports. The major-port sector has not exhibited the required level of fixed assets creation to lower the country's high logistic costs owing to legacy issues, including the TAMP's (Tariff Authority for Major ports) archaic regulatory thinking and practices. Every port will now be governed by a Port Authority (Board) which will have the powers to fix reference tariffs for various port services, as well as the terms for private developers who team up with them.

More such reforms in the power sector, aviation, urban development and others are being planned. (see Chapter 11 in this e-book for details of the sectoral reforms). Prime Minister Modi in the Budget Debate in the parliament strongly argued for private sector involvement and need to increase the number of wealth creators, which is unprecedented, and reflects the serious intent to bring about a shift away from over-reliance on the public sector.

It is in the above context that the process to list Life Insurance Corporation of India, LIC (while raising foreign equity limit to 74 percent in insurance sector), divest Air India, and others should be viewed. Listing on the stock exchanges brings the organization under the Companies Act, and that has the potential to improve governance practices of the public sector organizations, and enhance transparency and accountability of their operations.

IX. Improving Fiscal Transparency, Accountability

Anantha Nageswaran, a member of the Economic Advisory Council to the Prime Minister has argued that

> "MOF (Ministry of Finance) Team ensured that the budget gave a fair and accurate representation of public finances at the level of the Union Government."

They made realistic assumptions on next year's growth rate, i.e., for 2021-22. They made reasonable assumptions for revenue buoyancy. They did not budget for big dividends from The Central bank or income from spectrum sale. Their revenue projections for the current year are more likely to be exceeded than fall short. Their revenue projections for 2021-22 are even lower than the original budget estimates for 2020-21 while the GDP would end up almost at the level originally projected for 2020-21 by the end of the financial year 2021-22. The number of documents they had uploaded on the budget far exceeded anything seen before. That suggests a willingness to disclose rather than hide. It is a huge progress towards the goal of transparency and accountability. It is very likely that all of these would be understood and appreciated by market participants over time and that would result in a meaningful decline in the India country risk premium. That is the biggest contribution to sustainable growth that MoF (Ministry of Finance) could make and they have made it."[6]

X. The 15th Finance Commission Proposals

The 2021-22 Budget needs to be analysed in conjunction with the recommendations of the 15th Finance Commission (FC) headed by N K Singh. (see chapter 13 in this e-book). The 15th FC Report is quite long and complex. Only few areas are highlighted here.[7]

A. **Devolution Criteria:** The criteria for distribution of central taxes among states for 2021-26 period is same as that for 2020-21. The Commission has used 2011

---

[6] https://thegoldstandardsite.wordpress.com/2021/02/02/why-does-the-indian-budget-deserve-praise-not-for-the-reasons-you-think/ accessed on 1 February 2021.

[7] the full report is available at https://fincomindia.nic.in/showcontentone.aspx?id=9&section=1 accessed on 1 February 2021.

population data for determining the share of states during its entire award period. To reward efforts made by states in controlling their population, the Commission has used the Demographic Performance Criterion. States with a lower fertility ratio will be allocated a higher score under this criterion.

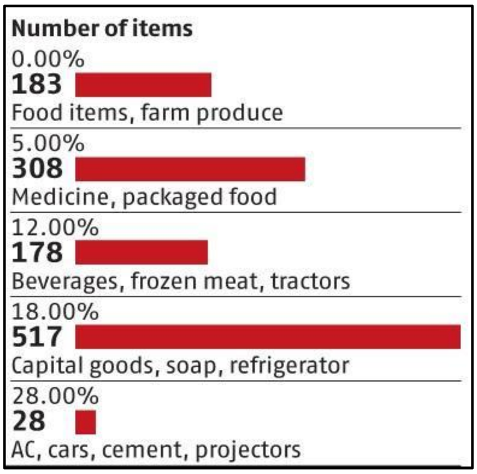
B. **Grants-in-aid**: The Commission has recommended grants from the centre to states and local bodies worth INR 10.3 trillion for the 2021-26 period. These include: (i) revenue deficit grants to 17 states, (ii) grants to urban and rural local bodies, (iii) disaster management grants, (iv) grants for eight sectors including health, education, and agriculture, and (v) certain state-specific grants.

C. **Funding of Defence and Internal Security:** A dedicated non-lapsable fund called the Modernization Fund for Défense and Internal Security (MFDIS) to be be constituted to primarily bridge the gap between budgetary requirements and allocation for capital outlay in defence and internal security sector. The fund will have an estimated corpus of INR 2.4 Trillion over the five years (2021-26). Of this, Rs INR 1.5 Trillion will be transferred from the Consolidated Fund of India. Rest of the amount will be generated from measures such as disinvestment of defence PSUs and monetization of defence lands. Such an allocation is unprecedented, and it also reflects the stress on capital expenditure in defence modernization.

D. **GST (Goods and Services Tax) Reform**: The 15th Finance Commission has suggested that the 12 per cent and 18 per cent rates under the GST be merged into one standard rate, and GST be rationalized to a three-rate structure, complemented by the 5 per cent merit rate and 28-30 per cent de-merit rate. If adopted by the GST Gouncil, it will further simplify the GST design.

The current rate structure of GST and the items under each rate is provided in Chart 4.

Chart 4 GST Structure and Items[8]



[8] 15th Finance Commission Report https://fincomindia.nic.in/showcontentone.aspx?id=9&section=1 accessed on 1 February 2021.

On behalf of the 15th Finance Commission, the International Monetary Fund assessed that the effective tax rate under GST currently stands at 11.8 per cent. This is close to Reserve Bank of India's estimate of 11.6 per cent. This is considerably lower than the nominal rates. IMF estimates that GST Collection efficiency is the ratio of GST collections to the product (c*r) of final consumption expenditure in the economy (c) and the standard rate (r), and is a summary measure of efficiency of GST. The Report of the 15th FC notes that collection efficiency is below 50 per cent. It could be raised to around 60 per cent, which will be around benchmarks of high-income countries.

The 15th FC report also highlighted that about 70 per cent of gross GST revenue goes to states due to sharing and devolution. With many taxes subsumed under it, GST accounts for 35 per cent of the gross tax revenue of the Union and around 44 per cent of own tax revenue of States. It suggested that the inverted duty structure needs to be addressed, as it might be the reason behind the high share of tax liability being paid using input tax credit. This was also mentioned by the Finance Minister in the Budget Speech.

XI. Concluding Remarks

This column has highlighted several distinguishing features of the 2021-22 Budget, which will facilitate India's rise in the global economy, as well as enhance ease of living and help meet aspirations of Indian citizens. The Budget has provided indications for several additional fiscal reforms. These are:

A. **GST Reform**: As noted, the 15th GC has recommended it, and the Budget Speech also suggested GST reform. This reform will be led by the GST Council, in which finance ministers of the union Government and of all states are members.

B. **Reforming Direct Taxes Code:** The budget contained relatively few proposals on income tax, though there were proposals to broaden the personal income tax base, and incentives were provided for single person companies. The current Direct Taxes Code is that of 1961, a very different era. The process of reforming this code needs to begin by next fiscal year i.e., 2022-23.

C. **Customs Duties:** The Budget has proposed rationalizing customs duties to align with India's emphasis on developing global scales for certain sectors, and integrate with global supply chains, and with strategic Concepts of Atmanirbhar Bharat and Be-Vocal-for Local.

D. **Accounting Reforms:** There are indications that accounting reforms will continue; as well as the shift toward greater transparency of fiscal accounts. Indian Railways, the largest organization of the Central government, is in the process of moving from cash to accrual accounting method; and more such initiatives may be expected. The process of continuing to get better societal outcomes from budgetary outlays should continue in the future budgets.

CHAPTER 13

MAKING THE 15TH FINANCE COMMISSION (FC) RECOMMENDATIONS FOR RURAL BODIES EFFECTIVE*

I. The Context

The role of urban and rural bodies (ULBs), India's third-tier of government after Centre and the states, has traditionally been given less focus and resources by the policymakers, and has been relatively neglected policy-relevant research area. But there is strong realization that this must change as the final delivery of amenities, services, and government services is at the level of these bodies.

The public policy initiatives by the Centre and by the states have substantially widened opportunities for the ULBs to progress towards better resource generation and governance. This however also requires that the skill-sets, e-governance technology, and infrastructure of these bodies needs to be upgraded; and greater accountability and transparency be required from these bodies. It also requires mind-set and behavioural change on the part of all the stakeholders, including citizens, to want to obtain and support those governments who deliver better citizen-centric outcomes from government outlays and work processes.

The importance of this point was highlighted By Swami Vivekananda about 130 years ago. To quote:

> "I consider that the great national sin is the neglect of the masses, and that is one of the causes of our downfall. No amount of politics would be of any avail until the masses of India are well educated, well fed, and well cared for…If we want to regenerate India, we must work for them".

II. The Theme

This column discusses the recommendations of the 15TH FC concerning rural bodies. Rural bodies comprise, Zilla Parishad (at District level). Panchayat Samiti (at Block level), and Gram Panchayat (at village level).

The District Rural Development Agency (DRDA) is among the key agencies in rural India. Its effective functioning and coordination with Block and Village level bodies, often lacking, are essential to deliver citizen-centric outcomes, and fulfil Swami Vivekananda's vision.

---

*This was first published on 18 February 2021.
Link:https://www.myind.net/Home/viewArticle/recommendations-of-the15th-finance-commission-fc-for-making-rural-bodies-effect

The role of the DRDA is to promote transparency in decision making and to facilitate implementation.[1] Its functions are:

- planning for effective implementation of antipoverty programs;
- coordinating with other agencies Governmental, non-Governmental, technical and financial for successful program implementation;
- enabling the community and the rural poor to participate in the decision-making process, overseeing the implementation to ensure adherence to guidelines, quality, equity and efficiency; reporting to the prescribed authorities on the implementation; and promoting transparency indecision making and implementation.

III. The Recommendations of the 15th FC for Rural Bodies

The 15th FC's final Report was submitted in October 2020. The government has accepted many of its major recommendations such as devolving 41 percent of applicable Central Government Tax revenue to the States. The 15th FC reduced the percentage from 42 percent to 41 percent because of the modified standing of the erstwhile state of Jammu and Kashmir into the new Union Territories (UTs) of Ladakh and Jammu and Kashmir, the logic being that the funding for these UTs will now be borne by the Union authorities.

The detailed recommendations of the Commission related to grants to local bodies are contained in Chapter 7 of Volume–I of the Final Report. The Central Government has accepted these recommendations of the Commission.[2]

The Commission has recommended total grants for duly constituted local governments that add up to INR 4364 billion for the period 2021-26. Aditi Pathak & Shikha Dahiya estimate that the 15th FC has recommended grants to local bodies equivalent to 2.85 percent of gross revenue receipts of the states.[3]

The Commission has recommended basing the inter-se distribution of grants for local bodies among the States, on population and area in the ratio of 90:10. A sum of INR 2368 Billion is earmarked for rural local bodies; INR 1211 Billion for urban local bodies; and INR 700 Billion for health grants through local governments. INR 80 Billion is allocated to performance-based grants for incubation of new cities and INR 4.5 billion are for shared municipal services.

[1] http://rdprd.gov.in/iay-circular-pdf/DRDA_Guidelines.pdf accessed on 17 February 2021.
[2] https://fincomindia.nic.in/ShowContentOne.aspx?id=9&Section=1 accessed on 16 February 2021.
[3] https://newsdeal.in/15th-finance-commission-getting-ready-for-the-new-normal/ accessed on 17 February 2021.

The Commission has recommended imposing entry-level conditions for local bodies to receive grants. These include:

(i) setting up of State Finance Commissions in States, acting upon their recommendations and laying the explanatory memorandum as to the action taken thereon before the State legislature on or before March 2024.

(ii) having both provisional and audited accounts online in the public domain;

(iii) fixation of minimum floor for property tax rates by the relevant State followed by consistent improvement in the collection of property taxes in tandem with the growth rate of State's own GSDP (for urban local bodies)

The Commission has recommended that 60 per cent of the grants to rural local bodies and for urban local bodies in non-million-plus cities should be tied to supporting and strengthening the delivery of two categories of basic services:

(i) sanitation, maintenance of ODF (Open Defecation Free) status (for Rural Local Bodies), solid waste management and attainment of star ratings as developed by MoHUA (Ministry of Housing and Urban Affairs) (for non-million plus cities / Category-II Cities/Towns; and

(ii) drinking water, rain water harvesting and water recycling (both for Rural Local Bodies and Urban Local Bodies).

The Commission has recommended that for cities with million plus population (Million-Plus cities), 100 per cent of the grants are to be performance-linked through the Million-Plus Cities Challenge Fund (MCF). The Commission has recommended that a sum of INR 8,0 billion be given to States as grants for incubation of new cities and INR 4.5 billion for facilitating shared municipal services.

IV. Making the Recommendations Effective

The rural bodies will need to closely study the 15th FC's recommendations, with state rural development departments taking the lead. They will need to be much more proficient at utilizing the potential of their resource envelope. Resource envelope for rural bodies comprises the following. First, the Central FC grants—general unconditional and those with conditions, Rural Bodies will need to be pro-active in meeting the conditions laid down by the 15th FC, and have specific course of action to obtain their share of the conditional grants.

The second component is State FC grants, both conditional and unconditional. Empirical observations suggest that there is much scope for making them transparent; and providing them in time with reliability. The third source is state government expenditure in rural areas and grants to rural bodies. The fourth source is levying cost recovery and user charges more effectively. Some of the Central Government schemes such as Jal Jeevan Mission, could assist these bodies in cost recovery and fees collection. This should be explored with greater sense of urgency.

The fifth source is treasury management. How are surplus funds of rural bodies invested? Many such bodies have sold land to the state for which they have been compensated. But their investment returns have much scope for improvement, while keeping investment risk low. The sixth source is using physical assets of rural bodies more productively, including leasing of land and properties. Many leases are given by rural bodies at non-economic prices, and renewal is not followed up. More effective legal framework for such leases needs to be given higher priority.

It is suggested that the states consider establishing skills development programs through Vishwakarma Skills University[4] and other similar organizations to train persons in maintenance of rural assets, including bio-gas plants, hydroponics fodder units, facilities for drinking water for animals, etc. For rural lands, consideration can be given to erecting land boundaries with income generating trees to obtain income, and to reduce encroachment.

The ULBs (Urban Local Bodies) could consider leveraging SWAMITA Scheme launched in April 2020.[5] (see Chapter 16 in this e-book).This Scheme could help generate more resources by making the households and others more inclined to contribute to cost recovery and paying fees to the ULBs. In the states, the Revenue Department / Land Records Department are to be the Nodal Department and shall carry out the SVAMITVA Scheme with support of State Panchayati Raj Department. Survey of India shall work as the technology partner for implementation.

The SVAMITVA Scheme aims to provide an integrated property validation solution for rural India. The demarcation of rural areas is to 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.

V. Objectives of the SVAMITVA Scheme

The SVAMITVA Scheme seeks to achieve the following objectives.

First, 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. Second, creation of accurate land records for rural planning. Third, determination of property tax, which would accrue to the GPs (Gram Panchayats) directly in States

[4]https://svsu.ac.in/ accessed on 17 February 2021.
[5]https://svamitva.nic.in/svamitva/ accessed on 17 February 2021.

where it is devolved or else, add to the state's revenue. Fourth, creation of survey infrastructure and GIS maps that can be leveraged by any department for their use. This would support in preparation of better-quality Gram Panchayat Development Plan (GPDP) by making use of GIS maps, including through use of drones. The sixth objective is to reduce property related disputes and legal cases.

Leveraging Technology: The ULBS could take technology initiatives to improve expenditure management of public amenities, and help generate royalty income.

Thus, to convert garbage and agricultural waste into alternate fuel, Nexgen Energia ltd (Leading Clean Fuel company is to start manufacturing and distribution units in India with an investment of INR 50 Billion. First 100 CBG units are to be set up in Uttar Pradesh. Rural bodies, in partnership with their states, can create a menu of such technologies relevant for them, and encourage their adoption. Effective coordination between different levels of rural government bodies, Zilla Parishads (at District level), Panchayat Samiti (at Block level), and Gram Panchayat (at Village level) is essential to obtain better results from such technology initiatives.

VI. Concluding Remarks

Opportunities for generating resources in conventional and non-conventional manner, and through better expenditure have opened up considerably due to policies emphasizing economic freedom and application of technology for rural bodies in India. But the stakeholders of the state at all levels must prepare themselves, including through mind-set and behavioural change, and readiness to use technology, and imbibe the essence of Swami Vivekananda's quote cited earlier.

NIYAT (intent), Integrity, competence, and using resources, including through introducing relevant context-specific technologies, for improving ease of living and enhancing quality of life should be the key priorities for rural bodies and stakeholders to make intended use of the 15th FC's grants, and other resources.

CHAPTER 14

ALIGN POLICY MEASURE WITH SOFTWARE AND TAX ADMINISTRATION, WITH ACCOUNTABILITY FOR OUTCOME MONITORING*

I. The Theme

Consistent with the global trends, India has increasingly shifted from manual to digital methods in administering taxes. This process is still under way and greater shift to digital methods is expected, including in India's 28 states and 8 Union Territories. This shift has been combined with increasing investments in hardware, software, and human expertise in third party data assimilation, data analytics, and artificial intelligence (AI) by the tax policy organizations and administration. Commendable progress toward modern tax administration in India has been made in a relatively short time. But the task of reforming tax systems is never done as it is a process and not an event, and as new challenges arise with changing circumstances.

For the Goods and Service Taxation (GST), all the compliances and administrative processes are routed through the GST Network (GSTN), a software platform. GSTN is a not-for-profit company equally owned by the Union Government (50 Percent Share) and all states combined (50 percent share).

For the income taxation, both personal and corporate, many compliances and administrative processes have already been made digital. There is an explicit policy focus to increasingly make as many of the work processes digital as possible. The Finance Minister, in the 2020 budget session, announced the introduction of E-appeal mechanism in the Income Tax Law, taking forward the E-assessment process announced in the 2019 budget. This reflects the determination of the Government for speedy digitization of tax processes.

The digitization of tax processes is essential for efficient management of mass (big) data, and represents a mechanism with potential to provide ease in tax estimation, filing, and compliance, as well as for transparency. However, digitization is not likely to result in desired outcomes if the digitized tax processes are not coherent from a systemic perspective; and are not aligned with software used, with work attitudes of the tax administrators, and with monitoring of the work done by tax organizations and officials and its consistency with announced tax policies.

---

*Mukul Asher and Rohini Aggarawal (Chartered Accountant). This was first published on 18 February 2020. The link is: https://myind.net/Home/viewArticle/align-policy-measure-with-software-and-tax-administration-with-accountability-for-outcome-monitoring

It is essential that the statistics generated from monitoring should be made accessible in a timely manner. The pace of digitization should be consistent with the available infrastructure, including infrastructure available with the tax administration. But lack of infrastructure should not be used as an alibi to delay digitalization and modernization of the tax administration.

II. Select Examples from the Income Tax and the GST

The rest of the chapter provides examples in the context of the above theme by discussing the select tax processes which have been digitized or proposed to be digitized for the Income Tax and for the GST. There are more such examples, but are not included due to space constraint.

The 2020 Union Budget projects Corporate Income Tax revenue of INR 6.8 trillion; Personal Income tax of INR 6.2 Trillion; and GST of INR 6.9 Trillion. These figures are before constitutionally mandated devolution to the states. The three taxes, which form the foundations of any modern tax system, are the key pillars of tax receipts, and therefore any improvements in their functioning will also help in strengthening India's fiscal position.

III. Income Tax

The E-assessment process in the Income Tax Law has been mapped and elaborated in a notification issued in 2019. It is highly probable that the similar process would be mapped in the case of E-appeals. An analysis of the proposed process however suggests that one tax official will review the documents submitted by the tax payer for assessment; the personal hearing will be undertaken by another tax official, and based on this personal hearing by way of video conferencing, the first tax official will pass the assessment order without having any interaction with the taxpayer.

It is argued from the perspective of practicalities as they exist currently in the country, the above process may require significant refining to ensure fairness (perception of it as well), ease of compliance, objectivity, and timely and due revenue generation. The process of making an assessment or appeal order requires exercise of judicious skills by the officer. When one officer reviews the documents, but the other officer conducts personal hearing, how would the judicious exercise of power be ensured in passing the order? This process has the potential to result in perceived unfairness and litigation, with consequent adverse effect on revenue generation.

The tendency of the taxpayers (aided by tax advisors) to game the system may further contribute to potential litigation. Therefore, addressing the behaviour of these two stakeholders is also essential. Exhortations of duty of taxpaying by the Prime Minister are commendable and helpful, but more specific measures are needed. All well regarded tax and tax administration systems have high degree of voluntary compliance, aided by appropriate systems of incentives and disincentives and social environment conducive to voluntary tax compliance.

The situation becomes more critical in the prevailing Indian conditions where standard conclusions may not be drawn from the accounting statements of different taxpayers; as these need to be understood in the context explained by the taxpayer. The 100 percent completely digitized tax processes as designed at present may adversely impact on fairness, as judicious views are to be taken based on thorough examination of both the facts and the law.

Direct Tax Vivad se Vishwas (from dispute to trust) Bill, 2020 was introduced in the 2020 budget. It seeks to resolve disputed tax cases worth INR 9.3 trillion. That such large outstanding amount exists is an indicator of the reforms needed in direct tax administration. The design, implementation, and monitoring of this scheme must be geared towards settlement, and not only revenue or punishment. The outcomes from this scheme need to be communicated in a transparent manner.

IV. The GST

There are situations, where the tax process is routine and mechanical in essence, but the manner in which the process is digitized leaves gaps for interface between the taxpayers and tax officials. An example is GST ITC (Input Tax Credit) refund process. Although the refund applications are to be filed online with all the documents, there is no mechanism to ensure that the taxpayer would get online acknowledgement or refund order without interacting with the jurisdictional tax official. Often, tax official has to be reminded, who then sends the acknowledgment online. Then, the tax official would call the taxpayer to get the invoices verified, and only then refund order would be passed by the same official, which is processed through the GST Network. This suggests that the purpose of quick and easy compliance with tax regulations through automatic digitized refund process has in many cases been significantly diluted.

Refund is one tax process which is suitable for complete digitization. In most of the refund cases, the parameters for allowing refund may be mechanized. A cue may be taken from the refund process adopted in Income Taxation which is one of the most efficiently working tax process till date in India. The only cases, where interface of taxpayer with tax official is required are the cases where refunds may not be allowed mechanically and a judicial procedure is to be followed.

Another point worth mentioning in the GST refund process is with respect to 'time limitation' for filing a refund claim. The GST Law allows a taxpayer to make a tax/ITC refund application within two years of the relevant date. In the present refund process, if a taxpayer applies for refund and any deficiency is noted by the tax official in the documentation of application, the official simply rejects the application, rather than acknowledging the submission, and giving an opportunity to the applicant to rectify the application. After this, the claimant needs to file a fresh application for the same refund. The point is that as per the process, this new application also has to be made within two years of the relevant date without considering the fact that time limitation was over with the submission of the first refund application. This is in complete disregard of the respective legal provision in the GST Law. This work process also leaves possibility of legal disputes.

The size of the GST transactions is very large. Thus, as on February 10, 2020, according to the GSTN portal, there were 12.1 million tax payers registered; 415 million returns have been filed; 8230 million invoices have been uploaded; highest number of return transactions in a day was 2.4 million; and highest payment transactions in a day was 0.9 million.

The efficiency of the digitized system, with its software and capacities meeting such large and complex needs, is one of the pre-requisites for the smooth functioning of the tax administration process through such platform. Considering the size of the user base of the GST Network and the system capacity, there have been many instances when the taxpayers could not file their tax returns or other documents within the given time frame. In such cases, the taxpayers either have to lose their tax benefits or have to pay penalty for delays in spite of complying with the regulations.

One such example is filing of GST TRAN1, which was a document for transfer of transitional ITC. It could not be filed by many within due dates because of technical issues resulting into huge number of litigations still going on in various high courts in India. A policy support needs to be provided for such cases so that a systematic rather than an ad hoc approach for such cases, which are becoming frequent, is taken.

The digitized tax processes have made big data and information analysis capability available to the tax officials. This is positive for the tax administration; however, the flip side is that in some cases, the tax officials are using the big data to issue notices at mass level simply based on arithmetical differences or the standard accounting ratios. For instance, if a taxpayer is having lesser revenue in year 2 than the revenue, he earned in the year 1, he may get a notice from the GST tax official to explain the reason for the lesser revenue; or one may get notice to explain the difference in the figures of GSTR-3B and GSTR-1 within 2 months of filing the returns although there is no modality to revise such returns in the law or the software. The annual return is the appropriate occasion for the taxpayer to align such differences. The number of notices a taxpayer is receiving in the GST regime have multiplied in comparison to any past tax regime, which was definitely not the intent of the tax policy.

V. Concluding Remarks

India is in early stages of learning curve for establishing and adjusting to the digitized tax environment. The technology can bring in significant tax efficiencies and convenience to the taxpayers. It is strongly suggested that for India to modernize its tax administration, deliver desired outcomes, and make it globally competitive (just as the corporate income tax has become globally competitive), the following need to be urgently considered. The extent and manner of digitization of the tax administration processes should be aligned with the work behaviour of tax officials, skills set needed, digital system infrastructure and tax policy objectives of the country.

Complete digitization of those processes which can be mechanically done without any interface between the taxpayers and the tax officials could lead to tax efficiencies. Complete digitization of the processes which require exercise of judicial skill on the part of the tax officials need to be refined to give greater weight to fairness (including perception of fairness). Interface of the taxpayer with the same officer who is going to pass the respective assessment or appeal order, if done through video conferencing, can help align the tax policy intent, the processes, and outcome. The outcomes must be monitored and communicated for generating appropriate incentives and disincentives for both tax officials and tax payers.

The tax officials must have appropriate infrastructure in terms of motivational and technical training, systems and resources *before* the digitized processes are initiated. A continuous monitoring mechanism must be introduced to analyse the appropriate working and sophistication of the software processes if the policy intent is to be realized.

A policy support is required to deal in the guided manner with the situations where taxpayers are not able to fulfil their obligations because of technical issues. Policy codes for guidance in cases of system deficiencies and the manner of using the data of the taxpayers judiciously by tax administration may create more conducive environment for digitized taxation system in India. A policy on final closure of income tax and GST needs to be explicitly formed, including when the tax payable is under litigation. This should balance the needs of the taxpayers with those of the state.

There should be an explicit policy (perhaps included in the proposed Taxpayer Charter) for regular and timely publication of detailed taxpayer statistics for research and analysis, albeit with appropriate safeguards. Releasing sporadically such data as amount of exemptions taken in the aggregate and by different income brackets for personal income tax, and for corporate income tax (for which number of corporations opting for new lower tax regimes should also be available). The GSTN may consider releasing time taken for the refund process and the amounts refunded.

Speedy refunds, including on exports are among the key performance indicators KPIs) of efficiency of GST administration.

CHAPTER 15

IMPLICATIONS OF GST REVENUE TRENDS FOR FY 2019-20 AND FY 2020-21*

This column analyses implications of revenue from India's GST (Goods and services Tax) for FY 2019-20 and FY 2020-21. From 1 July 2017, GST, aiming to be one -nation one -sales -tax, subsumed about 17 counterproductive, non-transparent, corruption and rent seeking prone, and cumbersome taxes on consumption with disproportionately high compliance costs considerably hindering ease of doing business and logistics efficiency.

The GST is levied on supply of goods and services under a single tax all across India uniformly. It is thus a dual tax, applied at the Union government level, and in all States and Union Territories. The aim is to make India a unified national internal market, and bring about one-nation-one -sales tax. Considerable improvements in design, implementation, and compliance in GST have been evident since it was introduced. Nevertheless, GST remains a work in progress.

For most of the 2020 calendar year, India, with the rest of the world, have been struggling with the Wuhan, China (technically Covid-19) Pandemic. There have been several lockdowns of economic and social activity in India, though with diminishing stringency. The most comprehensive lockdown across the country was in April 2020. The pandemic is still continuing, though in India its intensity as of January 2021, is less, this could change as subsequent waves of the virus occur. So, vigilance and protective measures need to be observed and investments in all areas of health care system accelerated. A hopeful sign of further reducing the intensity of the pandemic is that that the two made in India vaccines have also been given emergency use approval by beginning of 2021.

The above context should be taken into account in analysing the revenue trends.

I. Aggregate GST Revenue Trends

These are provided in Figure 1. While aggregate revenue in FY 2019-20 between April and December was INR 9.08 trillion, for the corresponding period in FY 2020-21 it fell to 7.80 trillion, a decline of one-sixth.[1]

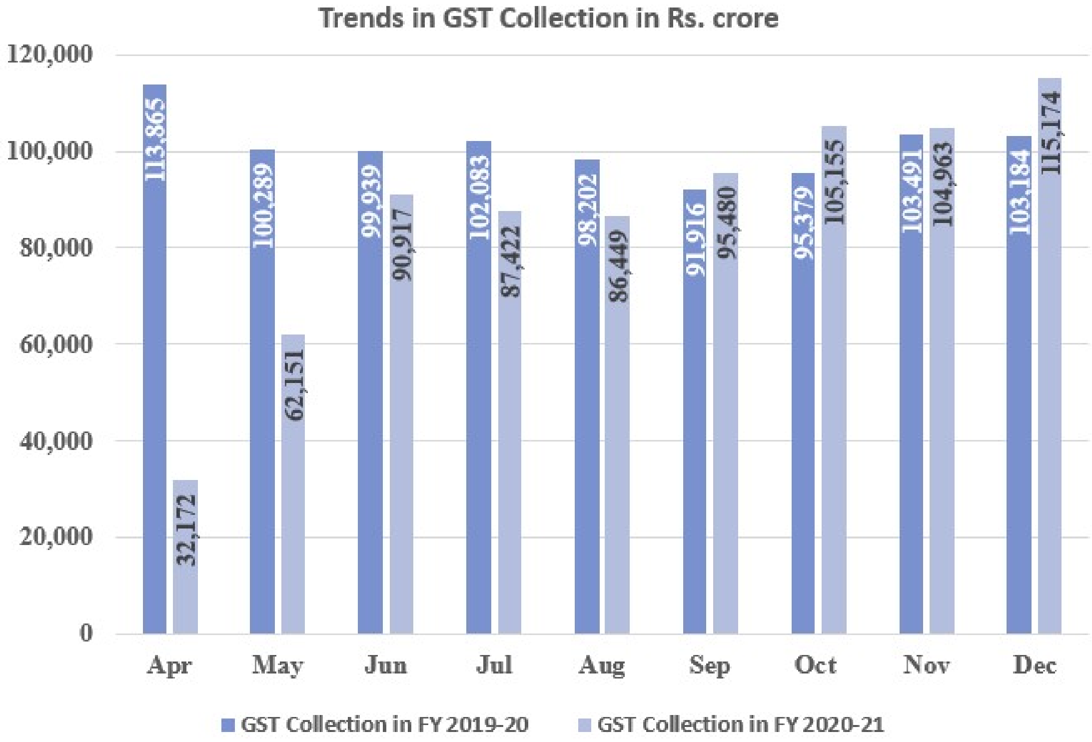
---

*This was first published on 4 January 2021. The link is: https://myind.net/Home/viewArticle/implications-of-gst-revenue-trends-for-fy-2019-20-and-fy-2020.-21

[1] https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1685332 accessed on 3 January 2021.

Figure 1

Aggregate Revenue Trends in GST, April-December FY2019-20 and FY 2020-21[2]



Much of this is however accounted for by the severe decline in GST revenue in April 2020 due to near total lockdown of the economy. If April 2020 is excluded from both the years, the decline in 2020-21 is less than 5 percent. Data in Figure 1 suggest, that GST revenue since September has been higher than in the previous year. In December 2020, the increase in revenue was around 12 percent over the same month in FY 2019-20. The official explanation attributes the increase to the combined effect of the rapid economic recovery post pandemic and the nation-wide drive against GST evasion and fake bills, along with introduction of many systemic changes, which have led to improved compliance.[3]

Among the changes introduced are progressively strengthening the requirements for the e-way bill before goods can be transported. Under GST laws, e-invoice for B2B transactions has been made mandatory for companies with turnover of over INR 5 billion from October 1,2020. It was extended to businesses with over INR 1 billion turnover from January 1, 2021, and is likely to be extended for all businesses beginning April 1, 2021.

[2]https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1685332 accessed on 3 January 2021.
[3]https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1685332accessed on 3 January 2021.

An e-way bill is an electronic way -bill for the movement of goods. It has to be generated on the e-way bill portal. A person registered under GST cannot transport goods in a vehicle without an e-way bill, if the value exceeds Rs 50,000. An e-way bill ensures that the goods are transported in line with GST norms and the relevant data is uploaded before the commencement of transportation of goods. This is designed to track the movement of goods and avoid tax evasion.

As there is widespread expectation of acceleration in economic activity in 2021, encouraging trend in GST revenue is expected to continue. Continuing implementation and design rationalization can also be expected to lead to better GST revenue generation.

Gross GST revenue collected in the month of December 2020 was INR 1.15 trillion, of which CGST (Central GST) was INR 213.6 Billion, SGST (State GST) was INR 278.0 Billion, IGST (Inter-State GST) was INR 574.3 billion (including INR 270.5 Billion collected on import of goods), and Cess (to be used for compensating states from GST shortfall compared to 14 percent assured growth each year till 2022 on the 2015-16 base) was INR 85.8 Billion (including INR 9.7 Billion collected on import of goods). The total number of GSTR-3B Returns filed for the month of November up to 31st December 2020 was 0.87 million.

The government has settled INR 232.8 Billion for CGST and INR176.8 Billion for SGST from IGST as regular settlement. The total revenue earned by Central Government and the State Governments after regular settlement in the month of December 2020 was INR 446.4 Billion for CGST and INR 454.8 crore for the SGST.

II. GST Revenue by States

Table 1 provides data on GST revenue by states.[4]

[4]https://pib.gov.in/PressReleaseIframePage.aspx?PRID=1685332 accessed on 3 January 2021.

Table 1

State-wise growth of GST Revenues during December 2020[1]

	State	Dec-19	Dec-20	Growth
1	Jammu and Kashmir	409	318	-22%
2	Himachal Pradesh	699	670	-4%
3	Punjab	1,290	1,353	5%
4	Chandigarh	168	158	-6%
5	Uttarakhand	1,213	1,246	3%
6	Haryana	5,365	5,747	7%
7	Delhi	3,698	3,451	-7%
8	Rajasthan	2,713	3,135	16%
9	Uttar Pradesh	5,489	5,937	8%
10	Bihar	1,016	1,067	5%
11	Sikkim	214	225	5%
12	Arunachal Pradesh	58	46	-22%
13	Nagaland	31	38	23%
14	Manipur	44	41	-8%
15	Mizoram	21	25	21%
16	Tripura	59	74	25%
17	Meghalaya	123	106	-14%
18	Assam	991	984	-1%
19	West Bengal	3,748	4,114	10%
20	Jharkhand	1,943	2,150	11%
21	Odisha	2,383	2,860	20%
22	Chhattisgarh	2,136	2,349	10%
23	Madhya Pradesh	2,434	2,615	7%
24	Gujarat	6,621	7,469	13%
25	Daman and Diu	94	4	-96%
26	Dadra and Nagar Haveli	154	259	68%
27	Maharashtra	16,530	17,699	7%
29	Karnataka	6,886	7,459	8%
30	Goa	363	342	-6%
31	Lakshadweep	1	1	-32%
32	Kerala	1,651	1,776	8%
33	Tamil Nadu	6,422	6,905	8%
34	Puducherry	165	159	-4%
35	Andaman and Nicobar Islands	30	22	-26%
36	Telangana	3,420	3,543	4%
37	Andhra Pradesh	2,265	2,581	14%
38	Laddakh	0	8	
97	Other Territory	118	88	-25%
99	Center Jurisdiction	75	127	68%
Grand Total		81,042	87,153	8%

[1] *Does not include GST on import of goods*

The following observations may be made from the data in Table 1.As may be expected, there are quite divergent trends in GST revenue among the states. As a policy goal, there is a need to reduce such wide divergences. In December 2020, six states accounted for about half of the GST revenue. Maharashtra (20.3 percent), Gujarat and Karnataka (8.6 percent each), Tamil Nadu (7.9 percent), Uttar Pradesh (6.8 percent), and Haryana (6.6 Percent). Healthy growth in these states is essential for healthy growth in GST revenue.

In December 2020, Kerala collected less GST (INR 17.8 Billion) than the 'poor' states of Jharkhand (INR 21.5 Billion) and Chhattisgarh (INR 23.5 Billion). Once rich Punjab collected less GST (INR 13.5 Billion) than even Kerala. Contrast between GST revenue of Haryana of INR 57.5 Billion and Punjab, INR 13.5 Billion, is also noticeable.

The above strongly suggests that Kerala and Punjab need to urgently undertake structural reforms, particularly in agricultural cropping patterns, use of technology, and marketing reforms, while encouraging industry through greater focus on ease of doing business and instilling confidence and trust of stakeholders, if they are to continue to be economically relevant to the country.

12 states and Union Territories exhibited double digit revenue growth between December 19 (pre virus pandemic period) and December 2020. Among them were Odisha (20 percent), Rajasthan (16 percent), Gujarat (13 percent), and Jharkhand (11 Percent). It is noteworthy and only Odisha and Rajasthan exceeded 14 percent guaranteed growth in GST. The rest would need to be compensated from the cess or other central revenue. But this compensation, according to agreement, is to end in 2022. The states therefore need to pursue broad-based economic growth, attract investment and talent, and leverage Union government initiatives if they are not to be severely constrained fiscally.

Delhi (negative 7 percent) and Goa (negative 6 percent exhibited very weak performance in GST revenue growth between December 2019 (pre-pandemic period) and December 2020. Reasons may differ Goa's economy has been particularly severely impacted by the lockdowns as tourism and related activities are significant proportion of its economy. Delhi has been actively encouraging severe disruptions to the normal functioning in the state, a perverse economic and social policy, disregarding citizen welfare. If this continues, it will have a very difficult task of managing its public finances, especially after 2022 when compensation agreement ends.

III. Concluding Remarks

The overall revenue trends in GST are encouraging, and the prospects for even better revenue generation from GST are promising as economic activity accelerates and continuing design and implementation initiatives bring results. Wide divergence in trends in GST revenue growth needs to be examined in greater detail with the aim of narrowing GST revenue growth differentials. This in turn implies that key role and responsibility of states in managing economy in general, and GST in particular, needs to be recognized. Individual states are strongly urged to establish semi-autonomous fiscal research centres, with requisite resources and skilled staff. The GST revenue trends also suggest that Kerala and Punjab need to focus more urgently on structural reform, including reforming agriculture cropping patterns, using technology more effectively, and diversifying their economies.

CHAPTER 16

SVAMITVA SCHEME WILL VASTLY IMPROVE MAPPING OF LAND RECORDS AND POSITIVELY IMPACT ON PROPERTY RIGHTS IN RURAL AREAS*

In the midst of the pandemic-forced lockdown, the Prime Minister Narendra Modi announced the SVAMITVA (Survey of Villages and Mapping with Improvised Technology in Village Areas) scheme on Panchayati Raj Day (April 24, 2021), to update rural land records. The scheme aims to map rural inhabited lands using drones and latest survey methods, and is motivated by the fact that land records, especially maps, are either inaccurate or do not exist for vast areas across the country. For the average observer, this may not seem to be the most critical action area. Yet, this actually has far-reaching consequences and is one of the fundamental reforms required.

SVAMITVA scheme, a collaborative effort of the Ministry of Panchayati Raj, State Panchayati Raj Departments, State Revenue Departments and Survey of India, aims to provide an integrated property validation solution for rural India, engaging the latest Drone Surveying technology, for demarcating the inhabitant (Aabadi) land in rural areas. Initially, the program is being implemented in six states - Haryana, Karnataka, Madhya Pradesh, Maharashtra, Uttar Pradesh and Uttarakhand. Under this, mapping of rural housing land can be done using the latest survey methods and drones. In Punjab and Rajasthan, 101 Continuously Operating Reference Stations (CORS) are to be set up during 2020-21, which will set the stage for undertaking actual survey and mapping of inhabited areas of villages. The mapping will be done across the country in a phase-wise manner over a period of four years - from 2020 to 2024 and would eventually cover around 0.66 million villages of the country. About 0.1 million villages in the States of Uttar Pradesh, Haryana, Maharashtra, Madhya Pradesh, Uttarakhand and Karnataka, and few border villages of Punjab & Rajasthan, along with establishment of Continuous Operating System (CORS) stations' network across Punjab & Rajasthan, are being covered in the Pilot phase (2020-21).

All these six States have signed MoU with the Survey of India for drone survey of rural areas and implementation of the scheme. These States have finalised the digital property card format and the villages to be covered for drone-based survey. States of Punjab and Rajasthan have signed MoU with Survey of India for establishment of CORS network to assist in future drone flying activities. The

---

*Mukul Asher and Vivek Singh, Chief Researcher, Policy Research Foundation. This was first published on 29 October 2020. The link is https://myind.net/Home/viewArticle/svamitva-scheme-will-vastly-improve-mapping-of-land-records-and-positively-impact-property-rights-in-rural-areas different States have different nomenclature for the Property Cards viz. 'Title deed' in Haryana, 'Rural Property Ownership Records (RPOR)' in Karnataka, '*Adhikar Abhilekh*' in Madhya Pradesh, '*Sannad*' in Maharashtra, '*Svamitva Abhilekh*' in Uttarakhand, '*Gharauni*' in Uttar Pradesh.

The aim of this program is to provide rural people with the right to document their residential properties so that they can use their property for economic purposes. This scheme will help in streamlining planning and revenue collection in rural areas and ensuring clarity on property rights. This will also help in resolving property related disputes. This scheme will also enable creation of better-quality Gram Panchayat Development Plans (GPDPs), leveraging the maps created under this programme.

Benefits

The scheme will help in streamlining planning and revenue collection in rural areas and ensuring clarity on property rights. The scheme will enable creation of better-quality Gram Panchayat Development Plans (GPDPs), using the maps created under this programme. The Gram Panchayats are constitutionally mandated for preparation of Gram Panchayat Development Plans (GPDP) for economic development and for delivering citizen-centric amenities and services. The GPDP is based on a participatory process in convergence with schemes of all related Central Ministries/Line Departments related to 29 subjects listed in the Eleventh Schedule of the Constitution.

Land records play an important role in the financial resilience of Gram Panchayats (GPs). GPs that are able to generate their own revenues will be able to invest in the needs of their local communities. However, the GPs have a poor track record of generating revenues, especially through property tax. The 2018 Economic Survey estimated only 19% of the potential property tax was being collected by the GPs. One possible reason for low collection efficiency is the lack of data about the properties –where are they located, are they residential or commercial, what should be the appropriate tax value, and who should be taxed.

Modernising land records is one of the foundational steps towards mending and reimagining broken institutional arrangements, which are pivotal in today's circumstances. The announcement of this scheme has signalled political will at the Centre to create reliable land records, which has been long overdue. It is hoped that the state and central government will follow.

Currently, the scheme is being implemented across the country in a phased manner over four years (2020-2024) and would eventually cover around 0.66 million villages across the country. About 0.1 million villages in the States of Uttar Pradesh, Haryana, Maharashtra, Madhya Pradesh, Uttarakhand and Karnataka, and few border villages of Punjab & Rajasthan are being covered initially. Once people have ownership cards of their properties, they can use the property to take loans and other financial benefits from banks by mortgaging them. This will also help lower the incidence of the disputes concerning land ownership in the villages. Most villagers do not have ownership documents of their homes. The scheme aims to rectify that by enabling one lakh property holders to download their property cards through the SMS link delivered on their mobile phones. Beneficiaries of this scheme will receive the physical copies of the Property Cards within one day.

PART III
SOCIAL PROTECTION, PENSIONS, AND HEALTH CARE

CHAPTER 17

REQUIREMENTS FOR A ROBUST PENSION SYSTEM IN MIDDLE-INCOME COUNTRIES*

I. Motivation

As global economy, including middle-income countries, cope with the economic, social, and political challenges of managing the impact of Covid-19 pandemic, geopolitical uncertainties, adjusting to the advent of digital economy, and with possibility of disruptive technologies, progressing towards a more robust pension system has become even more urgent public policy priority. This column discusses key requirements for progressing towards a robust pension system in middle-Income countries, defined by the World Bank (in July 2019) as those with per capita income between USD 1026 to USD 3995 (Lower Middle-Income), and between USD 3996 and USD 12375 (Upper Middle-Income).[1]

What does a Robust Pension System Imply?

Public policy goal concerning constructing a robust pension system should be to facilitate ageing with dignity. A pension system comprises several integrated schemes. To measure total impact, they should be evaluated and viewed in a systemic-way and not as isolated schemes. A robust pension system also implies that a person should be ageing-in-place, staying at home to the maximum number of years as possible, and have access to a bundle of services needed in old age, especially affordable and accessible health care, and services to facilitate mobility.

The word "robust" in relation to a pension system is meant to convey the following. Pension system should be embedded in a reasonable stable economic, regulatory, and macroeconomic environment; and when economic or other shocks (such as Covid-19 Pandemic, or 2008 global financial crisis) occur, there is enough flexibility, economic and fiscal capability, and competence to undertake short-run social assistance programs on an adequate scale.

The pension system should have context-specific reasonable trade-offs, given a country's socio-economic context, between longevity, inflation, and survivor's

---

*This was first published on 22 October 2020. The link is: https://www.myind.net/Home/viewArticle/requirements-for-a-robust-pension-system-in-middle-income-countries

[1]https://blogs.worldbank.org/opendata/new-country-classifications-income-level-2019-2020. accessed on 21 October 2020.

risks. Longevity risk refers to the risk that resources may not be adequate throughout life-time of an individual. Inflation risk concerns erosion of real value of pensions during the retirement period. Survivors' risk refers to the situation when rest of the dependent family members do not have adequate resources when main earner in the family passes away.

There are context-specific trade-offs between adequacy of benefits, individual, employer, and fiscal affordability, types of risks covered, and coverage of the pension system as a whole. Large differences in these areas between different occupations and groups need to be minimized. The pension system should be perceived as fair. The fairness attribute should not be underemphasized.

The focus of a pension system should be on household welfare and accessible bundle of services to the elderly. (Barr, 2002). Each society should decide on what is the bundle of services needed in its current context, and be prepared to change as demographic conditions and aspirations change. The aim of the pension system should be to enable purchases of bundle of goods, services and assets on a life-cycle basis. Covid-19 pandemic has underlined the importance of public and private health care system for economic and national security.

The above discussion suggests that an integrated approach to pension and health care has become essential. Constructing a robust pension system is qualitatively a very different challenge when retirement period after institutional retirement age extends to 25 to 35 years, as is the case now in most middle-income countries.

II. Demographic Trends and Implications

Demographic trends pertain to all the persons in the world, and to their characteristics as consumers, workers, savers, and investors. These trends affect income statement, and balance sheets in the of:

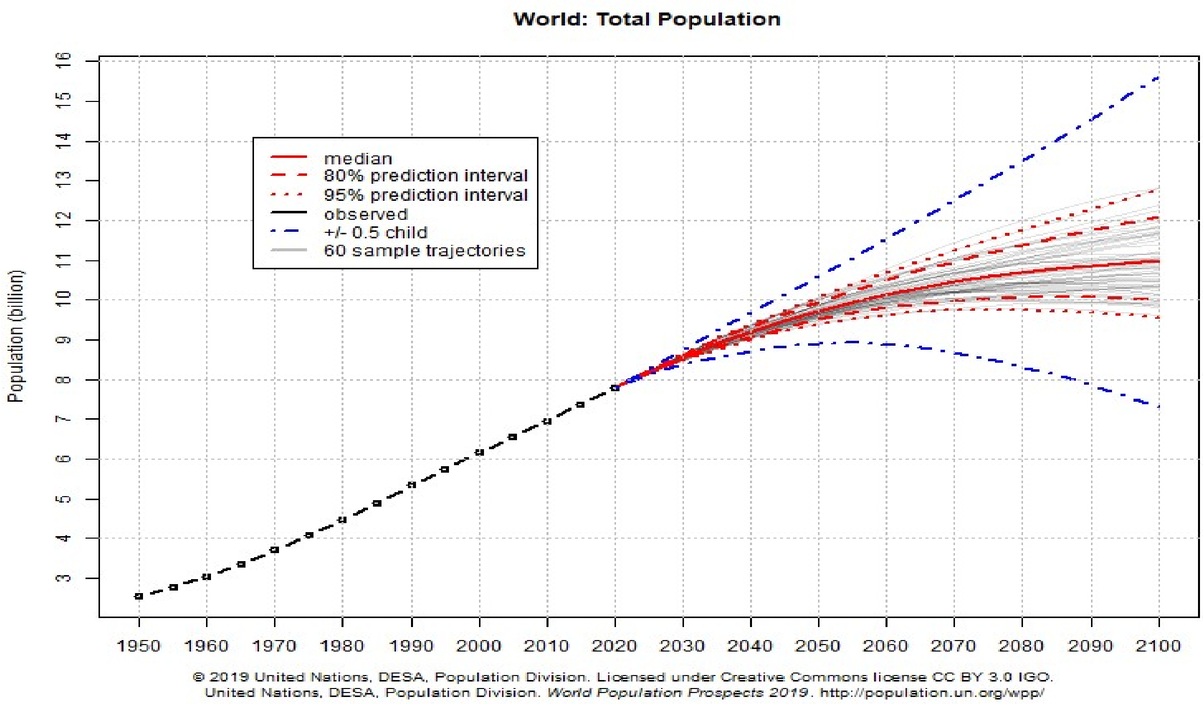
- Individuals
- Households
- Corporations and companies
- Governments (Roy, 2018).

The above in turn affect economy's demand patterns, saving behaviour, asset prices, and fiscal revenue generation possibilities. Policy makers should have access to such detailed demographic mapping of the above effects, as well as more traditional demographic research. This also has implications for the traditional demographic institutes. Do they have skill-sets (and intent) to broaden their research program? If not, are they serving public interest while being supported by the taxpayers?

In international demographic projections, UN Populations projections (latest revision is for 2019) are used. But there are wide variations in numbers depending on the fertility trends (low, medium, high) are used. Usually, medium variant is used. But the probability that the numbers in a specific country may depart from medium variant projections should be kept in mind. Fertility trends are very difficult to predict, but pension planning nevertheless must be done ahead of time. The variability applies even more when projections move from national to province, state, urban and rural areas level. This aspect, often ignored, should be taken into account in pension planning.

The next three figures shown the quantitative importance of the variability for 2019 UN projections. Table 1 provides select demographic indictors of Middle-Income countries. The graphs and the Table are self-explanatory.

Figure 1 A: Variations in Global Population Projections[2]



[2]World Population Prospects, 2019 Revision. accessed on 1 September 2020.

Figure 1B: Variations in Age 70+ Global Population Projections[3]

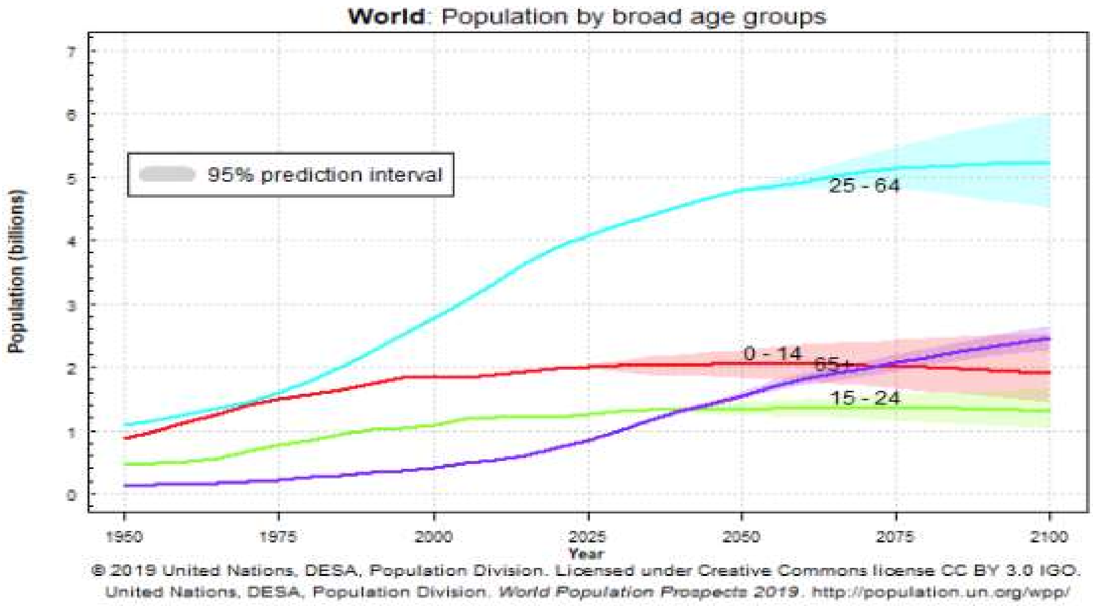
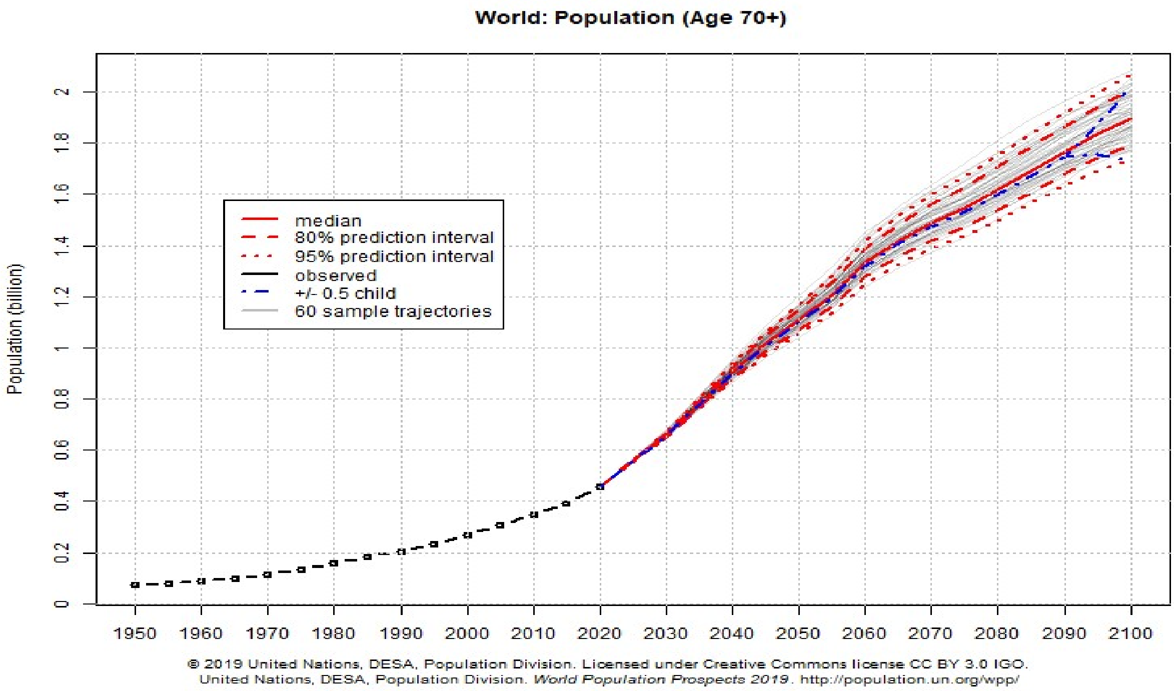


Figure 1 C: Demographic Profile Projection[4]



[3]World Population Prospects, 2019 Revision. accessed on 1 September 2020.
[4]World Population Prospects, 2019 Revision. accessed on 1 September 2020.

Table 1 Demographic Indicators, Select Middle-Income Countries[5]

	Population (million)			Population >65 (million)			Population > 80 (million)		
	2020	2040	2050	2020	2040	2050	2020	2040	2050
World	7794.8	9198.8	9735.0	727.6	1300.5	1548.9	145.5	305.1	426.4
India	1380.0	1592.7	1639.2	90.7	171.5	225.4	13.3	30.7	43.0
China	1439.3	1449.0	1402.4	172.3	343.8	365.6	26.6	71.9	115.3
Japan	126.5	113.4	105.8	35.9	39.9	39.9	11.4	16.0	16.5
Republic of Korea	51.3	49.8	46.8	8.1	16.4	17.8	1.9	5.0	7.1
Indonesia	273.5	318.6	330.9	17.1	40.3	52.5	2.4	6.5	10.8
Philippines	109.6	135.6	144.5	6.0	13.1	17.0	0.9	2.5	3.8
Singapore	5.9	6.4	6.4	0.8	1.9	2.1	0.1	0.6	0.8
Thailand	69.8	69.0	65.9	9.0	18.1	19.5	1.9	4.9	7.1
Viet Nam	97.3	107.8	109.6	7.7	17.5	22.4	1.9	4.1	6.3

Table 1 (Continued) Demographic Indicators, Select Middle -Income Countries[6]

	Sex Ratio (Females per 100 males)			Total Fertility Rate		
Location	2020	2040	2050	2020 - 2025	2040 - 2045	2050 - 2055
World	101.7	101.1	100.9	2.42	2.24	2.18
India	108.2	107.0	106.0	2.14	1.86	1.79
China	105.3	103.7	103.5	1.70	1.74	1.75
Japan	95.4	94.8	94.9	1.37	1.52	1.57
Republic of Korea	100.2	98.9	97.9	1.08	1.32	1.44
Indonesia	101.4	100.4	99.9	2.22	1.95	1.88
Philippines	100.9	99.3	98.7	2.45	2.07	1.95
Singapore	109.8	108.6	107.6	1.24	1.34	1.38
Thailand	94.8	93.2	93.5	1.46	1.48	1.54
Viet Nam	99.7	98.5	98.0	2.02	1.93	1.91

[5]World Population Prospects, 2019 Revision. accessed on 1 September 2020.
[6]World Population Prospects, 2019 Revision. accessed on 1 September 2020.

III. Key Requirements

Globally, social security and pension arrangements exhibit wide variety of practices and no template or a priori best practices can be relevant for diagnosing what measures are needed to progress towards a robust pension system in a given country. This underlines the need for greater competence in design and implementation of pension policies and initiatives in a context-specific manner.

Key requirements for a robust pension system in a middle-income country, with significant informal sector, may be stated as follows. This task has become even more complicated due to ongoing Covid-19 Pandemic. Some of the requirements, such as focusing on bundle of service on a life-cycle basis, and taking a systemic rather than ad-hoc approach focusing on particular schemes, have been mentioned earlier. A key requirement, often under emphasized, is that transition and sequencing issues inherent in any pension reform efforts, which alter existing trade-offs, must be explicitly addressed.

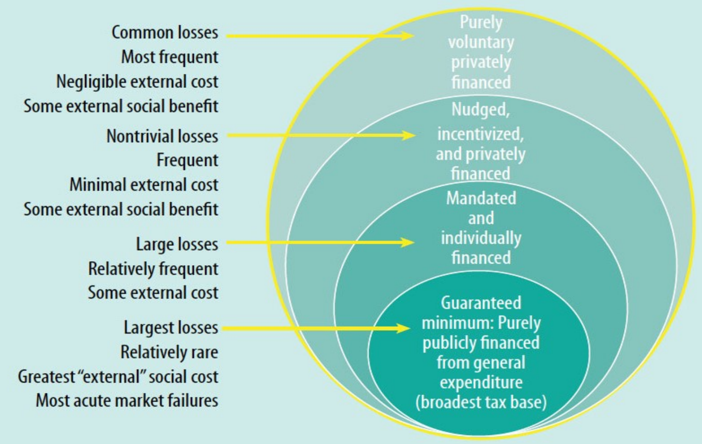
Pension and provident services are provided by government organizations. Without organizational change which is explicitly planned, including in habits and mind-set, and technology and skills-sets available to the organization, and its future recruitment practices, progressing towards a more robust pension system becomes difficult.

Extending social security coverage to the heterogeneous groups comprising the informal sector requires a variety of complementary and integrated initiatives concerning labour market, social assistance involving in-kind (food packages, transport) and cash, and others. For this, a good data base on informal sector employment and composition of activities are essential. Societies as well as households need to rely on multiple sources from which income or receipts in retirement are derived (Chart 2).

Chart 2

Rings of protection

From publicly financed to privately financed, there is a new take on ensuring social securi



Source: Packard and others (2018). World Bank, Washington, DC.

The importance of developing government and corporate bond markets to help provident and pension funds match their longer- term assets and liabilities has also been underlined by the Covid19 Pandemic. The importance of innovation and design of pension products and services needs greater recognition. There are several interesting experiments along these lines including micro-pension design and delivery in an environment providing long-term retirement saving security and confidence.

A systemic and integrated approach requires that the focus should be on outcomes and that the following question be asked. Could the desired objectives-outcomes be achieved in a different (or complementary) way than the standard social protection initiatives?

An Example: Maternal and child health care indicators can be improved in some countries with less pollution creating indoor cooking material. In that case, health outcomes can improve without standard health programs. Indonesian case study by Imelda, Carlos III, (2020) finds evidence in support of this hypothesis.

India's Pradhan Mantri Ujjwala Yojana, started in 2016, provides LPG connections to women in lower income households. This has reduced indoor pollution, and freed from the drudgery of fetching wood, cow dung and other indoor polluting fuel (Asher, 2020). India's 2014 initiative of Swachh Bharat (Clean Bharat) Abhiyan, by building toilets and ending open defecation, also have private and public health and hygiene benefits, while enhancing security of particularly girls and women. As of October 2020, over 0.6 million villages have declared themselves open defecation free, and over 100 million residential toilets have been constructed since 2014.[7]

IV. Concluding Remarks

It is clear that progressing towards a robust pension system is a process and not an event. Sustained focus and data-intensive monitoring and evaluation, preferably not just at central but also at decentralized levels of government are needed. In this context, each middle-income country is urged to consider setting up a semi-autonomous Centre of Retirement Research or its equivalent, with expertise in large-data analytics and policy research. Covid-19 Pandemic has led to the realization of the importance of disaggregated data on labour force, including for informal sector, internal migration trends, and composition of household income and expenditure.

The process of progressing towards a robust pension system is challenging in the current environment. It requires a determined and well-executed departure from "business as usual". This in turn requires managing political economy, and politics of reform. In this context, some of the key areas are:

[7] https://sbm.gov.in/sbmReport/home.aspx accessed on 21 October 2020.

Change in the purpose of the pension and provident fund organizations, shifting from process to outcome orientation and from welfare-orientation to professionalism. Change in the habits and mind-set of stakeholders, including of officials of provident and pension fund organizations, as well as their trustees; and of members, all of whom will need to exhibit greater financial literacy. This is an area deserving much greater attention of the policymakers and regulators. There is a need to more effectively and competently leverage emerging technologies for record-keeping, lowering of administrative and compliance costs, and lowering investment management costs. The incentive structures of the provident and pension fund organizations, the officials, and the members should be so restructured so as to behave in a manner consistent with their fiduciary responsibilities, and to enhance transparency and accountability

References

- Asher, Mukul (2020).” Innovative Approach to Social protection in India” Presented at Indian Institute of finance (IIF) International Conference, New Delhi, September 27,2020.
- Barr, Nicolas (2002), “Reforming Pensions: Myths, Truths, and Policy Choices,” *International Social Security Review*, 55; pp.3-36.
- Imelda, Carlos III. (2020). “Cooking that Kills: Cleaner Energy access, Indoor pollution, and health” *The* Journal of Development Economics, 147, pp1025-48
- Packard, Truman, Ugo Gentilini, Margaret Grosh, Philip O’Keefe, Robert Palacios, David Robalino, and Indhira Santos. 2018. "On Risk Sharing in the Diverse and Diversifying World of Work." Social Protection and Jobs White Paper, World Bank, Washington, DC.
- Roy, Amlan (2018). “Global Retirement and Demographics: ASEAN Focus” London: SSGA (State Street Global Advisors). Permission of Dr Roy has been obtained.

CHAPTER 18

INDIA'S INTEGRATED AND INNOVATIVE APPROACH TO OLD AGE SECURITY*

Since being entrusted with the responsibility of governing India in May 2014 (and then again in May 2019 with even larger majority), Prime Minister Narendra Modi-led government of Bhartiya Janata Party (BJP) has been evolving an innovative approach to old age security. This Chapter explains this approach.

According to the United Nations, India's population in 2019 was 1366 million, with yearly population increase of 1.0 %; Total Fertility Rate (TFR), which measures the average number of children a woman bears during her reproductive years, of 2.2, within striking distance of the replacement rate of 2.15; and median age of 27.5 years.[1] But India is ageing at a moderately rapid pace. According to the United Nations, India's population over 65 is projected to increase from 84 million in 2018 to 223 million in 2050, an increase of 2.7 times; while population over 80 years of age will increase by 3.25 times.[2]. Indeed, in 2050, demographic trends will lead to the two largest population cohorts in India being women and men respectively who will be 70 years plus. India thus needs to not only address the needs of very large absolute number of the elderly (a critical but often overlooked factor, especially in international comparisons and in drawing lessons), but also to moderately rapid pace of ageing, which provides policymakers a relatively short time to construct old age security systems.

I. Key Components:

Since independence in 1947, India has built a complex but fragmented system of social protection. Its limitations have been relatively limited coverage, lack of professional approach, and system-wide perspective, relatively small accumulation of total pension assets (around 20 percent of GDP), and limited use of technology. (Asher, 2018)

Four key components of India's integrated and innovative approach to old age security since 2014 are identified. This approach deserves to be widely studied as it is consistent with India's context-specific social, cultural, economic, and political realities. It incorporates linkages which are not found in social protection literature, such as between Ujjwala Yojna, better maternal and child health, and potential

*This was first published on 8 November 2019. The link is: https://www.myind.net/Home/viewArticle/indias-integrated-and-innovative-approach-to-old-age-security

[1] https://population.un.org/wpp/ accessed on 5 October 2019.

[2] https://www.un.org/development/desa/publications/world-population-prospects-the-2017-revision.html accessed on 5 October 2019.

income earning opportunities, improving economic security of the households. The purpose of this column is to identify key components, and indicate some of schemes or programs initiated. The column is not intended to be an empirical assessment of these schemes.

II. The First Component

India's approach towards old age income security recognizes that the elderly population globally desires affordable, reasonable quality, and accessible bundle of services, particularly health care, and housing, rather than just money. (Barr and Diamond, 2009). It recognizes that reducing the expenditure for essential services is equivalent, may be even better, as risk of increased cost of services is borne by the government, than provision of higher income.

Indeed, healthcare services are a major source of financial stress among the population, particularly the elderly. The government estimates that nearly 63 million people of India are in debt due to health care expenses and a third of the population is driven below poverty line due to the same.[3]According to the Indian official sources, in 2016, life expectancy in India at age 60 was 17 years for men, and19 years for women.[4] Age-related ill health episodes are likely to increase as life expectancy at age 60 increases. Those above 75 years of age also need elderly friendly amenities for mobility, and social interactions, for which investment in physical infrastructure and in human resources and skills-sets are needed.

Selected examples of the service provision components in India's innovative approach are

(I) The Economic Survey of India 2017 estimates that the magnitude of inter-state migration in India was close to 9 million annually between 2011 and 2016, while Census 2011 estimates the total stock of internal migrants in the country (accounting for inter- and intra-state movement) at 139 million. These are the potential beneficiaries from the portability provision of the AB-PMJY.

No amount needs to be paid by those hospitalized. The hospitals receive reimbursement according to the set rates from the government. There has however been concerns expressed by approved hospitals that the set rates are too low in relation to the cost (even when improved scale economies are taken into account), and that lag in receiving the reimbursement needs to be significantly reduced. It is reported that the AB-PMJAY is to be extended to senior citizens over 75 years of age,

---

[3]https://www.governancenow.com/news/regular-story/63-million-indians-are-in-debt-due-healthcare-expenditure-report.accessed on 5 October 2019.

[4]https://economictimes.indiatimes.com/nation-world/how-long-will-an-indian-live-after-60/this-is-how-long-you-will-live/slideshow/55092990.cms accessed on 5 October 2019.

with the premium being paid by the Union Government. This will further improve health care security of the elderly, reducing their expenditure needs.

An integral part of AB-PMJY, often overlooked, is the setting up of 0.15 million Health and Wellness Centres (HWCs) across the country, for which staff training, and building of infrastructure is being undertaken. This will help fill a vital gap in India's healthcare system, and help increase the supply of skilled health professionals.

It has been only about a year since the scheme was launched. In one year of its operation, about 0.5 million hospital treatments have been provided without pricing at point of consumption.[5] Since its launch, according to official sources, about 16,000 hospitals have been approved to provide treatment; 100 million e-cards have been issued, and about 17,000 HWCs have been made operational.

The challenges facing the AB-PMJY are organizational upgradation of the health sector, moving the whole system from low volume-high margin to high volume-low margin operations, and creating robust data analytics capabilities framework. W.H.O. (World Health Organization) is to cooperate with the AB-PMJAY on enhancing technical capabilities during the 2019 to 2023 period.[6]

(ii) Janaushadhi stores across the country have been set up for affordable diabetes and other common medicines price control on certain cancer and related medicines to make it affordable for the low income and for the middle class.[7] (see chapter 20 of this e-book for a discussion of this scheme).

(iii) The government initiated a housing scheme in June 2015, called Pradhan Mantri Awas Yojna, (PMAY). It provides subsidies for affordable housing to the urban and rural poor, with a target of building 20 million affordable houses in urban areas by 31 March 2022.

(iv) Ujjwala Yojna is designed to provide natural gas for cooking to reduce indoor pollution, and reduce time and energy of women spent on collecting fire wood. It was launched in May 2016. This saving of time can be potentially used to generate income from home by Family members, including the elderly. As of September 2019, 80 million natural gas connections have been provided, primarily to low-income families.[8]

---

[5] https://timesofindia.indiatimes.com/india/ayushman-bharat-programme-empowering-several-indians-pm-modi/articleshow/71591435.cms accessed on 30 October 2019.
[6] https://www.healthissuesindia.com/2019/10/11/world-health-organization-boost-for-ayushman-bharat/ accessed on 5 November 2019.
[7] http://janaushadhi.gov.in/) accessed on 5 October 2019.
[8] https://www.livemint.com/news/india/nda-ujjwala-surpasses-targets-provides-80-33-million-lpg-connections-1568006076964.html accessed on 5 October 2019.

For the schemes outlined above and similar schemes, it is essential that robust actuarial studies of the future fiscal costs (technically contingent liabilities) of the Union and State governments, as they co-share the costs, be conducted frequently, and taken into account in future changes in the schemes. Introduction of some co-payments for the services over time merits serious consideration.

III. The Second Component

The second component involves attempts to bring greater professionalism, rationalization, and systemic perspective to social security organizations. This is usually a neglected area in the pension literature. Managing political economy, including that of the social security is vital for this component. Thus, there is a proposal to appoint a body with requisite skills to manage INR 10 trillion (USD 133 Billion) of funds of the Employees Provident Fund Organization (EPFO).[9] The assets of INR 3.3 trillion (USD 47 Billion) of the National Pension System (NPS)[10] and growing rapidly, are already being managed professionally, with sound architecture for long term savings.

There has been an agreement between the NHA (National Health Authority) and ESIC (Employee State insurance Corporation), a mandatory health insurance scheme for private sector workers, to get treatment with the approved hospitals of AB-PMJY. This will widen choice, and improve scale economies of approved hospitals.

There is a strong case for setting up an autonomous National Centre for Retirement Behaviour Research, involving cross-disciplinary professionals in economics, sociology, geriatric care, medicine, actuaries, finance, organizational behaviour, and others.

IV. The Third Component:

Third, even as the coverage of pension schemes is expended, often with more targeted schemes for farmers, self-employed and others, in many of the schemes, the principle of co-contribution is incorporated resulting in self-selection. The government's fiscal costs are from its contribution, from revenue foregone through tax benefits (which are generous as contributions, investment income, and final withdrawals are not taxed, so-called EEE treatment), and from contingent liabilities. All three need to be better monitored and researched.

---

[9] https://economictimes.indiatimes.com/news/economy/policy/govt-proposes-to-corporatise-epfo-esic-appointment-of-ceos-for-first-time/articleshow/71188466.cms accessed on 5 October 2019.

[10] (http://www.npstrust.org.in/assets-under-management-and-subsribers) accessed on 5 October 2019.

V. The Fourth Component:

Fourth, India is using the technology platforms, most notably, exemplifies by JAM (*Jan Dhan Yojna Aadhar*, and Mobile phone). Launched in august 2014, Jan Dhan Yojna is designed for financial inclusion on a universal basis, By July 2019, 360 million bank accounts were opened, mainly by low-income individuals, with total deposits of INR 1 trillion (USD 14.3 Billion). Under it, overdraft facilities, insurance cover, and other financial products are also included.[11] Aadhaar is the world's largest biometric identification system. As of November 2018, 1239, million Aadhar cards have been issued, covering about 90 percent of India's population.[12]

India's mobile technology, particularly for financial transactions, has been rapidly evolving. India has the potential to create over US $1 trillion of economic value from the digital economy by 2025, up from around US $200 billion on October 5, 2019.[13] JAM has been combined to provide direct benefit transfers to bank accounts, including those of the elderly. This has reduced transaction costs, and help reduce inclusion and exclusion errors. Inclusion error refers to providing benefits to those who are not eligible under the regulations. The exclusion error refers to not providing benefits to those who are eligible under the regulations. In another illustration of use of technology, National Health Authority and Google are collaborating on the implementation of the AB-PMJAY Scheme.[14]

VI. Concluding Remarks

In conclusion, the above four areas illustrate the innovative and integrative approach of the Indian government towards old age income security since 2014. The vision is to provide old age security on as nearly an universal basis as possible in a gradual manner. There are however many continuing gaps and challenges in coverage and access, implementation, infrastructure, record keeping, and cost of services and fiscal contingent liability projections. Much more research on these issues is needed.

The government has rightly argued that data is new oil. It needs to put this into practice by making disaggregated data of various old age income security schemes on a regular and easy to access basis. Dashboards, while useful, are not a substitute for detailed data provision. The research community must also become much more pro-active in researching on these schemes.

---

[11] https://economictimes.indiatimes.com/industry/banking/finance/banking/deposits-in-jan-dhan-accounts-cross-rs-1-lakh-crore/articleshow/70155469.cms accessed on 5 October 2019.

[12] https://www.livemint.com/Politics/FFdSf7BlL42zJ9H0jt9T6O/123-crore-Aadhaar-cards-issued-to-people-Govt-tells-Rajya-S.html accessed on 5 October 2019,

[13] https://www.opengovasia.com/india-could-be-a-1-trillion-digital-economy-by-2025/Acc4essed

[14] https://swarajyamag.com/insta/national-health-authority-and-google-to-collaborate-on-implementation-of-ayushman-bharat-healthcare-scheme accessed on 5 October 2019.

References

- Asher, Mukul and Yutika Vora (2018). Social Protection system in India: An assessment of Recent Initiatives, in Social Protection Goals in East Asia, Mukul G. Asher, Fauzia Zen, and Astrid Dita (Eds). London: Routledge. Pp. 70-97.
- Barr, Nicholas and Diamond, Peter A., Reforming Pensions (January 2009). CESifo Working Paper Series No. 2523. Available at SSRN: https://ssrn.com/abstract=1330758

CHAPTER 19

LARGE-SCALE DATA COLLECTION FOR MONITORING EFFECTIVENESS OF POLICIES: SELECT EXAMPLES FROM THE SOCIAL SECTOR IN INDIA*

I. The Context

This Chapter is motivated by the on-going Vaishwik Bharatiya Vaigyanik (VAIBHAV) Summit.[1] This Summit has received less than deserved attention and coverage. It is therefore worth describing its objectives briefly. As stated in the above website. The VAIBHAV Summit is a collaborative initiative by Science and Technology (S and T) and Academic Organisations of India to enable deliberations on thought process, practices and R&D culture with a problem-solving approach for well-defined objectives.

The Summit aims to bring out the comprehensive roadmap to leverage the expertise and knowledge of global Indian researchers for solving emerging challenges. By bringing the Indian overseas and resident academicians/scientists together, a structure of collaboration will be evolved. The goal is to create an ecosystem of knowledge and innovation in the country through global outreach.The virtual summit was inaugurated by Prime Minister Narendra Modi on 2nd October 2020 in the virtual presence of registered academia and researchers from across the world. This summit will be followed by online month-long deliberation sessions starting from 3rd October to 30th October 2020 among researchers through the webinar mode. Concluding session is planned for 7th November 2020 on Sir CV Raman Jayanti.

The above is one more evidence that the strategic concepts of Atmanirbhar Abhiyan, and Be-vocal-for-local (and for the world) are outward looking concepts designed to make India more-self-confident, be conversant with accumulating knowledge, and technology, and pursue greater integration with the world. (see Chapter 2 of this e-book for explanation of these two strategic concepts).

On 3 October 2020, one of the sessions in the Social Science vertical of the Summit was on "Large-Scale Data Collection for Monitoring Effectiveness of Policies". I was one of the panellists. This column represents revised remarks made by the author as a panellist.

---

*This was first published on 6 October 2020. The link is: https://myind.net/Home/viewArticle/large-scale-data-collection-for-monitoring-effectiveness-of-policies-select-examples-for-the-social-sector-in-india

[1]https://innovate.mygov.in/vaibhav-summit/- accessed on 1 October 2020.

II. Select Examples from India's Social Sector

There have been many initiatives in the social as well as other sectors which have generated large-scale data, but which remain underutilized for empirical evidence-based research, policymaking, and as a potential source of revenue and therefore as an avenue for expanding fiscal space, a critical need in the current challenging economic and fiscal environment.

Four Examples are briefly discussed. It is however urged that researchers not only elaborate on them, but also identify more such examples. Government services are provided by organizations. Therefore, in each case, an organization should be identified with responsibility and accountability for managing large data bases, and making them accessible for policymakers and researchers.

The Pensions Sector: India's National Pension System (NPS) is regulated by PFRDA (Pension Fund Regulatory Development Authority) and by the NPS Trust. PFRDA is the regulator.[2] The Board of Trustees of the NPS Trust have the legal ownership of the Trust and the funds. The Trust is responsible for the monitoring of the operational and service level functions under the National Pension System or any other pension scheme regulated under the PFRDA Act, 2013.[3] Consideration is being given to separate the two organizations, which would be more consistent with global norms. In less than decade and a half, various mandatory schemes (for central government employees, and employees of states who opt for it), and various voluntary pension schemes open to all, including Atal Pension Yojana (APY)[4] have been implemented.

There have been impressive levels of membership, and assets under management (AUM)of India's NPS as indicated below. The data are as of 31 August 2020.[5] The total membership was 13.7 million. not counting the Atal Pension Yojna (APY) members, which number 22 million, for a total membership of 35.7 million. The composition is Central Government employees 2.1 million (5.9 percent), State Government employees (13.6) percent, Corporate Sector (2.9 percent), All Citizens voluntary members (3.8 percent), Swalamban Scheme (12.1 percent), and APY (61.6 percent). As for Central and State employees, NPS is mandatory, their combined number will overtime approach around 25 million, from the current 7.0 million. The membership data base will continue to grow.

The Assets Under Management (AUM) were INR 4.9 trillion (2.45 percent of GDP). Due to good pension design (such as minimum withdrawals till age 60; and very low administrative and investment management costs, and relatively superior

---

[2]https://www.pfrda.org.in/ accessed on 2 October 2020.
[3]http://www.npstrust.org.in/content/functions-nps-trust accessed on 2 October 2020.
[4]https://www.npscra.nsdl.co.in/scheme-details.php accessed on 2 October 2020.
[5]http://www.npstrust.org.in/assets-under-management-and-subsribers accessed on 2 October 2020.

returns, the AUM can be expected to grow rapidly. The composition of assets differs as compared to the composition of membership. Thus, Central and state government employees, which account for about one-fifth of the members, account for over four fifth of the assets. In contrast, APY and Swalamban Scheme account for 3.4 percent of assets but nearly three fourth of the members.

By any standards, the NPS constitutes a large data base, which must be organized for data analytics, and empirical research, with the aim of providing sound inputs to policymaking. The analytics could help assess the extent to which pension needs of different groups are met. It should be noted that a good pension system encourages retirement income to be obtained from multiple sources, not just one source. (se Chapter 17 of this e-book for the rationale for obtaining retirement income from multiple sources).

PFRDA, NPS Trust, and NSDL (National Securities Depository Limited)[6]are the three organizations involved in NPS data management. It is suggested that they could form a joint venture for organizing pension data in such a way that it is feasible to undertake big-data mining and analytics by NPS, PFRDA, and researchers relating to pension scheme design, behaviour within each scheme, and the extent to which pension objectives are met.

There is another large retirement fund, primarily for private sector workers, but also for employees of some public enterprises. The EPFO (Employees' Provident Fund Organization), established in 1952. As of 2018, its assets under management were INR 11 trillion, equivalent to around 6 percent of GDP.[7]The EPFO is reported to have 50 million active members as of early 2018, equivalent to 9.6% of the labour force of 520 million. Its total membership is much larger due to inactive accounts. But EPFO's relative lack of past investment in digital-based data management and reporting systems makes it difficult to undertake empirical evidence-based research, and assist policymakers. The data base of the EPFO is large, and needs to be subjected to modern data management methods for better policy formulation and implementation. As the EPFO does not have the expertise, a separate company would need to be formed for EPFO data management.

For better national level pension and social protection policies and their implementation at the centre and in the states, establishing a multidisciplinary National Retirement Behaviour Research Centre merits urgent consideration.

Aayushman Bharat: This health insurance scheme for hospitalization, is among the largest such schemes covering 100 million households (500 million people assuming each household has five members). There are indications that the scheme will be

[6]https://nsdl.co.in/ accessed on 2 October 2020.
[7]https://www.researchgate.net/publication/324006065_There_is_a_need_for_NPS_and_EPFO_to_shape_up accessed on 3 October 2020.

further expanded. The data generated by the Ayushman Bharat needs to be appropriately organized, and made available for data analytics, designating appropriate agencies who are accountable. The data management of Ayushman Bharat presents a good opportunity to monetize it (after appropriate privacy and other safeguards), and thereby can help partially fund the health sector initiatives.The covid-19 pandemic has made Indian policymakers realize that a well-functioning health system, involving public and private health, and preventive and curative care, is an economic and national security priority.

Pradhan Mantri Ujjwala Yojana (PMUY): This was launched on 1 May 2016. It aims to provide cleaner cooking fuel, such as LPG, instead of firewood, cow dung, and other fuels, to reduce indoor pollution. The benefits of PMUY comprise improved health of women and children, potential income generating opportunities due to two to three hours saved daily in fetching cooking material, and reduction in CO2 emission. These benefits need to be supported by empirical evidence through using data analytics relating to the Ujjwala data.

As of early October 2020, 80.3 million LPG connections have been provided to low-income households.[8] This constitutes a huge data base. If properly organized, and if data analytics tools are applied, it can be an important source for empirical evidence-based research. The Ministry of Petroleum and Natural Gas and the public sector oil marketing companies have created a data base for tracking applications under the scheme. Each oil marketing system has a separate system for tracking.[9]This is a commendable initiative. However, these data bases need to be extended to assess the socio-economic and health impact of the scheme. This is a major challenge, but addressing it will help improve design and implantation.

Agriculture Sector: In the agricultural sector reforms, NABARD (National Bank for Agriculture and Rural Development), set up in 1982, has the responsibility to act as development. In transformative reforms of Agriculture, (see Chapter 7 in this e-book for an analysis of NABARD) NABARD has been given key responsibility, including developing and providing credit and other support to FPOs (Farmer Producer Organizations) India aims to develop 10,000 such FPOs. As Asher has argued, NABARD as an organization will need to restructure and develop capacities to build large data base on behaviour of farmers, and other stakeholders, and make data accessible for data analytics, and for measuring effectiveness of new agriculture initiatives. In this, it can collaborate with SBI's (state Bank of India) app called SBI YONO.[10]

---

[8]https://transformingindia.mygov.in/performance-dashboard/ accessed on 6 October 2020.

[9]https://socialcops.com/case-studies/tracking-pmuy-beneficiaries-using-data-intelligence/accessed on 6 October 2020.

[10]https://www.myind.net/Home/viewArticle/the-changing-role-of-nabard-under-indias-new-agriculture-sector-environment accessed on 3 October 2020.

III. Concluding Observations

India has been making steady perceptible improvement in extending the reach of digital economy. But there is ample scope for further progress, hopefully at an accelerated pace as suggested by India ranking 44 out of 63 countries in IMD World Digital competitiveness ranking 2020.[11] This Chapter has highlighted some of the areas where there is large data-sets in the social sector. But these are currently not being organized to facilitate data analytics, encourage empirical-evidence based research, and to improve policies and implementation. Such rigorous empirical evidence-based research could also help raise profile of Indian academics and researchers in the social sector globally.

The above four examples are illustrations of the task ahead in this area, many more such data-sets exist in social and other sectors (e.g., for MSMEs, micro, small, and medium enterprises). It is strongly urged that policymakers assign responsibility and accountability to the relevant organizations to facilitate large scale data organization with a view to facilitating data analytics, and encourage empirical-evidence based research.

[11] https://www.imd.org/wcc/world-competitiveness-center-rankings/world-digital-competitiveness-rankings-2019/ accessed on 6 October 2020.

CHAPTER 20

AN ANALYSIS OF THE PRADHAN MANTRI BHARTIYA JAN AUSHADHI PARIYOJANA (PMBJP)*

I. Theme

In 2014, India's Union government introduced Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana (PMBJP) to provide medicines and surgical items of good quality at affordable prices through the Jan Aushadhi Kendras to wide section of the population. An earlier attempt in this direction in 2008 was unsuccessful due to supply side and logistics management problems. The PMBJP was revamped in 2015 to address the shortcomings. The revamped scheme provides financial incentives to store owners. Implementation and therefore operational accountability of the PMBJP is with the Bureau of Pharma PSUs (Public Sector Undertakings) of India (BPPI).

Revamped PMBJP is a part of the innovative approach to social protection which has been initiated by the Prime Minister Narendra Modi led government since being given the responsibility for governance in 2014. (See Chapter 18 in this e-book) It recognizes that citizens, particularly the elderly, need access to a bundle of goods and services, and not just money; and that technology can be adapted to make them more accessible and affordable.[1]

India's generic medicines industry is globally recognized and its product accepted. India reportedly accounts for around one-fifth of the global exports of generic medicines. In 2019-20 India pharma exports were USD 19.8 Billion. It is reported that over 90 countries have enquired about Indian Covid-19 vaccines. This demonstrates international confidence and acceptance of made in India medicines. India has donated vaccines to several neighbouring countries. A request by Brazil for two million dozes of Covid-19 vaccines, involving those from the Indian company Bharat Biotech International Limited (Covaxin), and Astra Zeneca and University of Oxford (Covishield), produced by the Serum Institute of India (SII), has been honoured on a commercial basis. More such commercial exports are to be executed. India has taken only six days to administer more than one million doses of vaccines against Covid-19. This makes it the fastest rollout of a million vaccine shots against the pandemic among countries that have placed their inoculation data in the public domain.

---

*Mukul Asher and Kruti Upadhyay, Independent Researcher. This was first published on 25 January 2021. The link is: https://myind.net/Home/viewArticle/an-analysis-of-pradhan-mantri-bhartiya-jan-aushadhi-pariyojana-pmbjp

[1] https://www.myind.net/Home/viewArticle/indias-integrated-and-innovative-approach-to-old-age-security Accessed on 2 December 2020.

II. Key Economic Reasoning concepts

There are three key economic reasoning concepts applicable in analysing the PMBJP. This will be evident in the analysis. First, the primary socio-economic role of public sector organizations is to make accessible, affordable, reasonable quality goods, services or amenities available to the citizens and reduce the monopoly power of other suppliers. Effective competition is the single most important spur to efficiency. This also requires adapting newer technologies, including in organizational structures and processes, and in managing supply and logistics chains.

Second, for a household, a reduction in total cost of obtaining a good or a service, such as medicines, whose share of household budget increases after persons reach 60 years of age, is equivalent to increasing its income. But this requires that they be accessible, affordable, and of acceptable quality.

Third, the concept of learning curve needs to be operationalized. This concept is derived from engineering economics. It measures the extent to which as *cumulative* output increases, per unit requirement of key inputs, such as labour units decline. This concept needs to be applied to public sector organization in India delivering goods, amenities and services. The efficiencies arising from the learning curve are in addition to economies of scale efficiencies, where a scale of operations, for example of PMBJP, increases, per unit costs exhibit a decline. These efficiencies however need to be measured by appropriate management information system.

III. The Context

The covid-19 Pandemic has underlined the importance of constructing a robust public and private health care system globally, as well as in India. India is also undergoing a disease-burden transition from communicable to life-style related diseases where more complex heath systems are even more essential. As in other areas, expectations and aspirations of the Indian citizens for better quality of health care and medical and surgical items has been rising, which need to be addressed.

One of the indicators of how a country organizes a health care system is the share of out-of-pocket expenditure (OOPE) as share of total health expenditure in the country. India's share, while declining, was in 2018 at around 60 percent of the total. This is on a high side, and needs to significantly decline further.[2] According to a study by Singh et. al. (2020) medicines and surgical items, i.e., pharmaceuticals, contribute 43 percent to the total out-of-pocket expenditure (OOPE) on health in 2015-16, with significant variations across states. This makes it the single largest category under OOPE, followed by expenditure incurred in private hospitals, medical diagnostics, government hospitals, and general medical practitioners, in that order.

---

[2]https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS accessed on 20 December 2020.

The Brookings study argues that the OOPE warrants special attention as it leads to impoverishment, with 7% of the households falling below the poverty line on account of health expenses.[3] Making medicines accessible and affordable, without persons needing to borrow, and in some cases being pushed to low-income status, should be among the KPIs (Key Performance Indicators) of the PMBJP. This initiative could also help India to progress towards achieving universal health coverage by 2030.

IV. Design and Implementation of PMBJP

The information in this sub-section is primarily from[4] Even though the Jan Aushadhi Yojna was launched in the year 2008, at the time of the 2015 revamping, PMBJP comprised only 80 functional stores across the country. Remaining stores were either non-functional or shut down due to various reasons such as poor support from state governments, poor supply chain management, non-prescription of generic medicines by the doctors, and lack of awareness.

Since 2015, the number of the stores have grown from 80 to more than 6600 spread across over 700 districts by end 2020. As may be expected, maximum expansion of stores is in urban districts, areas of high literacy and high level of development. The establishment of stores is driven by considerations of potential market size and resulting profits. Most districts in 2019 had at least one store but few of the North eastern and Central districts do not have a store. This aspect needs addressing. Ministry of Chemicals and Fertilizers has indicated that it plans to make 10,500 PMBJP stores functional by March 2024.

As at end 2020, four warehouses of Jan Aushadhi Kendras are functional at Gurugram, Chennai, Bengaluru and Guwahati. Two more warehouses are planned in Western and Central India to improve efficiency of the supply chain system. Bureau of Pharma PSUs of India (BPPI), the implementing agency of the PMBJP is responsible for setting up the new Kendras. An individual entrepreneur who opens PMBJP kendra is eligible to receive an incentive of 15 percent of monthly purchases (subject to ceilings).

As at end 2020, the product basket of PMBJP consists of more than 800 drugs and 154 surgical instruments. The medicines are procured from World Health Organization-Good Manufacturing Practices (WHO-GMP) certified suppliers. Also, each batch of the drug is tested at 'National Accreditation Board for Testing and

[3] Medicines in India: Accessibility, affordability and quality (brookings.edu) accessed on 25 December 2020.

[4] http://janaushadhi.gov.in/Data/Annual%20Report%2020.19-20_21052020..pdf accessed on 12 December 2020.

Calibration Laboratories' (NABL) accredited labs. Medicines are dispatched to the Kendras only after they pass the quality test.[5]

A medicine under PMBJP is priced on the principle of a maximum of 50% of the average price of top three branded medicines. Therefore, the cost of the Jan Aushadhi Medicine is cheaper at least by 50% and in some cases, by 80 to 90% of the market price of branded medicines.[6] The above does suggest that customers pay significantly less from PMBJP related stores than what they need to pay for same medicines (technically) from other sources. Table 1 provides average reduction of generic drug price as compared to branded drugs classified by therapeutic classes.

Table 1: Average price benefits of Jan Aushadhi stores[7]

Therapeutic class	Average Reduction in Price as Compared to Branded Drugs	Formulations covered
Analgesic and antipyretic /Muscle relaxant	-76.20%	51
Antiallergic drugs	-77.37%	17
Anticancer drugs	-74.69%	16
Antiinfective drugs	-62.66%	108
Diuretic drugs	-55.07%	5
Drugs acting on cardio-vascular system	-74.47%	82
Drugs acting on central nerve system	-73.12%	54
Drugs acting on endocrine gland including steroids & immunosupressant	-59.19%	17
Drugs acting on eye & ENT	-69.98%	14
Drugs acting on female reproductive	-78.12%	6
Drugs acting on gastro-intestinal-tract	-68.87%	53
Drugs acting on respiratory tract	-60.33%	16
Drugs acting on skin (Topical/local	-69.66%	29
Drugs acting on urogenital organs	-83.39%	6
Drugs used in diabetes	-68.18%	32
Local/General anaesthetics drugs	-61.34%	4
Miscelleneous	-79.64%	1
Solutions correcting water & electrolite disturbances	-52.35%	2
Vaccine	-52.38%	1
Vitamins, minerals & food supplement	-75.03%	18

"Formulations covered" column in Table 1 shows the number of generic medicines falling under any particular therapeutic class. "Average reduction in price

[5] http://janaushadhi.gov.in/Data/Annual%20Report%2020.19-20_21052020..pdf https://swarajyamag.com/insta/boost-to-affordable-medicines-govt-to-increase-number-of-janaushadhi-kendras-to-10500-by-march-2024 accessed on 12 December 2020.

[6] http://janaushadhi.gov.in/Data/Annual%20Report%2020.19-20_21052020..pdf

[7] "Medicines in India: Accessibility, Affordability and Quality," Brookings India Research Paper No. 032020.-01 accessed on 21 January 2021.

as compared to branded drugs" column shows the average percentage difference between average price of top three branded medicines and the generic drugs of the same therapeutic class.

Data in Table 1 suggest that minimum average percent of the price decrease is 52.35% for the drugs falling under Solutions correcting water & electrolyte disturbances therapeutic class compared to top three branded medicines. Drugs acting on urogenital organs-therapeutic class has maximum average percent decrease in prices compared to top three branded medicines.

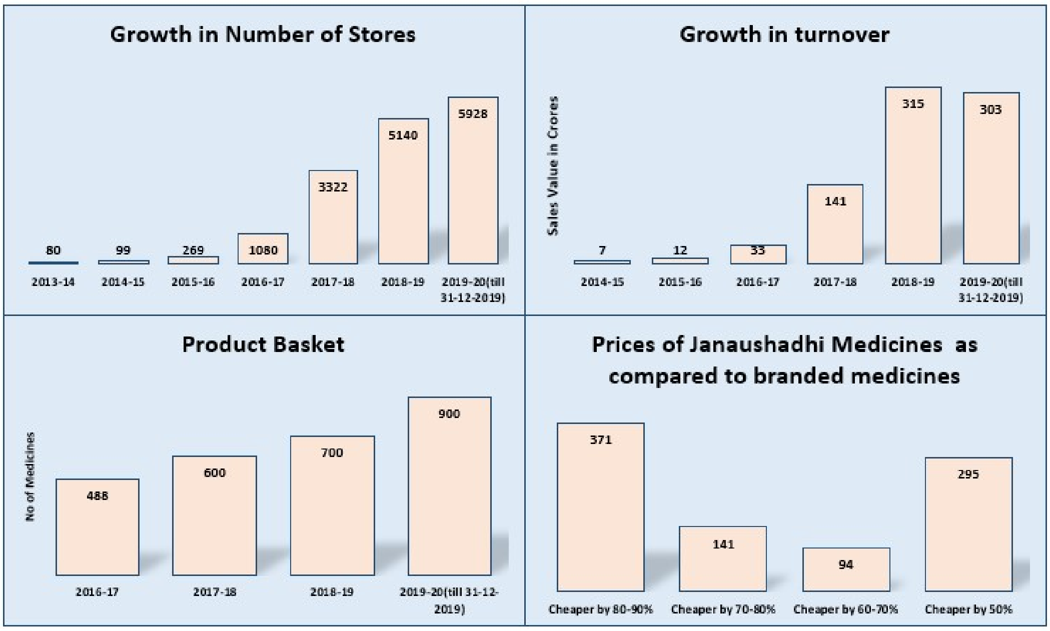
The same study compares some basic medicines used for lifelong disease such as thyroid, blood pressure and diabetes. Let us assume there is a patient who has been prescribed Telmisartan (40mg). If the person uses the medicines purchased from the kendra, she will save approximately INR 2300 per year. For a person living below poverty line this will make approximately 3 percent of the income saved per year. Any expenditure saved on medicines and surgical items by a household is same as increase in household income. The PMBJP thus can be cumulatively be expected to significantly raise income of the bottom half of the population.

Revenue from medicines and surgical items by the Kendras has grown rapidly from INR 73 million in 2014-15 to Rs. 3030 million till 31 December 2019 as per the annual report of the Ministry of Chemicals and Fertilizers. It is important to note that kendras marketed merchandise worth INR 3580 Million during first 7 seven months of the FY 2020-21. Kendras are estimated to achieve sales of more than INR 6000 million for the entire FY 2020-21. This suggests promising potential for expanding revenue from the Kendras.[8]

[8]https://economictimes.indiatimes.com/industry/healthcare/biotech/pharmaceuticals/pharma-products-worth-rs-358-cr-sold-through-jan-aushadhi-stores-in-april-october/articleshow/79025013.cms accessed on 12 December 2020.

Progress of PMBJP since 2013-14 is presented in Figure 1.[9]

Figure 1 Select Indicators of the PMBJP



V. Future Directions

The PMBJP will not only tap efficiencies from economies of scale as it expands, but also become competent as an organization to ride the learning curve, as cumulative output expands. In the 2020 Budget, the Finance Minister proposed expansion of PMBJP to all districts, with offering of 2000 medicines and 300 surgical items by 2024.

To set up robust logistic and supply chain for such large number of stores spread across the country, and for such large of medicines and surgical items in such a short period, is a challenging task. As noted, there is promising potential to enhance revenue generation from the Kendras. This requires robust financial management system. It is strongly urged that a robust MIS (management Information System) be established for MIS to assist in better management and decision-making, and to monitor key results and outcomes. The MIS should also provide the ratio of revenue generated over expenditure incurred on PMBJP. This ratio should be increasing overtime. Such MIS would also help in competitiveness of PMBJP with other supply chains, and help estimate real economic savings to the consumers, to the economy, and to medicine production industry.

---

[9] http://janaushadhi.gov.in/Data/Annual%20Report%2020.19-20_21052020..pdf accessed on 12 December 2020.

The number of Jan Aushadhi kendras should be spread out more evenly among urban, para-urban, and rural areas for better accessibility. The kendras need to be incentivized to upgrade their technology of supply chain and delivery mechanisms, and add more revenue generating added services to those who value them, while creating trust in them.

It is also urged that the health departments at all levels of government procure generis medicines wherever feasible, and educate doctors, nurses, general public and others about them. The researchers in health policy and practices are strongly urged to make use of data from the PMBJP link, and to collect primary data to critically evaluate the progress of PMBJP, and how it can better attain its objectives.

References

- Asher, Mukul G. (2019). "India's Integrated and Innovative Approach to Old Age Security", https://myind.net/Home/viewArticle/indias-integrated-and-innovative-approach-to-old-age-security accessed on 21 July 2021.

- Singh, Prachi, Shamika Ravi, and David Dam,2020. "Medicines in India", Brookings India Medicines in India: Accessibility, affordability and quality (brookings.edu) accessed on 12 January 2021.

CHAPTER 21

SUBSTANTIVE REFORMS OF EPFO AN IMPERATIVE IF INDIA IS TO CONSTRUCT 21ST CENTURY SOCIAL SECURITY SYSTEM[*]

There is a widespread consensus, supported by evidence, that the EPFO (Employees' Provident Fund Organization), nearly seven-decades old organization set up to provide social security to private sector workers, has not met its objectives, and has not adapted to the changing economy and changing aspirations of members.

EPFO administers three schemes, a provident fund scheme, called EPF (Employees' Provident fund) which is a mandatory savings scheme for those businesses employing over 20 workers; Employees' Pension Scheme (EPS) which provides pension on a defined benefit basis to eligible members; and EDLI (Employees Deposit Linked Insurance Scheme), is an insurance cover provided to its members. These three are require different skills, with EPS and EDLI requiring robust actuarial skills. The combined contribution rate of the three schemes varies between 18.83 and 20.83 percent. Reports by EPFO suggest that as of 31 March 2019, the EPFO had 47 million contributing members (only around 9 percent of the labour force), of which around 22 percent were in1340 exempt funds.

EPFO is India's largest NBFC (Non-Banking Financial Company), with total assets under management of INR 16.6 trillion as at end March 2019 (around 8.3 percent of GDP.[1] Of this amount, INR 4.6 trillion (27.7 percent) was accounted for by exempt funds, whose investment pattern is regulated by the EPFO.

As at end March 2019, total number of pensioners under EPS was 6.5 million, less than a tenth of the population over 60 years of age. The above suggests that the contribution of EPFO to India's social security goals has so far been limited. It is argued that feasible reforms in design, governance, and management information systems could help EPFO make better contribution to India's social security goals and to meeting aspirations of its members.

I. Design Reforms

The main reforms needed involve redesigning the three schemes. Given robust life insurance industry, EDLI is now redundant and can be not offered to future members, thereby causing minimal disruption to existing members. The EPF scheme is still being applied to around 200 industries, a feature from the 1950s design. EPF

---

[*]This was first published on 22 January 2021. The link is https://www.moneycontrol.com/news/business/personal-finance/how-the-epfo-can-improve-as-indias-largest-social-security-provider-6362421.html

[1]https://www.epfindia.gov.in/site_docs/PDFs/EPFO_FD/Booklet_67E.pdfaccessed on 10 January 2021

could henceforth be offered to all employees who are eligible, with list of industries eliminated, as India's dynamic economy spawns new economic activities. The requirement for firms with 20 employees or more also needs to be reduced gradually as EPFO's capabilities increase. This will enable millions more employees to benefit from EPFO schemes.

The EPFO has overgenerous withdrawal provisions before retirement, thereby drastically reducing the accumulation by members as the power of compound interest is not fully realized. The pre-retirement withdrawal provisions need to be significantly reduced as currently lump sum from EPF at retirement is quite inadequate to finance old age.

The EPS is widely believed, even by many informed government officials, to be actuarially unsustainable. This requires reducing benefits, increasing contribution rates, greater government subsidy, or turning EPS from Defined Benefit to Defined Contribution scheme (with grandfathering clauses to protect existing members). Earlier this exercise is undertaken, the better would it be for the viability of the EPFO as an organization.

The EPFO's investment pattern has also meant foregoing returns while increasing risk. Globally, provident and pension funds invest in mixed of debt, equity, real estate, and other assets, and many invest in both domestic and global markets. Significant portion of their earnings, from which dividends are paid, comes from trading in bonds (not keeping till maturity) and equities in a diversified portfolio.

The EPFO started investing in passive equity funds only in 2015 on a gradual basis. But its lack of professionalism has led it to make significant investment allocation into equity of government public enterprises, an asset class the government is trying to rationalise, including by divesting. Fortunately, the amounts involved are reportedly not very large in relation to its assets under management. The EPFO needs to invest in broad indexed funds which mimic the broader stock market. EPFO's earned returns on investments have been consistently lower than that of the National Pension System (NPS), even for similar portfolios, resulting in foregone income to its members. EPFO is urged to set up an internal investment management unit which can help minimize investment management costs, and act as benchmark to assess performance of outsourced investments. For this, recruitment and promotion practices will need to be revamped. Alternatively, a separate government appointed specialist group with accountability could be formed to undertake the EPFO's investment function.

II. Governance Reforms

EPFO's 43-member Board structure, with effectively Minister of Labour appointing all the members, and none with expertise in pension economics, finance, actuarial, and management information specialists, is unwieldy, and not conductive to outcome-oriented management. The key is to bring expertise into the EPFO Board of trustees to manage its responsibilities with competence and professionalism. The EPFO should not continue to be a service provider as well a regulator of exempt and non-exempt funds. The two functions must be separated. The provision of permitting EPF members and NPS members to choose between the two should be more effectively implemented as such competition would be a spur to efficiency for both organizations.

III. Management Information System (MIS) Reforms:

The EPFO's use of digital technology to deliver routine services has improved, but there is still further scope for improvement, as in settling provident fund payments, and completing pension arrangements in a shorter time after retirement. The EPFO however needs major revamp of its MIS, and develop a dashboard, to be refined as experience is gained, which includes total members and actual contributors to its three schemes, both as a flow and as a stock; contributions and withdrawals for different purposes to each scheme during a period; rate of return earned by different schemes and by asset classes; stock of assets for each scheme; and balances by income range, gender, and age group. The actuarial valuations by professionals need to be undertaken for three schemes at regular intervals, and put in public domain for evaluation.

CHAPTER 22

ESTABLISHING A ROBUST MIS AN IMPERATIVE FOR INDIA'S EPFO AND ESIS TO MEET MEMBERS ASPIRATIONS AND COUNTRY'S NEEDS*

I. The Context and the Theme

There is a widespread consensus that India's nearly seven decades old EPFO (Employees' Provident Fund Organization) and ESIS (Employee State Insurance Scheme), designed to provide retirement income security, and health care services to private sector workers respectively, have not delivered the desired outcomes for their members in spite of large investments made in them.

As of early 2021, The EPFO with assets under management of INR 16.6 Trillion (8.3 percent of GDP), and ESIS, with assets of INR 0.8 trillion, are among the largest Non-Banking financial institutions in the country. Much more is expected of them in contributing to India's capital market development.

EPFO administers three mandatory schemes, a provident fund scheme, called EPF (Employees' Provident fund) which is a mandatory savings scheme for those businesses employing over 20 workers; Employees' Pension Scheme (EPS) which provides pension on a defined benefit basis to eligible members; and EDLI (Employees Deposit Linked Insurance Scheme), is an insurance cover provided to its members. These three require different skills, with EPS and EDLI requiring robust actuarial skills. The combined contribution rate of the three schemes varies between 18.83 and 20.83 percent. The ESIS administers health insurance scheme. Its contribution rate is 3.25% of the wages by the employers, and 0.75 percent by the employees, for a total of 4.0 percent.

The members of these organizations and society expect that in return for entrusting such high mandatory contributions, EPFO and ESIS as organizations are managed competently, and professionally, and that they adopt to emerging technologies, including digital economy. Thus, between 22.83 and 24.83 percent of wages are mandatorily entrusted to EPFO and ESIS. This put high responsibility on these two organizations to deliver commensurate services.

A strong case can be made that without substantive reforms in design, governance structures, and investing in more robust Management Information System (MIS), these two organizations are not likely to meet 21st century aspirations

---

*Mukul Asher and V. Ramakrishnan, Managing Director Performance Consulting Coimbatore, India. This was first published on 20 January 2021. The link is https://myind.net/Home/viewArticle/establishing-a-robust-managemenorganizationst-information-system-an-imperative-for-indias-epfo-and-esis-to-meet-members-aspirations-and-countrys-needs of their members regarding service quality and delivered outcomes. This Chapter however focuses on only the MIS aspect of the needed reforms of EPFO and ESIS. Both need to establish and then competently and professionally manage a robust MIS which is capable of providing the information to management and to their stakeholders on a regular timely basis.(For an analysis of wider set of reforms needed for India's EPFO, see chapter 21 of this e-book)

II. What Should the MIS Deliver?

The suggestions made in this Chapter of what should the MIS deliver are preliminary, and will need to be refined as experience is gained and as new policy priorities emerge. Both organizations should provide total members (sometimes called subscribers) and total actual contributors to the three schemes of EPFO (EPF, EPS and EDLI) and of the ESIS scheme for health care. Both, flows during a given period (e.g., a six-month period) and a stock on a given date should be reported. These are important as they indicate the extent to which those who are members are actually contributing (there should be minimum difference between the two). Given the trends in this ratio, appropriate measures to improve the compliance ratio, and to eliminate duplicate accounts can be instituted. The actual contributors to total labour force ratio provide an indication of the extent to which the two organizations are able to provide coverage to the labour force.

The second set of information MIS must provide is contributions to and withdrawals by members for different purposes for each scheme during a period, perhaps quarterly. In any retirement income security scheme, it is the power of compound interest that significantly affects the total corpus available to members at retirement. If pre-retirement withdrawals to contributions ratio is high, power of compound interest is reduced, adversely affecting total balance of a member available for retirement. This is particularly relevant for the EPF scheme as it permits fairly generous pre-retirement withdrawals. The EPFO should also provide the number of persons withdrawing at the specified age of age of 55, and the average balance withdrawn classified into few retirement- corpus brackets.

The ESIS should report the contributions and the expenses on providing benefits plus administrative expenses. It does appear that the expenditure on health benefits to members is too low compared to the contributions. The MIS would permit examination of this trend, and the management can make appropriate policy decisions.

Both the organizations, for all their schemes, need to provide density of contributions (number of months of contribution divided by total potential months of contribution) on a periodic basis, perhaps once a year. It would be more policy-relevant if such data are provided for each state, and sector as well as for the country as a whole. For Provident and Pension Funds, members with a low density of contributions are likely to face low accumulated balances at retirement age, and therefore are likely to have lower ratio of retirement income to pre-retirement income. i.e. the replacement rates. For the pension and life insurance schemes of EPFO, and for the ESIS, without high density of contributions, the schemes would not be financially viable.

The EPFO needs to publish annually balances of its members (Active and Non-active) by income range, gender, and age group. Such information would help assess the extent to which member balances are concentrated (whether a small proportion of members have disproportionately large proportion of balances) that would require policy responses. Disaggregation by gender would help in gender analysis of the EPF scheme.

The ESIS needs to focus more on health outcomes, including through preventive care, it is aiming to achieve, and not just on health outputs/inputs (such as number of beds, operations performed, or patients visited). Its MIS should be constructed for its management to compare per unit costs of standard medical procedures across its hospitals. The Dashboard of the ESIS should incorporate this feature.

Annually, the two organizations need to provide rate of return earned by different schemes and by asset classes and the stock of assets for each scheme. Annual dividend actually credited to the accounts of the members in each scheme also should be published annually. Administrative costs, and investment management costs as a percent of contributions, and as percent of assets needs to be reported annually. The investment management strategy also needs to be reported annually.

The actuarial valuations by independent professionals need to be undertaken for three schemes of EPFO, and for ESIS at regular intervals, and put in public domain for public policy debate. As this has not been the practice, this requires mind-set change of the decision makers, and of the organizational and political leadership.

III. Concluding Remarks

This Chapter has argued a case for the EPFO and the ESIS to organize construction of a robust MIS (Management Information System), as this has become an urgent imperative if these organizations are to meet the needs of the country, and are to meet aspirations of its members. Such a MIS will require an organizational and attitudinal change insisted upon by the political leadership, which needs to be handled with sensitivity and competence. The MIS in turn would generate information suggested above which would assist in better management decision making, and help improve performance and delivery of outcomes.

PART IV
INDIA AND THE GLOBAL ECONOMY

CHAPTER 23

INDIA'S SEA PORT INITIATIVES IN IRAN, MYANMAR, AND INDONESIA TO ADVANCE ITS GEO-ECONOMIC AND GEO-STRATEGIC INTERESTS*

According to the Logistics Performance Index (LPI) by the World Bank, India ranked 44th out of 160 countries, with LPI score of 3.18. It is only a small improvement over its LPI rank of 47 in 2010. This lends added urgency to India's Blue Economy Program, which aims to utilize its coastline of 7500 km, involving 13 States and Union Territories, and 14500 KM of navigable waterways, and sea connectivity globally for more broad-based sustainable economic development, and to cut logistics costs significantly. An integral component of India's Blue Economy program concerns India's maritime initiatives abroad. This article examines India maritime initiatives in Iran, Myanmar, and Indonesia, focusing on sea ports.

I. Sea Port Initiatives with Iran

India, Iran and Afghanistan signed a trilateral agreement in 2016 to jointly develop Iran's Chabahar Port, opening a new strategic transit route between the three nations and other Central Asian nations. The sea-port initiatives between India and Iran fit into a 7,200-km-long multi-mode network of ship, rail, and road route for moving freight between India, Iran, Afghanistan, Armenia, Azerbaijan, Russia, Central Asia and Europe, called the International North–South Transport Corridor (INSTC). Its northern parts are Astrakhan, Moscow, and Baku. Its southern end is Mumbai in India.

In 2017-18, bilateral trade between India and Iran was USD 13.8 billion. Iran exhibited a surplus of USD 11.1 billion. Iran is the third largest oil supplier to India, and hence a major source of its energy imports. Bilateral trade between India and Afghanistan was USD 900 million in 2017-18. The plans are to raise it to USD 2 billion by 2020.

Under the agreement signed between India and Iran in May 2016, India is to equip and operate two berths in Chabahar Port Phase 1 with a capital investment of USD 85 million and an annual revenue expenditure of USD 23 million on a 10-year lease.[1]

In February 2018, India and Iran signed an agreement which gives New Delhi operational control of a section of the strategically located Chabahar port in the Gulf

*This was first published on 4 December 2018.The link is: https://myind.net/Home/viewArticle/indias-sea-port-initiatives-in-iran-and-indonesia-to-advance-its-geo-economic-and-geo-strategic-interests

[1] https://www.tolonews.com/business/another-wheat-shipment-afghanistan-arrives-chabaharaccessed on 9 September 2018.

of Oman for 18 months. India assumed operational control of Chabahar Port on December 24, 2018.[2] A task force of officials from these three countries has been set up to facilitate trade and to help reduce logistics costs.

The United States, exhibiting maturity in bilateral relations, recognizing strategic convergence of their interests, has granted waiver to India from its tough sanctions imposed on Iran in November 2018 for the development of Chabahar Port and a construction of railway line from the port city to the border of Afghanistan, and for shipment of non-sanctionable goods through the Port to Afghanistan. An SPV (Special Purpose Vehicle) involving two Indian ports will be involved from the Indian side in developing the port complex.

India has also been granted waiver by the US to continue to import oil from Iran, with some conditions. This enables India to continue its cooperation and payments arrangements with Iran concerning its exports of oil to India. If the two countries can reach an equitable agreement on barter trade, with India exporting agriculture, engineering, and other goods, and services in return for oil, using local currency payments mechanisms, the bilateral economic relationship would be further strengthened. India and Iran are also exploring more extensive trade in their own currencies.

The plans are to make Chabahar port in Iran fully operational by the end of 2019. The port project also involves Indian participation in railway projects, one of which will connect Chabahar port with Zahedan in Iran. The port has already been partly operational as indicated by India dispatching its first consignment of wheat via the Chabahar Port to Afghanistan in late October 2017. India's seventh consignment of wheat to be sent to Afghanistan arrived in the Chabahar port in early April 2018.

As part of India's development cooperation, about 110,000 tons of wheat from India bound for Afghanistan is to be transported annually to Afghanistan through Chabahar. From Chabahar, the shipments will be transported via road to Milak, a border city on the Afghan border.[3] India has also urged Central Asian countries which are landlocked, to utilize Chabahar Port for greater connectivity and reduced logistics costs. India has joined Ashgabat agreement which aims to establish international transport and transit corridor between Iran, Oman, Turkmenistan, and Uzbekistan.

---

[2]https://www.myind.net/Home/viewArticle/india-reaches-a-major-milestone-by-taking-over-the-operations-of-chabahar-port-in-iran accessed on 9 September 2018.

[3]https://www.voanews.com/a/india-opens-new-afghan-trade-route-via-iran/4091915.html accessed on 9 September 2018.

II. India-Myanmar Sea Port initiatives

India has assisted with Kaladan multi-modal transport project in Myanmar. Its objective is to create a multi-modal sea, river, and road transport corridor for shipment of cargo from the eastern ports of India to Myanmar through Sittwee Port. This will also facilitate cargo movements to the north eastern part of India through Myanmar. This initiative could help improve bilateral merchandise trade relations which are currently about USD 3 billion. India is set to assume responsibilities for operations at the Sittwee Port in the first quarter of 2019.[4]

III. India-Indonesia Sea Port initiatives

Indonesia and India have recognized that as maritime neighbours, stronger connectivity, particularly sea links is needed. In 2017, bilateral merchandise trade between the two countries was USD 18 billion, with Indonesia exhibiting a trade surplus of USD 10 billion. Indonesia is a source of key commodities for India, mainly crude palm oil and related products, coal, lignite, and wood pulp. The two countries plan to raise the bilateral trade to USD 50 billion by 2025.

The two countries have reached an agreement to provide India economic and military access to Indonesia's strategic island of Sabang, which has a deep sea-port. This island is located at the northern tip of Sumatra, about 500 KM from the entrance of Straits of Malacca. From an economic and strategic perspective, the Straits of Malacca is one of the most important shipping lanes in the world. About a quarter of all oil carried by sea passes through the Straits of Malacca, mainly from Persian Gulf suppliers to Asian markets. About two-fifths of India's trade passes through the Straits. Sabang is located 710 KM Southeast of India's Andaman and Nicobar (A and N) Islands. The two countries are planning to achieve greater connectivity between India's Andaman and Nicobar Islands and Indonesia's Aceh province. India is to invest in the port and in economic Zone at Sabang, and build a hospital. The Port has depth of 40 metres and can accommodate submarines. This agreement is part of India's Act East Policy; and signals Indonesia's commitment to strategic partnership with India in the Indian Ocean. It will strengthen Indo-Pacific relationships between the two countries. These initiatives also provide Indonesia and India a leverage on the Straits of Malacca.

In 2016, the Indian government identified 26 Islands within Andaman and Nicobar Islands for promoting and implementing development based on sustainable approach. The government announced laying of submarine optical fibre cable between Chennai and A and N Islands so as to increase telephone and internet connectivity in the region by December 2018. In 2017, the Andaman and Nicobar

[4] https://economictimes.indiatimes.com/news/defence/india-all-set-to-take-over-ops-in-myanmars-sittwe-port-after-chabahar/articleshow/67437859.cms accessed on 9 September 2018

Island Development Agency (IDA) was established. It plans to focus projects such as creation of jetties/berthing facilities, Roll-on/Roll-off ships; bridges on Andaman Trunk Road; improved air connectivity projects. As of June 2018, eighteen projects, both in Andaman and Nicobar as well as in Lakshadweep Islands, have been identified for implementation, out of which seven Projects are expected to be implemented through Public-Private Partnership method.

The port related initiatives are expected to improve connectivity, lower transport and logistics costs, and widen economic interactions. This would help India widen its geo-economic and geo-strategic options.

IV. Concluding Remarks

India's maritime initiatives, focusing on sea ports, with Iran, Myanmar, and Indonesia, are consistent with India's Blue Economy program to help generate broad-based sustainable development, and to help reduce logistics costs. They are also consistent with India's Act East Policy and regarding Indo-Pacific region as a key region for global growth. These initiatives will also help in improving India's ranking in the World Bank's Logistic Performance Index (LPI). These agreements are also likely to assist in advancing India's geo-economic and geo- strategic interests. Both Iran and Indonesia are major suppliers of commodities which India imports; and both help India to strategically focus on vital sea and other transport corridors.

In the case of Iran, the agreement links with the INSTC, reaching Afghanistan, Russia, and Central Asia; and in the case of India, it helps in deepening Indo-Pacific focus. In the case of Myanmar, it deepens its links with a near-neighbour with large economy. It also helps facilitate greater connectivity to India's north-eastern region, an important national priority. The initiatives with Indonesia will enable better monitoring of the Malacca Straits through which about two-fifths of India's trade passes.

CHAPTER 24

INDIA-BRAZIL PARTNERSHIP: WHY PRESIDENT BOLSONARO'S REPUBLIC DAY VISIT IS SIGNIFICANT?*

During the visit of the Prime Minister Narendra Modi to Brazil to attend the 11th BRICS (Brazil, Russia, India, and China are members) summit in November 2019, he extended an invitation to President Jair Bolsonaro of the Federative Republic of Brazil, to be the chief guest on India's Republic Day's celebration on January 26, 2020.

Such an invitation by India signals desire to deepen economic and strategic engagement with Brazil. India's need for agricultural and other resources and for technology and knowledge in which Brazil has a global competitiveness, and Brazil's need to diversify economic and strategic partners, especially with major rising power such as India, provide a solid backdrop for deepening engagement between the two countries. Brazil is widely acknowledged as an agricultural powerhouse in global trade, particularly in soybeans and related products.

Both the leaders need to urgently address legacy economic, fiscal, political, and social issues left by previous governing regimes. This has put them at odds with the establishment sections, including their media which are tied to the old regimes. There is therefore much at stake in their success, giving them a common frame of reference to build solid personal rapport and advance partnership between the two countries. In the 11th BRICS summit, India and other BRICS economies aimed to strengthen cooperation in digital economy, science, technology and innovation. Another key focus of the summit was countering terrorism and build mechanisms for counter-terrorism cooperation within the BRICS framework.

Being the largest economy of the Latin American region, with a GDP in current dollars of USD 1.89 trillion in 2019 (India's GDP USD 3.2 trillion) as estimated by IMF, Brazil is seen as a gateway to business with the port of Santos in São Paulo being the largest port on the continent. India and Brazil share close and multifaceted relationship at bilateral level as well as in plurilateral for a such as BRICS, BASIC (Brazil, South Africa, India, and China Grouping), G-20 (Group of 20 countries), G-4, IBSA (India Brazil and South Africa grouping), International Solar Alliance, Bio-future Platform and in the larger multilateral bodies such as the United Nations, WTO (World Trade Organization), UNESCO (United Nations Educational, Scientific and Cultural Organization), and WIPO (World Intellectual Property

---

*Mukul Asher and Shilpi Chhabra, Research Scholar, University of Delhi. This was first published on 15 January 2020. The link is https://myind.net/Home/viewArticle/the-india-brazil-partnership-and-why-president-bolsonaros-republic-day-visit-is-significant

Association).[1] Brazil played an important role in India- MERCOSUR Preferential Trade Agreement (PTA) in 2004. MERCOSUR, formed in 1991, comprises Argentina, Brazil, Paraguay and Uruguay. It became a customs union in January 1995.

I. Areas of Cooperation and Knowledge Sharing

There are four broad economic areas in which there is potential for cooperation and knowledge sharing between the two countries. This could help expend bilateral economic and security links and help improve comfort levels in the relationship.

II. Agriculture Trade

According to the WTO, in 2017, India's total international trade was USD 1081 Billion (service transactions accounting for 31 percent of the total); while Brazil's total trade was USD 475 Billion (service transactions accounting for 21 percent of the total). Brazil however had a surplus in merchandise trade of USD 60 Billion, while India had a large merchandise trade deficit of USD 149 Billion. In services, India had a surplus of USD 30 Billion, while Brazil had a deficit of USD 32 Billion. The above figures suggest potential for both countries to share in knowledge to improve their trade balances.

The Bilateral trade between India and Brazil is estimated at about USD 8 Billion in 2018-19. The main items of exports from India to Brazil are diesel, organic chemicals and pharmaceutical products, man-made filaments, nuclear reactors, boilers, machinery and mechanical appliances, and textile products (synthetic filaments/fibres, cotton, apparels, and accessories). Main items of Brazilian exports to India were petroleum products, mainly crude oil, cane sugar, copper ore, soya oil and gold.[2] During the BRICS summit, potential areas of trade highlighted by Prime Minister Modi were agricultural equipment, animal husbandry, post-harvest technologies and biofuels.[3]

According to the WTO, agriculture products accounted for 41.5 percent of Brazil's exports, but only 12.8 percent of India's. In 2017, Brazil exported USD 26 billion of Soybeans; USD 5.5 billion worth of Soybean oil; USD 1.4 billion worth of sugar; USD 4.7 billion worth of corn; and USD 6.6 billion worth of meat and poultry. In contrast, India exported USD 5.5 billion of rice; and USD 3.0 billion of meat and poultry. In addition, India also exported horticultural, and fish products.

---

[1] https://mea.gov.in/Portal/ForeignRelation/Brief_dec_2018.pdf accessed on 23 December 2020.
[2] https://mea.gov.in/Portal/ForeignRelation/Brief_dec_2018.pdf accessed on 23 December 2020.
[3] https://www.indiatoday.in/india/story/brazilian-president-jair-bolsonaro-to-be-chief-guest-at-2020.-republic-day-celebrations-1618665-2019-11-14?utm_source=recengine&utm_medium=web&referral=yes&utm_content=footerstrip-4 accessed on 23 December 2020.

India aims to increase its agriculture exports from around USD 38 billion in 2019 to USD 60 Billion in the next few years. Brazil's agriculture powerhouse status in the global markets, primarily due to its sophisticated agricultural technology, including innovative use of local weather forecasting stations, and its high yield per hectare, could be helpful to India in improving its presence in the global agriculture sector. Brazil's experience can also provide ideas on how to progress in India's goal of "more crop per drop of water". India is also keen to welcome investment from Brazil, including in areas of agricultural equipment, animal husbandry, post-harvest technologies, food processing, and biofuels.

III. Rapid Transit Systems

Brazil has globally competitive firms, such as Bombardier, specializing in energy efficient rapid transit systems. Bombardier has a significant presence in India. India is expanding its high-speed train network, with India railways transforming itself into globally competitive organization. There is scope for India and Brazil to cooperate in this area.

IV. Rankings in Global Indexes

India and Brazil could gain by sharing experiences and initiatives to improve their rankings in global indexes, with opportunities in cooperation in selected sub-components of these indexes. There are many common areas of high and of low rankings. Performance of India and Brazil in four such indexes may serve as an illustration.

V. Economic Complexity Index (ECI)

The ECI ranks countries by how complex their economies are, primarily based on variety of good they export. Less complex economies have low variety of exports, with high concentration of exports among countries globally, and low sophistication. These increase as economies become more complex. In 2017, India (45th with a score of 0.32) and Brazil (48th with a score of 0.24) have similar rankings in ECI.[4] Japan topped the ranking among 133 countries with a score of 2.28. The 25th ranked country, Thailand, had a score of 1.15. So, both countries need to take substantive initiatives to narrow the gap with higher ranked countries.

VI. Ease of Doing Business (EODB) Index

India improved its ranking in EODB from 134th in 2014 to 63rd in 2019.[5] New Zealand ranked first among 190 counties, with a score of 86.8, while Spain was ranked 30th with a score of 77.9. In 2019, Brazil ranked 124th, with a score of 54.1, while India's

---

[4]http://atlas.cid.harvard.edu/rankings accessed on 23 December 2020.

[5]https://openknowledge.worldbank.org/bitstream/handle/10986/32436/9781464814402.pdf accessed on 23 December 2020.

score was 71.0. Brazil however had better rank in two sub-components of the index, registering property and enforcing contracts. Besides these two areas, which critically involve the judiciary, India needs to improve substantially on ease of paying taxes, and in starting a business. This suggests possibility of benefitting from mutual exchange of ideas concerning how to improve their rankings.

The reported initiative by the Customs Department to introduce the concept of faceless assessment of cargo across the country, whereby consignments will be assessed by a virtual group irrespective of where the Bill of Entry is filed, could assist India in further improving its ranking in the next round. A Bill of Entry is a document filed by an importer or an exporter specifying the nature, quantity and value of goods that have landed or are being shipped out.

VII. Logistics Performance Index (LPI)

It may also be relevant to state rankings in the LPI (Logistics Performance Index). The aggregate LPI ranking, combining 2012, 2014, 2016, and 2018 rankings, was 42nd for India, with a score of 3.22, and 56th for Brazil, with a score of 3.02.[6] Germany ranked first out of 167 countries, with a score of 4.19, with the 25th ranked country was Ireland with a score of 3.63. For better rankings in LPI, India needs to substantially improve its customs, infrastructure, timeliness, and logistics competence sub-components.

VIII. World Economic Forum (WEF)'s Global Competitiveness Index 4 (GCI4)

The 2019 WEF's GCI 4, covering 141 countries, measures national competitiveness from a perspective of a set of institutions, policies, and factors that contribute to productivity and to long term growth.[7] In the 2019 Survey, India ranked 68th overall with a score of 61.4; and Brazil 71st, with a score of 60.9. The score of the 50th ranked country, Indonesia, was 64.6. In 2019, Brazil improved its rank by one position, and its score by 1.4; but India slipped by 10 ranks, and its score declined by 0.7.

India ranked in top 50 countries in macro-economic stability (43rd), market size (3rd) and innovation capacity (35th). Brazil ranked in top 50 countries in market size (10th), and innovation capacity (40th). India scored particularly poorly in ICT adoption (120th) (this is a bit surprising as many initiatives concerning ICT have been taken by India recently); skills (107th), labour market (103rd); and product market (101st). Brazil scored particularly poorly in macro-economic stability (115th), product market (124th), labour market (105th), institutions (99th), and skills (96th). On infrastructure, India was ranked 70th, and Brazil, 78th.

---

[6] https://lpi.worldbank.org/international/aggregated-ranking accessed on 23 December 2020.
[7] http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf accessed on 23 December 2020.

IX. A Caution

The rankings in global indexes should be viewed only as one of the inputs in formulating policies and specific initiatives for broad-based improvement in governance, organizational capabilities, and productivity enhancement. This is particularly the case for countries with physically large and varied geography and population, as is the case for India and Brazil. Improvements must percolate down to local levels to have the desired impact. The importance of what is not measured, such as focus on outcome orientation, and improving societal norms, also should not be underestimated. The goal should be not just to improve ranking, though it is essential, but to improve the underlying business and regulatory environment over wide areas of country and for small and medium businesses. In this context, improving motivation and performance of lower-level bureaucracy at state and local level is essential; and so is the desire to formalize businesses of small enterprises.

X. Concluding Remarks

The current leaders of India and Brazil have common interests in deepening and broadening bilateral relation as they seek to address challenges arising from the poor record of economic, political, and social management of the previous regimes. There are many complementarities between the two countries, especially in knowledge sharing in agriculture, and in improving rankings in global indexes. A large business delegation is expected to visit India with President Jair Bolsonaro. India hopes that cooperation in newer areas such as space and defence, and renewable energy will also be discussed during the visit.

Granting of visa free travel to Indians by Brazil is a welcome sign, but there is a need to expand the size of Indian diaspora (only ten thousand in a population of 210 million). India in particular needs to better strategize how to encourage Indian diaspora to grow in Brazil, including Portuguese language skills. The analysis in this Chapter suggests that there in considerable potential for deeper and broader cooperation and partnership. This is in turn will enhance the resilience of both the economies.

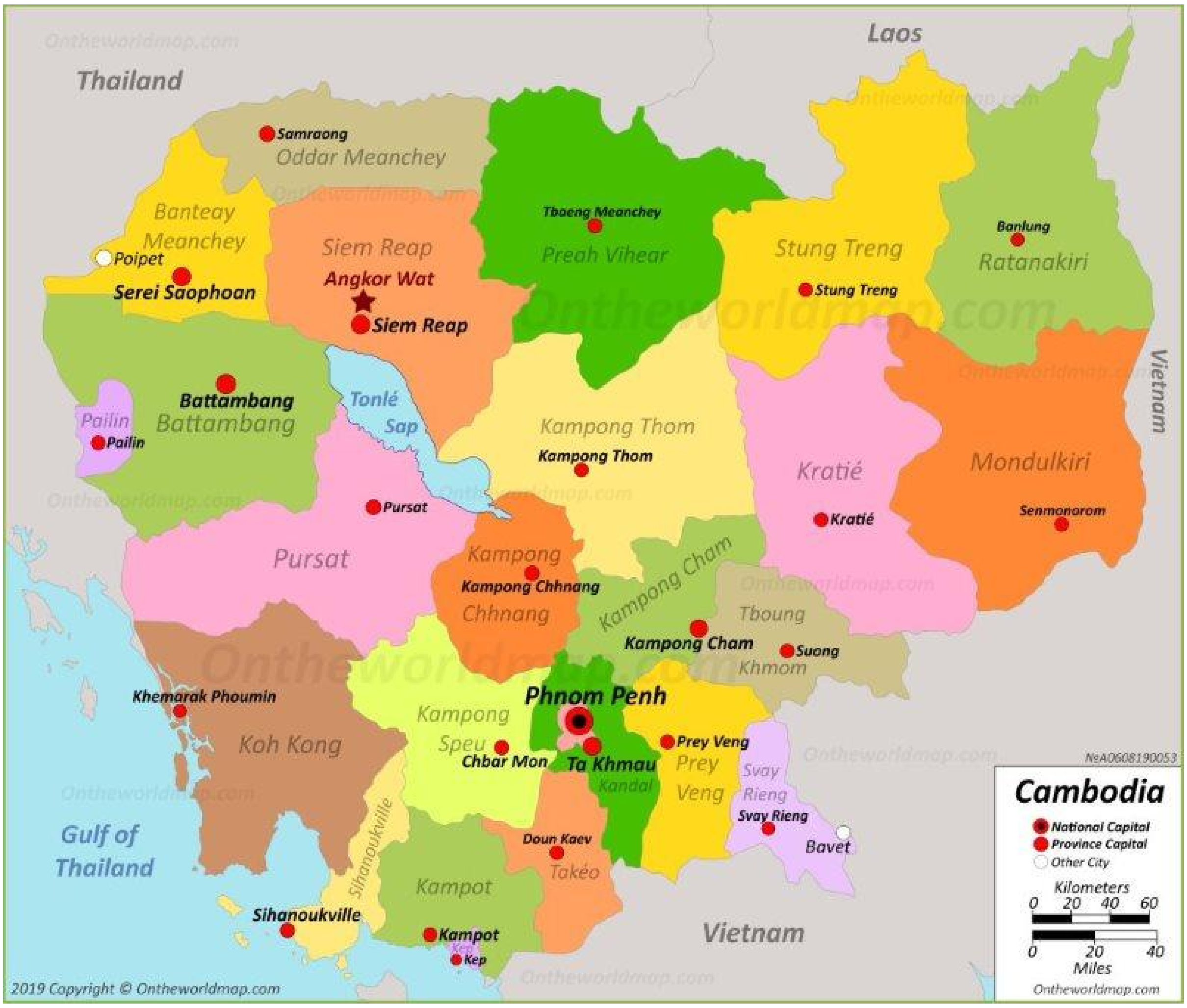
CHAPTER 25

CHALLENGES IN ECONOMIC MANAGEMENT IN CAMBODIA*

I. Theme

Cambodia is a country located in southeast Asia, with a population of 16.25 million in 2018. Its nominal GDP (Gross Domestic product) in 2019 was estimated at USD 28.9 billion, with per capita GDP of USD 1625.

Figure 1 Map of Cambodia



*This was first published on 14 November 2020. The link is https://myind.net/Home/viewArticle/challenges-in-economic-management-in-cambodia

This chapter discusses macro-economic, fiscal, and other challenges which need to be addressed by Cambodia as it manages the Covid-19 Pandemic, global geo-political and geo-economic uncertainties, digital age, and disruptive technologies.

Total reported cases of covid-19 in Cambodia are very low. As of 12 November 2020, it had 301 total cases, or only 18 per million population (global average of 6747) and no deaths.[1] The impact of Covid-19 pandemic on Cambodia arises due to how it has impacted economic activity of its key trading partners.

II. Economic Structure of Cambodia

Cambodia is well integrated into the global economy, with external sector as an important engine of growth. According to the World Trade Organization's Trade profiles for Cambodia for 2018,[2] for the 2015 -17 period, its trade per capita was USD 911, and trade as percentage of GDP was 71.2. Over 90 percent of Cambodia's merchandise exports are labour intensive manufacturing goods, mainly textiles, and shoes, and recently electronics. In services exports, 82 percent is accounted for by travel services. In services imports, transport (about half), and travel (about one-third) are prominent.

Table 1 below suggests that Cambodia has strong economic linkages with countries affected by Covid-19 pandemic.[3]

Table 1

Table ES.1. Cambodia has strong economic linkages with countries affected by COVID-19

Top 5 markets for Cambodia's merchandise exports, tourist arrivals and FDI origins (2019, percent)

Exports		Tourism		FDI inflows	
U.S.	26.8	China	32.6	China	40.0
E.U.	25.0	Vietnam	12.9	Hong Kong, PRC SAR	10.9
Japan	7.7	Lao PDR	6.9	Korea, Rep.	7.8
Canada	6.2	Thailand	6.2	Singapore	7.1
UK	6.1	Korea, Rep.	4.9	Japan	6.2
ROW	38.2	ROW	36.5	ROW	28.0

Sources: U.S. Comtrade; Cambodian authorities; and World Bank staff estimates.
Note: Total merchandise exports = US$25,199.39 million (2019); foreign arrivals = 6.61 million (2019); and FDI inflows = US$2,845 million (2019e). ROW = rest of the world.

---

[1] https://www.worldometers.info/coronavirus/?utm_campaign=homeAdvegas1?%22%20%5Cl%20%22countries accessed on 12 November 2020.

[2] https://www.wto.org/english/res_e/booksp_e/trade_profiles18_e.pdf accessed on 25 October 2020.

[3] The World Bank, May 2020, Cambodia in the time of Covid-19, https://openknowledge.worldbank.org/handle/10986/33826 accessed on 20 October 2020.

Table ES.2. Impacts of the COVID-19 outbreak on Cambodia's main growth drivers and employment

Drivers of growth	Tourism	Garment and footwear	Construction	Total
Contribution to GDP growth (2019, percent)	18.7	17.0	35.7	71.4
Direct employment ('000)	620	941	200	1,761
Percent of paid employment[1]	13.9	21.0	4.5	39.4
Percent of non-farm employment	11.2	17.0	3.6	31.9
Percent of total employment	7.1	10.7	2.3	20.1

Source: Cambodian authorities and World Bank staff estimates.
Note: [1.] Wage employment.

Key observations arising from Table 1 and 2 may be summarized as follows:

First, contribution to GDP growth of Construction Sector at over one-third is high. So are contributions from Tourism, and Garment and Footwear sectors. A visitor on the average stays for seven nights in Cambodia. The above three sectors contribute nearly three fourth of the contribution to GDP growth.

Second, at least 1.76 million jobs are currently at risk due to the COVID-19 outbreak. The collapse of the growth drivers has not only hurt economic growth but has also caused unemployment to potentially soar to nearly 20 percent.[4]

Third, partial withdrawal of trade preferences for Cambodia by the European Union (it accounted for 45 percent of Cambodia's exports in 2018) under EBA (Everything but Arms) scheme poses another challenge. IMF (November 2019) argues that this could **"… have a large negative impact** on exports and growth in the short-run…Suspension would lead to a permanent decline in garment sector output and employment in the long-run".[5]

Fourth, another challenge arises from high concentration of FDI. About two-thirds of FDI is from China and Hong Kong; and over half of FDI is in real estate, and quarter in tourism. This limits future diversification of the economy and growth.

[4]The World Bank, May 2020, Cambodia in the time of Covid-19 ,https://openknowledge.worldbank.org/handle/10986/33826 accessed on 23 October 2020.

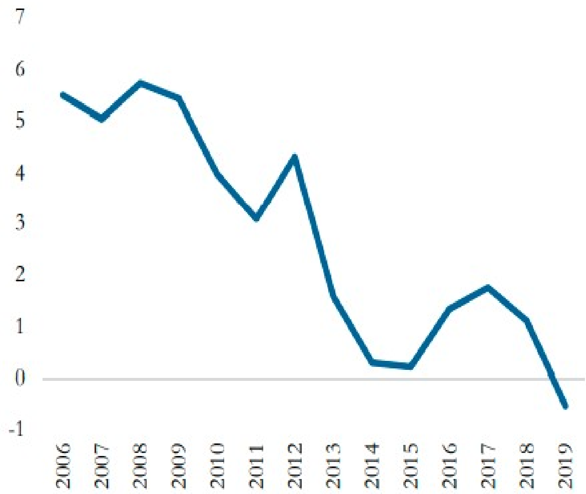
[5] IMF, December 2019, Cambodia. Country Report No. 19/387 https://www.imf.org/en/Publications/CR/Issues/2019/12/23/Cambodia-2019-Article-IV-Consultation-Press-Release-Staff-Report-and-Statement-by-the-48912 accessed on 23 October 2020.

Fifth, about half of Cambodia's debt is owed to China, and a significant proportion to ADB (Asian Development Bank). IMF's Debt Sustainability Framework indicates that Cambodia remains at low risk of debt distress, despite an increase in both debt disbursements and Public-Private Partnerships (PPP) to finance needed infrastructure investment. Short-term risks to public debt stem from the materialization of contingent liabilities, including from PPPs, and export and growth shocks

Contribution to agriculture in Cambodia which employs large proportion of population, is low. Its growth in constant terms has been declining for several years, and turned negative in 2019, before covid-19 pandemic (Figure 2)

Figure 2

Figure 15: Agricultural growth
(at constant 2000 prices, percent)



Source: Cambodian authorities.

This has labour absorption implications. Moreover, agriculture sector is over dependent on rice as a crop.[6]

The COVID-19 outbreak is hitting Cambodia's revenue base. The export and construction sectors are the main sources of direct revenues and indirect (and international trade) revenues, respectively. The least affected agriculture sector is tax-exempt. It is highly likely that revenue collection in 2020 will be significantly below the budget target. The overall fiscal deficit (including grants) is therefore projected to widen to 9.0 percent of GDP in 2020, down from a surplus of 0.5 percent

[6]The World Bank, May 2020, Cambodia in the time of Covid-19, https://openknowledge.worldbank.org/handle/10986/33826 accessed on 23 October 2020.

in 2019; and will remain high at 7.6 percent of GDP in 2021. This makes fiscal sustainability a major challenge.

Cambodia's government consumption declined by 9.1 percent in 2019; but is projected to increase by 6.7 percent in 2020, and projected to decline sharply by 16.7 percent in 2021. This represents high volatility. The policymakers could consider protecting operations and maintenance expenditure on assets, so their quality does not deteriorate.

Gross Fixed Capital formation is projected to decline from 10.7 percent of GDP in 2019 to 4.8 percent in 2020, before sharply increasing to 13.2 percent in 2021, before again decreasing to 7.4 percent in 2022. Fixed capital Formation is therefore also expected to be volatile.

The budget deficit is projected to remain at 17.8 percent of GDP in 2021.[7]

The ADB has argued that:

> "A concern has been that COVID-19 could destabilize the financial industry or rapidly deplete foreign exchange reserves. The annualized current account deficit widened to the equivalent of 22.7% of GDP in the first quarter of 2020, but capital inflow ensured stable reserves."

A current account deficit happens when a country spends more money on what it imports compared to the money it receives for what it exports. That means there is more money leaving the country than there is coming in. The current account of a country is the money it receives and pays for goods and services, investments, and other things such as any money sent abroad. Liquidity risks also remain elevated, as financial institutions rely on funding from abroad, including from parent banks. The concentration of FDI inflows in a few sectors (namely banking, construction and real estate) combined with bank lending primarily to construction and real estate, creates an additional source of risk.

The risks stemming from an overleveraged financial sector are rising. Several financial sector vulnerabilities could exacerbate the COVID-19 shock. These vulnerabilities include high credit concentration, related party lending risks, lack of consolidated cross-border supervision and gaps in implementation of risk-based supervision. The Covid-19 Pandemic is also likely to adversely affect Cambodia's inflow of remittances from abroad. In 2019, according to the World Bank, Cambodia received USD 1.6 billion in Remittances from abroad, equivalent to 5.9 percent of

[7]Asian Development Bank (ADB), September 2020., Asian Development Outlook 2020. Update: Wellness in Worrying Times https://www.adb.org/sites/default/files/publication/635666/ado2020.-update.pdf accessed on 23 October 2020.

GDP. This appears an underestimate as some put the inflow at 2.8 billion USD. How Covid-19 pandemic affects this flow in 2020 and beyond need to be watched.[8]

III. Growth Projections

The growth projections for Cambodia exhibits considerable variation. IMF's World Economic Outlook projects real GDP for 2020 at between negative 1.8 to negative 2.8 percent depending on policy responses. It projects a positive growth of Between 6.8 and 8.0 percent for 2021. Asian Development Bank (ADB) projects negative 4 percent for 2020; and positive 5.9 percent for 2021. Both institutions assess that there is downside risk to growth. Thus, the ADB assesses that for Cambodia:

> "Downside risks to the forecasts include unexpectedly deep or persistent weakness in GTF (garments, travel goods, and footwear) or construction, poor harvests after deficient rainfall in June–July (2020) and further suppression of consumer demand as more households suffer financial distress. Monetary policy is limited by dollarization, as almost 90 percent of transactions within the economy are carried out in USD rather than the domestic currency, Riel".[9]

IV. Priorities to Meet Economic Challenges

Based on the Reports of various multilateral institutions, and the Author's own analysis, the following policy measures are suggested for Cambodia to help address the economic challenges.

First, Cambodia needs to safeguard fiscal sustainability and promote inclusion. Continued strong revenue mobilization efforts and a prudent fiscal stance supported by restraining non-development current spending will enable additional spending to address development needs. Second, government expenditures should be oriented towards supporting inclusive growth through priority infrastructure investment, as well as health and education spending.

Third, fiscal governance should be further strengthened through reforms aimed at improving revenue administration, public financial management and spending efficiency. Managing fiscal risks from contingent liabilities calls for strengthening the PPP (public private Partnership) Framework. Contingent liabilities are fiscal obligations contingent on the occurrence of particular events. But these obligations are not budgeted and accounted for, nor are they considered in conventional fiscal analysis.

---

[8] https://www.knomad.org/sites/default/files/2020.-06/R8_Migration%26Remittances_brief32.pdf accessed on 24 October 2020.

[9] Asian Development Bank (ADB), September 2020., Asian Development Outlook 2020. Update: Wellness in Worrying Times https://www.adb.org/sites/default/files/publication/635666/ado2020.-update.pdf accessed on 23 October 2020.

Fourth, Cambodia needs to address macro-financial risks. Prompt actions are needed to address elevated financial sector vulnerabilities and to improve the external position through moderating credit growth and implementing targeted macro prudential policies. This includes a prompt, broad-based policy response to address risks associated with the real-estate sector. Enhancing regulation and supervision, promptly introducing a comprehensive crisis management framework and improving financial sector oversight, including through closing gaps in the AML/CFT regime, would help build financial resilience.

Fifth, Cambodia needs to better support progress towards the SDGs. (Social Development Goals). Policies should be geared towards addressing sizeable spending needs to reach SDG targets in health, education and infrastructure, with support from the private sector and international donors. Important challenges persist, and additional spending for SDGs is required. The quality and quantity of social services and physical infrastructure should continue to be improved. The estimates indicate that total additional spending for SDGs needs amounts to about 7½ percent of GDP in 2030. Education and health account for about two thirds. Spending needs to reach universal basic and safely managed access to water and sanitation seem manageable. Universal access to electricity and road would require an additional annual spending of about 2½ percent of 2030 GDP but could be larger due to rehabilitation and maintenance costs. This suggests need to create large additional fiscal space, around 10 percent of GDP between 2020 and 2030, or 1 percent of GDP per year, in Cambodia.

Sixth, accelerated implementation of structural reforms is needed to remove structural constraints to growth, correct external imbalances, address governance and corruption weaknesses and promote sustainable and inclusive development. Finally, while steady progress has been made, additional efforts are needed to address data gaps, and improve data quality and transparency. This requires progress in improving the national statistical system.

V. Concluding Remarks

Cambodia has been making steady progress in generating growth and improving socio-economic indicators by integrating with the world economy and by improving its government systems and processes. The country however does face challenges in diversifying its economy and its trading partners, and in coping with the impact of Covid-10 pandemic on its external sector partners.

A better understanding of its social and economic indicators would emerge as its national statistical system is modernized. There are strong indications that the leadership of the country recognizes that continued economic progress is essential for realizing its own goals. This is a strong positive factor as Cambodia charts its policies.

CHAPTER 26
WORLD MIGRATION REPORT 2020: IMPLICATIONS FOR INDIA*

International Organization for Migration (IOM), a United Nations organization based in Geneva, has published its World Migration Report 2020.[1] This Report is being published since the year 2000 and this is the 10th such Report. The Report does note that issues surrounding migration, particularly international migration, have become more prominent in economic, political, and social debates in recent years, and deserve thoughtful and nuanced rigorous research and policy debates This Chapter examines policy and other implications of the Report for India, largely drawing from the material in the first part of the Report.

At the international level, there is no universally accepted definition of "migrant". The IOM definition reflects the common sense understanding of a person who moves away from his or her place of usual residence, whether within a country or across an international border, temporarily or permanently, and for a variety of reasons. The term includes a number of well-defined legal categories of people, such as migrant workers; persons whose particular types of movements are legally-defined, such as smuggled migrants; as well as those whose status or means of movement are not specifically defined under international law, such as international students.[2] This imprecision in definition, along with phenomenon of unrecorded illegal migrants does complicate data collection, and analysis.

The 447-page Report (with rather excessive 110 pages of References), is divided into two parts. The first part concerns data and information on migration and migrants. It comprises 45 percent of the report, excluding Appendices and References. The second part, comprising rest of the Report, discusses complex and emerging migration issues such as, migration and health, migrant's contributions, and migration, inclusion and social protection.

I. Level, Trends, and Composition of Global Migration

On a global basis, the number of international migrants were estimated by the Report to be 272 million (3.5 percent of global population) globally, with two-thirds being labour migrants. In 2000, the total number of international migrants was 150 million, with 2.8 percent of the global population. Thus, migration has continued to grow significantly in recent years. The 2018 figures imply that globally 96.5 percent of the population reside in the country they were born. So domestic policies and internal conditions should be given the commensurate emphasis. 52 percent of

*This was first published on 3 December 2019. The link is https://myind.net/Home/viewArticle/world-migration-report-2020.-implications-for-india

[1] https://publications.iom.int/system/files/pdf/wmr_2020..pdfaccessed on 1 December 2019.

[2] https://www.iom.int/who-is-a-migrant accessed on 1 December 2019.

international migrants were male; 48 per cent were female. 74 percent of all international migrants were of working age (20–64 years).

The Report finds that India continues to have the largest number of migrants living abroad (17.5 million), followed by Mexico and China (11.8 million and 10.7 million respectively). Globally, the top destination country remains the United States (50.7 million international migrants). The Report notes that “the largest (migration) corridors tend to be from developing countries to larger economies such as those of the United States, France, the Russian Federation, the United Arab Emirates and Saudi Arabia”. India has good presence of migrants in all these corridors.

The Report foresees the above corridors to continue to be crucial for migrants, at least in the medium term. However, between 2013 and 2017, high-income countries experienced a slight drop in migrant workers (from 112.3 million to 111.2 million); and Upper middle-income countries observed the biggest increase (from 17.5 million to 30.5 million). The growth is therefore in upper-middle income countries, a group of countries where the sending countries will need to focus their policies and specific initiatives. India is ranked by the Report as the 13th largest recipient of migrants in the world. India thus plays a significant role both as a sender and as recipient of migrants.

Another finding of the Report that the number of stateless persons globally in 2018 was 3.9 million, with Bangladesh having the largest number of stateless persons (around 906,000), and Myanmar, 620,000, both India’s immediate neighbours, has economic, political, and social implications for India. There are also citizens of other neighbouring states who are widely believed to be staying in India illegally. Consistent with global practices, India is trying to establish NRC (National Register of Citizens) to bring clarity to the definition and count of citizens of India.

II. Inward Gross Remittances

The Report defines remittances as financial or in-kind transfers made by migrants directly to families or communities in their countries of origin. The Report estimates that gross global remittances were USD 689 Billion in 2018, of which India received USD 79 Billion (11.5 percent of the total). This is much lower than India’s share of 17.7 percent in global population as of November 2019.[3] India had ranked third (with USD 22 Billion) in remittances in 2005. But since 2010, it has retained the first rank. Reaching share of global remittances equivalent to share in global population could be a benchmark against which India’s performance could be measured.

In 2018, the United States remained the top remittance-sending country (USD 68.0 billion), followed by the United Arab Emirates (USD 44.4 billion), and Saudi

[3] https://www.worldometers.info/world-population/india-population/ accessed on 1 December 2019.

Arabia (USD 36.1 billion). India has strong presence in these three countries. India however appears to have weak presence in South Korea (USD 13 billion in remittances); and in Russian Federation (USD 21 billion).

In addition to increasing its migrant stock, India needs to find ways to improve skill levels, and incomes of its migrants in these countries, as well as to roll over migrants from different states to particularly the countries in the Gulf region. This will enable greater diversity in sharing of receipts of migrants from different parts of the country. The aim of India's and the State-level specific initiatives should be to increase representation of migrants from Bihar, UP, and the Eastern part, particularly the Northeast, in the Gulf and other regions. States such as Kerala should aim to impart skills which enable their cross-national workers to obtain higher paying livelihoods.

In designing and implementing these initiatives, transaction costs of recruitment of migrants, and the integrity of the processes need to be given deserved priority. It would be desirable if a revolving pool of migrants, where old migrants bring new skills, resources, and work attitudes back to their regions, even as new migrants make progress in these areas, is evolved.

Against the target of 3 percent of the Sustainable Development Goal 10c.1, as cost of sending remittances, the World Bank estimates global cost of sending USD 200 in remittances at 6.9 percent in the first quarter of 2019, while the corresponding cost for sending to the South Asia Region was the lowest at 5 percent.[4] This is another area where India, as the largest recipient, has particular interest in tapping financial technologies to find ways to lower remittance costs for itself and in finding new service export niches. Researchers, in particular, need to focus on this aspect.

The IOM's data are consistent with the World Bank's data on remittances. The World Bank has estimated that in 2019, in current USD, the top five remittance recipient countries are projected to be India (82.2 billion), China (70.3 billion), Mexico (38.7 billion), the Philippines (35.1 billion), and the Arab Republic of Egypt (26.4 billion).[5] The gross remittance data of the IOM have three limitations from India's perspective, limitations which it needs to address by its own efforts.

First, gross inward remittances should be netted out from gross outward remittances from India. Second, gross inward remittances are likely to be higher if un-recorded remittances are included. These are difficult to estimate, but research efforts should nevertheless be made to estimate them, just as unrecorded income and assets are researched. Third, the gross remittances would be lower if Indian migrants

---

[4]https://www.knomad.org/sites/default/files/2019-04/Migrationanddevelopmentbrief31.pdf accessed on 1 December 2019.

[5] https://migrationdataportal.org/themes/remittances) .accessed on 1 December 2019.

sell their existing financial and physical assets (such as real estate) in India, and remit the money abroad. These transactions appear not to be tracked.

India's foreign exchange reserves however were at a comfortable level of USD 449 Billion as on November 22, 2019, exhibiting an upward trend.[6] So, this is not an immediate policy issue in terms of flows. Nevertheless, it is important to have Indian diaspora engaged with India in terms investing in not just financial, but also physical assets, and in business start-ups, and in bringing to bear their knowledge and skills to help develop India.

III. Concluding Remarks

The most important policy implication from this Report is that India must give high priority in its economic diplomacy to diversifying the location, occupations, and avenues, particularly for students, skilled workers, and business people. Indeed. Management of Indian migrant stock and flow in their respective regions and countries should be among the criteria for assessing India's diplomatic missions. The State-level initiatives are also needed, in conjunction with those of the Union Government in the spirit of Co-operative Federalism.

[6] https://m.rbi.org.in/Scripts/WSSViewDetail.aspx?TYPE=Section&PARAM1=2 accessed on December 1, 2019.

CHAPTER 27
AN ANALYSIS OF DEMOGRAPHIC DYNAMICS OF INDIA AND INDONESIA*

I. Introduction

This Chapter analyses demographic dynamics of India and Indonesia, two Indo-Pacific countries with large populations (about one-fifth of the global total) and diverse geography, with significant socio-economic variation among its regions. The population projections are primarily based on the United Nations, 2019 Population Revision, and use medium fertility trend assumptions. If lower or higher fertility assumptions are used, and if confidence intervals are taken into account, projected figures will differ significantly. This is illustrated for total global population in Figure 1. For select indicators, other sources, are also used.

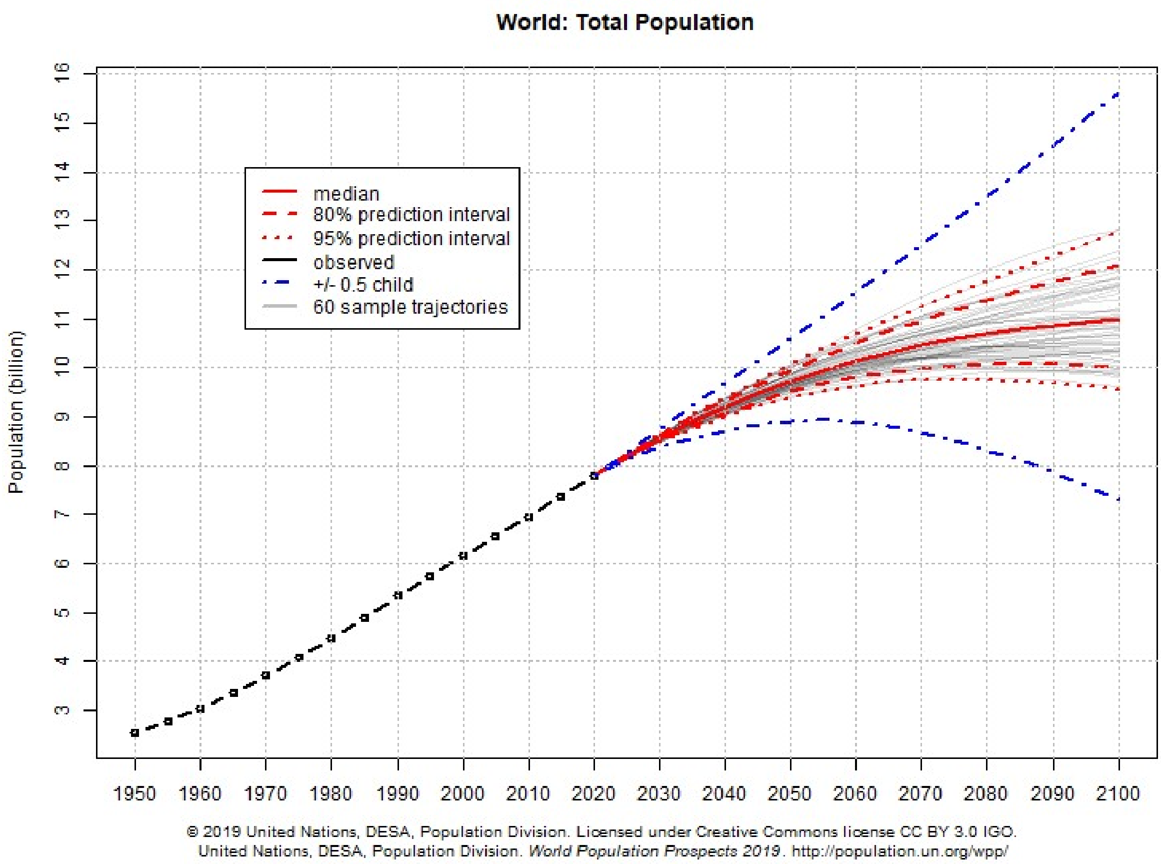


Figure 1 Variations in Global population Based on Fertility Rate Assumptions, and Confidence Intervals

*This was first published on 19 January 2021. The link is: https://myind.net/Home/viewArticle/an-analysis-of-demographic-dynamics-of-india-and-indonesia

The policy implication is that these projections should not be accepted without subjecting to rigorous country and regional level projections, for which robust capabilities must be built. Many economic, social, and other policies require such projections, and their quality has important bearing on the design of pension and health initiatives, and on the extent to which policy objectives can be realized.

II. Select Demographic Projections

On the basis of select demographic indicators provided in Table 1, the following observations may be made. While total population in both countries is projected to grow in absolute numbers, their share in global population is expected to decrease slightly from 21.2 percent in 2020 to 20.2 percent in 2050. This implies lower population growth rate in these two countries than for the world as a whole.

India and Indonesia are projected to exhibit moderately rapid ageing as compared to the world. Thus, share of population over 65 years of age, is projected to increase from 12.5 of the global totals of this age group in 2020 to 14.6 percent in 2050, while corresponding proportions for Indonesia are 2.4 percent and 3.4 percent respectively. Similar trends are observed for population above 80 years of age. In terms of their own share of population, the rise in elderly population is even more pronounced. In India, the share of population over 65 years of age is projected to increase from 6.6 percent in 2020 to 13.8 percent in 2050, but the share will continue to remain below the world average. This will also be the case for share of population above 80 years of age. Indonesia is projected to age more rapidly than India. In spite of having lower share of population over 65 years in 2020, its share will be much higher in 2040 and 2050.

Table 1

India and Indonesia: Select Demographic Indicators[1]

Indicator	Year	World	India	Indonesia
Population (million)	2020	7794.8(100.0)	1380.0(17.7)	273.5(3.5)
	2040	9198.8(100.0)	1592.7(17.3)	318.6(3.5)
	2050	9735.0(100.0)	1639.2(16.8)	330.9(3.4)
Population >65 (million)	2020	727.6 (100.0)	90.7 (12.5)	17.19(2.4)
	2040	1300.5(100.0)	171.5(13.2)	40.3(3.1)
	2050	1548.9(100.0)	225.4(14.6)	52.5(3.4)
Population >80 (million)	2020	145.5 (100.0)	13.3(9.1)	2.4(1.6)
	2040	305.1(100.0)	30.7(10.1)	6.5(2.1)
	2050	426.4(100.0)	43.0((10.1)	10.8(2.5)

[1] Estimated from the 2019 Revision of World Population Prospects, Medium Variant Projections, https://population.un.org/wpp/ accessed on 7 January 2021.

Population >65 (% of total population)	2020	9.3	6.6	6.3
	2040	14.1	10.8	12.6
	2050	15.9	13.8	15.9
Population >80 (% of total population)	2020	1.9	1.0	0.9
	2040	3.3	1.9	2.0
	2050	4.4	2.6	3.3
Gender Ratio (males per 100 females)	2020	101.7	108.2	101.4
	2040	101.1	107.0	100.4
	2050	100.9	106.0	99.9
Total Fertility Rate	2020-2025	2.42	2.14	2.22
	2040-2045	2.24	1.86	1.95
	2050-2055	2.18	1.79	1.88

It is not just the share, but the absolute number of aged in India and Indonesia that would pose challenges in devising social protection policies, particularly reasonable health care services with access and affordability. Both countries are taking commendable initiatives to address the health care challenges. The Wuhan, China (covid-19) pandemic has given added impetus to their health care initiatives. As of 9 January 2021, Indonesia recorded 2976 cases, and 87 deaths per million population, with 120,928 active cases. The corresponding figures for India were 7521, 109, and 225,040; and for the world were 11474, 246.8. and 23.4 million.[2]

In 2020, India had 90 million and Indonesia 17 million persons aged over 65, but by 2050, these numbers are projected to be 225 million and 53 million respectively. This implies rapidly increasing absolute number of aged persons. The policymakers need to address both the absolute level and the pace of ageing. In gender ratio, number of males born over females, Indonesia exhibits more balanced ratio than India. India's ratio, while improving, is projected to continue to exceed the global ratio significantly even by 2050. This is an area where Indian societal norms and behaviour needs change, and promotion to reduce gender discrimination is needed.

India's Total Fertility Rate (TFR), the number of children a woman would have in the course of her life if the fertility rates observed at each age in the year in question remained unchanged, for the 2020-25 period is lower (2.14) as compared to Indonesia (2.22). But the TFR of both countries is lower than the world average

[2]https://www.worldometers.info/coronavirus/accessed on 9 January 2021.

(2.42). These trends in TFR are projected to continue for the 2040-50, and the 2050-55 period. By 2015-20, India exhibited near replacement level fertility, which is 2.15. As its TFR is projected to decline further, India will need to address how to adjust to the below replacement level fertility, and have policies appropriate for multispeed TFR among its states.

In India, the first phase of the fifth round of the National Family Health Survey (NFHS-5) was conducted in 2019-20 and its findings were released in December 2020. The fourth round of NFHS was conducted five years ago in 2015-16. In the first phase of the fifth round, the findings for 22 states and union territories (17 states and 5 union territories) have been presented. A total of 281,429 households, were surveyed across 17 states. On the basis of TFR data in select states and Union Territories, the following observations may be made.

First, except for Bihar, Meghalaya and Manipur, all the other sample states have TFR lower than the replacement rate. In the three states exhibiting above replacement level fertility rate, there has been decline in TFR. Second, only state exhibiting high TFR is Kerala, from 1.6 to 1.8. This requires more searching examination, particularly the hypothesis that changing ethnic composition has led to increase. Third, declining TFR implies changing patterns of cross-state workers; and greater pressure to improve productivity of land, labour, and capital if the living standards are to further improve and meet aspirations of people.

Table 2: Change in TFR in Select States and Union Territories in India Between 2015-16 and 2019-20[3]

States	NHFS 2015-16	NHFS 2019-20
Andhra Pradesh	1.8	1.7
Assam	2.2	1.9
Bihar	3.4	3
Goa	1.7	1.3
Gujarat	2	1.9
Himachal Pradesh	1.9	1.7
Jammu & Kashmir	2	1.4
Karnataka	1.8	1.7
Kerala	1.6	1.8
Maharashtra	1.9	1.7
Meghalaya	3	2.9
Manipur	2.6	2.2
Mizoram	2.3	1.9
Nagaland	2.7	1.7
Sikkim	1.2	1.1
Telangana	1.8	1.8
Tripura	1.7	1.7
West Bengal	1.8	1.6

[3]Arihant Pawariya https://swarajyamag.com/ideas/national-family-health-survey-2019-20-the-latest-data-on-total-fertility-rate-shows-why-we-dont-need-a-population-control-law accessed on 20 December 2020.

In 2020, life expectancy at birth for both sexes combined was higher for Indonesia (71.91 years) than India (69.89 years). But there was only a narrow difference between them for life expectancy at age 60, 18.28 for Indonesia, 18.02 for India. The difference in life expectancy at birth between men and women was 2.52 years for India, but was substantially higher at 4.42 years for Indonesia. This suggests that India needs to make further improvement in nurturing the girl-child.[4]

III. Concluding Observations

India and Indonesia, two highly populated and geographically large and diverse Indo-Pacific countries, are projected to exhibit moderately rapid ageing populations, with fertility rates persistently at or below replacement level. The resulting demographic dynamics requires more professional, data-driven and system-oriented management of the resultant challenges, including in constructing their own-context specific social protection policies at not just the national level, but also at the state or provincial levels.

[4]https://knoema.com/atlas/India/topics/Demographics/Age/Life-expectancy-at-age-60-years#:~:text=In%2020.20%2C%20life%20expectancy%20at,decreased%20to%202.22%25%20in%2020.20.accessed on 7 January 2021.
https://knoema.com/atlas/Indonesia/topics/Demographics/Fertility/Fertility-rate accessed on 7 January 2021.

CHAPTER 28

NEW GLOBAL INDEX SUGGESTED BY PM NARENDRA MODI OF INDIA*

During the 15th G20 Summit in Riyadh, Saudi Arabia, held on November 21-22, 2020, Prime Minister Narendra Modi made a suggestion for a new global index. He also offered India's Information Technology (IT) prowess to further develop digital facilities for more efficient functioning of the G20. Currently, country hosting the summit during the year acts as a secretariat for the year. Therefore, there is no permanent secretariat and no continuity of functioning between summits. In 2021, Italy is to host the G20 Summit, Indonesia in 2022 followed by India in 2023. Further development of the digital facilities could help make current arrangements more efficient. These facilities could in due course lay foundations for a permanent virtual digital technology-based secretariat

I. Suggested Global Index

The current measurement concepts and tools, whether GDP (Gross Domestic Product) or HDI (Human Development index), while useful to policymakers, have serious limitations, particularly with the rise of the digital economy and the post COVID-19 challenges facing the global economy. There are a host of specialized indexes, such as Ease of Doing Business, Logistics Index and many others. But these do not capture in a consistent way the global challenges of the future. The proposed Global Index can supplement the current measures and indexes.

The Index suggested by PM Modi comprises four key elements – creation of a vast talent pool; ensuring that technology reaches all segments of the society; transparency in systems of governance; and dealing with mother earth with a spirit of trusteeship.

- **Creation of Vast Talent pool**: The Prime Minister underscored that in the past few decades, while there has been an emphasis on capital and finance, the time has come to focus on multi-skilling and re-skilling to create a vast human talent pool. This would not only enhance dignity of citizens but would make citizens more resilient to face crises. "Work from Anywhere" has become increasingly acceptable, and new arrangements and measures are being developed.
- **Technology Meeting Societal Needs:** He indicated that any assessment of new technology should be based on its impact on ease of living and quality of life. The control over technology and technology firms has been a very difficult challenge

*This was first published on 24 November 2020. The link is: https://www.myind.net/Home/viewArticle/pm-modis-suggestion-for-a-new-global-index-at-15th-g20-summit-deserves-serious-consideration for policymakers globally, as rise of large digital-based firms such as Google, Facebook, Twitter, Instagram and others suggests.

- **Greater Transparency in Governance Systems:** The Prime Minister argued that greater transparency in governance systems, both domestically and in international organizations, could motivate and inspire citizens to deal with shared challenges and enhance their confidence. This is critical as trust in institutions, whether political parties, media, judiciary, judiciary, legislative branch, universities, and others across a wide range of countries has been eroded, and need to be restored.

- **Dealing with Mother Earth with a Spirit of Trusteeship:** Prime Minister Modi stressed on the principle of sustainability while dealing with the environment and nature. He emphasized the sustainable use of resources for a holistic and healthy lifestyle which could be measured by the per capita carbon footprint. The Prime Minister stated India's initiatives in this regard. India has taken several measures such as elimination of single-use plastics, expansion of forest cover, and restoring 26 million hectares of degraded land by 2030. He announced that India will meet the goal of 175 giga watts of renewable energy well before the target date of 2022. India has set itself an ambitious target of generating 450 giga watts of renewable energy by 2030. India, he said, would not only meet its Paris Accord targets but exceed them. He stressed that India is committed to relying on non-fossil fuels for 40% of its electricity needs by 2030. Among other actions, the Prime Minister cited making LED lights popular which is saving 38 million tons of carbon dioxide emissions per year and smoke-free kitchens being provided to 80 million households.

Climate Transparency, an international partnership of 14 research and non-governmental organizations, examined efforts to combat climate change among the G20 nations. The Report found that India's "fair Share" climate targets under the 2015 Paris Agreement, as well as the actions it has taken in the recent years since the Paris Accord, make it "compatible with the upper goal of curbing global warming by 2 degrees Celsius by the end of the century.

India has promised to reduce its emissions intensity by 33-35% by 2030 and has taken actions in its energy, waste, industry, transport and forestry sectors, the report said. However, the report noted that India continues to not be on track to reach the Paris Agreement's long-term 1.5 C target. India could be a "global leader" if it didn't build new coal fired power plants and phased out the use of coal by 2040.

PM Narendra Modi also noted that the International Solar Alliance (ISA), jointly founded by India and France in November 2015, based in Gurugram, India, is among the fastest growing international organizations, with 88 signatories. The ISA could contribute to reducing carbon foot-print as it plans to mobilize billions of dollars, train thousands of stake-holders, and promote research and development in renewable energy. (see chapter 6 in this e-book).

II. Challenges

The first task is to obtain the approval of the G20 group to in-principle include the work on developing the Global Index in its work plan. Constructing a Global Index, incorporating the above four factors, will be a very challenging task. It will require expertise in diverse fields, and longer-term focus and commitment of resources. KPIs (Key Performance indicators) for each of the four areas and their subcomponents (to be identified) will need to be developed. Reliable data sources will need to be identified; and large data analytics exercises conducted.

Constructing the initial version of the Global Index will be the beginning. The index will need to be refined as comments are gathered, and as new global developments emerge in technology, climate, labour markets, and governance practices. Selecting which countries to include in the Index will require diplomatic skills. The Global Index will need to be regularly updated, and disseminated and communicated. All these are essential but complex tasks in the current and prospective global environment.

The above suggests that construction of Global Index will take time, even if in-principal approval is obtained. India could perhaps target completion of the preliminary version of the Index when it Chairs the G20 Summit in 2023.

III. Concluding Remarks

The proposal by Prime Minister Modi at the 15th G20 Summit in Riyadh to develop a Global index comprising creation of a vast talent pool; ensuring that technology reaches all segments of the society; transparency in systems of governance; and dealing with mother earth with a spirit of trusteeship; has much to commend it. But operationalizing the index, sustaining it, and disseminating and communicating it to better understand and impact global policies will be a challenging task. It is strongly urged that Indian think-tanks take a lead, in cooperation with think tanks of receptive G20 countries, in exploring webinars and other methods to explore how the idea of the proposed Global Index can be taken forward.

Delhi School of Public Policy and Governance
Institution of Eminence
University of Delhi
Delhi-110007