

ASSOCHAM National Council on Manufacturing
Roundtable on
Transforming Manufacturing to Next Level

Knowledge Partner **accenture**



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First Roundtable (16th March 2019, at Hotel Claridges Delhi)

It was a highly successful roundtable discussion with participation of senior executives/CEOs from a wide spectrum of industries, services and multilateral institutions which amongst others included: BMW, World Bank, NOKIA, Tata Steel, Steelbird Hi-Tech India Limited, JSW, Tata Engineers Services Ltd, Jindal Steel & Power Ltd, Sterlite Technologies, Infineon Technologies India Pvt. Ltd, Philips Lighting India Limited, Boston Scientific India, JSL, Hindalco, Hindustan Syringes & Medical Devices, Trident Group - Logistics, Quest Global Technologies, & IGC India.

Second Roundtable: (scheduled at Mumbai on 16th May, 2019)

Third Roundtable: (scheduled at Hyderabad on 30th May, 2019)

Fourth Roundtable: (scheduled at Chennai on 18th June, 2019)

Major Topics to be covered:

- 1. Operational Challenges and Unfinished Agenda: Policy Reforms for the New Government**
 - **GST:** Promoting simplification, reducing complexity and compliance cost for manufacturers;
 - **Role of long term finance** in Manufacturing
 - **Skills:** Need to upgrade skills and skill deficit and mismatch to enhance labour productivity;
 - **Labour Policy Reforms:** Rationalisation and codification of 44 central labour laws into four broad groups;
 - **Land Acquisition:** Making it transparent and faster for big industrial/infrastructure projects;
 - Clearance and approval challenges in setting up and expansion
 - Logistics and Supply Chain management to help trim logistics costs
- 2. Role of Emerging Technology**
 - How manufacturing can best leverage emerging technologies?
 - Impact of technology on labour market: Job creation versus job destruction
 - Types of skill sets required to tap emerging technologies
- 3. Advancement of Supply Chain & Logistics**
 - Push for lean and agile Supply Chain management through AI, IoT, Advanced Analytics & Blockchain.
 - Use Big Data for Supply Chain Management

4. Enhancing the Competitiveness of SMEs through Innovation

- Fostering complementarity amongs micro, small, medium and big enterprises;
- Transforming SMEs through digitisation;
- Use of technology to source inputs and market output to overcome structural handicaps;

5. Strategy to promote merchandise export competitiveness

- Bilateral Agreements/regional Agreements/FTAs
- Revitalizing the SEZ
- Need for a new WTO export incentive framework
- Role of Non-Tariff Barriers (NTBs) from exporters perspective
- Technical standards and regulatory barriers
- Anti-Dumping duties and Countervailing measures
- Incentives Export

Target Sectors

- Food Processing
- Textiles
- Non tradable sectors (ports, highways, waterways, energy etc)
- Automobile & Auto Components
- Iron, Steel and Non-Metals
- Chemicals, Pharmaceuticals and Biotechnology
- Cement and Construction Material
- Electronics and Electricals
- Power and Energy Equipments

The round table will highlight the views by the industry players in the process of development of the sector.

BACKGROUND

The 'Make in India' initiative was launched in 2014, which aims at promoting India as an important investment destination and a global hub in manufacturing, design and innovation. 'Make in India' initiative aims to create a conducive environment for investment, development of modern and efficient infrastructure, opening up new sectors for foreign investment and forging a partnership between Government and industry through a positive mind set.

The 'Make in India' initiative launched by the government has two main objectives, namely, to increase the share of the manufacturing sector to the gross domestic product (GDP) to 25 per cent by 2022, from just above 16 per cent in 2014, and to create 100 million new jobs by the same year. In more than four years since its launch, the share of manufacturing in GDP has remained virtually stagnant. This has implications for job creation in this sector and for job creating units in the manufacturing sector, namely, the micro, small and medium enterprises (MSMEs).

India has skipped the traditional journey from agriculture to manufacturing, unlike China, South Korea and other emerging markets. In terms of growth, India's manufacturing sector has underperformed compared to the overall GDP growth in the past decades. As a result, the share of manufacturing in India's GDP has stagnated at 16-17 per cent. To put this in perspective, manufacturing accounts for 29 per cent of GDP in China and South Korea, and 27 per cent in Thailand. Manufacturing has been the motor force of economic growth in these countries. According to estimates, every job created in manufacturing has a multiplier effect of 2-3x additional jobs in other sectors. Therefore, manufacturing sector's role is vital for promoting job creation.

China's extraordinary transformation based on manufacturing has been achieved through a combination of massive infrastructure investment, Special Economic Zones, incentives and subsidies, progressive decentralization, and market-oriented reforms. Now, through the Made in China 2025 strategic plan, the government is incentivising Chinese companies to leapfrog on the technology forefront by encouraging manufacturers to upgrade their factories in terms of quality, productivity and digitisation. On the other hand, South Korea has transitioned to a high-tech manufacturing nation by focusing heavily on overseas technology acquisition, and subsidies on R&D investments made by the public and private sectors. Tax incentives for R&D in South Korea are offered at every stage. Therefore, South Korea's comparative advantage lies in technology and design.

Rise of manufacturing has placed a decisive role in the economic transformation of present day developed countries. China's transition from an agrarian society to status of "global factory" is a testimony to the role of manufacturing. China's enviable growth has been primarily driven by the manufacturing sector, which contributes more than a quarter to the global manufacturing GDP. China has outgrown India in terms of economic size, with its GDP almost five times that of India's.

Factors constraining India's manufacturing competitiveness

One of the important ways in which a weak manufacturing sector has adversely impacted the India is in its external economic relations. For more than a decade and a half, India has been engaged in an intensive process of global and regional economic integration. This process requires the government to lower the import duties, especially in the manufacturing sector. This has bearing on India's capacity to negotiate and conclude the ongoing Regional Comprehensive Economic Partnership (RCEP). India's manufacturing sector finds its integration into global system a challenge India's industrial competitiveness is affected by a variety of factors.

The first is the cost and quality of power. Setting up of captive power supply for stable, concurrent and uninterrupted power is a huge cost burden for all energy-intensive manufacturing units. Cross-subsidisation has increased industrial power tariffs over the years. Besides, a large number of cesses on inputs used in manufacturing which are unrebated add to the cost.

Second, Indian logistics costs are estimated to be of around 13-14 per cent of GDP, almost double of the 7-8 per cent of GDP in developed countries. In India, nearly 60 per cent of the cargo travels by road. This is because of congested railway networks, high rail freights, long transit times, inadequate port depths, high turnaround time at ports, and poor warehousing facility.

Third, India's demographic and low labour cost advantage is undermined by growing skill mismatch and low productivity of labour. Today, 62 per cent of India's population is in the working age group and more than 54 per cent of the total population is below 25 years of age. It is estimated that only 4.7 per cent of India's workforce is formally skilled, as against 52 per cent in the US, 68 per cent in the UK, 75 per cent in Germany, 80 per cent in Japan, 96 per cent in South Korea and 24 per cent in China. As per official estimates, India needs to train 126 million people across 34 sectors. This has an impact on productivity. Manufacturing productivity in value added per hour worked in India is much lower compared to many emerging economies.

Fourth, if India is to realise its goal of increasing the manufacturing share in its GDP to 25 per cent, expenditure on R&D is critical. According to the Economic Survey, India's spending on R&D as a share of GDP has been stagnant at 0.6-0.7 per cent for the last two decades. This is much lower than the US (2.8 per cent), China (2.1 per cent), South Korea (4.2 per cent) and Israel (4.3 per cent). The survey recommends doubling R&D expenditure. There is a not only a need for greater state and central government spending, but also industrial application oriented R&D and greater collaboration with the private sector.

Finally, for India's manufacturing sector to grow, it is important to have a vibrant and competitive MSMEs-they contribute nearly one third of the GDP. There is an urgent need to bring down the cost of capital for these firms so that they stay competitive and innovative. The Economic Survey 2017-18 points out that a meagre 17 per cent of credit disbursed to industry goes to MSMEs, while the rest is garnered by the large enterprises. If we want our MSMEs to innovate, export and thrive, we must create suitable conditions for them in terms of cost and provision of capital.

Manufacturing sector has strong 'multiplier' impact on the rest of the economy as it requires many raw materials and services as inputs.

Low interest rates in other parts of the world, such as Asia, translate to an ability of the manufacturing sector in those countries to access credit at more affordable levels, thereby catalysing the development of the sector.

India's manufacturing sector will not be able to expand nor be able to compete with its emerging market peers. Thus effective collaboration between the government and the private sector is the need of the hour. To this end, four roundtables and mega seminar will be organised during 2019 across important cities of India and it will focus on following:

Manufacturing and Growth: International Evidence

Countries in East Asia have not achieved rapid industrialisation by chance, but by deliberate policies that oriented their private corporate sectors to rapidly raise the level and diversity of manufactured products. The types of support included protection from foreign competition in the domestic market, incentives to export and the extension of various forms of concessional finance. Interest and exchange rate setting as well as capital allocation policies were frequently geared to promote industrialization; so too were their policies concerning infrastructure and skills development.

A far more detailed appreciation of India's industrial structure is needed in order to trace the potential for direct employment gains within manufacturing itself, as well as its potential to stimulate indirect employment. **Three major categories of manufacturing can be identified in India.**

First, there are sectors which are by their nature capital intensive. These generally comprise the capital- and energy-intensive 'Minerals-Energy Complex' sectors which convert primary resources into semi-processed ones. These sectors, which include steel, chemicals and aluminium etc. Due to economies of scale, there is little scope to substitute labour for capital. The role of these sectors with regard to employment is less to create employment directly as such, but to enable greater employment in sectors that are medium and highly labour-intensive by supplying intermediate inputs to them at competitive prices. This would also ensure that the underlying advantages of the country's resource endowments are passed on to a broader group of sectors, employees and consumers.

A second group of sectors comprises those in which capital and labour are complements rather than substitutes. For example, in sectors such as the fabrication of metals and plastics or capital and transport equipment there is no contradiction between increasing levels of fixed investment and employment intensity – employment rises as capital investment rises. Substantial parts of the agro-processing sector also exhibit this trait. In addition to promoting greater investment in agro-processing, it is necessary to increase agricultural and allied output and exports. This will stimulate agricultural employment directly and provide higher levels of feedstock for further local processing. Parts of the automotive value chain also have significant scope to raise employment in conjunction with increased investment. This includes increasing the volume of the vehicle

assembly segment (which is highly capital intensive) while simultaneously increasing the breadth and depth of domestically produced automotive components (which generally are much less capital intensive than assembly). Similarly, the manufacture of components for the renewable energy sector provides opportunities to raise employment.

The third group of sectors are those which are intrinsically labour intensive, such as the production of clothing and footwear and face intense competition in the global market. One must also note that countries such as China and now Vietnam have been able to offer relatively low labour costs because the wages are counterbalanced by the more extensive provision of 'social infrastructure' than in India; this includes cheap housing close to the source of employment, cheap public transport and affordable health care.).

This does not imply that no employment gains can be made in these sectors. Targeting higher quality, reliability and shorter delivery times is one of the strategies currently pursued and which have helped to arrest the decline in employment in these sectors. In the medium to long term, improved transport, logistics and better industrial planning that locates light industry near affordable housing and other amenities are part of the solution. China's recent move to begin 'rebalancing' its economy towards being less reliant on exports and more on the domestic market has also begun to open up more breathing space for these sectors.

In addition to this, there is a profound technological transformation that is affecting the industry.

India's manufacturing sector is diverse, with activities ranging from aerospace, pharmaceuticals, chemicals and automotives to traditional handicrafts, leather and textiles. It is characterised by a wide range of sizes of firm, with a preponderance of MSMEs in terms of numbers and share in employment. The new era of manufacturing will be marked by highly agile, networked enterprises that use information and analytics to deliver products and services to diverse global markets' Highly talented skilled people are necessary to effectively and consistently apply cutting edge science and technology, systems thinking, smart services and processes, and supply chain excellence.

Emerging technologies for future manufacturing activities

Information and communications technology (ICT): Modelling and simulation integrated into all design processes, together with virtual reality tools will allow complex products and processes to be assessed and optimised, with analysis of new data streams.

Sensors: The integration of sensors into networks of technology, such as products connected to the internet, will revolutionise manufacturing. New data streams from products will become available to support new services, enable self-checking inventories and products which self diagnose faults before failure, and reduced energy usage.

Advanced & functional materials: New materials will penetrate the mass market and will include reactive nanoparticles, lightweight composites, self-healing materials, carbon nanotubes, biomaterials and 'intelligent' materials providing user feedback.

Biotechnology: The range of biotechnology products is likely to increase, with greater use of fields of biology by industry. There is potential for new disease treatment strategies, bedside manufacturing of personalised drugs, personalised organ fabrication, wide availability of engineered leather and meat, and sustainable production of fuel and chemicals.

Sustainable/green technologies: These will be used to reduce the resources used in production including energy and water, produce clean energy technologies, and deliver improved environmental performance of products. Minimising the use of hazardous substance.

Big data and knowledge based automation: These will be important in the on-going automation of many tasks that formerly required people. In addition, the volume and detail of information captured by businesses and the rise of multimedia, social media and the internet of things will fuel future increases in data, allowing firms to understand customer preferences and personalise products

Internet of things: There is potential for major impacts in terms of business optimisation, resource management, energy minimisation, and remote healthcare. In factory and process environments, virtually everything is expected to be connected via central networks. Increasingly, new products will have embedded sensors and become autonomous

Advanced and autonomous robotics: Advances are likely to make many routine manufacturing operations obsolete, including healthcare and surgery, food preparation and cleaning activities. Autonomous and near-autonomous vehicles will boost the development of computer vision, sensors including radar and GPS, and remote control algorithms. 3D measurement and vision will be able to adapt to conditions, and track human gestures.

Additive manufacturing (also known as 3D printing): This is expected to have a profound impact on the way manufacturers make almost any product. It will become an essential 'tool' allowing designs to be optimised to reduce waste; products to be made as light as possible; inventories of spare parts to be reduced; greater flexibility in the location of manufacturing; products to be personalised to consumers; consumers to make some of their own products; and products to be made with new graded composition and bespoke properties.

Cloud computing: Computerised manufacturing execution systems (MES) will work increasingly in real time to enable the control of multiple elements of the production process. Opportunities will be created for enhanced productivity, supply chain management, resource and material planning and customer relationship management.

Mobile internet: Smart phones and similar devices are positioned to become ubiquitous, general purpose tools for managing supply chains, assets, maintenance and production. They will allow functions such as directed advertising, remote healthcare and personalisation of products. Linked technologies include battery technology, low energy displays, user interfaces, nano-miniaturisation of electronics, and plastic electronics.

KEY DELIVERABLES OF ROUNDTABLES AND CONFERENCE

- Outcome report will be prepared on the basis of each deliberation
- Sectoral short term and long term policy recommendations focusing on following:
 - Central Government
 - State Governments
 - Independent Agencies
- Alongwith to the roundtables and conference, ASSOCHAM will conduct an industry survey which will be part of recommendations.
- Interaction with Leading Industry representatives, Government Officials, Policy Makers, Multilateral Agencies on a single platform
- Exchange ideas & discuss challenges and opportunities during discussions
- Capitalize on the opportunity to make lasting connections, share best practices and network with potential customers
- Branding Building Opportunities

The Associated Chambers of Commerce and Industry of India

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