A Study on Factors Driving Growth in the Indian Manufacturing Sector

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ABSTRACT:

The Indian manufacturing sector provides livelihood to more than 14 million people (43.4% of the workforce) and contributes ~16% to India's GDP. The Indian government has prioritized growing the manufacturing sector over the last ten years with several policy initiatives introduced under the "Make in India" campaign. Besides, major economies across the globe are diversifying their supply chains away from China. This is the result of global supply chain disruption that the world experienced as an after-effect of the COVID-19 pandemic and due to over reliance on China in the manufacturing space. This has opened new ways for the Indian manufacturing industry to prosper. The Indian government, aware of the situation, plans to boost the manufacturing sector's contribution to the economic output by up to 25% by 2025. In this case study we discuss the key factors and government policies that is likely driving the growth of manufacturing in India.

Key Words: Manufacturing Sector, Growth, GDP and Make in India.

INTROUDCTION:

MANUFACTURING SECTOR: AN OVERVIEW

With an estimated GDP of US$ 3.7 trillion in 2023, the Indian economy ranks fifth in the world. Despite the COVID-19 pandemic, The Indian economy's CAGR over the last decade stands at a healthy ~6%. In the years to follow, the Indian economy is predicted to expand at a rate of more than 6% annually, with the manufacturing sector is expected to serve as the primary driver of this growth. Evolution of the sector Pre-Liberalization: Until the 1990s, the government had significant bureaucratic control over production, trade, and investments in manufacturing. The Indian economy was highly regulated, where industries were required to obtain licenses from the government for the setup and expansion of manufacturing units. This led to Red-tapism, making the entire process tedious and inefficient. For FDIs, inflow was limited to 40% in certain large and heavy industries, resulting in a lack of incentive for investors. Post-Liberalization: In 1991, India took a major step towards

integrating with the world economy by adopting economic liberalization and reform programmes in 1991. Restrictions on investment projects and business expansion were gradually removed and FDI limits were steadily increased to almost 100%, except for certain industries. While manufacturing continued to be an important part of the economy, these policies largely emphasized the growth of the services sector due to changing market dynamics, globalization, and technological advancements. Make in India: September 2014 marked the commencement of the 'Make in India' program by the Indian government, emphasizing that 'making the production process the main driver of the economy' will be the objective of the initiative. While the emergence of industrial corridors like the Delhi-Mumbai Industrial Corridor (DMIC) and Chennai Bengaluru Industrial Corridor (CBIC) were one of the factors behind the growth of manufacturing in India, this provided an environment in which manufacturing activities flourished, attracted investments, and fostered economic growth. The matter of consideration was simplifying foreign direct investments and urges it to increase. This will also aid in the reduction of imported goods, help to strengthen indigenous industries, and to govern the economy under centralized management. These measures improved India's 'Ease of Doing Business' ranking by the World Bank with India reaching 63rd place in 2020 from 142nd position in 2015.

OBJECTIVES OF THE STUDY:

1) To know the role of manufacturing sector in the growth of the county development.
2) What are the factors affecting growth of economic development of the country.
3) To know the facilitating factors of the country's economic growth.

LITERATURE REVIEW'S:

This research aims to enhance community empowerment through the MSME sector. Utilizing a qualitative case study approach, the study focused on Bali Province and selected informants purposefully. Findings indicated that MSMEs became pivotal for economic stability during the pandemic, facilitating economic growth and a shift from tourism to MSME activities. The sector embraced digital economy practices and developed a sharing economy model. Key findings include a societal shift from a worker mentality to an entrepreneurial spirit and the adoption of value exchange in the MSME sector. A limitation is the focus on a single region, but the study highlights MSMEs as crucial for mitigating social vulnerability (Subawa et al., Citation2022).

A consistent rise in per capita income does not inevitably equate to a continuous rise in the standard of living in a developing country like India, where wealth and income inequality are quite high (Committee, Citation2022). Using published statistics and primary data, this study aims to identify Financial Year various problems with SME supporting from banks, examine the causes of banks' reluctance to lend to the industry, and identify Financial Year potential solutions to improve SMEs' access to bank supporting (Bhavan, Citationn.d.). The COVID-19 pandemic has significantly impacted on MSMEs, with a high positive correlation among variables. The government should begin an ongoing nursing system, declare relief steps, promote e-market linkage, and increase fiscal stimulus to improve MSMEs and achieve self-reliance (Sudharani, Citation2021).
The Indian economy is supported by the MSME sector, which plays a major role in its expansion. It has become a crucial tool for achieving inclusive growth for the nation. This essay aims to highlight the role that micro, small, and medium enterprises (MSME) have played in the development of the Indian economy as well as its current state. This paper systematically reviews the relationship between FinTech and SME supporting from 2008 to 2022. It addresses the challenges SMEs face in accessing capital and financial services, such as information asymmetry and high transaction costs. FinTech innovations have streamlined information sharing, altered fund

mobilization methods, and boosted capital-raising activities. However, existing literature on this topic is fragmented, necessitating a consolidation of empirical research on FinTech's effectiveness in meeting SMEs' supporting needs. The review reveals a surge in empirical studies a decade after the advent of FinTech 3.0, predominantly employing measureable methods based on surveys and FinTech platforms. Notably, there's more focus on alternative digital supporting for SMEs than outdated bank lending. China leads in publications on this subject, followed by the United States (US). Content analysis highlights FinTech's role in enhancing information processing, reducing asymmetry, and speeding up the lending cycle. The paper concludes by identify Financial Yearning research gaps, proposing future study areas, addressing challenges, and offering policy recommendations in this domain (Sanga & Aziakpono, Citation2023).

The study reviews the economic involvement of the MSMEs sector post-the 1991 economic reforms, examining their performance using data from various reports and publications and highlighting the significant contribution of the sector to Indian economic growth (Cunningham et al., Citation2023). This article analyses the description of MSMEs, the role and performance of MSMEs in the Indian economy, government policies regarding MSMEs, as well as the various challenges and opportunities associated with MSMEs in India (Singh, Citation2021). The paragraph highlights the significance of MSMEs in India, highlighting their significant role in the economy. However, the collapse of the MSME sector threatens the livelihoods of workers and small business owners, mainly in Tamil Nadu, due to the COVID-19 pandemic (Tambunan, Citation2019). MSMEs globally contribute to economic expansion and fair development, but the COVID-19 pandemic has posed significant challenges. To remain competitive, they must constantly innovate and adapt to technological changes, demand shifts, and new markets (Buteau, Citation2021). The essay explores the influence of the global pandemic on MSMEs, their role in the economy, and the challenges they face in India, emphasising the need for government intervention to mitigate its effects (Aminullah et al., Citation2024).

The research note reveals that MSMEs participate less in international trade compared to huge firms, but their share of trade value has increased. MSMEs' share in imports is higher than in exports (Singh, Citation2021). The percentage of industrial MSMEs shipping and importing increased for all firms, except for micro firms. MSMEs are more likely to trade in less capital-intensive sectors, and their share of real estate service exports and imports has increased (Kanimozhi, Citation2023). The Reserve Bank of India is forming an Expert Committee to identify Financial Year causes and intend long-term solutions for the economic and financial sustainability of MSMEs, which contribute significantly to service, entrepreneurship, and economic growth. The committee's composition and terms of reference will be finalized by December 2018 (Dambiski Gomes de Carvalho et al., Citation2021).

The review classifies MSMEs across regions and identifies variables utilized in the highly cited papers, which align with excellence/quality management elements and outdated invention types. The study reveals strong theoretical relationships among variables, mainly highlighting connections between networks-open invention, information-knowledge, and product and process inventions. It underscores the significance of sustainability, information-knowledge, and networks-open invention in enhancing MSMEs' competitiveness, urging bosses/owners to prioritize these determinants. Additionally, the paper discusses future research guidelines in this domain, providing insights for further exploration and development in understanding MSMEs' competitiveness (Dambiski Gomes de Carvalho et al., Citation2021). Despite the growing significance of SMEs and the increasing body of research in data analytics, there is a lack of a cohesive and integrated understanding of the field. To address this gap, a systematic literature review was conducted, analysing 42 peer-reviewed research studies published between 2010 and 2021. This review classified, categorized, and synthesized the findings into four main themes: enabling determinants, restraining determinants, investing SMEs, and performance indicators. Additionally, the review identified research gaps in key areas and provided insights for future research guidelines (Bhardwaj, Citation2022).

GST has significantly influenced the economic development of MSME, but many struggle to implement it. The tax system has unified the market and simplified operations, leading to increased liability for tax payments. This report examines the challenges faced by 158 MSME entrepreneurs in Bangalore's Peenya Industrial Area, using Cluster Random Sampling Technique and One-way ANOVA analysis. The findings suggest both positive and negative effects on India's MSME sector (Kanimozhi, Citation2023). The study focuses on accelerating digitalization of MSMEs in Indonesia. It identifies three main constraints: human capital in digital talent, socio-technical adaptation, and government support. To work effectively, three resolutions are needed: building digital talent, accelerating socio-technical adaptation, and ensuring the sustainability of existing government support for digitalization (Aminullah et al., Citation2023). This review investigates the contribution of MSMEs to Ethiopia's sustainable development goals. It found that MSMEs significantly contribute to Ethiopia's sustainable development by creating service, alleviating poverty, and cultivating living standards. However, access to finance, electricity, and trade regulation are major constraints. The review suggests policy implications for addressing these challenges and calls for further MSMEs influence evaluation research (Endris & Kassegn, Citation2022).

Digital technology can significantly benefit India's MSME sector, provided it has government, solution providers, and users' support. The digital landscape has evolved, but challenges remain in addressing the diverse MSME segment. Encouraging businesses to embrace digital technology involves providing end-to-end solutions (Buteau, Citation2021). The paper explores the role of MSMEs in Indonesia, concentrating on their importance, constraints, and role in creating business opportunities for women. The study found that MSMEs dominate Indonesia, accounting for almost 100% of firms but only contributing 58–61% of GDP. Poverty is the main driving force behind MSE growth. The study recommends government training on online marketing, alternative funding, and assistance for new entrepreneurs. However, it has limitations, as secondary data lacks information on motivation and socio-economic profiles of MSMEs owners (Tambunan, Citation2019).

This article examines the role and performance of MSME in India, highlighting their significant contribution to industrial production, exports, service, and entrepreneurial base. It concludes that the pandemic has adversely influenced MSMEs, urging the government to implement appropriate measures to overcome its effect.(Singh, Citation2021). The paper examines the determinants determining technology adoption among MSMEs in the Danube region of Europe. It focuses on the automotive, electronics, and IT sectors, which are typically characterized by rapid uptake of high-performance calculating (HPC). The study finds that opportunity recognition is a more important factor than cognition for technology adoption, and that combining these determinants can enable MSMEs to accept new technologies for value creation (Cunningham et al., Citation2023).

DISCUSSION:

GROWTH OF THE SECTOR:

Industrial production in India contributed ~30% in GDP on average from 2011-12 to 2022-23. The growth in industrial income, measured by Industrial Gross Value Added (GVA), has maintained pace with the overall GVA growth in the economy. Within the Industrial GVA, Manufacturing GVA has grown at a higher rate compared to the overall GVA. It has been a major contributor with its contribution averaging more than 50% of the total from 2011-12 to 2022-23.

The industrial sector registered a modest growth of 4.1% in 2022-23 compared to the strong growth of 10.3% in 2021-22. This was mostly due to the supply chain disruptions and lockdown in China, which affected the availability of essential raw materials. The smoothening of the low base effect also impacted this growth rate. The manufacturing sector has had a dominant presence in GVA by economic activity, with an average share of ~16.2% over the past 12 years. However, since 2019-20, the average share of manufacturing has fallen to ~15%. The slump was caused by the demand contraction and reduced capacity utilizations due to the pandemic. The restrictions on movement due to social distancing and lockdown also caused logistics and supply chain issues.

These issues continued beyond the pandemic as several geo-political issues emerged in different parts of the world. However, over the past few quarters, demand has shown recovery and sales and business activities have also expanded, which is evident from the rise of the Manufacturing PMI.

In March 2024, the HSBC India Manufacturing PMI rose to 59.2 from 56.9 in February 2024. The fastest growth in factory activity since February 2008 was attributed to the rise in demand. Buying levels also saw a significant surge, reaching the highest point in nine months. This led companies to restock their inventories more actively. Business sentiment improved and employment also increased moderately, reflecting optimism among manufacturing firms with regard to the future prospects.

HOW INDIA'S MANUFACTURING SECTOR FARE AMONG THE TOP FIVE GLOBAL ECONOMIES:

An analysis of the top 5 economies in the world reveals that only the US has a lower contribution (11%) from the manufacturing sector to GDP compared to India. In India, the manufacturing sector has historically contributed 15-17% of its GDP, while in China, the sector's average contribution stood at 29% from 2011 to 2022. For Japan and Germany, the manufacturing sector contributed 20% of GDP during the same period. This relative comparison indicates that there is still significant potential in India's manufacturing sector to increase its contribution to the nation's GDP and drive economic growth and employment creation over the next decade.
Moreover, the recent COVID-19 pandemic and many conflicts worldwide have proven the point that a country's complete dependence on another country for the manufacturing process might include various risks. That is the main reason why leading suppliers are going for the China + 1 approach by openly looking for alternatives to China. Product makers around the globe now consider India as a preferred destination owing to the added advantages of policy support and the availability of human capital, particularly skilled workers. The Indian government is heavily committed to utilizing these trends for its own gain, so it is planned that the manufacturing sector's contribution to the Indian economy output will be increased up to 25% by 2025

GOVERNMENT INITIATIVES TARGETING INDIA'S MANUFACTURING SECTOR:

Some of the major government schemes and initiatives to promote the manufacturing sector are as follows: Make in India initiative: The Indian government started the "Make in India" initiative in September 2014 to encourage companies to produce and assemble goods in India. The initiative is aimed at the following:

- boosting domestic manufacturing
- Attracting foreign investment
- Enhancing skill development
- Encouraging innovation
- Promoting entrepreneurship

- ➢ Facilitating export growth
- ➢ Creating employment opportunities

It has helped the nation to explore the potential of local products and taken Indian industry to the world. The implementation of the new system terminated its predecessor and gave way to a simple, clear system with a transparent, user-friendly design. This enabled investors to access funds, encouraged innovation, improved the skill base, and created a world-class manufacturing infrastructure. Opening up several sectors like defence manufacturing, railways, and space for the FDI and adjustment of regulation policies for increasing the investments have accelerated the process. One of the most impressive outcomes of the 'Make in India' campaign is the Delhi Metro, which is the first and the biggest mass transport system which is entirely indigenously developed in India. The majority of coaches (~90%) for the metro system are made domestically. The main systems of the new 'Vande Bharat' trains, such as the air conditioning, the brakes, and the engines, have been designed and built in India, showing how far the nation is advanced in this regard. Industrial Corridor Development Programme: In order to create new industrial cities and accelerate the growth of the manufacturing sector, the Indian government has decided to build industrial corridors. The programme seeks to develop the undeveloped and underdeveloped industrial regions with sustainable infrastructure in order to compete with the best manufacturing and investment destinations across the globe. This initiative is undertaken in partnership with the state governments.

The development of 32 projects under 11 industrial corridors is being undertaken in four phases as part of this programme. The 11 industrial corridors being developed are:

- Delhi Mumbai Industrial Corridor (DMIC)
- Amritsar Kolkata Industrial Corridor (AKIC)
- Chennai Bengaluru Industrial Corridor (CBIC)
- Vizag Chennai Industrial Corridor (VCIC)
- Bengaluru Mumbai Industrial Corridor (BMIC)
- Odisha Economic Corridor (OEC)
- Hyderabad Nagpur Industrial Corridor (HNIC) Hyderabad
- Warangal Industrial Corridor (HWIC)
- Hyderabad Bengaluru Industrial Corridor (HBIC)
- Extension of CBIC to Kochi via Coimbatore
- Delhi Nagpur Industrial Corridor (DNIC)

Phase 1 Projects:

1. Dholera Special Investment Region (DSIR)- (Gujarat, DMIC)
2. Shendra Bidkin Industrial Area (SBIA)- (Maharashtra, DMIC)
3. Integrated Industrial Township – Greater Noida (IIT-GN)- (Uttar Pradesh, DMIC)
4. Integrated Industrial Township – Vikram Udyogpuri (IIT-VUL)- (Madhya Pradesh, DMIC).
5. Integrated Multi-Modal Logistics Hub – Nangal Chaudhary (IMLH NC)- (Haryana, DMIC)

Phase 2 projects:

- ➢ Rajpura Patiala IMC
- ➢ Tumakuru Industrial Area
- ➢ Multi-Modal Logistics Hub and Multi-Modal Transport Hub (Uttar Pradesh, DMIC)

- Dighi Port Industrial Area (Maharashtra, DMIC)
- Khurpia Integrated Manufacturing Cluster IMC (Uttarakhand, AKIC)
- Zaheerabad Phase 1 (Telangana, HNIC)
- Rajpura Patiala IMC (Punjab, AKIC)
- Palakkad Industrial Area (Kerala, CBIC Extension)

Phase 3 projects:

1) IMC at Agra (Uttar Pradesh, AKIC)
2) Jodhpur Pali Marwar Industrial Area (Rajasthan, DMIC)
3) IMC Gaya in Bihar under AKIC
4) Hisar Integrated Manufacturing Cluster IMC (Haryana, AKIC)
5) Kopparthy Industrial Area (Andhra Pradesh, VCIC)
6) Vishakhapatnam Industrial Area (Andhra Pradesh, VCIC)
7) Khushkhera Bhiwadi Neemrana Industrial Area (Rajasthan, DMIC)

Phase 4 projects:

1. Dharwad Node (Karnataka, BMIC)
2. Satara Node (Maharashtra, BMIC)
3. IMC in Jharkhand under AKIC
4. IMC Prayagraj (Uttar Pradesh, AKIC)
5. Odisha Economic Corridor (OEC)s
6. Orvakal Industrial Area (Andhra Pradesh, HBIC)
7. Chittoor Industrial Area (Andhra Pradesh, VCIC)
8. Delhi Nagpur Industrial Corridor (DNIC)
9. New project to be identified
10. New Project to be identified

DPIIT had authorised and released Rs. 9,899.89 crore (~US$ 1.19 billion) for the industrial corridor projects until July 31, 2023. Of these, Rs. 9,816.98 crore (~US$ 1.18 billion) was utilised. Ease of Doing Business: The objective of this programme is to develop a beneficial business environment for the existing as well as new businesses and industries. The programme was focused on the following:
Streamlining the regulatory environment by bringing in easier procedures to obtain permits, licenses, and clearances.

- Reducing compliance burden.
- Improving access to finance by simplifying processes to obtain credit.
- Attracting foreign investment through transparent processes and reduced red tapism.
- Encouraging entrepreneurship by lowering barriers to entry for new businesses.

Favourable changes that happened during the implementation of it were such that India became the 63rd country by the Ease of Doing Business rankings of the World Bank in 2020, from 142nd position in the year 2015. India's ranking for obtaining construction permits was ranked 184 in 2014, but it improved to 27 in 2019 which reflects a considerable reduction in the number of procedures and cutting down the time for acquiring the permits. India's ease of doing business regarding 'getting electricity' rank improved from position 137 to position 22. Only 53 days and four procedures are necessary for the same reason to get electricity. India is ranked number 13 for

minority investor protection and 25th for the ease of getting credit among 190 economies. Cross-border business dealings have become seamless with electronic filing of customs clearance.

National Single Window System (NSWS):

The NSWS was announced in the union budget 2020-21 and launched in September 2021. The setting up of this system has been beneficial in the following ways:

- All approvals are in one place without going to individual ministries, departments, or States/UTs.
- Smart questionnaire to find out which approvals might be needed for starting a business.
- Smart questionnaire to find out which approvals might be needed for starting a business.
- Easy renewals of approvals through a seamless interface.

The systems of 26 states and UTs and 32 ministries and departments have been linked with the NSWS portal, which provides access to over 658 central approvals and 6,171 state approvals. More than 1.3 lakh 'know your approvals' queries have been taken on the portal, and over 67,000 approvals have been applied through the NSWS.

PM GATI SHAKTI NATIONAL MASTER PLAN (NMP):

PM Gati Shakti National Master Plan is a GIS-based platform that was launched in October 2021. It has portals of various ministries and departments of the government. It is a modern and unique approach to facilitate data based decisions related to integrated planning of diverse infrastructure, which will reduce logistics costs. About 1,530 data layers of 43 various central
ministries and departments and 36 state/UT governments have so far been uploaded on the NMP. To increase the capex by states on infrastructure development, the Ministry of Finance had made an additional provision of Rs. 1 lakh crore (~US$ 12 billion) as long-term loans at zero interest rate.

National Logistics Policy (NLP):

The National Logistics Policy was launched in September 2022 with the key objectives of:

- ➢ Lower cost of logistics;
- ➢ Improve logistics operations; and
- ➢ Reduce bottlenecks.

It is also an effort to tackle inefficiencies in procedures by laying down an interdisciplinary framework across sectors for developing the entire logistics ecosystem.

PRODUCTION LINKED INCENTIVE (PLI) SCHEME:

The Production Linked Incentive (PLI) schemes for 14 important sectors were announced with an outlay of Rs. 1.97 lakh crore (~US$ 23.6 billion), in line with India's goal of becoming "Aatmanirbhar" and boosting the country's manufacturing and export capacities. The PLI programmes provide a variety of incentives, including tax breaks, financial subsidies, and other benefits, that encourage companies to increase their output and sales in particular industries, such as the manufacturing of electronics, automobiles, pharmaceuticals, and textiles. The PLI programme was started by the Ministry of Electronics and Information Technology (MeitY) with a total fund allocation of Rs. 38,601 crore (US$ 4.65 billion). Ten mobile manufacturing beneficiaries have received benefits

from the large-scale infrastructure manufacturing scheme. The impact of 'Made in India' on employment creation and exports is clear. 28,636 jobs have been created under the programme, and smartphone exports increased by 139% over the last three years. Under the PLI scheme, the Indian government is set to initiate an automotive industry programme to boost investment and create domestic assembly facilities in the automotive sector. This scheme is capitalized by Rs. 20,750 crore (~US$ 3.5 billion), offering financial incentives of up to 18%. Through such a plan, the government received 115 companies' applications. Apart from the 18 of them who have managed to meet the criteria of the 'Champion OEM Incentive,' the rest are the 67 applicants who successfully complied with the requirements of the Component Champion Incentive. Looking forward to the achievements of the Ministry of New and Renewable Energy, the PLI scheme for the National Programme on High-Efficiency solar PV modules was finally brought into force with an overall allocation of Rs. 24,000 crore (US$ 2.89 billion). These objectives would involve the creation of 30,000 direct jobs and 1,20,000 indirect jobs for the local people, which, in turn, would substitute the annual import worth Rs. 17,500 crore (US$ 2.10 billion). It also follows the research works on new, efficient utility-scale panel technologies that are an integral part of the Indian renewable energy planning. The government has created measures to encourage the local production of drugs to help tackle the high reliance on suppliers from abroad. The two units of this sector are separated based on manufacturing the bulk drugs having an allocation of Rs. 6,940 crore (US$ 835.64 million) and Rs. 15,000 crore (US$ 1.81 million) for pharmaceutical manufacturing. In coming years, all these PLI plans have the potential to generate significant employment, high production, economic growth, and exports.

SCHEMES TO ENCOURAGE DOMESTIC MANUFACTURING OF PHARMACEUTICAL DRUGS:

The scheme for Strengthening the Pharmaceutical Industry (SPI) was launched with a budget of Rs. 500 crore (~US$ 60 million). The scheme is being implemented from 2021-22 to 2025-26, with a purpose

- ➢ Providing infrastructure support for pharma MSME in clusters; and
- ➢ Addressing the issues of technology upgrade of individual pharma MSME.

To establish the common facilities, financial assistance of Rs. 100 crore (~US$ 12 million) each has been given to four states under the 'Promotion of Medical Devices Parks' scheme.

Modified Programme for Semiconductors and Display Manufacturing Ecosystem:

A programme for the development of the semiconductor and display manufacturing ecosystem in India was approved by the government in line with the vision of "Aatmanirbhar Bharat," to establish India as the global hub for Electronics System Design and Manufacturing.

After the modifications, the scheme provides the following:

- Under the plan for setting up semiconductor fabs in India, all technology nodes will receive equal financial support equal to 50% of the project cost.
- Financial assistance equal to 50% of project cost under the Display Fab Scheme setup.
- Fiscal support of 50% of project cost on an equal basis under the Scheme for setting up Compound semiconductors/silicon photonics/sensors fab and semiconductor ATMP/OSAT facilities in India.
- The programme was approved with a budget of Rs. 76,000 crore (~US$ 10 billion). PM Mega

PM INTEGRATED TEXTILE REGION AND APPAREL (PM MITRA):

In 2021, the Ministry of Textiles decided to set up seven PM MITRA parks in the states of Gujarat, Karnataka, Madhya Pradesh, Maharashtra, Tamil Nadu, Telangana, and Uttar Pradesh. The reason behind this initiative was to develop a world class industrial infrastructure that would attract cutting-edge technology and boost FDI and local investment in the textile sector. These PM MITRA parks will provide an opportunity to create a cohesive textiles value chain, from spinning, weaving, processing/dyeing, and printing to garment manufacturing, at one location. Each park is expected to create over one lakh direct and two lakh indirect jobs after completion. The scheme has a total outlay of Rs. 4,445 crore (~US$ 532 million).

Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles (FAME-India) Scheme:
The FAME-India plan was created to encourage the production of electric and hybrid vehicle components with a particular focus on technology. Initially, 2015 to 2019 were the years of Phase-I with an aggregate fund of Rs. 895 crore (~US$ 107 million). The Phase II kick started from 2019 April with a budget of US$ 1.2 billion for three years. March 2024 was later finalized as the end date for phase II. It intends to pose a significant step towards electric vehicles in public transport and signs consumption increase by boosting market share and strengthening demand.

UDYAMI BHARAT SCHEME:

'Udyami Bharat' is an ongoing effort by the government to continue to work towards promoting the empowerment of Micro, Small, and Medium Enterprises (MSME). The authorities have subsequently, under this program, launched different schemes such as MUDRA Yojana, the Scheme of Fund for Regeneration of Traditional Industries (SFURTI), as well as Emergency Credit Line Guarantee Scheme, to offer necessary support in the form of a quick-action facility to the micro, small and medium enterprises. To intensify the gain of MSMEs in the states, the introduction of the Raising and Accelerating MSME Performance (RAMP) scheme in a two-pronged plan that has an approximate financial outlay of Rs. 6,000 crore (~US$ 720 million) an investment estimation. It will combine with the 'Aatmanirbhar Bharat Abhiyan' as it will develop quality standards, upgrading of practices and enhancement of processes, and improve market access to provide a competitive and self sustaining platform for micro, small, and medium enterprises.

NAVIGATING THE CHALLENGES:

Though there are opportunities to capitalise on the Indian Manufacturing sector, the challenges need to be tackled in an efficient way to have a lasting impact. Below, we list the key challenges and the steps being taken to overcome them.

Lack of infrastructure:

- In order to function smoothly, the manufacturing sector requires a strong integrated infrastructure, including power, telecom, and transportation. India is still going through a phase in which its road, rail, and port infrastructure is developing. In rural India, last-mile connectivity and reliable power supply remains a challenge.
- To overcome these challenges, the government has launched initiatives like the Industrial Corridor Development Programme, PM Gati Shakti National Master Plan, and National Logistics Policy. We

expect these initiatives to result in world-class infrastructure which will boost the growth of the manufacturing sector in India

Skill gap:

- The shortfall of adequate skilled labour is another significant challenge faced by the sector. With the ever evolving needs of the industry, considerable efforts need to be made by the education system to narrow the wide disconnect between the skills that are imparted and those that are required.
- In the quest to become self-reliant in the manufacturing sector, India needs to use its biggest advantage, viz., large youth population, wisely by providing the working-age people with focused training programmes.
- To overcome this issue, the government has taken up skill development initiatives like Skill India Mission and Pradhan Mantri Kaushal Vikas Yojana (PMKVY) that enable the youth to take up training to acquire industry relevant skills which will offer them meaningful employment opportunities.

Complex regulatory environment:

Complex and tedious regulations in India are a major deterrent for businesses that are willing to set up manufacturing units in the country. A more business-friendly and simplified regulatory environment in India can definitely end up attracting more investments in the sector. The government has demonstrated the efforts to ease this burden by introducing programmes like Ease of Doing Business and the National Single Window System, which have simplified the procedures to obtain permits, licenses, and clearances, reduced compliance burden, and enhanced efficiency through easy accessibility to regulatory approvals.

Lack of Innovation:

- India's manufacturing sector lacks innovation, primarily due to limited investments by businesses in research and development.
- It has also affected the ability of Indian manufacturers to produce goods that are competitive at a global level.

However, by introducing schemes that encourage the integration of technology into manufacturing and increased funding and incentives for research and development, India can overcome these challenges, make itself a global manufacturing hub, and be in the same bracket as some of the developed economies like the US, China, Japan, and Germany

CONCLUSION:

The government's thrust to encourage manufacturing and a unique demographic advantage are driving the manufacturing sector towards more automated and process-driven manufacturing, which will result in improved efficiency and boost the production of the industry. With a focus on developing industrial corridors and smart cities, the government is looking to develop a favourable environment for the industrial development, which will promote advanced practices in manufacturing. The government has also recognized the importance of Industry 4.0 and launched initiatives like the Smart Advanced Manufacturing and Rapid Transformation Hubs (SAMARTH) Udyog Bharat 4.0 to encourage the integration of technological solutions into the Indian manufacturing Industry. Today, India is fast becoming a desirable destination for foreign investments in the manufacturing sector. Several luxury, auto, and cell phone brands have established production facilities in the entire country. Many other brands are attempting to replicate this. According to the Indian Cellular and

Electronics Association (ICEA), India could increase its total capacity for producing laptops and tablets to US$ 100 billion by 2025, with the help of policy intervention. The PLI schemes are ready to unlock manufacturing capacity, boost exports, reduce import dependence, and lead to job creation for both skilled and unskilled labour. Moreover, the improvement in business sentiment suggests growing optimism among Indian manufacturing firms regarding future prospects. In a nutshell, we can conclude that the stars are aligned for the manufacturing sector to achieve greater heights, and the Indian government's vision of increasing the manufacturing sector's contribution to the Indian economy by 25% looks achievable.

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