

VISION FOR INDUSTRY

Over the last decade, India has made significant progress in strengthening the competitiveness of its domestic manufacturing, especially under the Atmanirbhar Bharat and Make in India initiatives. Manufacturing has the highest potential of all sectors to propel job growth, with the potential to create 60-70 million jobs by 2030. The future of manufacturing is sustainability. Through a number of initiatives, the Indian Government is enticing businesses to adopt sustainable manufacturing, including 'Zero Defect-Zero Effect', 'Digital India', and many others. Over the past seven years, India has made substantial improvements in its policy and regulatory environment, making it much easier for enterprises to establish themselves and flourish.

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The road to 75 years has not been easy, yet India has come a long way — from a country that saw its wealth drained by its colonial masters to a major player in the global economy. As India enters the *Kartavya Kaal*, it is time for the country to realise its potential and emerge as a world leader in this post-Covid New-World Order. More importantly, it is imperative to

foster sustainable and inclusive economic growth while protecting people and the planet.

According to a FICCI-McKinsey report, by 2047, a growing India is expected to become a high-income nation with six times its current per capita income and to create 60 crore jobs to gainfully employ its growing workforce. Achieving



this potential will make India an approximately Rs 1500 lakh crore (\$19 trillion) economy in real terms by 2047, with the economy growing at a real GDP growth rate of 7.7%.

Industry will be the key lever to propel the economy towards this goal. Recent policy reforms have created a favourable environment in which Industry can grow. These include the introduction of the goods and services tax, the launch of the National Single-Window System, and a steadily expanding production-linked incentive scheme, which is expected to drive growth in strategic sectors, such as electronics and capital goods, chemicals, textiles, auto and auto components (including electric vehicles), solar modules, batteries, and pharmaceutical and medical devices. The Centre's other key initiatives, like the PM-Gati Shakti and National Logistics Policy, have also provided a facilitating environment for India's manufacturing ecosystem to boom.

Overall, manufacturing has the highest potential of all sectors to propel job growth, with the potential to create 60 million to 70 million jobs by 2030. India could also aspire to boost its real GDP growth rate for manufacturing to 9–10% (from 7–8% in 2022). At the same time, India could

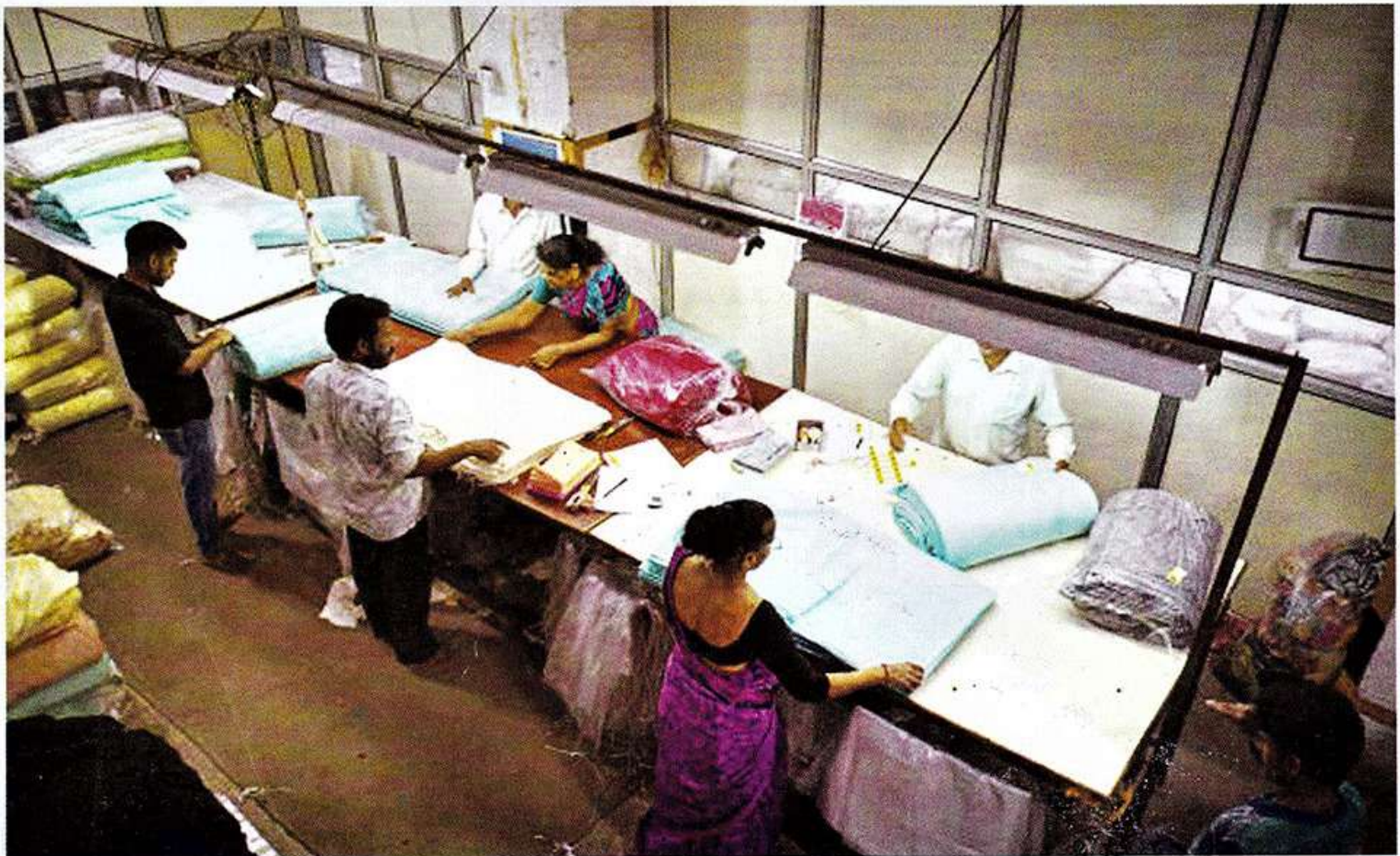
aim to boost overall manufacturing productivity fivefold by 2030 (by tripling labour productivity and doubling capital productivity), achieve 70–80% digital adoption by MSMEs, and increase the number of World Economic Forum lighthouses tenfold to drive IoT and automation adoption and boost productivity. These goals cannot become a reality unless even the smallest manufacturing MSME becomes a part of the entire chain.

Focusing on the following areas will be essential for India to realise its full potential in manufacturing:

New-age Factory of the World: India's chance to shine amid shifts in global supply chains

With the Covid-19 pandemic highlighting the challenges of concentrated supply chains, companies worldwide are looking for alternatives to their primary suppliers that will ensure greater resilience. India could capitalise on this emerging opportunity and capture an increased share of key global supply chains valued at between \$800 billion and \$1.2 trillion by 2030.

India is well positioned to leverage Global Value Chains (GVC) for higher economic growth and job creation. In labour-intensive sectors like textiles and apparel, India is well integrated into global value



chains, though there is scope for greater expansion. In some of the capital-intensive sectors too, like electronics, India has good GVC linkages.

The Government has selected a diverse set of sectors for PLI incentives. It has selected multiple new-age sectors such as mobile phones, Advanced Chemistry Cell (ACC) batteries, high-efficiency solar PV modules, drones, wearables, semiconductors, and specialty steel. To be sure, a significant portion of the government's incentives are directed towards these new-age sectors. These new-age sectors would help India gain prominence as a manufacturing hub. The results are already evident. From just two mobile phone factories in 2014, India has now become the second-largest mobile phone producer in the world, supported by the policy thrust on the sector. In fact, India's exports of smartphones today are worth more than US\$11 billion, and India has emerged as a leading exporter in the global mobile device market. Also, smartphones are now the fifth-largest export item in India's export basket.

The aim should be to further increase India's presence in five to six specific global value chains (e.g., electronics, chemicals, medical devices) by developing port-proximate clusters like the Mumbai—Thane—Raigad cluster for electronics and chemicals. State governments could support efforts by creating plug-and-play cluster zones based on their manufacturing strengths. For example, multi-modal logistics parks are being set up in several cities under the government's road-development programme, 'Bharatmala', and these could become world-class, efficient logistics zones for manufacturing (for example, electronics and aeronautics in Nagpur). Solapur, meanwhile, could become a hub for textiles and apparel. Additionally, adopting contract manufacturing to raise capacity utilisation to over 80%, launching supplier development programmes (e.g., innovation grants), and facilitating single-window clearance could raise India's presence in these specific global value chains.

The future of manufacturing is sustainability. Customers are looking for products and partners who follow eco-friendly practises, adopt green policies, and share a commitment to sustainability.

Embracing the Digital Revolution in Manufacturing

As per a recent NASSCOM report, the Indian manufacturing industry spent between US\$ 5.5 and US\$ 6.5 billion on Industry-4.0 solutions in FY21. Government regulations and private sector investments are pushing Indian manufacturing to adopt digital technology. Manufacturing enterprises, both large and small and medium-sized, can develop a new paradigm of production by leveraging

4.0 technologies (IoT, AI, big data analytics, and robotics) to digitalise some or all levels of business operations and become forerunners in this new Industrial Revolution.

Digitisation could improve reliability and value chain resilience. For example, by leveraging advanced analytics such as telemetry, manufacturers could optimise their delivery networks and better forecast demand at the stockkeeping and distributor levels. Technology grants and international joint ventures could help secure technology expertise that would help propel manufacturing into the digital future. The ongoing 5G rollout would also play a key role in their transformation to 'smart manufacturing.' The key 5G use cases for Industry 4.0 include Connected Asset Monitoring, Connected Warehouses, Predictive Maintenance, Logistics and Fleet Management, and Quality Management.

Focusing on technology development to support manufacturing industries is going to be an important area to strengthen. Besides that, a workforce with the right skills and capabilities would also be essential to bringing technological advancements to the manufacturing sector. Support for skilling and upskilling initiatives will be the need of the hour for manufacturing MSMEs to advance in the future. India needs to invest in robust skill development programmes and collaborate with educational institutions and industry bodies to bridge this skills gap. At-scale manufacturers could upskill or reskill their employees with the latest manufacturing technologies through



tie-ups with academic institutions and digital training platforms. Additionally, the government must incentivise technological investments, boost R&D, and expand institutional capacity. These elements, if implemented successfully, could speed India's industrialisation.

Leaping towards Sustainable Manufacturing Future

Manufacturing has a significant impact on environmental issues because it is a major source of GHG and other pollutants. The future of manufacturing is sustainability. Customers are looking for products and partners who follow eco-friendly practises, adopt green policies, and share a commitment to sustainability. Another critical reason for manufacturers to undertake initiatives in sustainability and include them as a key goal in their strategy and operations is their substantial financial benefits and global competitiveness. It is pertinent to pursue industrial expansion while still being conscious of how production adversely affects the environment. Manufacturers will need to continue changing and improving their methods and seeking out new solutions to make sustainability happen.

Through a number of initiatives, the Indian Government is enticing businesses to adopt sustainable manufacturing, including 'Zero Defect-Zero Effect', 'Digital India', and many others. To complement these initiatives, manufacturers across the value chain need to prioritise the creation of green alternatives, such as bio-based feedstock and sustainable packaging, green building materials, aligning industry standards for green labels, and setting up recycling hubs. The industry should

get together to help define a standard for 'green' labels and establish a robust auditing process for green products. Product development merged with digital technologies can help reap the true potential of sustainable manufacturing and achieve environmental conservation goals. With its integration of cutting-edge technologies and digitisation, Industry 4.0 offers a special chance to match industrial procedures with sustainability objectives. The key to generating long-term economic benefits is leveraging innovation and technology to establish a green, lean manufacturing system that can enable sustainable businesses.

Strengthening Infrastructure

India has inefficiencies in terms of the large amount of goods transitioning within an industrial value chain, as well as the high cost and lengthy time for the transition. The country is already solving these challenges with a variety of interventions, such as the Industrial Corridor Development Programme, the PM Gati Shakti National Master Plan, and the National Logistics Policy. Additionally, state and central governments could strengthen infrastructure in key manufacturing hubs through public-private partnerships (PPPs) and special-purpose vehicles and expand smart-city coverage. They could also use new technologies to provide essential utilities, such as off-grid rural market electrification via solar infrastructure. Further, the sectors being considered for import localisation (including electronic components) could be incentivised by providing plug-and-play infrastructure. Besides hard industrial infrastructure, Indian industry also needs widespread State-sponsored urban infrastructure development to be able to capitalise on the window of opportunity provided by the strategic decoupling between China and the West.

Way Ahead

Over the past seven years, India has made substantial improvements in its policy and regulatory environment, making it much easier for enterprises to establish themselves and flourish. FICCI is confident that as we move ahead on the path towards India@100, the process of reforms will further gather pace and strengthen the foundation on which India will have a world-class industrial sector that is efficient, productive, sustainable, and will imbibe a major export orientation. □