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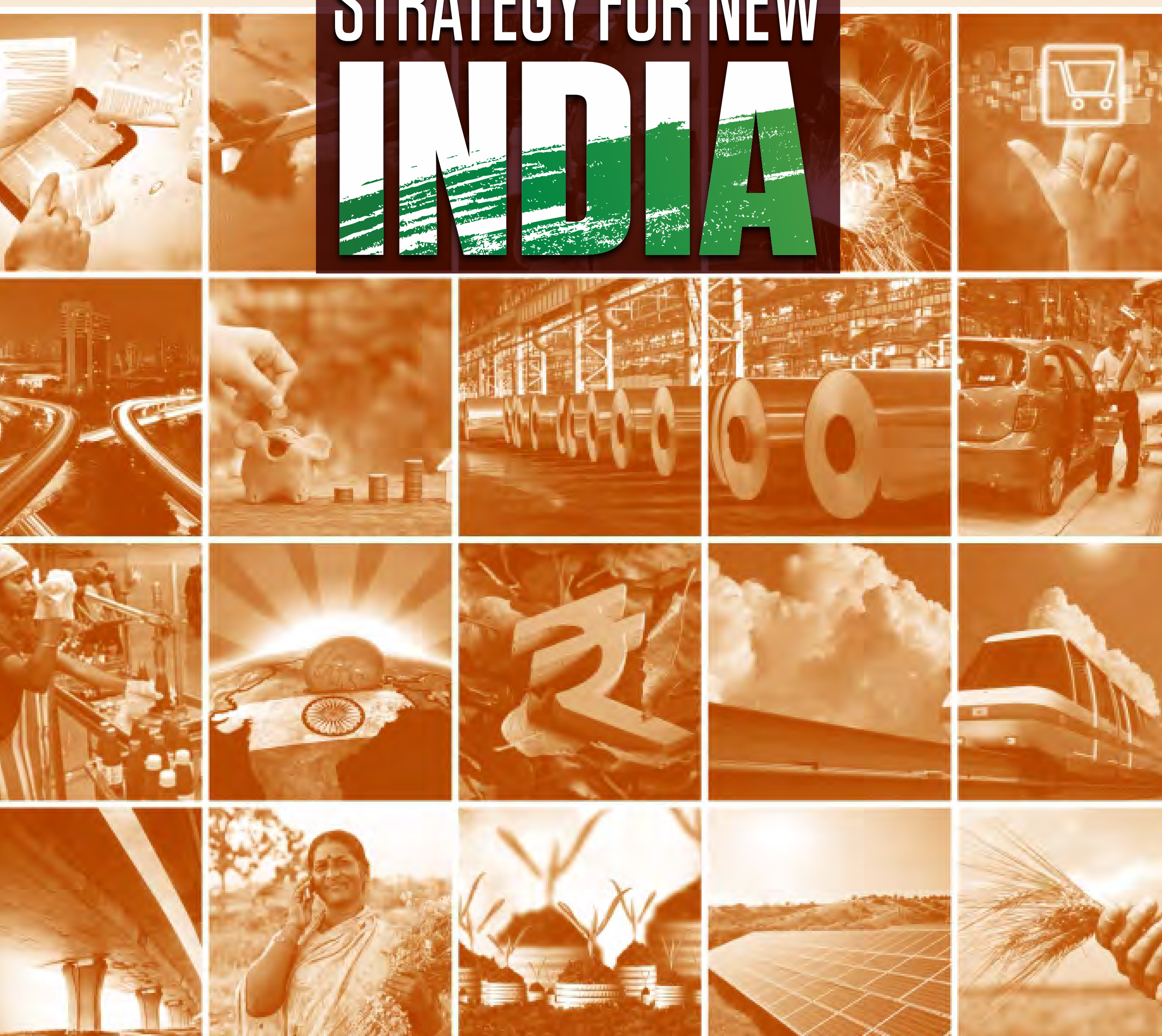
Azadi Ka Amrit Mahotsav

FICCI

INDIA BEYOND 75
STRATEGY FOR NEW INDIA



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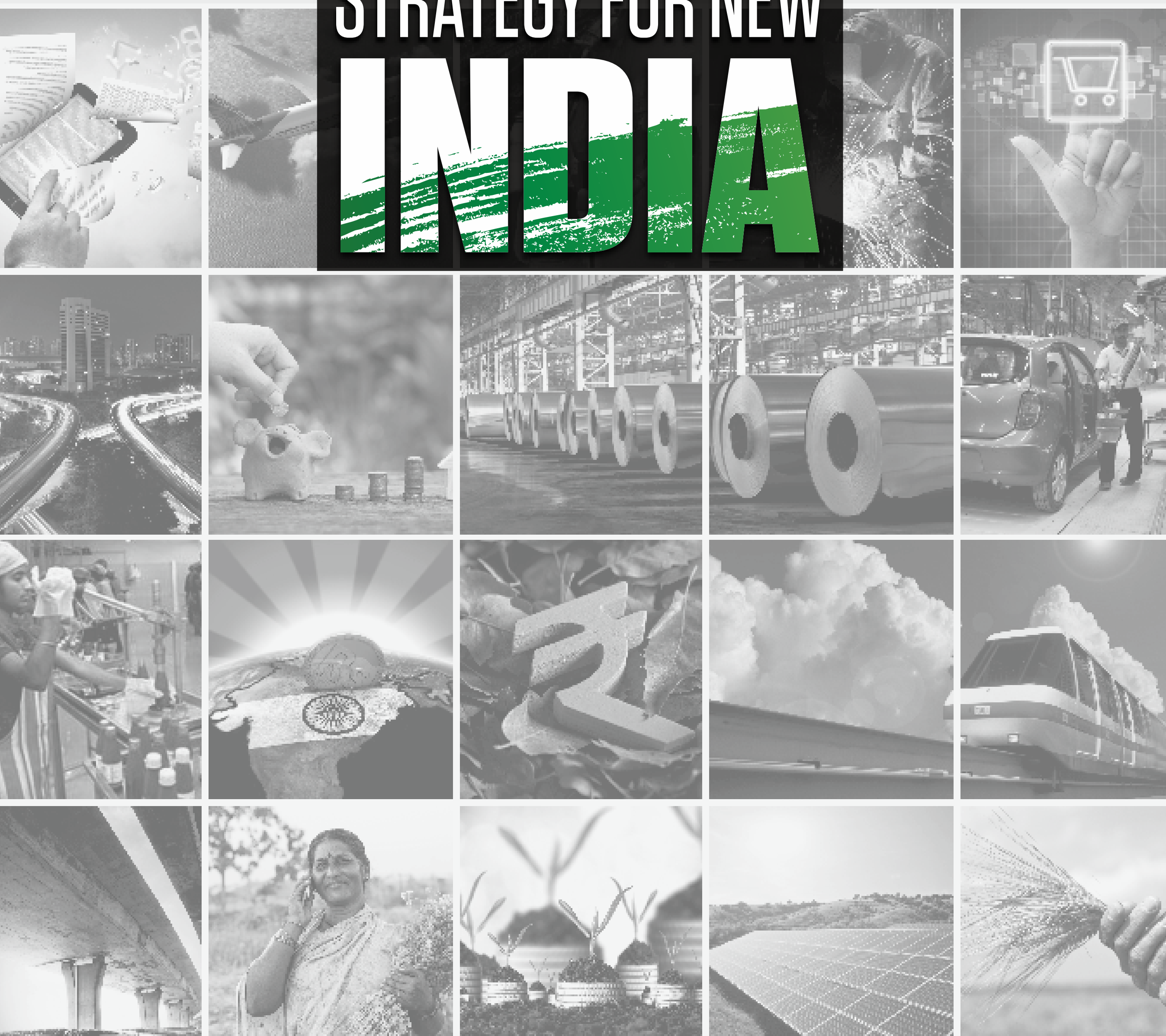

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FOREWORD

A seventy-five years young India is making strong strides on the global map. Counted amongst the fastest-growing major economy in the world, India is all set to be amongst the top three economic powers much before she hits the centenary.

The unwavering policy support helped the country sail through even the worst of times seen during the last two years. The momentum in vaccination drive combined with focus on reforms have aided economic recovery. The economy is quickly bouncing back to pre-Covid levels. I believe the time is apt to power up the engine and accelerate the pace of economic growth in the coming years.

India's long term economic potential is indisputable. The demography, location, resources, and talent offer a significant advantage to India vis-a-vis its peer economies. These need to be leveraged effectively through appropriate policy planning, design and strategy. This joint publication by FICCI and India office of KAS has brought forward the best minds to lay out a Strategy for New India beyond 75.

Through the voice of eminent thought leaders, industry stalwarts and global economists, this publication highlights the transformation that India is going through and assimilates some brilliant ideas for India's progression. I would like to personally thank all the contributors who have laid out a strategy for taking India to new heights of development and prosperity in the coming decades.

We will have to continue building on our competitiveness, taking advantage of our inherent strengths and aggressively pursuing the reform agenda. The adversity put forth by the pandemic has also opened bountiful opportunities. Let us leverage these optimally and strengthen our foothold on the global economic map.

I am hopeful that the suggestions laid out in this publication will serve as a policy reference in accomplishing our dreams of a five trillion-dollar economy and an AtmaNirbhar Bharat.

Uday Shankar

President, FICCI

FOREWORD

We've come a long way since the coronavirus pandemic upended nearly every aspect of life worldwide. After a year of stop-start lockdowns, depressed wages, disrupted supply chains and vastly diminished economic activity, we may now be turning a corner on the fight against coronavirus. Accelerating vaccine rollouts and extensive government support have provided a beacon of hope the world over.

We enter 2022 with hope and optimism but also with an awareness that the battle against Covid-19 may not be over yet with the newly mutated Omicron in stark focus. We do not know what other surprises this virus has in store for us but what we do know is that we will return to economic growth while also being prepared for the new experiences that lie ahead.

As we now tentatively look to a post-pandemic future, governments around the world will need to shift their thought processes from 'survival mode' to focusing on future economic growth. The policy choices governments make today will determine their success in building a transition to a greener, more inclusive and more resilient tomorrow. It is an opportunity to chart a path that empowers everyone to face the future with confidence.

When India turns 75 on August 15, 2022, it will mark a moment when we step out from the old to the new. It will be the era of a New India; an era where India will have to prioritise economic expansion and sustainability for sustained growth and influence on the world stage. It requires a paradigm shift in the thought process, methods, and tools of the policymakers.

FICCI and KAS are proud to present some thought-provoking essays on the future of India's economy in this post-pandemic world. In this compendium, the focus is on ideas needed to make India fit for the future and suited for this emerging new environment of sustainability. From economic growth to international trade to glocal production to innovation and entrepreneurship, this publication offers an array of solutions to India to scale new heights of prosperity in the coming years.

While these essays are only a first pitch, it is for the readers to take the debate further, on the one hand and for the policymakers on the other, to implement them. This compendium marks yet another important milestone in the long history of FICCI-KAS cooperation, which has been a source of great pride for us.

Peter Rimmele
Resident Representative to India, Konrad-Adenauer-Stiftung

India in the Global Economy: Prospects and Challenges

1

- By Heribert Dieter

Introduction

The global economy is currently reshaped by three quite unprecedented developments. The first and probably most important one is the geopolitical conflict between China and the United States. There is no indication that this clash will end any time soon. The second development is the re-organization of supply chains, which is partly due to the Covid-19 crisis, but more so because of structural trends, namely the rapidly declining competitiveness of Chinese manufacturers. The third trend is the unexpected turn the Chinese government has taken with regard to the country's trade policy. China is discontinuing Deng Xiaoping's preference for an open economy and is returning to an inward-looking economic policy.

Together, these developments will result in a new international division of labour. China, which has been the world's factory for four decades, has both become too expensive and is no longer emphasizing trade as an instrument to foster economic development. Like in Imperial China, the current government under Secretary General Xi Jinping wants the country to look inward. Self-sufficiency and partial autarky are supposed to serve as instruments to secure the continued reign of the Chinese Communist Party. The rest of the world is portrayed as a risk for the implementation of Xi Jinping's "Chinese Dream".

But that development does not alter the logic of globalization. Other economies, first and foremost India, will probably seize the opportunity. The logic of an international division of labour, which has raised the standard of living of hundreds of millions of people, continues to work even if important economies are re-discovering yesterday's autarkic thought.

The new international division of labour

Of course, there are quite profane issues that have triggered China's new inward-looking approach. The first is the high level of wages that contribute to declining competitiveness of manufacturing in China. Since 2000, wages in industry have risen, depending on the mode of calculation, up to nine fold. Whilst this is beneficial for workers, it has reduced the attractiveness of manufacturing in China. Wages will not drop any time soon: The dilemma is a significantly declining labour force. In 2011, the labour force in China peaked at 940.5 million people, but by 2015, the labour force had already dropped by nearly 30 million to 911 million people. The Chinese Ministry of Human Capital and Social Affairs forecasts a further decline in the labour force to 830 million in 2030 and 700 million in

2050, with the labour force falling by 7.6 million each year from 2030 onward. By contrast, the U.S. will still increase its labour force potential from 157 million (2015) to 186 million over the same period.[1]

> *Production in China is no longer nearly as attractive as it was a few years ago*

The response in China is an intensified use of robots in manufacturing: Their number has risen from 50,000 in 2010 to 800,000 in 2020.[2] The consequence of rising wages and a declining workforce is that production in China is no longer nearly as attractive as it was a few years ago and it is no longer necessary to produce there. To put it bluntly: Robot-based production can also take place elsewhere. These processes are likely to lead to both a renaissance of industrial production in Europe and a shift from China to other Asian economies, such as India or Vietnam.[3] In China, high productivity could solve the problem, but surprisingly, it continues to be low. According to the World Bank, productivity in the manufacturing industry has developed only very weakly. Since 2008, it has risen by just 1.1 percent per year.[4]

Of course, these developments matter a lot for the prospects of Indian manufacturing. For many decades to come, labour supply in India will be high. India's population is young: Looking at age cohorts, in 2020, about 350 million people each are in the age groups 0 to 14, 15 to 29 and 30 to 49.[5] But even with rising wages and a large number of young people that enter the workforce, the unemployment rate is forecast to decline from over 10 percent to about 6 percent in 2026.[6]

That optimistic outlook is of course based on the assumption that India will further expand its manufacturing sector. An indispensable ingredient for that is the improvement of India's infrastructure. In recent years, the Indian government has invested a great amount in improving country's roads, rail and ports. For foreign investors, the completion of the dedicated freight corridor (DFC) - linking significant inland industrialized zones with the Jawaharlal Nehru Port in Maharashtra - in late 2022 or early 2023 will result in a significant improvement of conditions for investment. The DFC will be particularly important for small- and medium-sized companies, which will be able to significantly reduce trade costs due to lower transportation costs. Whilst India has been linked to many markets for electronic services with submarine cables for decades, the DFC will provide a comparable infrastructure for trade in manufactured goods. But more trade increases the importance of trade regulation, and there, the prospects are dim.

Trade policy: The key to global markets

The existing institutions for the regulation of international trade, namely the World Trade Organization, are in inevitable decline. The main reason for that sober assessment is the geopolitical

1 *Daniel C. Lynch, "Is China's Rise Now Stalling?", in: The Pacific Review, 32 (2019) 3 , pp. 446-474 (453).*

2 *China's growth prospects: Automatic for the people. The Economist, 14 August 2021, p. 27.*

3 *Simon Book, Simon Hage, Claus Hecking, Globale Rückholaktion, Der Spiegel, 24 July 2021, pp. 64-67.*

4 *China's growth prospects: Automatic for the people. The Economist, 14 August 2021, p. 27.*

5 *Economist Intelligence Unit, Country Report India, 2nd November 2021, p. 3.*

6 *Ibd.*

conflict between China and the USA. Whilst Washington had been willing to expect a gradual reduction of the influence of the Chinese Communist Party in China's economy, the opposite has been happening. Against this background, American policymakers are not going to support a renaissance of the WTO because they assume that Beijing has not been adhering to both the letter and the spirit of the multilateral trade regime and will continue to do so in the future. For India as well as most member countries of the WTO, this raises the question of potential alternatives. Whilst Beijing is embracing a policy of self-reliance, many other economies continue to value the benefits of cross-border division of labour. But what ought to be the forum for regulating international trade?

For India, joining CPTPP would constitute a bold move, but it is not inconceivable.

One option would be plurilateral agreements: Large enough to simplify the administration of international trade, but sufficiently small to exclude free-riders. A current free trade area could be expanded into a new global group. This could be the already existing agreement of Pacific Rim countries, the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). That agreement, originally known as the TPP ("Trans-Pacific Partnership"), would offer the opportunity to conclude a comparatively aspiring agreement and to further develop the trade relations of important economies there.

The UK has already applied to join this Indo-Pacific free trade area in 2021, after leaving the EU.[7] Both the European Union and the United States could join CPTPP, too.[8] CPTPP is a comparatively ambitious agreement, includes regulation of services, and, like the WTO, has liberalization steps that have to be implemented automatically.[9] The agreement regulates a number of current fields that are insufficiently addressed in the WTO. These include not only the role of state-owned enterprises, but also trade in goods on the Internet (e-commerce) and access to national markets for agricultural products.[10] CPTPP has no less than three dispute resolution procedures, including a specific procedure for handling disputes over labour and environmental issues.

For India, joining CPTPP would constitute a bold move, but it is not inconceivable. New Delhi would provide Indian companies with access to a market not that much smaller than the one covered by WTO rules. Unlike China, state-owned companies are not nearly as important in India. Rather than negotiating separate agreements with the United Kingdom, the European Union, the United States and Japan, India would get access to all large markets with the exception of China's. Of course, many big

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[7] *Yuka Hayashi, "Japan Wants U.S. Back in TPP", in: The Wall Street Journal, 16 April 2021.*

[8] *Wendy Cutler/Peter Grey/Kim Jong-Hoon/Mari Pangestu/Yoichi Suzuki/Tu Xinquan, Trade in Trouble. How the Asia Pacific Can Step Up and Lead Reforms, Asia Society Policy Institute, May 2019 (Issue Paper), p. 7, <https://asiasociety.org/sites/default/files/2019-05/ASPI_Trade%20In%20Trouble_1.pdf*

[9] *Deborah Elms, The Comprehensive and Progressive Trans-Pacific Partnership. Policy Innovations and Impacts, Gütersloh: Bertelsmann Stiftung, 2019 (Global Economic Dynamics Focus Paper), p. 6.*

[10] *Charles D. Lake II., A Three-Part Strategy to Take the Comprehensive and Progressive Agreement for Trans-Pacific Partnership to the Next Level, Washington, D.C.: Peterson Institute for International Economics, November 2020 (Rebuilding the Global Economy, A series outlining policy priorities and solutions).*

ifs remain. Both the United States and the European Union have signaled no intention to join CPTPP. But considering the formidable obstacles for meaningful WTO reform and the ever-rising tensions with Beijing, today's outdated trade regulation is a big issue that requires and will receive attention.

For India, the immediately available alternatives are bilateral trade agreements. These have some advantages, but tend to be suboptimal from a company's perspective. Unless all free trade agreements of an economy use the same rules of origin, cross-border trade may, in the end, be administratively cumbersome and thus costly. Trade costs are not reduced as much as they could in a larger plurilateral agreement. Nevertheless, the Indian government may opt for a rather swift implementation of bilateral agreements. With the United States, a trade agreement might be reached as early as 2023, rolling back the tariff increases the Trump administration had introduced.[11]

Any Indian government will have to consider the political effects of liberalization of trade policy. Indian economic history plays an important role in assessing the effects of liberalized trade. Many Indian observers have not forgotten that the British colonial power enforced free trade just when their textile industry had become competitive through the introduction of mechanized looms. The protectionist tradition continues to feature prominently in India and, of course, many other countries. In the United Kingdom, by contrast, a political movement demanded free trade as a right of citizens in the 19th century.[12]

Simply put, it is politically much easier to implement a liberal trade policy if the companies in an economy are able to successfully compete in international trade. As India has improved its position while the competitive position of other economies, namely China, has been deteriorating, promoting liberal trade policies in India will become easier in the coming years.

Thus, the Indian government's new trade policy, which is expected to be unveiled in spring 2022, is picking up the momentum that the improved competitiveness of Indian companies has been providing. Whilst it appears to be politically unwise to switch to completely liberal trade policy, the reformed approach will probably contain significant liberalization elements. Considering India's much improved competitive position, its ample supply of qualified workers and significant improvements in infrastructure, the Indian economy today is in a position to reduce the level of protection for domestic producers and can expose them to greater international competition.

However, it would probably be too early to withdraw support for some sectors that have only recently been identified as essential for India's economic development. In particular, the electronics industry may continue to need support via the Production Linked Incentive Scheme (PLI) for large scale electronics manufacturing. An important and valid justification for subsidies in that area is that the playing field is not level. For example, the European Union has been increasing its support for semiconductor manufacturers, which has resulted in a controversy between supporters of state-driven economic development, primarily France, and free-market- oriented governments, in particular the Dutch.[13]

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[11] *Economist Intelligence Unit, Country Report India, 2nd November 2021, p. 5.*

[12] *C Douglas Irwin, The Political Economy of Free Trade: Voting in the British General Election of 1906. The Journal of Law & Economics, Vol. 37, No. 1 (April 1994), pp. 75-108 (85).*

India's prospects in the global economy

> *India has an almost historic opportunity to fill the void that China has been creating.*

The combination of the geopolitical conflict and India's improving competitiveness is a potentially potent cocktail. Business choices will be filtered through a geopolitical risk lens, affecting many choices from investment location to sourcing operations. As a stable democracy with improving ties to both the United States and other democracies in the Indo-Pacific, as well as the European Union, India will probably turn out to be the next big emerging economy in Asia. [14]

The country's relative proximity to the European Union, the world's largest market, is an additional benefit. Transportation time from India's West Coast to Northern European ports is over 40 percent less than that from East Asian ports. Hapag-Lloyd estimates that cargo from Jawaharlal Nehru Port will reach Bremerhaven in 22 days, compared to 39 days Hamburg Süd calculates for cargo from Ningbo to Bremerhaven.[15]

In 2022 and 2023, exports from India will probably benefit from a declining value of the rupee. Whilst capital inflows may help to soften the depreciation, the likely tightening of monetary policy by all major central banks, with the notable exception of the European Central Bank, will strengthen the dollar and some other currencies. Given that India's debt today is primarily held domestically, with only about five percent of government debt held abroad in 2020, on balance a weaker rupee is no reason for concern. However, as India is increasingly becoming a destination for both foreign direct as well as portfolio investment, the ownership of India's debt may change and may make the economy more susceptible to swings of perception of India's economic performance abroad.

In 2021, India has experienced both the shock of a severe second wave of Corona and an economic boom in the second half of the year. The IMF expects a growth rate of almost ten percent in 2021. The medium-term prospects for India are probably even better. The geopolitical conflict between China and the USA will not terminate but alter globalization. Today, India has an almost historic opportunity to fill the void that China has been creating.

Prof. Dr. Heribert Dieter is a Senior Fellow at German Institute for International and Security Affairs, Berlin

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[13] *Europa will den Chipmangel bekämpfen - und blockiert sich selbst, Handelsblatt, 18 October 2021, available at https://www.handelsblatt.com/politik/international/halbleiter-produktion-europa-will-den-chipmangel-bekaempfen-und-blockiert-sich-selbst/27705604.html?ticket=ST-1806306-aeEgEM0R4sK5WWWE1E5w-cas01.example.org*

[14] *Economist Intelligence Unit: Things to watch in India in 2022, p. 2.*

[15] *Data from https://www.hapag-lloyd.com/content/dam/website/downloads/pdf/HapagLloyd_Product_Brochure_MiddleEast_2021_2.pdf; https://www.hamburgsud-line.com/liner/media/hamburg_sud_liner_shipping/liner_services/01_europe/NorthEurope-Asia.pdf*

India in the Global Economy

2

- By Isabelle Joumard and Alvaro Pereira

India has become a key player in the global economy. It performs well in exporting information and technology services, pharmaceuticals and petroleum products. India's large diaspora is well integrated in destination countries, helping to develop new export markets and facilitate the transfer of technology and know-how. This being said, India could perform better in certain domains. These include labour-intensive manufacturing exports and inward foreign direct investment. Better performance in these areas would boost job creation, making growth more inclusive and sustainable. This would require addressing domestic bottlenecks, in particular infrastructure, and reconsidering barriers to international trade and investment. OECD simulations suggest that India would be a major beneficiary were barriers to trade and investment be reduced multilaterally. In the absence of a multilateral agreement, the economy would also gain from a unilateral liberalisation of trade and investment.

"India would be a major beneficiary were barriers to trade and investment be reduced multilaterally"

India has seized many opportunities

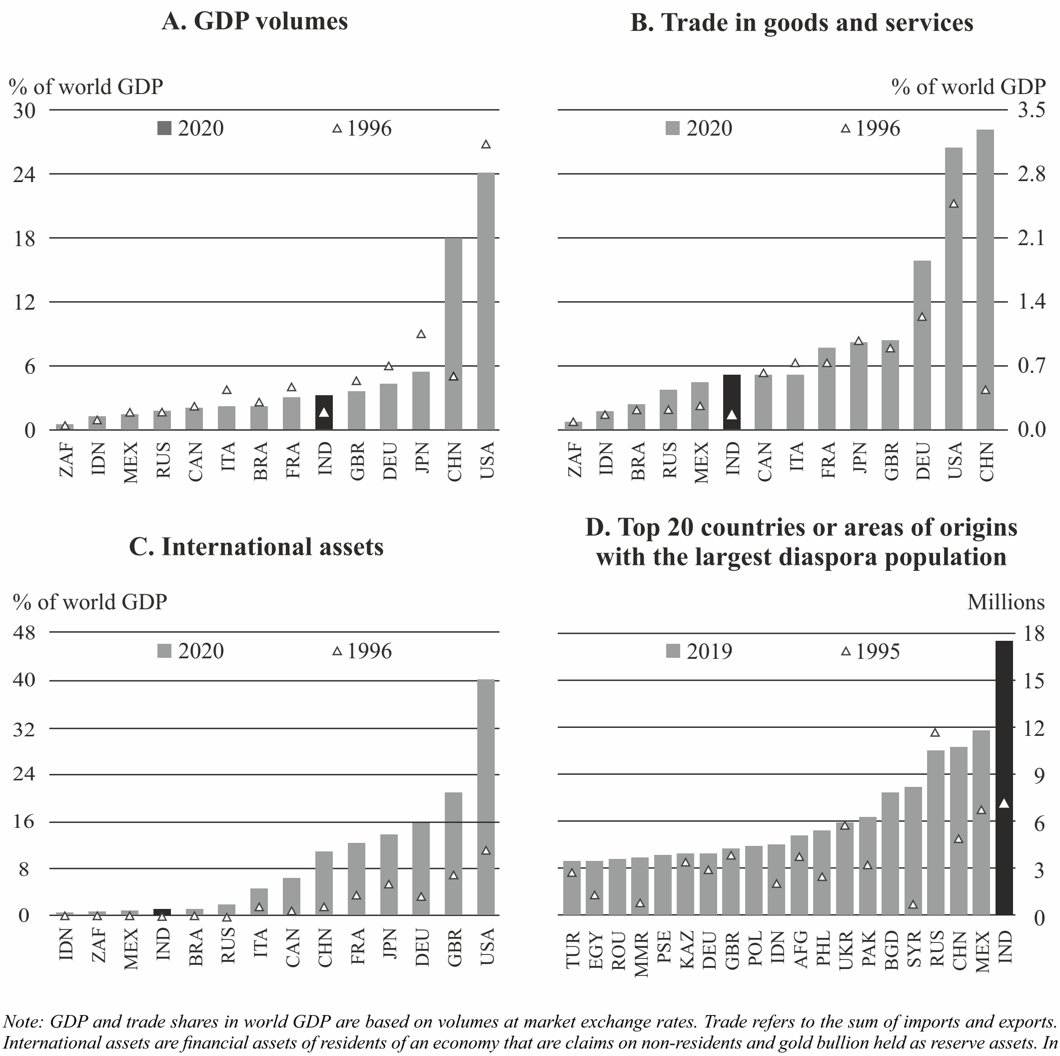
The participation of India in the global economy has risen and is high, in terms of GDP, trade, number of Indians living abroad, although less so in terms of international capital (Figure 1).

Exposure to trade has increased and India has gained market shares

India's exposure to trade - as measured by exports and imports share in GDP - has increased significantly since the mid-1990s (OECD, 2019[1]). The sharp reduction in tariffs which took place in the early 1990s, coupled with the dismantling of some non-tariff barriers, played an important role (Panagariya, 2004[2]). Trade opening has offered new opportunities for consumers, who gained access to a much wider spectrum of goods, and for firms, as they could import world-class inputs and become more competitive. Competition from abroad has also facilitated the diffusion of innovation and promoted the pursuit of higher productivity, putting pressures on monopolistic rents (OECD, 2015[3]).

Exports buoyancy partly reflects the specialisation of India in fast-growing products - including ICT services, pharmaceuticals and medical devices. The large share of services in total exports stands out (Figure 2). The rise in the export-to-GDP ratio since the late 2000s has been partly reversed, as India and many other emerging market economies (EMEs) have suffered from sluggish global demand and some re-shoring by advanced economies (AEs). Still, India has continued to gain market shares - its share in world exports of goods and services has risen from 0.5% in the early 1990s to 2.1% in 2020.

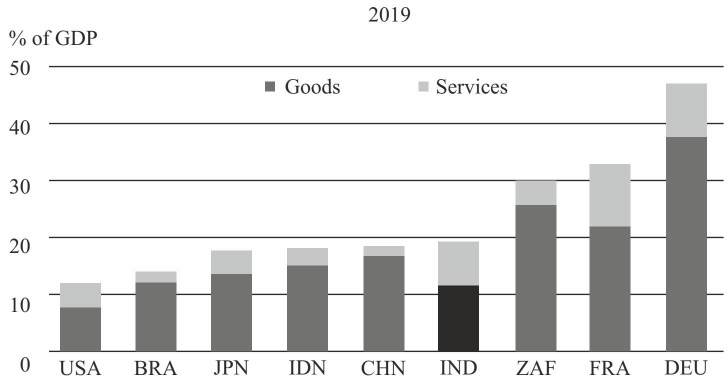
Figure 1. India has become a major actor in the global economy



Note: GDP and trade shares in world GDP are based on volumes at market exchange rates. Trade refers to the sum of imports and exports. International assets are financial assets of residents of an economy that are claims on non-residents and gold bullion held as reserve assets. In Panel B, 1996 refers to 1997 for India. In Panel C, data for 1996 refer to 2001 for Brazil, India and Mexico, and 2004 for China.

Source: OECD; IMF Balance of Payments; United Nations, Department of Economic and Social Affairs, Population Division (2019); and OECD calculations.

Figure 2. India's export-to-GDP ratio is relatively high, with a tilt towards services



Source: World Bank, World Development Indicators database.

India's export basket is well diversified

India has succeeded in increasing the number of goods exported and in serving new markets/countries. Its export basket is highly diversified and exports to emerging economies are growing fast. Such a diversification reveals the high potential of the Indian economy to adjust to new demands.

India has performed well for some goods

India's market share for some skill- and capital-intensive goods has surged. For pharmaceutical exports, India accounted for 4.2% of total world exports in 2020, up from 1.1% in 1995, making it the 10th largest exporter in the world and, by far, the first among EMEs. In particular, India has become the world's largest producer and exporter of generic drugs (FICCI and EY, 2021[4]). In the smartphone segment of electronic goods, India has transformed itself from being a net importer to a net exporter. India is also the largest manufacturer of cut and polished diamonds, exporting 93% of its production.

Exports of ICT services have been particularly buoyant

Growth in services exports has been rapid. India's share of world services trade surged from 0.5% in 1995 to 3.4% in 2019 and 4% in 2020. India has become one of the major exporters of business services (Benz, Khanna and Nordås, 2017[5]), notably in the ICT sector. Medical and wellness tourism is also supporting growth in services exports, with international patients seeking high-quality medical treatments at competitive costs in some Indian hospitals. Exports of services now account for more than one third of total exports, with the lion's share in ICT- a larger share than in most OECD countries and emerging economies.

> *India's market share for some skill- and capital-intensive goods has surged.*

The large diaspora living abroad is an asset

India has the largest diaspora in the world and many Indian students are enrolled in OECD countries. Indians living abroad are valuable assets for the Indian economy. The Indian diaspora has helped develop trade networks, by triggering demand for home-grown commodities and by lowering transaction costs between importers and exporters (Aleksynska and Peri, 2014[6]; Giovannetti and Lanati, 2015[7]). The high and growing number of executives of Indian origin at the helm of some of the world's largest companies provides evidence of the high degree of integration.

India could capitalise on the rejigging of value chains resulting from the increase in labour costs in China.

Migration can facilitate the transfer of skills, knowledge and technology. Empirical work on Indians living in the United States suggests that about one fifth of Indian students abroad return to their home country; skills Indian investors acquire abroad may find application in India (Breschi, Lissoni and Miguelez, 2019[8]).

Migrants' remittances and savings have supported domestic consumption and investment. Inflows from remittances amounted to 2.9% of GDP in FY 2019-20, representing a rather stable source of current account financing. They have contributed to reducing poverty, raising consumption and increased investment in education and health (Arif and Chaudhry, 2015[9]). Non-resident Indians also support domestic investment via deposits in the financial system or direct investment.

Export performance could improve in the post-Covid landscape

The government aims at getting India even more and better integrated into the global economy. The objectives are: to increase India's share of world trade; to make India a hub for global value chains under the Make in India initiative; to boost foreign investment inflows by modernising regulations; and to attract more savings from Indians living abroad. Production Linked Incentive (PLI) Schemes were announced across 13 key sectors in 2020, to create national manufacturing champions and generate employment opportunities. As an encouraging sign, some multinationals have made India a manufacturing hub for automobile and mobile phone exports.

The Covid-19 pandemic offers new trade and investment opportunities. India could capitalise on the rejigging of value chains resulting from the increase in labour costs in China, the risk of single-sourcing a vast array of intermediate products and the rising trade tensions between the US and China since the late 2010s.

Exports of labour-intensive manufacturing products could grow faster. The export performance of textiles, leather and agricultural products have lagged behind other capital-intensive sectors, thus limiting the positive impact of trade opening on net job creation. The textile sector provides an illustrative case. Within textile exports, the share of yarns and fabrics, which are increasingly automated, has increased while the share of labour-intensive products, like carpets, has declined (Das

Krishna and Kumar, 2015[10]). India has stopped gaining market shares in the low-technology segment for textile, garment and footwear since 2013; Vietnam now has a larger market share. More dynamic manufacturing exports would create jobs, including for the many unskilled workers currently unemployed or under-employed in the low-paid unorganised sector.

Reaping the full benefits of globalisation by addressing constraints faced by businesses

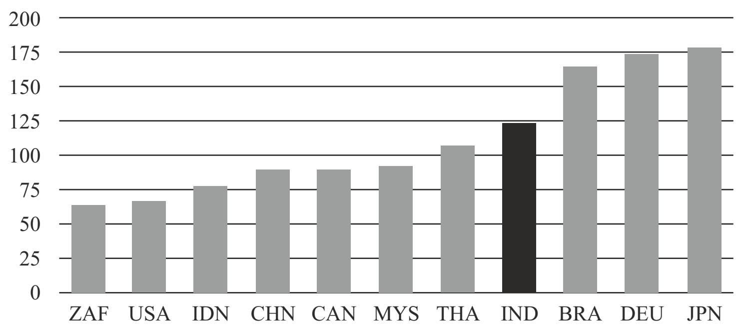
Exporters face some domestic bottlenecks, which affect all companies whether or not they actually export. The performance gap between exports of services and manufacturing suggests that some constraints are particularly binding for labour-intensive manufacturing firms, and less so for services. Exporters also face trade-specific constraints, including trade infrastructure and logistics.

Infrastructure bottlenecks have lessened but some persist

The quality of infrastructure is a key determinant of countries' participation in global value chains (Ignatenko, Raei and Mircheva, 2019[11]). As exports of goods tend to be more intensive in energy and transport than services, they suffer more from infrastructure bottlenecks. In India, the government has made laudable progress in increasing electricity generation and transmission capacities, in particular from renewable sources (IEA, 2021[12]). The provision of electricity has expanded significantly and power cuts are becoming less frequent. Electricity prices for industrial users also remain relatively high (Figure 3), reflecting cross-subsidisation (to allow lower tariffs for households and the agricultural sector) coupled with large technical and commercial losses. High prices have hampered the competitiveness of electricity-intensive exports.

Figure 3. Electricity prices are high for businesses

Industry electricity prices, US Dollars/MWh, 2020 or latest year available



Note: Data for India refer to 2018.
Source: IEA, World Energy Prices, 2021 edition.

Transport infrastructure bottlenecks, by increasing costs for exporting goods and importing intermediate inputs, are weighing on firms' competitiveness. The construction of highways and rural roads has accelerated in recent years. India has also made great progress in building airport related infrastructure. However, seaport infrastructure lags behind and, together with poor trade logistics, hampers India's external competitiveness. Around 90% of India's external trade (by volume) and 70% (by value) are handled by ports (NITI Aayog, 2018[13]).

Reducing the number of documents and harmonising external formalities would improve competitiveness.

Addressing external trade bottlenecks

Improving further on trade facilitation

India has improved significantly on trade facilitation since the mid-2010s by reducing the number of documents and level of fees, and thus trade costs. India is now close to best performance in OECD countries on many dimensions identified in the OECD Trade Facilitation Indicators. Still, importers and exporters have to provide many documents and agency cooperation at the border could be improved.

Reducing the number of documents and harmonising external formalities would improve competitiveness. OECD estimates suggest that bringing trade facilitation to the G20 average level would boost India's exports by 1.6% over a 5-year period (Joumard, Arriola and Dek, 2020[14]). These reforms would benefit most manufacturing sectors, including agro-food, textile and apparel, heavy manufacturing, and electronic and transport equipment.

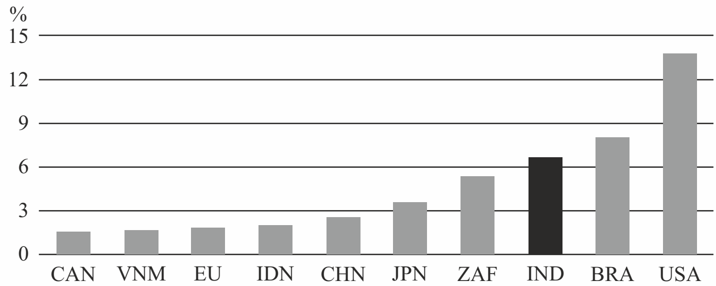
Reconsidering tariffs barriers

Import tariffs were cut sharply in the 1990s and 2000s, although more recently some tariffs have been raised again. Overall, the average effectively applied tariff level was in 2019 higher than in several EMEs and most OECD countries (Figure 4).

High tariffs and frequent rate adjustments weigh on firms' competitiveness. Because they stifle competitive pressures, tariffs may insulate domestic producers from the need to increase productivity. More expensive imports of intermediate products, owing to import duties, can penalise exports by raising input costs and run against the objective of making India an export hub. The tariff escalation (also called "inverted duty structure") - whereby import tariffs on inputs are higher than on finished goods - has been an issue in several sectors, including textile, capital goods, cement and electronics (FICCI, 2016[15]). The complexity of India's tariff structure - including the large dispersion in tariff rates - further raises administrative and compliance costs.

Overall, OECD simulations suggest that, even in the absence of new bilateral, regional or multilateral trade agreements, India would benefit from reducing trade tariffs: exports, domestic production and income would increase (Joumard, Arriola and Dek, 2020[14]).

Figure 4. Import tariffs have been cut but remain high



Note: Data show simple averages of effectively applied tariffs.
Source: UNCTAD Trade Analysis Information System (TRAINS) data extracted from the World Bank, World Integrated Trade Solutions.

Gains from services trade liberalisation

India has recently taken steps towards making its services sector more competitive but foreign suppliers still face some restrictions in certain sectors (Export-Import Bank of India, 2019[16]). For example, only Indian nationals are allowed to practise as lawyers or architects and are permitted to become partners or hold equity in firms active in these two sectors.

Likewise, India's services exports face restrictions from other countries, reducing potential gains from trade in services where India is competitive (Mukherjee and Kapoor, 2017[17]). In recent years, several countries have raised restrictions on the temporary movement of professionals, through quotas, labour market tests and limitations on duration of stay. Such restrictions are affecting India's exports of ICT and other business services that depend on the movement of people.

Given that services are key inputs for other sectors and support participation in global value chains, restrictions on services are weighing on export performance far beyond services. Distribution, freight transportation, telecommunications, energy and financial intermediation are particularly important for the manufacturing sector. Modernising regulations on services trade would boost competitiveness and exports of goods, thus contributing to the success of the Make in India initiative.

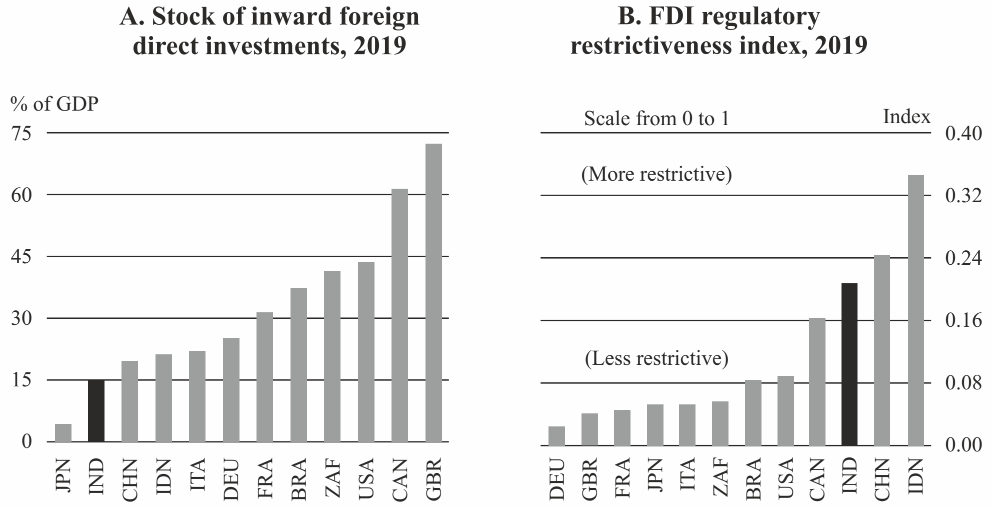
In a scenario of a simultaneous cut in service restrictions across G20 countries, empirical work (OECD, 2019[18]) suggests that India would be the single largest beneficiary in terms of production growth. In the absence of such a multilateral move, OECD simulations suggest that modernisation of India's regulations affecting services would also boost manufacturing exports, output and jobs (Joumard, Arriola and Dek, 2020[14]). Benefits would be widely shared across agriculture and manufacturing industries, although some services would face stiffer competition from foreign suppliers.

More foreign investment could promote income growth and support export performance

The government aims at making India a more attractive FDI destination. The FDI policy has been liberalised in many sectors over the past two decades, making India a top reformer in this domain (OECD, 2017[19]). Overall, the OECD FDI Restrictiveness Index suggests that, in 2020, India was more open than several other Asian EMEs, including China, Indonesia, Malaysia, the Philippines and Thailand. Restrictions on FDI, however, remain higher than in most OECD countries (Figure 5).

Further liberalisation and simplification of FDI policy could trigger foreign investment. The impact could be large in the context of rising global trade tensions where firms are considering redrawing the map of their production facilities. The relatively low stock of FDI in India compared to other EMEs while the size of the domestic market is large also suggests that a large untapped potential exists.

Figure 5. Inward foreign direct investment has remained relatively low despite lighter regulations



Note: The FDI Regulatory Restrictiveness Index measures statutory restrictions on foreign direct investment across 22 economic sectors. It looks at four main types of restrictions on FDI: 1) Foreign equity limitations; 2) Discriminatory screening or approval mechanisms; 3) Restrictions on the employment of foreigners as key personnel and 4) Other operational restrictions. The overall restrictiveness index is the average of sectorial scores.
Source: OECD FDI main aggregates database and OECD FDI Regulatory Restrictiveness Index database.

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Ushering an Era of Reinvention for Indian Travel & Tourism

3

- By Ritesh Agarwal

The potential for Indian tourism in the post-pandemic age is endless. With vaccination rates reaching record highs and the world steadily unlocking and adapting to a new, digitalised normal - India is well poised to become one of the top tourist destinations globally in terms of experiential offerings, ease of access and value.

> *The time is ripe for reinvention, and for India to bring its small hotels on to the global travel map.*

Already ranked 34 of 140 countries in the World Travel Competitiveness Index published by the World Economic Forum, India has long been at the top of traveller's bucket lists for a variety of reasons, ranging from cultural to spiritual. Even domestically, with #DekhoApnaDesh as the clarion call, and our Prime Minister's campaign to have every Indian visit at least 15 local destinations in 2022, the travel & tourism sector must ponder how to meet a unique resurgence in demand, and the dynamic needs of today's traveller.

What is particularly interesting about this resurgence, is a significant trend both in India and abroad- small is the new big. The target addressable market (TAM) for short-stay accommodations is expected to increase to ~$1.9 trillion by 2030, as per Redseer. Globally, only 12% of the hotels are organized (88% of the hotels are unorganized). In India, 92% of hotels are unorganized. However, with the advent of advanced tech, and new formats of exploration- the time is ripe for reinvention, and for India to bring its small hotels on to the global travel map.

India's storied past, rapidly progressing present, and vibrant future needs a tourism industry that stands as the very best in the world. However, in order to do so, it is essential not only to understand the dynamics of the traveller of today, but also the ecosystem which is at the brink of a transformation.

Understanding the new age traveller

At the risk of generalizing, the pandemic brought to light new use cases for travel, with flexible work and school, and the desire to travel to motorable distances with a view to ensure safety, familiarity and comfort. Beyond the circumstances forcing a change in travel habits, they have fostered a shift in the wanderlust mindset. The traveller of today is looking less for adventure and more for a sense of belonging and connection. They want to voyage to discover and to truly get to know the heritage, culture and ecosystem of a particular place.

> *Experiences that infuse culture, heritage and ecology will emerge as a popular preference for individuals and families in the near future.*

In comes the concept of slow travel - slow travel challenges the routine of having hectic travel schedules where guests rush from place to place to visit as many attractions to check off items on their list, queueing up with a herd of other tourists to take some photos, and, with just that glimpse of the local attraction, packing up and heading off to the next destination on their list, or-fast travel. Fast travel is known for its accumulation of waste, build-up of noxious pollutants and tendency towards overcrowding. This trend is gaining momentum post pandemic, while it was only present as a niche concept previously, and this is primarily due to a perception shift for consumers. Supporting social causes and local economies was identified as a key driver in tourism related purchases for 25% of global respondents in GlobalData's Q1 2021 consumer survey and for 45%, this was 'nice to have'- indicating that the raison d'etre for travel is evolving.

Slow travel inculcates experiential travel, centred around high-value travel experiences that are relaxing, educational and have an emotional impact on guests, without offering a rushed, breathless bucket list experience which tends to be taxing on guests and the environment. These experiences that infuse culture, heritage and ecology will emerge as a popular preference for individuals and families in the near future.

Leisure Travellers are also keen on destinations and locations that reconnect them with nature. Treehouses, beach houses, campsites and skydomes will present off the grid alternatives while offering luxury and the capability of staying plugged in. This also indicates a shift from urban jungles to suburban and rural retreats for one-of-a-kind unique experience. Recently, OYO opened up boutique homestays under OYO Home in the Kevadia district in Gujarat to bring a flavour of staying like the locals for travellers. Local cuisine, regional flavour plays a big part in homestays. We are looking to replicate this in other tourist hotspots like Haryana, Himachal Pradesh and Ladakh. Many of these home-owners align with regional food vendors, local tour guides, indigenous performers and artists from the region to offer a rich tapestry of what their state has to offer in its totality- a true taste of the impeccable hospitality offered in India's smaller towns and villages, to make both domestic and international visitors feel right at home, even as they partake in a typically unfamiliar experience.

Beyond this, tourists globally continue to grow conscious of their health and well-being. This has resulted in offbeat stays such as wellness staycations, self-care and 'immunity booster' retreats, one of the most sought-after use cases for a new age traveller. According to a recent report, wellness tourism is slated to grow at an average annual rate of 7.5 per cent by 2022. Customised offerings, including retreats, and meditation sessions will become clearly advantageous as offerings for small hotels and vacation homes will add enormous value for travellers.

Leisure travel is also particularly sought after due to the extended period of social distancing and staying indoors, causing people to look for experiences that allow them to luxuriate and be pampered.

According to OYO's Unlocking Travel Report 2021, here are some key insights gleaned from the travel behaviour of Indians:

> *Safety and hygiene top the list of demands of every traveller in the new normal.*

- Goa, Jaipur, followed by the hill stations of Manali, Ooty and Mysore are top-ranked leisure destinations among travellers.
- According to a consumer survey, 37% of travellers have a preference for mountains, 33% for beaches in India. The remaining 14% prefer visiting motorable places (or road trips), followed by heritage cities and pilgrimages.
- It is also observed that approx. 57% of travellers prefer making bookings closer to the travel day. This is a striking shift from the pre-Covid era when travel was extensively planned and bookings were made weeks or even months in advance.

Evolving alongside concerns for safety

Safety and hygiene top the list of demands of every traveller in the new normal. It ranges from hygienic service, comfort at the hotel standards, and food safety and hygiene practices with technology at the core of every hotel's operational processes. According to a World Tourism Day Survey by OYO, in India, vaccinated staff and sanitisation protocols at properties are the top two factors that consumers keep in mind before deciding their next travel destination and accommodation.

It is essential to meet this growing need with necessary protocols that offer immense assurance and ease of mind to travellers. If small and local hotels fail to deliver on these basic nuances, they could be contributing to a larger problem- a trust deficit with consumers. For this, accelerating transparency, open communication and enhancing the visibility of the operational process will be key.

Given this context, OYO with its technology, transformation capabilities, and deep expertise in standardising amenities, aims decisively to empower local small hotel owners in the country to become autonomous, well-functioning units on their own mettle with the right safety protocols in place to aid consumer demand, and mitigating any lingering concerns.

In keeping with the maxim of "seeing is believing", OYO launched a campaign called 'Sanitised Before Your Eyes' or SBYE to showcase our sanitisation and safety efforts in real-time so that guests can be rest assured of their stay with us. We additionally launched Contactless Check-in, where guests can choose to check-in on the OYO app from anywhere, right after the booking, consequently eliminating the need for a physical check-in process on arrival. This simplified process enables social distancing and reduces the risk of infections while checking in. Now, in light of India's vastly successful citizen vaccination drive, travellers were further reassured if their hotel staff and service providers were immunised in a timely manner. Anticipating their need and proactively communicating by leveraging smart technology, OYO launched "VaccinAid"- where travellers, as a part of the booking journey, on the OYO app will have visibility on hotels and homes with vaccinated staff, either with the first dose or second dose of the Covid-19 vaccine. This enables users to book hotels with vaccinated staff and thereby acts as an accelerator on both sides of the platform.

These campaigns were particularly well-received and boosted organic demand for many of our patrons across the nation.

> *67% of customers worldwide used a chatbot for support in 2020, and the momentum is only set to grow.*

Technology outlook for tourism

The travel and hospitality experience is due to be transformed with technology, especially in the 5th Industrial Revolution. Top trends that are already here, or are soon to arrive include:

1. Contactless check-in and payments, as has already been implemented at OYO and other global travel & hospitality players.

2. **AI-enabled chatbots:** 67% of customers worldwide used a chatbot for support in 2020, and the momentum is only set to grow. Self-serve is a tricky product to master due to the customers' ever-growing demands for better & quicker support. At OYO, we launched Yo! Help- a 24*7 real-time chat assistant for OYO guests who have created a valid booking at any OYO hotels or homes. Currently, Yo! Help has been able to successfully solve 73% of guest queries, while continuing to evolve its iterative and user-centric approach using natural language processing. AI-Enabled Chatbots are an essential checkpoint in what is increasingly a low-touch, highly digitised journey for the average traveller.

3. **IoT enabled services:** Spain's Hotel Technology Institute (Instituto Tecnológico Hotelero, or ITH) affirmed that the Internet of Things is going to be the major transformative factor in the personalization of customer experience over the next few years. These include smart locks, smart lighting and temperature control at the guest's fingertips.

4. **Big Data:** Data is ushering a new era of personalisation and customisation for the consumer by offering a deeper understanding of their behaviour. For example, customers take the liberty to

book at the last minute. Businesses can leverage data to predict demand patterns and meet their changing needs. Data from more than 10K+ hotels in India show that more than 60% of bookings are created less than a day from the check-in time. Moreover, customers can choose customised stays owing to the level of details available online, which comes from a comprehensive analysis of multiple relevant trends and patterns that comes from powerful data computation.

5. For international travel, increasing accessibility through E-Visa applications; streamlining the process and simplifying verification by leveraging our extant sophisticated UIDAI mechanisms in India will be key.

Maintaining public hygiene and cleanliness

With health-seeking behaviour at an all-time high, in lieu of wanting the need to have accommodation facilities safe and sanitised, the need for public facilities to be clean and hygienic is paramount. There is an urgent need to innovate on enduring solutions that improve hygiene, access and ease for travellers.

A few ideas in this direction involve sustainable infrastructure solutions like composting toilets in tourism hubs like bazaars and museums and effective waste management in areas of high tourist density.

The United Nations Environment Programme (UNEP) estimates that 4.8 million tonnes, 14 percent of all solid waste, is produced each year solely by tourists. This waste can potentially overload waste management systems, especially in areas with a lack of connectivity and access, or more rural locations in countries like India.

Effective public-private partnerships can crack the code for waste management in tourist hotspots. For example, all facilities catering to tourists (restaurants, hotels, etc.) can eliminate the need for plastic altogether at the source and use natural resources like bamboo and other plant-based materials.

Additionally, moving away from the landfill waste disposal system would be necessary, and pivoting to an energy-efficient one. There needs to be an efficient 3-way segregation of waste - Wet or Biodegradable Waste; Dry or Non-biodegradable Waste, Sanitary Waste and Domestic Hazardous Waste.

Given the cultural nuances involved and the terrain, the local community must be involved at all levels - decision making, planning, implementation, training and execution. Small businesses/hotels as essential drivers of the local economy should be at the forefront of these dialogues and lead the mindset shift for a better tourism infrastructure to thrive. Larger entities and private institutions can support these grassroots initiatives with technology solutions and collaboration with small enterprises.

The nuances of sustainable tourism

65% of people are willing to pay more for an eco-friendly hotel- but an increased appetite for sustainability cannot be a simplistic monolith. Often, eco-tourism could be seen as an elitist solution, especially in India where accessibility and infrastructure is still a challenge. There needs to be an integration with local practices and communities. Communities need to lead the way and set the norms for tourists to follow.

What is needed is awareness and to teach sustainable practices, put in place regulations for travellers trekking or looking to access remote places. It is important for there to have fewer commercialised centers, and more avenues for tourists to support local businesses, partake in local modes of travel and truly immerse themselves in the region's economy and ecology in order to not pressure its natural modes of living, or disturb its flora and fauna to serve any extravagant demands. There is a need to build awareness for and promote the uniqueness of a region, rather than making it adaptable to tourists at the cost of the environment.

A good example of how this is achieved has been seen in Uttarakhand, a biodiversity hub that suffered at the hands of irresponsible tourism practices. In order to make travellers aware of the diverse surroundings, the Uttarakhand Tourism Development Board, in collaboration with Vikas Nigam and the Eco-tourism Division of the Forest Department, launched the concept of village treks. These three institutions jointly supported local homeowners to promote sustainable tourism and provided adequate funds for an easy, enjoyable experience.

The Swachh Bharat campaign has also been particularly useful as a tool for creating consciousness. There is an urgent need to devise similar campaigns with clear actionables for local merchants and tourists to follow.

In 2020, the travel and tourism sector in India contributed around 4.7% to the total GDP of the country. By 2029, this is expected to be 9.2% of the total GDP. There is a need to strengthen India's ever-growing momentum towards becoming a challenger tourist destination, driven not just by operationalizing cutting edge tech in line with the upcoming trends, but understanding the changing needs of travellers looking to incorporate sustainability, digitization into their travel decisions and infusing heritage and culture into their experiences.

This need can definitively be met by companies in the space who choose first and foremost to remain agile and offer sustained, consistent support to smaller tourism and hospitality businesses that will define and lead to an increasing preference for localized stays and experiences in the country.

Mr Ritesh Agarwal is Founder and CEO (Group), OYO Hotels and Homes Pvt Ltd

75 Years of Making in India, for India

4

- By Sanjiv Mehta

A silver lining for India

The pandemic has presented an opportunity for India to expand its local manufacturing base for global reach.

The Covid-19 pandemic has been an impediment to economic and social growth around the world. Social, economic, and environmental issues that existed prior to the pandemic have been pushed into stark focus. For businesses, significant challenges arose out of the restricted mobility and the uncertainty in the minds of citizens. The rapid convergence of environmental forces, economic struggles and social tensions has led to widespread uncertainty and called into question the role that institutions play in the world today.

The pandemic, and the resulting actions led to a widescale disruption in global value chains, especially in manufacturing - from computer chips to packaging material and even certain chemicals. With strained cross-border relationships, it caused a shift in global sentiments and unravelled the fragilities of the global economic and geopolitical order. There has been a marked rise in protectionist measures by countries with underlying trade concerns that made it imperative for businesses to be more resilient by having a more distributed value chain.

Despite the challenges of recent times, the India growth journey continues to be the silver lining on the horizon. According to the latest IMF annual review, India's swift and substantial policy responses to the pandemic, including fiscal support and economic reforms, are underpinning a rebound in growth that's now forecast to be one of the fastest of all major economies. In fact, a recent economic outlook survey by FICCI estimates India's GDP growth at over 9 % in 2021-22.

Einstein had rightly said, "In the middle of difficulty lies opportunity." The pandemic has presented an opportunity for India to expand its local manufacturing base for global reach. Manufacturing can also be an answer to providing employment and entrepreneurship opportunities to India's youth.

There is tremendous headroom for growth of manufacturing in India. In the food industry for instance, less than 2% of agricultural crops such as tomatoes, are processed in India, even though India is the second-largest country in global tomato production. Low processing of produced crops leads to a tragic increase in wastage of food. In India, about 16% of fruits and vegetables are wasted every year. Besides wastage of food, there is also a significant loss of nutritional value of crops over their life cycle that results from improper cold chain logistics and other lags in the stages of the supply chain. Given the high incidence of malnourishment in India, containing this wastage can improve the quality of life for many. The solution lies in proper processing of food - in other words, manufacturing. This will not only address wastage but also ensure availability of nutrition for the masses.

> *The cost of borrowing in India is higher than our peer countries by 400-500 bps.*

There is also a strong possibility for India to become the next manufacturing hub for global exports across several industries in the foreseeable future. The government has introduced timely policies such as the Production Linked Incentive schemes (PLI) for many industries. PLI has the potential to create a competitive edge for these industries.

While we set forth to conquer newer horizons and get closer to realizing our ambitions of becoming a hub for quality manufacturing, we must keep a firm focus on growing responsibly. Particularly in the aftermath of the pandemic, we should become even more acutely aware of the urgent need for climate action. In fact, as the third largest national emitter of greenhouse gases in 2021, India's transition to a low-carbon future will determine the trajectory of global efforts to mitigate climate change.

Businesses can only sustain when the society they serve thrives, and the environment they operate in flourishes. While relentlessly pursuing its manufacturing ambitions, India will have to be mindful of the effect of its operations on the environment and be sensitive to the expectations of a consumer base that is increasingly conscious about patronising businesses that display responsibility towards the environment.

Reinvigorating manufacturing

The challenge that we need to take on is how do we reinvigorate the manufacturing sector, which has the potential to give the biggest lift to productivity and jobs growth. Importantly, India must position itself to be a bigger part of the global supply chain. We should focus on sectors where we have natural advantage or where we as a nation can create competitive advantage. Let me now talk about a few important things that we need to do in this area:

i) **Reform the factors of production:** India needs to accelerate reforms in the areas of Land, Labour and Capital. We must unlock supply in land markets and reduce its cost by 20-25%; create flexible labour markets, strengthen safety nets and provide portable benefits to make labour more mobile across sectors and geographies. The cost of borrowing in India is higher than our peer countries by 400-500 bps. The biggest benefit can come out of reducing the credit intermediation in the banking system where heavy bank borrowing by the government crowds out the private sector and high NPAs in the banking sector increases their cost.

ii) **Increase the ease but reduce the cost of doing business:** Logistics cost in the country as a percentage of GDP is estimated as being 500-600 bps higher than other developed countries. While India has climbed up the ladder when it comes to ease of doing business, there is much more to do if India must become one of the most attractive destinations for manufacturing investments.

iii) **Scale matters:** India will have to compete for an increased share of the global pie based on cost, quality, service, and innovation. A Mckinsey study indicated that India has only 600 firms with annual revenues exceeding US$ 500 million. It is apparent that large firms not only help boost GDP and productivity, but they also act as catalysts for change - driving exports, investing in training and paying higher wages. They are also nimbler and more innovative in adopting technologies.

iv) **Make Small and Medium Enterprises thrive:** In the US, the strength of the economy is built on its smaller and medium sized enterprises. After the financial crash of 2008, small-scale entrepreneurs helped America get back on its feet, creating 60% of net new jobs between 2008-2013. Today, SMEs employ 40% of that country's workforce. In India, it's a different story. Only a little more than 10 percent of employees are in similar enterprises in India. We must ensure all our SMEs - in every corner of our country - have access to financing and technological knowledge required to succeed.

v) **Strengthen infrastructure:** The building of physical infrastructure including new airports and highways, modernisation of railway stations and multimodal transport will not only provide an impetus to growth but reduce the cost of logistics in the country.

vi) **Harness technology for manufacturing:** The blurring of lines between physical, digital and biological worlds through joining of technologies like advanced connectivity, artificial intelligence, gene editing, internet of things, cloud & cognitive computing to advanced robotics offers huge opportunities for India to become competitive.

Hindustan Unilever (HUL) and the future of manufacturing

The pandemic has accelerated things up for Indian manufacturing. During the months of severely constrained mobility, the FMCG industry struggled with material supply that was imported from Europe, China and the US. Working with local partners for domestic production of hitherto imported components became an imperative. HUL, for instance, has been able to steadily bring down import dependency for certain chemicals by as much as 33%; a figure that is likely to go down further in times to come. In the long term, this move will help build resilience into the value chain by having multiple options for supply. The immediate benefits of a diversified supply chain will include more agility, shorter supply lines, and even cost efficiencies that can come with local manufacturing at scale.

Apart from diversifying the supply pool, sourcing locally has distinct benefits for the environment by way of leaner logistics. Undeniably, business sustainability is closely linked to environmental sustainability as well as operational agility. Therefore, the most efficient factories of the future will be automated, able to dynamically shift production with a change in demand, and also be able to work independently of the volatile and rapidly changing external environment. Most significantly, factories of the future will contribute positively to the health of the planet as well as the communities in which they operate.

At HUL, future-ready manufacturing is a strategic imperative as much as our responsibility. Leveraging technology to enable a more efficient and sustainable solution, our supply chain is undergoing a transformation across the verticals of Plan, Source, Make and Deliver, to build a new-age Operations Ecosystem. The digitisation of our upstream sourcing network has now optimised cost and heightened agility, resilience, and traceability of materials.

As a part of industry 4.0 transformation, our factories are becoming more agile, responsive and competitive through the digitisation of manufacturing processes of both data and physical assets. We are also extensively using automation for more reliable fulfilment with shorter lead times. These measures will collectively improve customer service, increase efficiency and reduce costs.

Environmental and social considerations are of paramount importance to the future of the manufacturing industry. Recognizing this, Unilever has adopted an integrated corporate strategy, called the Unilever Compass, to become a leader in sustainable business and to make sustainable living commonplace for people across the world. At Unilever, globally, we are committed to reducing our environmental footprint in manufacturing, including the ambitious plan to achieve net zero emissions by 2039. We are challenging ourselves to even higher standards to protect high carbon ecosystems like forests and tropical rainforests, and we will have a deforestation-free supply chain by 2023.

As Hindustan Unilever Limited, a business that reaches 9 out of 10 Indian households, we have played a significant role in addressing issues related to climate change through actions focused on a continuous reduction of carbon emissions and water usage, increase of renewable energy as well as reducing generation of waste in our manufacturing. Most of the agricultural raw materials that we source are from sustainable sources, for example more than 90% of tomatoes used in our Kissan ketchup and 67% of the tea in our brands in India have been sourced sustainably.

> *Environmental and social considerations are of paramount importance to the future of the manufacturing industry.*

We make every effort to ensure that communities thrive alongside our businesses. We are empowering a new generation of farmers and smallholders to protect and regenerate their environment through a new Regenerative Agriculture Code for all our suppliers. Prabhat, the HUL sustainable community development initiative that is linked to the Unilever Compass, works relentlessly to ensure that communities are supported in line with India's development agenda. A long-standing proponent of women's participation in manufacturing, HUL has also successfully integrated an increasing number of women in various roles including running an all-women factory in Haridwar.

What's next in the Make in India dream

India is already moving up the preferred manufacturing hub ranking, and it is only a matter of time before it becomes one of the top manufacturing destinations. What will tip the scales emphatically in India's favour is the continued focus on technology to drive efficiency, and ESG to drive longevity. For the dream to convert into reality, the government will need to partner with private enterprises to address the challenges faced by the manufacturing organisations.

Mr. Sanjiv Mehta is President-Elect, FICCI and Chairman & Managing Director, Hindustan Unilever Limited

India Beyond 75: A Vision for Healthcare 5

- By Pankaj R. Patel

> *India today contributes about 20% share in global supply of medicines by volume and supplies around 60% of global demand for vaccines.*

India at 75 stands tall as a much more confident nation which is firmly anchored to take leadership position in many spheres. This confidence stems from our rapid advances across multiple domains like agriculture, science and technology, healthcare, pharmacy amongst many others. The enormously promising human capital of 1.3 billion people, a vibrant democracy, a vision at the future and a deep desire to take our rightful place on the world stage are all the right ingredients to propel India's growth into the future.

Having stepped into the 75th year of our independence, we have much to celebrate. As we started as a young nation in 1947, the struggle was for self-sufficiency in many fields. India for instance greatly depended on imports and aids for basic items like food and medicine. At the time of independence there was a clarion call to produce affordable and quality medicines indigenously to support our population. It is a matter of great pride that India today ranks fourth amongst all nations in the world in terms of forex reserves. From being an importer of essential drugs and pharmaceuticals in 1950s, India's drugs and pharmaceuticals exports stood at US$ 24.44 billion in FY21. It is an Aatmanirbhar Bharat that has taken the centre stage successfully completing over 100 crore vaccinations, indigenously producing vaccines, critical medicines, diagnostic kits, healthcare essentials to fight the pandemic and providing access to all these in an affordable way.

75 years on, the world looks at India as the pharmacy to the world. Today India, through its innovation and large capabilities to manufacture drugs, is catering to the needs of the entire world by discovering novel drugs to bridge unmet healthcare needs. Researchers and scientists in India are finding novel drugs to fight critical illnesses. Even in the midst of a pandemic, they could come up with several indigenously developed vaccines. India, with its large vaccine production capabilities, is also making vaccines available to the world. India today contributes about 20% share in global supply of medicines by volume and supplies around 60% of global demand for vaccines. The Indian pharmaceutical industry is US$ 45 billion in size and ranks third worldwide for production by volume and thirteenth by value. As we move forward, the Indian Pharmaceutical industry's vision is to grow to US$ 130 billion in size by 2030 and thereby supporting the global need for both innovative and affordable medicines.

The millennium development goals include health for all and how healthcare models need to be more inclusive. This is a transformation that is happening in India, with access to better healthcare infrastructure and services made available in the remote parts of the country. India has an acute shortage of doctors with one doctor per 1,456 people against WHO recommendation of 1:1000. Furthermore, the doctor density is much higher in the urban areas. These facts highlight the need for doctors to reach out to maximum patients in the rural as well as the remote parts of the country. Developing a digitally integrated healthcare ecosystem offers a promising solution to these challenges. While the Indian healthcare system was making progress on this front, these developments were occurring in small pockets. With the pandemic, key stakeholders in healthcare value chain are now expressing interest towards adoption of several teleconsultation platforms. These adoption levels are expected to continue even after the pandemic subsides, thereby requiring healthcare businesses to refine their own business models and ride the overall promising growth in virtual care.

Healthcare industry will have to focus on integrating parts of the patient flow, from doctor consultation to diagnosis, from referral to secondary or tertiary or even quaternary care, and overall well-being in a digitally integrated manner. Each step would include additional touch-points such as diagnostics, medicines and follow-up consultations. Real value lies in creating an ecosystem that can integrate all stakeholders from doctors, caregivers, diagnostic labs and pharmacy labs to patients and insurance companies so as to enable an end-to-end customer journey.

India at 75 is looking at the next growth horizon in healthcare where innovation has the potential to make all the difference. As it builds an innovation eco-system, healthcare will become more inclusive and a game-changer for India. We will be looking at more customised solutions which are patient centric and impact the quality of life in different ways. India will be exploring new approaches through biopharmaceuticals, looking at new healthcare delivery models and also continuing with national missions and dedicated programmes like 'Make in India' and Aatmanirbhar Bharat. We will be seeing many new health start-ups or unicorns which combine new-age technology with healthcare to bring in greater access, allow more precision and make processes more agile. The world will see new trends which are already emerging - such as the use of biosensors, AI, robotic tools, telehealth and predictive analytics coming into play, and we will be witnessing more of this in the coming years. India, with its prowess in information technology and differentiating capabilities in healthcare, can make the best of these opportunities. Greater inventiveness will unlock new possibilities of growth in 2030.

The future of healthcare could see a new ecosystem evolving that integrates different approaches of care, customised solutions and cohesiveness to ensure customer well-being. This would mean a greater emphasis on preventives, individualised approaches to understanding diseases and specialised disease management.

As we explore several measures to transform India into an export-led economy, the Indian pharmaceutical and healthcare sector will emerge not just as a tour-de-force in manufacturing but also as an innovation hub for the world. It will be an innovation driven India that will script its future at 75 and beyond.

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Making India Aatmanirbhar in Defence Manufacturing

6

- By Jayant D Patil

India places a special spotlight on its GDP and growth trajectory to measure the size and the health of her economy. One of the important sectors that has a potential to drive the economic growth engine is the manufacturing sector. It is well understood by the decision makers, our manufacturing GDP has remained stagnant / range bound for past two decades.

> *The demographic dividend and diversity that India possesses can be harnessed and gainfully channelized to position India as the manufacturing hub*

The present Government has catalysed this sector through its Make in India "Aatmanirbhar Bharat" campaign through series of reforms to promote indigenous production of goods and services and has targeted to position India on the world map as a leading manufacturing destination. The target is to grow manufacturing sector to contribute from the current 17% of the GDP to over 25% over the next decade. The demographic dividend and diversity that India possesses can be harnessed and gainfully channelized to effect this growth, position India as the manufacturing hub for the world and also emerge as the regional economic superpower.

Such vision can only be realised by a powerfully equipped triumvirate of the Defence forces that have requisite wherewithal to protect National interests. The Make in India, Make for the World initiative strives to achieve these ambitions concurrently through organic as well as inorganic means by building strong partnerships, Transfer of Technology across Industry sectors to gain capabilities to leapfrog subsequent indigenous end to end capabilities where self-reliance is crucial for strategic autonomy to India. The pandemic engulfing the world re-emphasized the ill-effects of long supply chains and concentration of manufacturing in one geography, as also need for being self-reliant and build local eco-system. Thus, the need for a concurrent push on the 'Design in India' and 'Digital India' initiatives. The target of having regional supremacy can only be realised by a powerfully equipped triumvirate of the Defence forces making it an imperative to indigenously design, engineer, develop, and manufacture one's own defence requirements for strategic autonomy and serving as force multipliers, as is the need for conducive policy making and implementation.

It can be seen that GoI has institutionalised a series of reforms in Defence Sector and besides Aatmanirbhar, the focus is shifting to manufacture for the world. The Government has targeted to achieve a Defence manufacturing turnover of over Rs.1.70 Lakh Crore (USD 25 billion, doubling over the FY 2020-21 revenues @15% CAGR) including export of over USD 5 billion in the Defence sector by FY 2025-26. The planned Defence Capital Acquisitions are to the tune of Rs.15 Lakh Crore over the next decade and a vision to enhance defence indigenisation from current levels of 35-40% to 70-75%. Given the multiplier effect to the economy in case of indigenously designed and / or manufactured warfighting equipment in India, these numbers translate to a significant increase in contribution by the Defence sector for the GDP over the next ten years.

Historically, since opening up of the Defence sector for participation by the Private industry in 2001, the country's defence procurements have seen a sea change. The initial animosity towards the private industry until nearly a decade back began changing then and has much evolved over the past 6-7 years. Thus, the MoD preference to the Government owned entities as the prime production agencies with Private Industries as tierised vendors has slowly evolved into a "compete/ collaborate in a win-win scenario" to build robust indigenous ecosystem to serve the Defence sector. The acquisition policy has evolved over the past two decades from "Defence Procurement" to "Defence Acquisition" and from Buy (Global / and manufacture under ToT in Government sector) to Buy Indian, to Buy and Make Indian, to Make (Make - I for Design & Development with joint funding by Government & Industry, Make - II for Industry Funded development and Make-III for import substitution for major building blocks / spares of major platforms funded by Industry), to Strategic Partnership to Buy Global-Manufacture in India models of acquisition. There is much understanding of separate category for acquisition of ICT systems as also Leasing of Assets.

The End Users and the Government began to appreciate the challenges in doing business with this sector as the country became largest importer of Defence goods in the world and the indigenisation hovered around 30% for two decades - 1990's to 2010. As the reality of limited capacity and capability in Government owned sector sank in, the sector began to truly open up since 2011 and almost completely since 2016. The inclusion of Private sector with gradually improving level playing field injected an important constituent by accelerating the realisation timelines as also putting cutting edge systems in the hands of the Users with all compliance to quality standards.

Private industry players entered the Defence Sector as development partners to DRDO, or as tierised partners to DPSUs / OFB. Over years, the DRDO's development partners began carrying out in house R&D and evolved into system integrators par excellence and competitively positioned themselves to design, develop and manufacture plethora of complex platforms such as Warships, Submarines, Artillery Systems, Armoured Systems, Air Defence systems, Radars, Fire Control and Command & Control systems, etc.

Based on the capability and track record of the Private Defence industry, the Dhirendra Singh Committee had recommended a Strategic Partnership (SP) model in September 2015 for selection of Private Sector companies to be Strategic Partners to MoD as System integrators for major platforms such as Submarines, Main Battle Tanks, Fighter Aircrafts and Combat Helicopters, in addition to the existing Defence PSUs. Dr. Aatre Committee recommended the fair and transparent selection of SPs in April 2016. The model was formally accepted by the Government in May 2017. The model is based on the Strategic Partner receiving ToT from foreign OEM and concurrently investing in R&D and capability building to target the entire life cycle being managed locally as well as developing subsequent follow-on platforms indigenously. SP model was directed at transforming India's defence production from hitherto being 'import dependent' to being a 'foreign-exchange neutral' one by implementing Make-in-India initiative. In the process, we can build complete platforms through sustained capability development and eventually become self-reliant and also export. This route would also create jobs, build competition and help stretch the budgets to acquire higher capabilities through force multipliers. Since the incorporation of the SP model in DPP 2016, selection of SP's has been completed in January 2020 and RFP for indigenous construction of conventional AIP submarines has been issued by the Indian Navy in July 2021. Navy also issued EoI for Naval Utility Helicopters in February 2019, however, the selection of SP is still awaited.

> *SP model was directed at transforming India's defence production from hitherto being 'import dependent' to being a 'foreign-exchange neutral' one*

The indigenization focus has been emphasised by the MoD in the DAP-2020 which introduced a new category of 'Buy Global - Manufacture in India', introducing Leasing of assets, and a need for faster process for acquisition of Information & Communication Technology (ICT) systems given their fast obsolescence. The nomination of DPSU yards in shipbuilding has been done away with and nomination, if resorted to must include Private Shipyards along with Public on merit. Emphasis on localization has been provided through enhancement of IC content by 10% across acquisition categories. The FDI and foreign ownership limit has been enhanced to 74% under automatic route; however, procurement under Buy (Indian - IDDM), Make, SP and Design & Development categories restricts participation by Indian Owned and controlled companies with FDI up to 49% in order to safeguard the fledgling Indian Defence industry. The Government has also released two Positive Indigenization Lists totalling to 209 items, that include platforms, complete systems, and building blocks with clear timelines to enable existing capabilities of domestic companies as also to be ready with targeted capability and capacity development in near future. Given the impetus, the indigenous ordering has increased from ~30% in 2014 to 62% in 2021. With the opening and promoting of Defence Exports in 2016, India's Defence exports have dramatically grown from Rs 700 Crore in 2015 to Rs 10700 Crore in 2020 and currently are around Rs 9500 Cr in 2021 & 2022, even under Covid conditions. The draft Defence Production policy has been recast into draft Defence Production and Export Promotion Policy (DPEPP) and the same has already been reviewed by the EGoS and is currently under consideration by the EGoM, before Cabinet approval. The DPEPP has laid emphasis on building a robust Defence industry with inclusion of Private sector on level playing basis with the Public sector to address the Nation's targeted growth aspirations. While the intent behind the creation of these ideals is certainly credit worthy, its implementation holds the key to ensuring success.

While the incremental evolutions of the acquisition procedures and policies are steps in the right direction, more needs to be done to implement the policies in the right earnest for India to become Aatmanirbhar in Defence. Some of the issues to focus are -

> *Given the impetus, the indigenous ordering has increased from 30% in 2014 to 62% in 2021.*

- For building long term indigenous capability we need a much higher focus on **Make Projects** that help Industry build IP. Own IP alone grants us freedom to Export, besides becoming self-reliant. Towards this, while we see a good traction on Make - II (Industry funded projects) in the recent years, the Make - I (joint funding by MoD and Industry) is yet to take off nearly 15 years since its incorporation in the DPP. Make - I programs alone can help India build platform capability and thus large ticket exports.

- The **Non-level playing field** between Private and Public sector need to be evened out urgently. While a lot in this direction has been implemented in the policies, implementation has been far from wanted. These include issues like preferential treatment to DPSUs to nominate contracts, Customs Duty exemption on imports, provision of corporate bonds in place of collateral bank guarantees against advances, contract performance bond / warranty PBGs, exemption against Integrity pact bank guarantees. Also DPSUs enjoy usage of Government funded assts for competitive programs without a capital charge while Private Companies must invest in asset creation as well as incur servicing costs.

- The sanctity of highest preference for indigenously designed, developed and manufactured systems / platforms (i.e. **IDDM Projects**) need to be unconditionally upheld even if one single partner from the Private sector has the capability to realize the same. The current acquisition practices strive to have multiple competing agencies to allow price discovery and thus the IDDM capability gets ignored in relevance to arriving at a L1 price with multiple bidders. However, this can be seen as being diluted for DPSU offerings that get referred to categorisation committees, as nominated cases are not being called for industry presentation. Suitable processes need to be instituted where a Private sector entity can be established on par with DPSUs for single party categorisation under IDDM. While this is enabled in DAP2020, same is not implemented.

- **Strategic Partnership model:** After several years of deliberations, the SP model was implemented in DPP2016. While this was intended for inclusion of Private Sector in system of systems and platform projects, in addition to the existing DPSUs, DPSUs are also being permitted to participate in SP programs with clear advantages against Private Sector, as brought out in the point above on non-level playing field. The usage of Government funded infrastructure and assets with nil charge enables DPSUs to easily outbid the Private industry, who must invest in asset creation as well as service the assets. This dilution in SP defeats the entire purpose of inclusion of Strategic Partnership as the acquisition eventually boils down to the L1 methodology of bidding.

- Government of India has recently advocated the **QCBS (Quality cum Cost Based Selection),** but the same will not automatically apply in Defence Acquisition without appropriate amendment in the DAP 2020 and institutionalising the processes and worksheets to implement the same. This needs to be done expeditiously.

- The DPP 2016 enabled the User to include **Enhanced Parameters** to prefer acquisition of superior products. Unfortunately, no RFP of significance has yet implemented the same as the acquisition process remains L1 based. The new QCBS process being already implemented across Government Departments for placement of EPC / turnkey contracts, need to be institutionalised in Defence with Enhanced parameters becoming one of the major basis for differentiating the bids in value terms and not cost alone.

- **Higher Indigenous** Content need to be incentivised given GoI's focus on Aatmanirbhar, especially for quantitatively higher indigenous content delivered by the Contractor. This can be included in the QCBS system, upfront and graded for incentivising far higher indigenous content (60%, 70%, 80%, 90% or higher) over the stipulated (50%) under the DAP 2020.

- DRDO, as part of MoD exclusively enjoys Government funding for Defence **Research & Development** @ 5% of the Defence budget. It is to the credit of DRDO that it has contributed to the Nation's progress on strategic programmes, fighter aircrafts, etc. It is equally important to acknowledge Private sector's role in realizing a sizeable part of these programmes. Having built capabilities and capacities, through such partnership with DRDO, Industry is envisaged under the Policy to undertake Technology and Product development in domains except the High-Tech Complex and Strategic sectors that the DRDO must continue to develop. On the other hand, even after 15 years of institutionalising the MAKE (recently named MAKE-I) category and stipulating joint funding of such programs with major share of funding coming from the MoD (80:20 funding ten raised to 90:10 in 2016 and revised to 70:30 under DAP2020), no program has yet been placed under the MAKE-I category. In the process, private industry has been effectively denied access to R&D funding for major platform technologies / programs.

- Since the defence industry in India is a monopsony, there is hardly a room for long-term sustained investments by private angel investors. Realising this, MoD has implemented initiatives like the iDEX and the Technology Development Fund targeted at MSMEs / SMEs. However, it is pertinent that the funding limits are small which limits development of sub-systems or mere innovation of known technologies and product development to build scale and system of systems. These are critical to not only become self-reliant but also to export them, with control over IP enabling the same.

- The need for **Research & Development Funding** needs to be seen on the backdrop of disallowance of accelerated Tax incentivisation scheme of the Government for R&D investments under the Income Tax rules. While the Government may argue that the Income Tax has been cut from the average ~35% to ~25% and that there is more money at the hands of corporates to do R&D, it needs to be seen that under the 200% accelerated benefit, the

Government was returning nearly 70% (200% @35%) of the R&D investment to the corporate undertaking R&D under qualifying domains, and in the process the Corporate was putting in 100 % but in-effect incurring only 30% of cost of R&D ignoring the time value of money. In today's regime, the same has become 75% to be put in by the Corporate and the Government having cut its share from 70% to 25% of R&D investments made.

> *The Government must also consider institutionalizing a "Foreign Military Sale" entity for promulgating exports to friendly countries.*

- **Export opportunities:** The defence sector had production being undertaken by the Government owned entities with "manufacturing ToT" under "Licenced manufacturing" and this did not permit any exports, limiting overseas revenues to UN led peace keeping forces/ few indigenous products, parts and components. However, post opening up of the sector for platform level exports, the private industry leveraging their wider business network across the globe has brought in significant exports (over 94% of total exports) over the past 5 years. While the Government has several initiatives to promote Defence exports, following is suggested to enhance the same.

  - The Lines of Credit is known to be offered to friendly countries. It is Industry's experience that complete system / platforms do get preferentially nominated to DPSUs citing track record that was denied to private sector through nominations of domestic requirements. Also, it has been seen that where private sector has track record, DPSUs are also allowed to compete by citing "Price discovery" while private sector built the track record by competing against the same DPSUs. By inclusion of the private industry across the board and allocating them the exports of goods already sold to GoI, the End User would also have a better choice at a competitive offering and build volumes.

  - It is often observed that for acquisition by Global End Users, there is a requirement of the equipment being "in-service". Accordingly, induction of all trial cleared equipment would pave the way for better product positioning at a global level.

  - The Government must also consider institutionalizing a "Foreign Military Sale" entity for promulgating exports to friendly countries. This would provide a win-win-win situation to the Buyer country, the Seller and the Government of India through better price discovery and risk mitigation.

In summary, the Indian Defence Industry has matured over the years and there are visible green offshoots that indicate the preference of the Government machinery and the End Users towards the Indian private sector. Also visible are the increasing number of local industry players that find value in participating and contributing to the Defence sector. Although this is required to scale up in a big way going forward by providing a level playing field.

Building indigenous capability is strategic and confers on India the ability to gain an edge over adversaries in the form of surprises through force multipliers. It also positions India for export of Defence Systems / Platforms, and achieve a balance of trade on defence goods.

The SME's/MSME's and start-ups form the foundation of the tier-based ecosystem in Defence product development innovation and Production. As a nation, we need facilitative environment to promote generation of Intellectual Property through Make Programs by 'trusting' abilities of Private Companies that have invested in Defence and gained maturity and clear these at an accelerated pace. The tierised value / supply chains generate multiplier effect to economy, in addition to providing employment opportunities and therefore need to be incentivised for higher indigenisation. The Government needs to reinstate the tax deduction incentives for R&D in a targeted sector like Defence to promote development of IDDM products and services developed through in-house R&D, to be sold domestically and exported.

The Indian Defence Industry has the necessary mindset and capabilities across target segments for indigenization as proven post opening up of the economy in 1992 and replicated in the Defence Sector since opening in 2001. With adoption of a trust-based model, the MoD, can facilitate building the much needed robust and vibrant Defence ecosystem for Military Civil Fusion, emerge Aatmanirbhar, and become export surplus Nation in the Defence Sector, having gained strategic independence in foreign policy. While the Government has taken rightful steps to promote the same through Policy framework, their implementation requires resolve and bold steps to speed up decision making by eliminating repetitive / redundant processes, questioning the need for many time-consuming processes, reform procurement through merit based acquisition and thus truly unleash self-reliance and exports. I believe that the Make-in-India for defence is the journey that is evolving from Make-in-India to Make-for-India, and lead to Made-in-India for the World.

Jai Hind!

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India as the Global Manufacturing Hub 7

- By Harsh Pati Singhania

The Covid-19 pandemic has ravaged all major economies, including India. Even if the Indian economy manages to grow at 9-10% (consensus estimate), we would just about reach the pre-pandemic level of GDP (2019-20) by the end of March 2022. Effectively, we are losing out 2 years of potential growth (about Rs 19-20 lakh crore or 11-12% of pre-Covid level GDP). And this is just looking at the formal sector, which effectively indicates the widening disparity of the income levels. The latest IMF projections (World Economic Outlook (WEO) - Oct 2021) give a good idea of the lasting economic damage by the pandemic. The size of the Indian economy is likely to be $3.8 trillion in 2024, a sharp reduction from the size of $4.63 trillion as predicted in the Oct 2019 edition of WEO, just before the pandemic struck. The value of economic activity in India will thus be far lower than what its pre-pandemic trajectory would have suggested. More concerning is the fact that per capita consumption is pegged back by 4 years due to the pandemic. Although demand is gradually reviving, there is not enough meat on the bones yet to energise the economy.

"The biggest risk is that if mass unemployment is allowed to become entrenched or viable businesses go bust, the loss would become permanent."

Is this damage permanent loss?

While large parts of the economy were shut during the pandemic, it did not reduce the productive capacity of the economy. Thus, despite the huge short-term fall in GDP, which happened to most countries of the world and not just limited to India, the greater worry is whether this would do permanent damage to the economy. The biggest risk is that if mass unemployment is allowed to become entrenched or viable businesses go bust, the loss would become permanent.

The primary goal thus rests on how to get back to the high growth path that would provide gainful employment to people and improve the overall standard of living, and not restricted to a few sections of the population. With services sectors, especially the contact-intensive ones that are way-off their pre-pandemic levels and only gradually recovering lost ground, the onus would lie on the manufacturing sector to be the key job creation engine and pull up the Indian economy to greater heights.

The Covid pandemic has revealed the perilous nature of global supply chains on account of its overdependence on China. This has prompted global firms to expand the geographic spread of their facilities and look for new manufacturing centres as a part of a risk hedging strategy for the future. This is expected to help them focus on resilience and create a balance along with cost competitiveness.

China-Plus-One strategy - Advantage India

This presents a great opportunity for India to reap rich dividends by creating a manufacturing-friendly environment and offering attractive prospects to global players for setting up units in India, and to help companies build resilience and manage risk. According to World Economic Forum, India can play a significant role in reshaping supply chains and could contribute over US$ 500 billion annually to the global economy by 2030. In fact, Indian manufacturing has also shown great resilience during and post the second wave of Covid-19.

India already has all the necessary ingredients for its major industrial push in the form of its huge semi-skilled labour force, with an increasing share of young working population, and a big domestic market (world's sixth largest consumer market). There is also a clear shift in Government of India's commitment in making India fulfill its manufacturing potential. Already the corporate tax for new manufacturing units is the lowest among major economies. Government has also announced a slew of measures and ushered in structural reforms to gear the Indian economy in the medium term, of which the most notable is the Production Linked Incentive (PLI) Scheme. It aims to capitalize on this opportunity and present itself as a viable alternative manufacturing destination. Most significantly, the PLI scheme is likely to induce capex growth in new-age sectors where India is largely import-dependent.The necessary support infrastructure is also being developed, with setting up of manufacturing clusters. There would also be more emphasis on renewables and digitization to move the Indian economy to a more sustainable growth path.

Incentives would work only with agile execution on the ground

However, the incentives alone like the PLI are not enough to manage this shift as it also requires the creation of a best-in-class manufacturing ecosystem that offers efficient and highly trained manpower, encourages innovation and allows ease of doing business. Although things are improving on the logistics and infrastructure fronts, namely in the form of Dedicated Freight Corridor (DFC), National Investment Pipeline (NIP), covering multiple sectors, including transport, energy and water, as well as Bharatmala and Sagarmala, the progress, unfortunately, is not fast enough. The planned investment is also not always accompanied by proportionate capacity creation. While advance in road construction is satisfactory, progress has been relatively slower in railways, inland waterways and port construction. The skewed modal mix (high dependency on roads) also impacts overall logistics performance. Transportation alone accounts for about 40% of total logistics costs. As a result, logistics costs remain high in India at over 14% of GDP compared to 8-10% in the US, Europe.

To address this, we need to optimize the logistics modal-mix and have Multi-Modal Logistics Parks with different modes of transport access, which would help address high overheads due to lack of last-mile connectivity. The Parks would provide world-class storage solutions such as cold storage, mechanized warehouses, and handling as well as delivering value-added freight services. Government could also set up a few Coastal Economic Zones which are large, with good logistics facilities. According to a World Bank study, the economic growth in the SEZs is 4-5 times more than average due to the infrastructural advantages they enjoy. The infrastructure situation in India would also improve when mega projects in the area of logistics like Sagarmala, Bharatmala and DFC are fully operational.

Government could also set up a few Coastal Economic Zones which are large, with good logistics facilities

Industrial power tariffs in India are about 15-35% higher than comparable Asian peers. To further improve India's manufacturing competitiveness, the practice of cross subsidization has to end. The government must ensure completion of the proposed power sector reforms in the form of encouraging franchisee model or privatization of distribution companies. For example, in Odisha's Distribution Franchisee Model, the steepest reduction in AT&C losses was achieved in a predominantly rural area. Separating feeders for agricultural use from non-agricultural ones can also be another option as huge benefits seen in states such as Rajasthan, Andhra Pradesh, Gujarat, and Maharashtra with large rural or agricultural consumer bases testify.

Though the maze of labour laws has not prevented India from industrializing or attracting foreign investment, it has made entrepreneurs' and investors' life unnecessarily difficult. Consider this, of the 1,536 Acts that govern all economic activity in the country, about one third pertain to only labour, while about half of all compliances relate to labour. With the four Labour Codes in place, it should become easier and cheaper to do business in India. But with states dithering to frame rules under those codes, India's ambitious labour reforms are further delayed, if not derailed. Given the scale of job creation that India needs over the next decade, estimated to be over 100 million by 2030, there is an urgent need to leverage labour reforms at the earliest.

With ease of compliance would come increased formalisation, which will lead to a proliferation of larger enterprises, which are found to be 11 times more productive (McKinsey) and create more organised jobs (employ one-fifth of the people in the direct formal workforce). The large and mid-sized players are also better positioned to adopt economies of scale for global manufacturing and emerging industry 4.0 technologies. No doubt MSMEs are the backbone of the economy and should be incentivized. But large companies would drive the growth and create large scale employment, which in turn would become the platforms for the MSMEs to become more integrated, as we have seen in the case of the auto industry. State governments may introduce incentives that will draw FDI at regional levels, as has been witnessed in the case of Telangana and Tamil Nadu.

The simplification of central labour laws would certainly be an improvement, but the key is the clarity and practicality of reforms. While we have improved on EoDB ranking, execution on the ground continues to be the main roadblock. This regulatory burden comes at a heavy cost, with last-mile inspections being a significant source of uncertainty for businesses. To improve upon this, we need to enhance inter-ministerial and inter-department collaboration and have structured cross-functional programs to rationalize compliance requirements. A change in attitude at the ground level is also essential, particularly for inspections and approvals. There should be increased coverage of single-window clearance and deployment of digital-first solutions.

It is equally important to facilitate access to land banks for new investors. However, the regulation in India for acquiring land is too cumbersome, with more than 1,200 laws related to land, alongside about a multitude of federal laws (Centre for Policy Research). This makes the process of land acquisition for industrial use time-consuming and cost-escalating. This process could be significantly eased by digitising land records, so that there is limited risk in land procurement. Some states have implemented this and measures like land pooling, enhancing the state land bank for industrial use, etc. For example, to ease conversion of land from agricultural to industrial use, Karnataka has implemented an online, single-window system that requires fewer document submissions for land use conversion for industrial purposes. Approval is automatic after 30 days if no response has been received. According to McKinsey, unlocking supply in land markets can reduce land costs by 20-25%. The GIS-enabled India Industrial Land Bank (IILB) established by Government of India is a one-stop source of information related to industrial infrastructure and provides details of more than 5.6 lakh hectares, at the click of a button.

In the fast-changing post-Covid world, labour advantage may not be the only cost arbitrage for project viability. Supply chains are transforming as the convergence of additive manufacturing (3D printing), artificial intelligence (AI), robotics and the internet of things (IoT) is dramatically altering the global production landscape for all types of goods. Manufacturers will no longer have to rely on multiple stakeholders scattered across geographies, and digitization would help switch to just-in-time models. This would raise the quality and speed of decision-making and help to reduce costs.

Enhancing skill development to create a large pool of skilled workforce is also an important element of India's next wave of manufacturing evolution. With greater automation becoming the norm in every sector, which has accelerated post-pandemic, the nature of jobs has also changed, creating a demand for specialist workers. With an eye on this, India needs to improve the skill of its workforce for it to become a preferred global manufacturing hub.

India's integration into global value chain started a decade back with free trade agreements (FTAs) with ASEAN, Japan and Korea. But they did not help in our export competitiveness in a great way. While India eliminated tariffs on 74% of its market to ASEAN countries, the reciprocity has been less generous. This however does not indicate moving back on that process, but instead FTAs should be more balanced, unlike in the past. In fact, the government is already on the path to sign FTAs with 6 nations - the US, the UK, EU, Australia, Canada and the UAE. However, it would resolve only part of the problem. Though tariffs have come down significantly under the FTAs, Non-Tariff Barriers (NTBs) have put additional restrictions and have become more restrictive than existing tariffs. There is thus a need to build extensive Government-to- Government relationships to reduce non-tariff barriers on Indian exports.

> *There is a need to build extensive Government-to-Government relationships to reduce non-tariff barriers on Indian exports.*

Digital transformation is inevitable post-pandemic

The best thing about the current disruption and uncertainty is that it is opening new avenues for revenue and future growth. Businesses need to pivot to the new opportunities and redirect their resources to build new capacities and competencies. The Covid-19 pandemic has accelerated the process of digital manufacturing by at least 3-4 years as it is a business imperative now and no longer just another option for them. Through extensive use of digital technology, manufacturing facilities are becoming significantly more efficient, and disparate factory assets are operating seamlessly by linking them digitally with new generation systems. Companies of all sizes are already rethinking their entire business models to become truly digital, connecting end customers and enterprises seamlessly. Digital disruption has led to introduction of several new innovative business models that might have been deemed impossible just a few years ago. Digital leaders often score far higher than their traditional counterparts regarding functional benefits like saving time, reducing costs, and customization.

However, this accelerated wave of digital initiatives is not the real business transformation needed for success in the digital age. We have to go beyond simply making the existing processes more digital and applying digital technologies to do what we have always done, like process automation. The post-Covid future has forced our hands to live differently - whether at work, how we live, interact or collaborate and thus requires more dynamic changes to build real, long-term competitive advantage to succeed. Digital technologies would need to become an integral part of the organisation through which it can create more value. For e.g., Phillips transformed from a lighting business to a company focused on health technology services and solutions. One can also look to create value through platforms, ecosystems, and partner networks rather than doing it all alone. One may even look at subscription-based models or pay-per-use and offer product as a comprehensive service to enhance revenue streams and foster stronger relationships with customers. But not everything needs to be digital. An effective new business model is one that strikes the right balance and integrates the digital, physical, and human world.

Concluding remarks

India is perhaps the only large developing country which is a viable alternative for investors who want to diversify their supply chains. India has emerged as the second most sought after manufacturing destination across the world as reflected in the Cushman & Wakefield's 2021 Global Manufacturing Risk Index. There is a growing interest shown by manufacturers in India as a preferred manufacturing hub over other countries. India had already emerged as the top 3 Greenfield FDI destinations even before the pandemic. The FDI inflows in the last 5-6 years accounted for more than half of the FDI received by India since the liberalization era of early 90s. And more significantly, these investments came in diverse sectors ranging from highly sophisticated areas such as engineering, biotechnology, and pharmaceuticals to resource intensive industries such as food processing and chemicals. India also attracted large scale investments in labour intensive manufacturing processes of electronics, textiles, and footwear industries.

India's industry is already moving in the direction of industry 4.0, and the manufacturing capability and scale would improve with further ease of doing business in India, which would in turn spur confidence and attract foreign and domestic investments to set up and expand businesses in India. The PLI Scheme is expected to further hasten this process, which otherwise would have taken longer to push the next capex cycle. Apart from inviting foreign companies to set up shop in India, the scheme would also encourage local companies to set up or expand existing manufacturing units. Moreover, considerable deleveraging by the Corporate sector, amidst lower interest rates and surplus liquidity, will create space for further growth and entrench India as a global manufacturing hub.

Mr Harsh Pati Singhania is Past President, FICCI and Vice Chairman & Managing Director, J K Paper Ltd

Riding the Wave of Entrepreneurship 8

- By Ajai Chowdhry

> *Entrepreneurship led economic growth is more inclusive.*

Many young fearless entrepreneurs have set the path for a wave of entrepreneurship in the country. This entrepreneurial spirit is being recognized as the driving force of the market and the economy at large. Innovation is crucial for a thriving economy and especially in today's increasingly competitive world. In India, entrepreneurship is accelerating innovation in areas like Education, IT, Healthcare, etc and generating solutions to many such problem areas. India has witnessed several innovative ideas and businesses driven by start-ups thus leading to entrepreneurship emerging as a valuable input to the economic growth of the country.

Economic development of a country is supported by entrepreneurship in several ways. It is a key contributor to innovativeness and product improvement and a pivotal ingredient to employment creation. Another important aspect to be considered is that in the context of the Indian market, entrepreneurship led economic growth is more inclusive and hence Governments, both at the Centre and State level, have been taking initiatives to boost the entrepreneurial ecosystem as they realise the benefits entrepreneurship brings to the economic growth of the country.

If we look historically, Indian entrepreneurship started way back, where trading was the major area and India dominated world commerce around 1500 AD. In 1600 AD, Surat merchant, Virji Vora was among the first entrepreneurs. This was followed by Birlas, Goenkas, Srirams. And then the new changemakers like JRD Tata, MS Oberoi and Jamnalal Bajaj.

The roots of IT can be seen in the setting up of schools of technology (IITs) and business management (IIMs). And the entry of IBM in the 1950s. In 1968, the Tata Group set up TCS and that was the beginning of off shoring from India.

When globalization hit India, the IT industry grew with new entrepreneurs like Shiv Nadar, Narayana Murthy and Azim Premji who became the icons of entrepreneurship.

With venture/angel funding non-existent, most of these businesses were bootstrapped. I still remember when six of us set up HCL, which is now a US$ 9.25 billion company, we started out with US$ 2500. Today, it is a US$ 180 billion industry primarily focused on the global market.

The new models that I see ahead are going to be based on Deep Tech and RP driven. The target customer is no longer only India and an increasing number of start-ups in India are not born global.

These entrepreneurs are building in India for the work and becoming more product focused rather than services. The government's big initiative of Digital India has sparked off many stacks like the India Stack, Health Stack, Digital Stack. Start-ups are using these to create many applications and I see AI and ML to create many global solutions across sectors.

Interestingly, the new wave in India is also creating more B2B start-ups. The demand from global markets is huge. Most of these will have Deep Tech and IP driven innovation at its centre.

Druva, Delhivery, Udaan, Perpule, Capital Float are now growing really fast. Freshdesk is India's first SAAS Unicorn and selling to the world. As of mid-2019, India added 2,300 B2B start-ups in the last five years. This is happening due to increased corporate involvement, B2B focused VC funds and rise of DeepTech, AI, IOT and RPA.

Due to financial constraints and competition in the metro cities, entrepreneurs are setting up industries in Tier-II cities.

Consumerism takes off

As the expendable income increased, many new business models got created. More capital became available. And as internet and mobile phones happened, access improved dramatically. Therefore, models around e-commerce, specialized retail, marketplaces happened.

So, there was a huge wave of entrepreneurial activity in India. Due to this, and the success of such models in the USA, new opportunities got created. This resulted in the birth of Flipkart, Ola, Swiggy, Paytm. A lot of these companies learned to compete with global entrants.

Economic slowdown is one of the reasons that has led to a downturn in employment opportunities in the country. Unemployment amongst the youth is on the rise and in this regard, entrepreneurship is playing a key role in creating jobs. An entrepreneur is not just creating self-employment but also building a structure for small to large scale employment. As these enterprises grow, the employment opportunities increase. In India, many start-ups that started out as home-based ventures are today employers to hundreds of individuals. A company/entrepreneur with an innovative idea has the power to build employment and in turn stimulate the economy.

Besides employment, another area that is witnessing development by virtue of entrepreneurship is modernisation in the regional areas or Tier II cities in the country. Due to financial constraints and competition in the metro cities, entrepreneurs are setting up industries in Tier II cities. Some State Governments like Kerala, Maharashtra, Tamil Nadu are offering schemes/incentives for setting up of SMEs in Tier II and III cities. The growth of businesses in these smaller towns is leading to several public benefits in areas like better transportation, health facilities, education, etc., thus promoting a balanced development in the country. This is also leading to more and more entrepreneurs setting up base in their hometowns due to lower costs and affordable talent, driving investor attention and incubation centres to these cities too.

This brings us to another crucial element of standard of living. To ensure people can afford good quality goods at reasonable prices and avail quality services is a crucial feature of a developing economy. Today, entrepreneurial driven economy is the answer to this need as it drives innovation in manufacturing of goods and services leading to availability of goods at lower costs, making them more affordable. Entrepreneurs explore opportunities, make effective utilisation of resources and create new goods and services. These are for consumption within the country and hence will lead to growth in the national income and invariably reduce our import dependency, making the economy stronger.

Entrepreneurs are no doubt catalysts of change and innovation. Entrepreneurship stems from the need of fulfilling a gap that exists in the market and this sets the entire process of development in motion. The entrepreneurial growth in our country has triggered a host of economic benefits, together with new businesses, new jobs and new products and services.

Newer areas are now opening up for entrepreneurs – Space, Drones, Deep Tech and so on. As a result, India is riding on a wave of great growth in start-ups. Now every month, we are left counting the number of unicorns we are creating. In addition, we are also seeing IPOs taking off for start-ups. This is time to be in India if you are a start-up.

Dr. Ajai Chowdhry is Founder HCL

Making India a Digitally Powered Economy 9

- By CP Gurnani

India is a nation, which has all the right ingredients - digital stack, talent, infrastructure, and scale - to become a digitally powered economy. Even when the pandemic hit us hard, we were able to withstand the challenges, because of these fundamental pillars which held our fort. We were already on our journey to become a global digital powerhouse as can be seen from the evolution of the India stack and JAM stack (Jan Dhan Bank Accounts, Aadhar and Mobile), which enabled the creation of a touchless environment even before the pandemic.

> *We must continue to embrace and enhance our digital capabilities and build a resilient digital economy.*

Now, as we bounce back from the pandemic, we are in the midst of a digital revolution that is transforming the lives of people, and the stature of the Indian economy in ways and volume that was hard to imagine a few decades ago. Backed by this growing digital prowess of our nation, the technology industry unearthed and leveraged significant growth opportunities especially in digital transactions space during the pandemic and the overall picture still looks quite promising.

A few of the recently released reports suggest that the Indian economy is poised for steady growth. For October 2021, the Purchasing Managers' Index (PMI) for manufacturing was at 55.9 - the highest since February 2021. Private investments are also at an all-time high - the first time in 16 years - which certainly adds to the cheer as large new projects mean greater scope for capacity expansion and better employment numbers in the future. With visible green shoots emerging after such a challenging period, it is important for us to leverage the upward economic growth trajectory of our country and take it several notches above. For this, we must continue to embrace and enhance our digital capabilities and build a resilient digital economy.

Here are what I believe will be the top 4 strategies that will ensure a successful run towards a five trillion-dollar economy: -

Investing in comprehensive digital skilling

India's growth story has its core in digital. With a lot of citizen services becoming digital, such as digital transactions, virtual classrooms, digital marketplaces, and so on, it is time to take a huge leap and accelerate the adoption of digital technologies across industries and sectors. One of the important steps needed for this is to develop the right skills from the grass-roots level. India's skilling ecosystem has already turned digital, however, we need to make it more effective and inclusive by:

Channelizing the skilling initiatives to make it more effective - India is a country with a large youth population and while there is potential, there is a need to channelize our skilling efforts. This will require collaboration between government, academia, and organizations. For instance, governments can identify the set of problems faced by a particular state, be it in healthcare or the development of sustainable cities or any other such area. The academia and organizations can then step in to train the youth in the required areas and onboard them to create solutions for the problem areas. We have a huge talent in coding and software development, and this needs to be leveraged by creating services that enable the students to code in their native language. Learning platforms should support diverse languages and dialects to ensure inclusive learning and upskilling. This is something that the tech organizations can focus on, and it will have a huge impact in making skilling all-inclusive.

Focusing on research and deep-tech - For building an 'Atmanirbhar Bharat' (self-reliant India), the core that needs to be strengthened is research and development. To do so, young minds should be encouraged to join the research force, consider it as an aspirational job. According to NASSCOM, India will need four times the existing digital workforce, over the next three years, to cater to the IT industry demands alone. This gap can only be bridged by a radical shift in building digital capability skills. At school and college level, more impetus should be given to covering digital courses in deep tech such as Artificial Intelligence & Machine Learning, Internet of Things, Cybersecurity, Blockchain, Robotics, Drones, and Automation. India can become a game-changer in innovation with its "More for Less" innovation model that leverages its strength in indigenous research and extraordinary talent ecosystem to ensure successful outcomes with minimum investments.

Bridging the supply and demand gap in talent - One of the main gaps in leveraging our talent potential is the failure to allocate the right talent at the right place, which results in a mismatch in the supply and demand of talent. Digital can play a great role in correcting this mismatch through platforms that enable employees to identify opportunities that match their skill sets, and upskill so that they are aligned with skills and resource requirements of an organization.

Adequately and appropriately skilled people form the core strength of a growing economy, hence proper training should be imparted; efforts must be made to accelerate the development of employable skills related to new-age digital technologies and requisite soft skills that will help highlight India on the world map as a global digital talent hub.

Enabling an all-inclusive socio-economic growth with digital infrastructure

Technology has the potential to lead us towards a shared future in a fragmented world by acting as a leveler that binds all stakeholders together - irrespective of their age, race, social status, or gender. In a country like India, it can play a major role in achieving our goals of ensuring seamless access to education, financial inclusion, and employment for all. For this to happen, we need to first address the digital divide, as this is crucial to India's vision of attaining sustainable growth, which implies that it should become a 'One for All' solution. The pandemic has indeed been a 'catalyst' for digital transformation, but we must ensure that the current pace of digital adoption should not exaggerate the previously existing digital divide. Low data costs and mobile penetration have already proved to be a huge game-changer of the 20th century and under no circumstances should we lose sight of the larger game plan. For this, we need to focus on getting the basics right. We can't really move ahead unless we are able to develop proper infrastructure, quality healthcare, education, and job creation. These are not any luxuries but the fundamental rights of all human beings. 5G will have a direct impact on the creation of additional GDP worldwide in the next decade and connectivity enabled by 5G holds great promise to government and enterprise services.

> *Championing the start-up ecosystem will help in stepping up and getting closer to our collective 'trillion-dollar economy' dream*

Securing 'Data' in a digitally wired world

As it is rightfully said, in a digitally connected world, a byte of data can either boost or bite your brand. Undoubtedly, data and trust form the biggest currency of the digital world and therefore, policies around data privacy and security need to be continually worked upon. A digitally wired world comes with complex data transactions, and this calls for data encryption, tokenization, and key management practices that protect data across all applications and platforms from any unauthorized access and data corruption. In today's world, which is increasingly becoming online, data is no longer under the control of an individual alone. Hence, there is a need for right regulations for data privacy, and social media policies, and these need to be implemented with efficiency and speed.

Thinking minds, always thrive - nurturing the start-up ecosystem

With an overall population of over 1.3 billion and more than 65% of its population below the age of 35, India is truly the land of talented, knowledgeable, and skillful people. Championing the start-up ecosystem will help in stepping up and getting closer to our collective 'trillion-dollar economy' dream. Social entrepreneurs who are the social innovators of a nation, can be the agents of change and create significant change using innovative ideas and can also catalyze economic growth. For instance, twenty thousand social enterprises in Australia employ more than 300,000 and give 2-3% of GDP, as per the report of the Centre for Social Impact.

While the pandemic impacted the global economy, it also exposed the fractures in the societies that we have built. It further emphasized the need to build a sustainable future. Transitioning from a linear to a circular economy- a restorative or regenerative economy that lays equal emphasis on people, planet and profits- is perhaps the only viable solution that can ensure this. There is a lot that start-ups can do to deliver game-changing results in this regard.

For instance, start-ups can scale up innovative services such as Mobility-on-demand, wherein, vehicles can be routed in real-time, to meet the demand for picking up and delivering passengers in fast-varying environments and can help in exploiting the unused vehicle capacity to reduce congestion. Another such area is drone logistics, which is still in the nascent stage. For example, a medical product delivering company in Rwanda, which uses drones for delivery recently completed an analysis of a real-world, scaled UAS (Unmammed Aircraft Systems) logistics system's deliveries based on actual customer and order data, and found a 98% reduction in delivery emissions compared to using cars. Agritech start-ups are a ray of hope for Indian agriculture. They can develop innovative solutions to provide information and knowledge about various agronomic practices, perform organic farming, connect the farmers to market accessibility selling products online, and automate farm procedures, by leveraging technologies such as big data analytics, IoT, Machine learning, etc.

Circular and local models have proven to be more resilient and efficient in addressing the needs of the masses and catalyzing the recovery of businesses. We must hence encourage start-ups to go vocal for local by coming up with local alternatives to enable local supply chains. During the early stages of the pandemic in India, we were in dire need of PPE (Personal Protective Equipment) kits and masks for our frontline line workers. However, within a few weeks of the lockdown, our country managed to manufacture these kits indigenously in huge numbers. This provided employment opportunities to many and together, we were able to turn the situation around successfully. While it is important to go vocal for local, there is a need to foster global collaboration to provide the necessary infrastructure to collectively develop and sustain a circular economy.

The inherent indomitable human spirit to survive is in itself a huge force that has helped us time and again to tide over crises - this time by riding high on the back of the digitization wave. Digital economy is the 'new normal' now, and it is the gateway to the future we have always imagined. Yet, there needs to be some solid groundwork to be done before we can take the flight and join other 'Global Superpowers'.

Mr CP Gurnani is Managing Director & CEO, Tech Mahindra

Innovation and Entrepreneurship Wave in India

10

- By Priya Kapadia and Amit Chandra

In science credit goes to the (wo)man who convinces the world, not the (wo)man to whom the idea first occurs.

-Francis Galton

As the world emerges from the pandemic - the biggest crisis it has faced since the world wars, two facts should not escape us - first that humanity has been saved by innovation and entrepreneurship. Second, to almost everyone's surprise, an immense amount of wealth has been created during a period of great uncertainty, fuelled yet again by innovation and entrepreneurship!

Not just limited to the pandemic, innovation is galloping ahead fuelled by a digitally forward nation.

We aren't suggesting that any of this was either quick or easy. To the contrary, the seeds of vaccine innovation were sown over two centuries ago in the fight against smallpox by Doctor Edward Jenner, a country doctor who experimented the effects of inoculating an 8-year-old child. With humanities' back to the wall, small teams of scientists, often led by women, sometimes working in University Labs, rapidly innovated to come up with the platforms that have saved the world. When brought to India, and additionally powered by our entrepreneurship, they were mass produced resulting in the largest and cheapest vaccination program globally, one that now promises to power the drive in emerging markets! Today, India is at the cusp of not just having one major vaccine producing company, but multiple players, including its own DNA and mRNA vaccine platforms that could potentially be global game changers in years to come. And that is the bedrock of innovation. To inspire profound ideas, which when combined with entrepreneurship, results in change at scale.

India has been moving to the "Take Off Point" for the past decade

As individuals at the helm of an innovation focused organization, we appreciate the importance of the often arduous journey an idea takes to eventually become an innovation that is recognizable. Via our own work at the Foundation, we have observed this journey unfold in numerous cases as Indian entrepreneurs have begun to start pushing across sectors to create an impact. This, we believe, will play out its full effect over many decades to come.

A number of factors have been converging to boost this surge in entrepreneurship and innovation. Not just limited to the pandemic, innovation is galloping ahead fuelled by a digitally forward nation.

The growth, over the past decade or so, and dramatic penetration of the internet, coupled with the rise of e-commerce is creating the always-on economy. This has already invigorated many app based, logistic and database/analytics-based innovators and it seems like there is no slowing down! In recent times, these start-ups are becoming increasingly sophisticated with rapid technological advancements in AI, IoT, location data and importantly breaking new thresholds of geographic and linguistic barriers.

The huge success of the tech and innovation in China over the past two decades, led to extraordinary wealth creation and has showed everyone what is possible in India with the creation of the right conditions. The rollout of UPI, surge in FinTech with favourable government policies, have all had created tailwinds for this movement. On the back of this, Venture Capital and Private Equity firms went on to lead the charge by backing promising entrepreneurs with interesting business models. As some of these were validated by successful scale up and exits, both new talent and capital has poured into start-ups, making them a very interesting alternative career opportunity to traditional blue chips. New-age companies have now been accounting for 15-20% of FDI coming in from PE & VC investors in the last couple of years and over five years represents the fastest growing piece of FDI and perhaps employment.

As a consequence, over the past decade, India's start-up ecosystem has undergone a massive change. Innovation based entrepreneurship has broken out of the confines of a small number of garages and R&D labs and matured from 'jugaad' fixes and solutions to incremental corporate problems to increasingly a larger number of disruptive solutions. Start-ups across sectors have led a surge in India's ranking from 81 in 2015 to 48 in 2020 in the Global Innovation Index. These individuals are in many cases taking risks typically needed to innovate and being bold and trying to solve unmet needs and problems, instead of incremental needs, and are not afraid to challenge well established business and social models that have existed for decades. In the process, they are becoming protagonists in a new historical phase of India's growth story.

For instance, very early in the Covid-19 crisis - as India faced the threat of a scarcity of ventilators, PPE kits and respiratory equipment - Marico Innovation Foundation (MIF) witnessed first-hand, high-quality, world-class, and affordable ventilators and innovative personal protective gear come to the forefront in India. This was in response to MIF's #Innovate2Beat Covid challenge, which invited innovators with ideas to ramp up capacity quickly while staying affordable. The nationwide hunt brought forward tremendous results with 1000 applications within just 10 days! In fact, the ventilators manufactured by the three selected winners are more economical compared to international ventilators with ~ 70% lower prices and advanced features. As the pandemic settles, these entrepreneurs can now use their capabilities to address long term issues that plague developing nations.

Government and successful private sector as a facilitator

Naturally, the question arises, what going forward could give a further impetus to this movement in national interest? What structural changes are possible to make innovation-based entrepreneurship in

India look like parts of Silicon Valley or Israel? The answer is that a LOT needs to be done by various ecosystem players to foster this movement, and the benefit to doing so is massive to the nation.

> *Wealth creators and the financial system must recognize the opportunity and responsibility to nurture innovation and grass-root entrepreneurship*

There is a rich precedent of the role governments around the globe have played in fostering innovation in the private sector. In Japan, the Ministry of International Trade and Industry (MITI) does so by providing large-scale funding of selected high-priority advanced technologies. India could learn from this model and identify 5-6 key areas and set up innovation funds that are professionally managed to back innovators. Another model could be to take large LP positions in VC & PE funds that meet certain criteria and work towards the creation of a vibrant funding ecosystem. The EU states support research ventures, both jointly and individually, the Airbus ecosystem being a prominent beneficiary, among other examples in telecom, high-tech, and food - all areas of interest for India. Again, India could choose to fund a few key areas under the Atmanirbhar Bharat initiative, from a longer-term perspective. One of the best examples remains NASA's program of supporting innovation and entrepreneurship, which benefited thousands of companies and led to the US' technology edge. Efforts need not be limited to high tech. The US and Canada are great examples of governments that are sponsoring innovation in areas like healthcare and agriculture - both critical sectors for the Indian economy.

Stronger ecosystems

To scale new heights of growth, a nurturing start-up ecosystem will also play a critical role. Therefore, a non-trivial part of the funding must go towards invigorating innovation in the Top 100 Universities in the country. They must become hubs for innovation and entrepreneurship and get integrated with problem solving for the nation. High quality laboratories must be built to support work in them, and top-notch faculty and students attracted by competitive pulls and pressures of R&D on campuses.

Wealth creators and the financial system must recognize the opportunity and responsibility to nurture innovation and grass-root entrepreneurship. Where mentorship is needed, successful leaders must step in to provide it to those coming up the chain. Networks need to be created to support entrepreneurs before they are successful, and it is the responsibility of those who have made it to give back via such initiatives. An example of a support network is the ASCENT Foundation, which is designed as a unique, powerful peer-to-peer platform that leverages the "power of the collective". It enables entrepreneurs to share and exchange experiences, ideas, insights and create a healthy ecosystem to learn from each other.

Scaling up innovations require deeper intervention to safeguard fledgling start-ups and create meaningful impact. Expanding the base of strong ecosystems of co-working spaces, incubators, tinkering labs and accelerators is one way to go. Building platforms where start-ups can regularly convene with other participants in the ecosystem can allow them access to knowledge networks, give pitch presentations and meet potential investors. Industry stalwarts and seasoned experts of well-established enterprises must come together to contribute by providing deeper intervention to innovation entrepreneurs to help them solve their challenges.

Policy and incentives, interactions with functional experts, along with access to human capital, institutional support, funds, and markets are all essential to create a sustainable ecosystem for self-sustaining startups.

Corporate - start-up collaborations

Collaboration between corporates and start-ups can be a value-creating proposition for both. A start-up brings with it a culture of openness and an ability to ideate faster, whereas the corporate can contribute by helping to create operating frameworks that assure scale and impact for the idea to become a reality. Combined, the two can create a right to win that enables change for the better and provides access where none existed.

Successful collaborations between corporates and start-ups can greatly increase competencies and drive benefits in the business world. Leveraging such collaborations can become an economic and creative engine to propel India's growth with their ability to fuel innovation for corporate and scalability for promising start-ups. There is no better example of this than the Pfizer-BioNTech vaccine initiative, which has delivered exceptional results to the world and to shareholders.

Creating value and not valuation

As India's start-up ecosystem flourishes, credible and scalable start-ups will enjoy greater assurance of funding from Indian VCs as well as global investors. Deep-tech and new start-up hubs are expected to continue to grow at rates not seen before, for who would have imagined, even last year, that India will have a 70-plus strong unicorn club by 2021-22?

As we stand at this exciting cusp waiting to launch into the new phase of growth, everyone needs to come together to make the Indian start-up ecosystem the most exciting part of the India story. We have the opportunity to solve many of our sticky problems through disruption that start-ups in India have the potential to bring. We have the opportunity for it to employ tens of millions in white collar jobs. We have the opportunity for it to drive massive wealth creation that could make the world take notice, and perhaps do so for Indian investors and not just global. For this, we need to be supportive and imaginative, and not lose the moment.

Ms. Priya Kapadia is Head of Marico Innovation Foundation

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The Rise of New Mobility

11

- By Bhavish Aggarwal

As Ola and our various businesses grow, I sometimes get asked how they connect with each other. So I want to share our vision of the future of mobility, which we call New Mobility, and how we're building it.

> *EVs are 80% cheaper to run so the service will be more affordable and accessible to all.*

Through the ages, human progress has been closely tied to advancements in mobility. The wheel, the steam engine, internal combustion and jet engines, cars, planes are all mobility inventions that transformed our lives and made movement safer, faster, efficient, convenient and accessible to more and more people.

The IC engine, automobiles and the related ecosystem is a remnant of the past and assumes unsustainably high ownership of vehicles manufactured by OEMs and sold through dealers. Consumers have been downgraded to being just a cog in this giant wheel. This is best indicated by Henry Ford's - 'You can have whatever colour you want, as long as it's black'. Try saying that to an e-commerce customer today!

In India, just 2% (30 million) people own a 4W and only 12% (160 million) own a 2W. That means more than a billion people in India have been shut out of mobility by this system!

New mobility is fixing this archaic system by making mobility universally accessible, sustainable, personalised and convenient. To do this, both shared and personal mobility will grow significantly in India through a combination of purpose built EVs lowering costs, digital retail driving convenience and the cloud enabling personalisation.

Ola is building this New Mobility ecosystem with the consumer at the core. The 3 pillars of this new ecosystem are: New Mobility Services, New Energy Vehicles and New Auto Retail. These three pillars amplify and enhance the impact of each other as part of an integrated Ola New Mobility Platform.

New Mobility Services

Today Ola provides multi-modal mobility access to 100 million people through Taxis, auto rickshaws, 2Ws, day hires, outstation rides, etc. But this is just 7% of India's population.

We will bring this multi-modal mobility to all 1.3 billion people by Ola designed EVs customised for the diverse shared mobility needs. EVs are 80% cheaper to run, so the service will be more affordable and accessible to all. Further, with miniaturisation and high energy density (neither possible in traditional vehicles), our EVs also create the opportunity for custom vehicle form factors serving many more use cases, better.

As you use our service more frequently, we will create your unique mobility persona in our cloud and will personalise your experience across shared and personal vehicles. This will also enable new usage models like vehicle subscriptions.

We already see strong adoption of our multi-modal platform across Ola's 150 cities. As we expand to 500 towns and bring shared mobility to 500 million people, the multi-modal offerings will grow substantially and will be central to driving affordability and access for these 500 million people.

New Energy Vehicles

40% of air pollution in India is due to vehicles. This is when just 15% of India owns a vehicle today! This number will grow exponentially as we provide more affordable options for shared and personal mobility. So we will do this through EVs to ensure we and our planet can breathe free!

We have already moved forward here with our Futurefactory, the largest 2W factory in the world building the first in our range of scooters - the Ola S1, the best scooter ever made. In the coming quarters, we will expand our EV range with more scooters, bikes and cars.

Our EVs are smart, connected AI machines and will leapfrog current personal vehicles that are dumb mechanical devices. They will serve diverse needs through a variety of form factors including kick scooters, e-bikes and yes even drones and flying cars while costing 80% less to run compared to IC engines! This will cause vehicle ownership to explode to 40% of the population, with 50 million 2Ws and 10 million 4Ws sold per year in India in the coming years.

New Auto Retail

Not just the vehicles but the 100+ year old model of dealership based sales and service, standard financing and insurance and unorganised used vehicle sale/purchase is also out of date and needs to change.

We have already built a powerful digital retail platform that bypasses physical infrastructure and hosted the largest automotive launch in history with the Ola S1. In future, we will open up this platform to other OEMs too, giving them unparalleled digital distribution. It will bring consumers wide multi-brand choice online, at home test rides, personalised financing, insurance and more. The existing ecosystem of dealers will play an important role in this future but in a new paradigm.

Ola's advanced telematics platform (some of which is already built into our S1 EVs) will provide real time analysis of usage and vehicle and road condition data to provide better driving experience, predictive maintenance, better insurance and financing.

This will also create a more trustworthy e-commerce marketplace for used vehicles with real time pricing and digital access. This is what we're doing with Ola Cars - reimagining not just buying and selling but the end-to-end ownership experience of used and new vehicles. Ola Cars is in 30 cities today and will scale up to 100 next year.

> *India has the opportunity to leapfrog old mobility and adopt New Mobility.*

We are living through a once in a century rewiring of the entire mobility industry. Modes, vehicle form factors, energy sources, distribution are all fundamentally changing. India has the opportunity to leapfrog old mobility and adopt New Mobility.

Ola has a unique and significant advantage here being the only mobility company in the world that does the hardware (EVs), software and service (shared mobility services and auto retail) entirely in-house plus has the deepest understanding of urban mobility needs of consumers. We will lead the development of new technologies and build this future of new mobility to bring a billion people more choice, convenience and affordable mission. This is our mission - mobility for a billion, sustainability for the future!

Let's move!

Mr Bhavish Aggarwal is Founder & CEO, OLA Group

Building a Progressive Society 12

- By TV Mohandas Pai and Nisha Holla

"India must play its role as the largest democracy - to demonstrate how to build a sustainable system with robust justice mechanisms, meeting the aspirational needs of its billion+ citizens, and where every citizen can dream of outstanding achievements."

A progressive society is one with ample opportunities where every individual can achieve their dreams. In such a society, the state plays a pivotal role in ensuring opportunities, dispensing justice, maintaining law and order, and protecting life and liberty. For emerging countries recovering from centuries of colonial exploitation, poverty is the most significant handicap. Battling poverty requires the welfare state to provide basic amenities and necessities; only after accessing these can individuals aspire to realise their fullest potential in the shortest time.

> *"The DBT system drastically reduces intermediary inefficiencies, leading to an estimated INR 2.2 lakh crore of savings since 2015."*

India was at a significant disadvantage in 1947 after prolonged loot by colonial powers, plagued by low literacy levels and the travails of partition-induced violence. Over the years, governments have worked towards welfare measures to provide citizens with the bare necessities of life. The Republic of India, particularly in the last seven years under Prime Minister Modi's leadership, has made giant strides in this direction. As India reaches a stage where all of its 1.4 billion citizens can access necessities, there is a need to focus on the building blocks of a society which can provide extensive opportunities for all citizens.

Several policy initiatives are required in the next decade to put these building blocks together:

1. **Stable society:** PM Modi has already laid the foundation for providing basic amenities to every Indian citizen. 2.15 crore homes have been built since 2014. Individual household latrine coverage is at 100%, as is electrification. Food security has been extended to all states and UTs. 13 crore gas connections were distributed since 2014, of which 8 crore have been provided free to rural women, enabling them to cook smoke-free and improve their health dramatically. The digital and financial inclusion schemes have been a resounding success - 45 crore previously "unbanked" individuals have a mobile-linked bank account via Jan Dhan. This has led to a cumulative direct-beneficiary-transfer (DBT) volume of INR 19.75 lakh crore. The DBT system drastically reduces intermediary inefficiencies, leading to an estimated INR 2.2 lakh crore of

savings since 2015. This march of progress provides all Indians access to basic amenities and lays the foundation for a stable society that can drive rapid socio-economic growth.

2. **Driving productivity of all sectors:** 43% of India's workforce is in agriculture, contributing 17.6% to the GVA. Meanwhile, 57% of the workforce is involved in industry and services, contributing 27.4% and 55% to the GVA, respectively. This asymmetry results in a high income-inequity ratio of 1:3:4; i.e., a dependent on agriculture earns, on average, 1/3rd of what a dependent on industry makes and 1/4th that of services. By 2030, India must move a majority of agriculture-dependents to industry or services. 20% of the workforce engaged in agriculture is sufficient - the US and China have done this while successfully producing food surpluses in the agriculture sector. The highest value-add is in the services and industry sectors; expanding these with skilled labour and incentives will contribute heavily to our economic growth. On the other hand, the agriculture sector will experience enhanced growth when farmer incomes are incentivised to grow with direct connections to the market. Agri-tech platforms play a crucial role here; studies show farmers can accrue 20% higher gains using agri-tech platforms linked with immediate payment mechanisms, allowing them greater freedom and opportunities.

3. **Infrastructure development and Supply chain:** India's construction sectors need a significant boost - roads, railways, tourism infrastructure, ports, power surplus infrastructure, renewable energy infrastructure, and more. The carriage speed of goods on railways needs to increase from 25 kmph currently to 50-60 kmph. While contributing to economic growth (like in China), this move will also provide mass employment and a logistical backbone to boost India's export capabilities and supply chain efficiency. Today, supply chain costs are 14% of GDP, exceedingly high. The GST reform is already reducing supply chain costs - with enhanced transportation and creating a common market for India, a target of 8-9% is achievable in three years.

4. **Urbanise with labour-intensive industry (LII) clusters:** Urbanisation concentrates human activity and boosts specialisation and productivity. Rapid urbanisation is essential to provide high-quality jobs for all - this is not in the ten major Indian cities but by developing 5,000 small towns all over the country. By creating LIIs in and around these towns, people all over the country will have access to quality employment instead of migrating en masse to the major cities. With careful planning, this network of 5,000 small towns will become India's growth engine.

5. **Jobs and Skilling:** India needs 15 million jobs a year, but only 11-12 million are counted. The difficulty is not a shortage of jobs but rather that of low wages and quality of employment. Mass employment and skilling through infrastructure development and LIIs can solve this problem. Increasing jobs in the industry sector will provide higher-wage jobs, providing opportunities to millions. Similarly, incentivising specialisation through higher education and technical research will build a pipeline for hi-tech and other high value-add industries.

6. **Digital economy:** India has moved from a data-poor to a data-rich country over the last decade. Most Indians now have digital identities. With 1 billion+ mobile phones, 560 million+ internet connections, and 450 million+ additional mobile-linked bank accounts opened since 2014, our

digital economy has reached scale. We are already capitalising on this through new payment modes, e-commerce, and start-up entrepreneurship. However, US and Chinese companies primarily own Indian citizens' data - Google, Facebook, Twitter, Tencent, and Ali Baba. About US$ 100 billion capital has entered the ecosystem since 2014, US$ 30 billion this CY alone till November. Less than 10% of the US$ 100 billion is estimated to be Indian. India is in danger of becoming a captive digital colony, which can only be remedied by taking ownership of data and platforms. The country needs laws for keeping Indian data in data centres within its borders. More Indian capital must enter the ecosystem. India's prominent insurance companies and pension funds must invest in the start-up ecosystem - institutions from the US, Canada and other developed nations are already investing in the Indian growth story. The administration can also incentivise individual investment by reducing capital gains tax on unlisted stock to 10% - on par with listed stocks.

> *Every major Indian city can become a global hub in various domains.*

7. **Banking and Finance:** India has driven phenomenal reforms in the banking sector and can leverage the system as a solid economic growth driver. Total lending to GDP is just over 50%, while total deposits to GDP is around 65%. These ratios can be incentivised to grow with increased infrastructure, integrating technology and building a robust banking sector. The administration can implement specific drivers like lower interest rates for MSMEs, innovative financing models based on GST returns, speedier payments for procurement by the government and public sector undertakings, and the development of bond markets which has been in the works for the last 30 years.

8. **Empower big cities:** India's big cities are engines of growth - Mumbai is a financial hub, Delhi is the seat of political and growing technological power, Bengaluru is a global technological hub - but are starved of resources. Take Bengaluru, for example - it is the wealthiest city in India with the highest per-capita income. It generates a tremendous amount in taxes which is spent on the rest of Karnataka. With no budget allocation to Bengaluru, it has an inadequate infrastructure with no capacity to deal with the continual immigration from the rest of the country. Despite its financial underpinning for the state and country, Bengaluru is politically insignificant. High-growth cities like Bengaluru must be made self-governing with a full-time mayor and in charge of its allocation. The city can then direct that allocation on improving infrastructure and mobility to boost productivity. Every major Indian city can become a global hub in various domains (like Silicon Valley or Shanghai), which will, in turn, boost India's economy.

9. **Higher education and human capital development:** A nation's true worth is in its higher education system. The US' political and military strength stands on the innovation of its universities and research labs. China recognised this and has built a comprehensive network of

higher education and research institutions. India must reform its higher education system, give autonomy to its universities, and set up state-of-the-art research labs to attract the best talent. The National Education Policy (NEP) 2020 has set a renewed vision to transform India's higher education system and make young Indians future-ready for the knowledge economy. Policymakers must focus on implementing the radical reforms of NEP 2020 and improving the Gross Enrolment Ratio and quality of education. The proposed National Research Foundation with a committed outlay of INR 50,000 crore over five years needs urgent implementation.

10. **Sound governance:** PM Modi has set the tone by ensuring there is no corruption in Delhi. Similarly, governments at state and city levels must work with their citizens to implement effective and responsive policies to their needs. Large-scale corruption at these levels hurts citizens all over. Sound governance at all levels is essential to building a progressive society.

11. **Tax and Justice:** Tax terrorism has hurt India badly, and litigation has doubled in the last five years. The tax justice system needs urgent reforms to reduce unnecessary litigation and ensure any litigation taken up is closed within three years. The reduction of corporate taxes to 25%, the worldwide average, has been a good move to allow large companies to grow and compete globally.

12. **Judicial reforms:** It is crucial to improve the judicial infrastructure and investigative capacity so that justice can be served to the aam aadmi in three years instead of the current 15-20-year horizon. There are 250,000+ awaiting trial in prisons, reduced to a situation where their court date never comes up, and they are too poor to post bail. The biggest failure of the Republic for 71 years has been the inability to mete out justice in time. The poor suffer disproportionately. Reforming this must be the number one priority over the next three years. Today, we have 18 judges/million population; this must grow to 50 in 5-6 years. The capacity of the police to investigate and keep the citizenry safe must also increase. India can only build a progressive society on the foundation of a functioning justice system available to all.

13. **Role of States:** India is now in an era where the Centre's role is increasingly limited, and State spending is growing. State GDP across India varies enormously, driven by fertility and population dynamics, human capital development, and asymmetric dependence on economic sectors. India cannot develop unless its highly populated areas in the North-Central-East regions become prosperous. Each CM must evaluate their state's growth drivers and set ambitious goals and wheels in motion to drive economic growth. The biggest deficiency here is the lack of data-based policymaking. Every state must have an institution like NITI-Aayog to study local needs and invest accordingly.

14. **Planning for an ageing population -** Data from the National Family and Health Survey (NFHS-5 in 2021) shows India's population is now officially below replacement. Barring some states in the North and East, the rest of the country is ageing. Before this becomes a problem, the administration must put a robust social security system and other adequate plans in motion.

India is a unique country with a profound civilisational heritage and tremendous potential for global impact. For most of history, India was the most booming economy in the world. 75 years ago, the country won its freedom through the largest-ever freedom movement in human history - delivering 60% of humanity from colonisation. Today, India must play its role as the most extensive democracy - to demonstrate how to build a sustainable system with robust justice mechanisms, meeting the aspirational needs of its billion+ citizens, and where every citizen can dream of outstanding achievements. As it steadily drives socio-economic growth, India can simultaneously focus on building a progressive society.

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Leading India to a More Sustainable Future 13

- By Mukund Govind Rajan

As India celebrates the 75th anniversary of independence, a very clear new thrust is emerging in the complexion of economic growth. India's leading companies are now pushing the pedal in favour of greater sustainability and initiatives that will lead to better Environment, Social and Governance (ESG) performance. This is a marked change from even the recent past.

> *India suffers from some of the worst environmental indicators in the world.*

The current environmental crisis

India suffers from some of the worst environmental indicators in the world. Sample these data points - 21 of the 30 most polluted cities in the world in terms of air pollution are in India; data from the Indian Council of Medical Research (ICMR) suggests that air pollution kills over a million Indians each year; of India's landmass of 328 million hectares, just under half, around 147 million hectares is undergoing some form of degradation due to deforestation, drought, and improper or inappropriate agricultural practices; and twenty-one of India's largest cities are projected to run out of ground water this year, affecting 100 million people.

Newer challenges are also emerging in the form of extreme climatic events caused by global warming. With India's long coastlines, the country is likely to be greatly impacted by sea level rise; rising temperatures will make outdoor work more difficult; unpredictable changes in precipitation and weather patterns will particularly impact Indian agriculture; and more natural disasters are likely to add to human misery.

Domestic stakeholder reactions

However, the environmental crisis has stimulated important, mostly constructive reactions from stakeholders. In significant measure, these have been catalysed by growing public consciousness, with independent activists, the judiciary, vigilant media and customers, especially millennials, all playing their roles. Responding to these stimuli, a number of constructive actions have been taken by the central and state governments.

For instance, across India, the central government has enforced the migration of the Indian auto industry from the Bharat Stage 4 to Bharat Stage 6 fuel emission standards, bypassing Stage 5 altogether. This will dramatically reduce Nitrogen Oxide emissions and discharge of particulate matter. Vehicular pollution is also being curbed through the introduction of alternate fuels, including compressed natural gas and liquified petroleum gas, and ethanol blending. Other measures being deployed by state governments include the promotion of public transport, introduction of electric three-wheelers and buses, subsidies for electric two-wheelers and four-wheelers for personal transport, and scrappage policies designed to get old, polluting vehicles off the roads.

Strong regulatory tailwinds now favour a powerful new focus on environmental disclosures and ESG in India. These include the 2018 'National Guidelines on Responsible Business Conduct' (NGRBC), designed by the Ministry of Corporate Affairs to mainstream the concept of Corporate Responsibility. These guidelines have been integrated into the Business Responsibility and Sustainability Reports that the Securities and Exchange Board of India (SEBI) has directed the top 1000 listed companies to publish, from this fiscal on a voluntary basis and from the next fiscal on a mandatory basis.

Parallelly, regulations with a significant focus on good governance are also influencing the conduct of Indian businesses. The key regulators, including SEBI, the Insurance Regulator IRDAI, and the Pension Fund Regulator PFRDA, have each defined Stewardship Codes, which emphasize sustainability and ESG requirements, for institutional investors across the mutual fund, insurance and pension fund sectors. Going by an indicator like the rising 'against' votes by these influential investors on AGM and shareholder resolutions, they are beginning to flex their muscles.

International perspectives

Changes in the Indian sustainability landscape are also being catalysed by actions of stakeholders overseas. Sustainability concerns are rapidly transcending international boundaries, and one of the critical drivers of this is the increasing concern about global environmental issues. These impact the whole world, and no single country can on its own successfully address them, so co-operation between nations is a must. The argument is the same as in the case of Covid 19 - nobody is safe until everybody is safe.

Examples include ozone depletion and the loss of biodiversity, but perhaps climate change is the most pressing concern just now. The Intergovernmental Panel on Climate Change (IPCC) has underlined the need to go well beyond the 2015 Paris Climate Treaty target of a 2-degrees rise in global temperatures by the turn of the century, to instead target a lower 1.5 degrees rise. The impact of the IPCC's call for urgent action has been seen at the 26th Conference of Parties on Climate Change which met at Glasgow in November.

As the third largest greenhouse gas producer in the world after China and the US, India is key to how the world will resolve the problem of global warming. At Glasgow, it announced that it would significantly enhance its targets from the time of the Paris Climate Agreement. It thus declared 2070 as the target date for achieving net zero status and promised to generate 500 GW of renewable energy with 50% of the energy mix from renewables by 2030, while improving the energy efficiency of the economy by 45% over 2005 levels by 2030. India is also anchoring the International Solar Alliance, where it is promoting the One Sun-One World-One Grid initiative.

> *Over half of overall European fund flows and a quarter of US fund flows now go to sustainable funds*

Growing public concern on global environmental issues has impacted politics in many countries, reflected for instance in the surge of the green parties in the European Union. The European Commission's President, Ursula von der Leyen, has repeatedly emphasized that her top priority is dealing with the climate emergency and ensuring the end of carbon emissions by the middle of the century. One outcome is the recent adoption by the Commission of a proposal for a Carbon Border Adjustment Mechanism to address the climate change crisis; this proposes to impose tariffs on goods imported from markets which do not have strong carbon emission controls in place similar to those instituted within the European Union. Multinational enterprises are in parallel raising the sustainability standards for their supply chain participants from India.

Foreign investors are also making their preferences clear. Investors controlling over US$ 100 trillion of invested funds around the world have now subscribed to the United Nations Principles for Responsible Investment or the UNPRI. These Principles require investors to incorporate ESG issues into their investment analysis and decision-making processes. The European Commission has in fact put out regulations that require all asset managers in the European Union to disclose the ESG performance of their investment portfolios, which include many Indian companies. On environmental issues like global warming, such investors are already making critical decisions to divest the stocks of companies that contribute to such problems. Over half of overall European fund flows and a quarter of US fund flows now go to sustainable funds; in India too, a clutch of new ESG funds have been launched in swift succession by players like Quantum, ICICI, Axis, Mirae, Kotak and Aditya Birla, and more are in the pipeline.

Indian businesses are also being tasked to perform on the Sustainable Development Goals or SDGs defined by the United Nations, traversing issues ranging from poverty alleviation to addressing climate change. The SDGs have essentially fused the global with the local and created an interest of the international community in the way in which local issues are now being addressed within countries.

From the perspective of lenders too, there is an increasing thrust on reporting of material climate-related risks by businesses in their financial filings. As banks and lending institutions incorporate the recommendations of the international Task Force on Climate-related Financial Disclosure (TCFD), it will become progressively more difficult for businesses that do not evaluate and disclose the climate related risks they face to raise finance for their projects. It is also worth noting that the Reserve Bank of India (RBI) has recently joined the Network for Greening the Financial System or the NGFS, a grouping of central banks which seeks to enhance environment and climate risk management in the financial sector and supports the transition toward a sustainable economy.

In essence, capital, both as equity and as debt, will be allocated in the future primarily towards well-governed Indian companies that contribute to the goals of a more sustainable economy and society.

Best practices of Indian companies

Forward looking Indian companies recognise these pressures for change. They understand the value of being proactive in their response. They have imbibed the academic research that demonstrates the powerful correlation between material ESG actions and firm outcomes. A greater focus on sustainability and ESG typically yields greater resource use efficiency, lower cost of operations, reduced risk - and therefore reduced insurance premia, minimized regulatory and legal interventions, higher employee engagement, lower cost of borrowing, and increased analyst coverage and investor interest. Consequently, businesses that focus on improving their ESG performance tend to outperform their peers.

The body of empirical evidence on this ESG advantage continues to grow. Data from, for instance, the MSCI India ESG Leaders Index, shows that it has outperformed the broader benchmark index for most periods of time since its inception in 2007, including the past three-, five- and ten-year periods. Similar consistent out performance is witnessed with the NSE's Nifty 100 ESG Index when compared with the Nifty 100 Index.

What are forward looking companies doing differently? First, they accept the need for change. A good example is India's largest private sector company, Reliance Industries, which has acknowledged the climate change issue by setting a target to become net carbon-zero by 2035.

Next, they put in place the right governance structures to develop and execute sustainability strategies that are relevant for them. Companies such as Tata Steel, Indian Hotels and NTPC are enhancing the mandate of the CSR Committee by bringing sustainability within its purview, and renaming it as the 'CSR and Sustainability Committee'. Others like Infosys, Welspun and Ashok Leyland have opted to create 'ESG Committees' of their boards.

Many sustainability enhancement measures require little by way of capital investment. Some, such as investments in energy efficiency improvement or renewable energy have high returns on investment and can pay for themselves quite swiftly. Forward-looking companies are also innovating and pivoting their business models ahead of the competition and seeking new ways to find competitive advantage. Thus, when Tata Power found itself at the receiving end of portfolio decarbonization initiatives by major investors like the Norwegian sovereign wealth fund, it chose to pivot towards renewable energy and away from coal-fired thermal power.

We see a greater focus in forward-looking businesses on resource use efficiency and embracing "circular economy" practices that minimize waste across product life cycles and prioritize better design for reuse, repair and recycling of waste. Many such measures - a great example is the shift to more energy efficient lighting solutions with LEDs - deliver very compelling return on investment. These enterprises are also embracing their supply chains in the progressive actions they need to take. This is especially important because the MSMEs that form part of the supply chain of India's larger corporates account for close to half the actual resource consumption that takes place within the economy.

The percentage of companies rated "A" or higher by MSCI over the past five years has increased from 19% to 26%.

All this is also beginning to throw up many new opportunities for environmental services companies, across segments like design services, energy optimization services, the internet of things, the sharing economy, and advisory and consultancy services. Be it in better measurement and data capture, better reporting and disclosure, and new services like waste management, there is a huge opportunity that beckons Indian environmental services businesses.

It is worth noting that given the scale of operations in India, the needs of many other markets for sustainability-linked products and services can also be addressed from within the country. As market leaders in India demonstrate, this requires a commitment to creating a world-class set of operations, and interventions in areas such as skills building, the quality of domestic contracting, definition of uniform standards that are aligned with global best practices, greater exposure to the needs and business opportunities in developed markets, and stronger industry-academia partnerships for R&D and design.

Forward-looking companies, like Marico, are now linking performance on critical issues like carbon emission reduction, water conservation and other sustainability practices to executive compensation. Integral to the link with compensation is a strong focus on measurement of sustainability parameters that are material to their operations, tracking performance over time, and making transparent disclosures.

There are multiple reporting frameworks being used by Indian companies, including the Global Reporting Initiative or GRI, Integrated reporting or IR, and the standards developed by the Sustainability Accounting Standards Board, or SASB. While a universal framework is still elusive, the Business Responsibility and Sustainability Report mandated by SEBI or the BRSR will offer one valuable tool for Indian businesses to communicate their ESG commitment.

The efforts of forward-looking enterprises to improve their sustainability performance are getting recognition from decision support service entities like MSCI. The percentage of companies rated "A" or higher by MSCI over the past five years has increased from 19% to 26%.

Green finance

As Indian companies begin to mainstream sustainability as a part of their business strategies, this is creating a corresponding need for massive green finance flows in emerging sectors like green construction, electric mobility, energy efficiency, and water and waste management. A Climate Policy Initiative study that looked at India's earlier, more modest Paris Climate Agreement targets suggested an annual requirement of US$ 170 billion of sustainable finance; that number will go up significantly now, based on the ambitious COP26 promises. Meanwhile, the Indian market presently secures access to only around US$ 17-18 billion of investment spend annually, i.e. only 10% of what will be required.

The delta between ambition and availability presents huge opportunities for the financial services sector. Not just the traditional banks, but also non-bank finance companies and the private equity and venture capital industry, and new instruments available from the booming international green bond and social bond markets.

Technology and infrastructure needs

For India to meet the commitments made at COP26, investment in critical technologies will need to be made in this decade of action. Many technologies that will help companies to meet their net zero targets are yet to be commercialised at scale. Technologies for energy storage, carbon capture, utilisation and storage (CCUS), advanced biofuels, and hydrogen for industrial use will bring major transformative impact. Innovation and R&D will be needed with cooperation between the public and private sectors, as will partnerships with leading global organisations for these technology areas. India has a thriving ecosystem of start-ups that are also bringing innovative ideas and solutions. This ecosystem needs to be incentivized and rewarded and linkages need to be created between the producers and users of such innovations. India's strong network of R&D institutions under the CSIR need to be leveraged to build, market and deploy the country's indigenous technologies.

A large part of India's sustainable future will lie in how cities address their future infrastructure growth. Vehicular pollution is a big culprit in the rising index of the most polluted cities in India. Solutions to address multi-modality of transport, creating more non-motorised infrastructure in cities, pushing for greater use of sustainable fuels in vehicles, and shared mobility will be the future direction for Indian metropolises.

Cities are also agglomerations of waste. Developing value creation in the waste management chain, and engaging the private sector and informal sector effectively in this crucial business that serves both environmental and societal needs is paramount for a sustainable future. With rising water pollution and different waste streams, there is a vast gap in environmental infrastructure to address recycling and disposal requirements. This is an area of investment that can be encouraged under well-defined public private partnership models. Common environmental infrastructure that can serve the needs of industrial clusters, and particularly, the small and medium enterprises for whom affordability is a major challenge, is a critical need that India needs to act upon with urgency.

Conclusion

India is on the move towards a more sustainable future. With the best practices already in vogue, by leveraging India's scale to service global requirements of sustainable products and services, and the seizure of opportunities in areas such as financing, we can look forward to a transformation in the next twenty-five years from a landscape of environmental crisis into one of sustainability leadership.

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Epilogue

- By Arun Chawla

This collection of articles by eminent thought leaders, industry stalwarts and global experts puts forward a roadmap for India's future trajectory looking beyond 75 and towards a New India.

India has seen significant growth over the past decades, yet its true economic potential remains untapped. By bringing best minds together, we have been able to identify potential opportunities and suggestions to leverage them for charting out India's progression, while simultaneously finding solutions to the key challenges and impediments.

India as the global influencer

Global economy is getting reshaped. As aptly put by Ms. Isabelle Joumard and Dr. Alvaro Pereira, the Covid-19 pandemic offers new trade and investment opportunities. India could capitalise on the rejigging of value chains resulting from the increase in labour costs in China, the risk of single-sourcing a vast array of intermediate products and the rising trade tensions between the US and China.

India's demographic advantage makes it the best alternative and an optimal choice for the global manufacturing players to fill the void created by China.

However, India's aspirations of being a global manufacturing hub and expanding its global market share will be dependent on a number of factors -

- Building a world class infrastructure would be critical. Timely implementation of large infrastructure and connectivity projects under the National Infrastructure Pipeline will go a long way in bringing down India's logistics costs, which run as high as 14% of GDP.
- Addressing barriers to trade and investment will be important. Trade facilitation could be further improved by reducing the number of documents and harmonising external formalities.
- Entering into strategic multilateral trade agreements can be a gamechanger, especially if Indian players get a significant market access in partner countries. Prof. Heribert Dieter believes that joining CPTPP would constitute a bold move, but it is not inconceivable. He also suggests that bilateral agreements such as those with the United States could be an immediate available alternative. Mr. Harsh Pati Singhania has highlighted the need for FTAs to be more balanced. Reducing non-tariff barriers through government-to-government consultations is equally essential for enhancing India's exports.

Tapping India's economic potential

Covid-19 pandemic adversely affected economies across the world, including India. Now that the worst of the pandemic seems to be over and a new ray of hope has risen, it is time to rebuild and to build better this time. Be it the agriculture, manufacturing, or services, we need to advance by leveraging the resources, skills, technology and supportive policy landscape (such as the latest scheme of Production Linked Incentives).

As Mr. Sanjiv Mehta puts it "the pandemic has presented an opportunity for India to expand its local manufacturing base for global reach. Manufacturing can also be an answer to providing employment and entrepreneurship opportunities to India's youth."

- Enhancing industry competitiveness will be the key to reinvigorating Indian manufacturing. According to Mr. Mehta, this is possible if India accelerates reforms in the areas of factors of production, enhances ease of doing business while lowering the cost of doing business, continues its support to MSMEs by ensuring they have access to finance, markets and technology, and lays impetus on strengthening the physical infrastructure of the country.
- Mr. Harsh Pati Singhania highlights the importance of optimizing the logistics modal-mix and have Multi-Modal Logistics Parks with different modes of transport access, which is required to help address high overheads due to lack of last-mile connectivity. The Parks would provide world-class storage solutions such as cold storage, mechanized warehouses, and handling as well as delivering value-added freight services.
- Reforms in power sector can be a gamechanger in enhancing India's competitiveness. As Mr. Singhania says, "the practice of cross subsidization in power sector has to end. The government must ensure completion of the proposed power sector reforms in the form of encouraging franchisee model or privatization of distribution companies."

Pharmaceuticals is one sector that proved India's prowess to the world in the times of the pandemic. The world looks at India as the global pharmacy. This has been made possible through innovation and large manufacturing capacities. In the midst of the pandemic, India not only developed indigenous vaccines but also leveraged its capacities to produce vaccines for the world. As India looks beyond 75, new healthcare models are expected to emerge.

- Healthcare will benefit immensely from digitisation. Even the shortages of doctors can be met through digitisation. Teleconsultation platforms have already seen an exponential rise during the pandemic. As Mr. Pankaj Patel says, "the future of healthcare could see a new ecosystem evolving that integrates different approaches of care, customised solutions and cohesiveness to ensure customer well-being. This would mean a greater emphasis on preventive, individualised approaches to understanding diseases and specialised disease management."

Defence manufacturing is one of the sectors crucial for making India Aatmanirbhar. As Mr. Jayant Patil puts it, “the target of having regional supremacy can only be realised by a powerfully equipped triumvirate of the Defence forces making it an imperative to indigenously design, engineer, develop, and manufacture one's own defence requirements for strategic autonomy."

One of the adversely affected sectors due to Covid -19 pandemic has been travel and tourism. The entire travel and tourism eco-system is being transformed. There is a need to understand emerging dynamics and adapt accordingly.

- To sustain tourism demand in coming years, innovative and enduring solutions will be needed. One such solution offered by Mr. Ritesh Agarwal is to look at sustainable infrastructure solutions like composting toilets in tourism hubs like bazaars and museums and effective waste management in areas of high tourist density. Public-private partnerships in waste management can be considered in tourist hotspots.
- Another suggestion is to spread awareness on sustainable practices and to put in regulations for travellers. Tourism cannot flourish at the cost of environment.
- Small hotels need to be brought at the global travel map. Better tourism infrastructure is needed, keeping in mind the cultural, geographical and ecological factors. A collaborative effort on the part of larger enterprises and small entities, leveraging technology solutions would be important.

Leveraging technology to be a digital and innovation hub

The Covid-19 pandemic has sparked a sudden shift in economic activity from physical to digital and has transformed peoples' approach towards work and mobility. The current crisis has underlined the criticality of digital infrastructure across different sectors - be it healthcare, education, retail, entertainment, large enterprises, small companies, start-ups, etc.

In order to meet the growing digital demand, it has become imperative to offer high quality service with superior connectivity and data speed. Moreover, there is a need to bridge the disparities in access to digital means that exist at various levels in India.

Digital entrepreneurship can be a viable solution to the unemployment challenge faced by India. As Mr. Ajai Chowdhry states, "an entrepreneur with an innovative idea has the power to build employment and in turn stimulate the economy."

A conducive environment for the growth of innovative start-ups has been a facilitator and this must continue. Mr. C P Gurnani offers some excellent ideas to leverage digital revolution for accelerating India's growth and addressing developmental challenges -

- Developing digital skills at the grass-roots level will be important. Skilling should be channelised to address local developmental problems. Learning platforms in local language can ensure inclusive learning as well as upskilling.

- Digital courses in deep tech such as Artificial Intelligence & Machine Learning, Internet of Things, Cybersecurity, Blockchain, Robotics, Drones, and Automation could be embedded in school and college curriculum.
- Mr. Gurnani further adds that data and trust form the biggest currency of the digital world and therefore, policies around data privacy and security need to be continually worked upon.

Ms. Priya Kapadia and Mr. Amit Chandra have also put forward some great ideas to foster the innovation eco-system in the country.

- Learnings form global models supporting innovation eco-system can be considered. The government could identify 5-6 key areas and set up innovation funds that are professionally managed to back innovators. Another model could be to take large LP positions in VC & PE funds that meet certain criteria and work towards the creation of a vibrant funding ecosystem.
- Universities can become hubs for innovation and entrepreneurship and get integrated with problem solving for the nation. High quality laboratories must be built to support work in them, attracting world class faculty and talented students.
- A network of successful corporate leaders for mentorship can be created. Likewise, collaborations between corporates and start-ups could help enhance competencies and propel India's growth.

Ensuring progressive and sustainable development

A progressive India would be one that provides opportunities to its citizen to meet their aspirations. It would also be the one that ensures that the growth and development are not transitory rather sustainable.

Mr. T V Mohandas Pai and Ms. Nisha Holla enlist a wide range of policy initiatives that can help India transcend towards being a progressive society. These include driving productivity across all sectors, giving a boost to infrastructure and construction, urbanising with labour intensive clusters, encouraging digital and technology start-ups, introducing innovative financing models, strengthening the banking sector, empowering large Indian cities to be a global hub in various domains, rapidly implementing the New National Education Policy, ensuring sound governance, accelerating tax and judicial reforms, and ensuring balanced regional development, with each State making economic progress.

Sustainable development of the country necessitates integration of environmental, social and governance factors. There has been strong push towards climate change action, with Prime Minister Modi committing ambitious goal of Net Zero Emission by 2070. As Dr. Mukund Govind Rajan puts it, "as the third largest greenhouse gas producer in the world after China and the US, India is the key to how the world will resolve the problem of global warming." How corporates integrate sustainability in their operations will be the key. According to Dr. Rajan," in future, capital (both as equity and as debt) will be allocated primarily towards well-governed Indian companies that contribute to the goals of a more sustainable economy and society." He enlists the key priorities required towards a greener economy -

- Investment in critical technologies will need to be made. Many technologies that will help companies to meet their net zero targets are yet to be commercialised at scale. Innovation and R&D will need a thrust. The start-up ecosystem in this space needs to be incentivized and rewarded and linkages need to be created between the producers and users of such innovations.
- Developing value creation in the waste management chain and engaging the private sector and informal sector effectively in this crucial business that serves both environmental and societal needs is paramount for a sustainable future.
- To address the challenge of vehicular pollution, solutions towards multi-modality of transport, creating more non-motorised infrastructure in cities, pushing for greater use of sustainable fuels in vehicles, and shared mobility will be important. The vehicular pollution statistics highlighted by Mr. Bhavish Aggarwal also point towards the stark need for sustainable mobility solutions, such as the electric vehicles. New business models in personal and shared mobility will have to be explored to encourage a shift towards electric vehicles.

While these essays offer a comprehensive agenda for the government to support India's future growth trajectory, it is equally important for the industry and other stakeholders to collaborate and play their part in the nation building process.

Let us imbibe the spirit of "Sabka Saath, Sabka Vikas, Sabka Vishwas and Sabka Prayas" as we step ahead and look beyond India at 75.

Mr. Arun Chawla is Director General, FICCI

Federation of Indian Chambers of Commerce and Industry (FICCI)

Established in 1927, Federation of Indian Chambers of Commerce and Industry (FICCI) is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialisation, and its emergence as one of the most rapidly growing global economies.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies.

FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community. FICCI's vision is to be the thought leader for industry, its voice for policy change and its guardian for effective implementation.

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The Konrad- Adenauer-Stiftung has organised its program priorities in India into five core areas: Political Dialogue and cooperation, Foreign and Security Policy including Energy Policy, Economic Policy and Management, Rule of Law and Media which includes training programmes for students of journalism.

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