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Opportunities, Threats & the Role of MSMEs

Varinder Jain

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In the wake of Fourth Industrialisation, this study has made an assessment of emerging opportunities for the Indian manufacturing sector. It has highlighted various threats that may debilitate the expected gains. It has also discussed briefly the nature and scope of the 'Make in India' initiative of the Government of India. As the industrial structure in India is largely dominated by the micro, small and medium enterprises (MSMEs), the study has reflected on the role that the MSMEs would be playing in the 21st century industrialisation in India.

Keywords: Fourth Industrialisation, MSMEs, Make-in-India, Manufacturing Sector

Introduction

In developing countries like India where the industrial structure is largely dominated by micro, small and medium enterprises (MSMEs), any discussion on planning for 21st century industrialisation is bound to raise concerns about the future of these enterprises especially during such times when it is expected that the manufacturing processes would be largely driven by digital man-less technologies in the Fourth Industrialisation phase of the 21st century (Schwab 2016). It is expected that most of the manufacturing processes would be performed with new technologies. The usage of robots, 3D printing, artificial intelligence and similar technologies would be more rampant in the most industrial processes. Large batch manufacturing would reduce cost of production to a considerable extent and thus, the world markets will get flooded with a variety of cheap, durable and better-finished products manufactured through automatic production systems, which will reduce further the comparative advantage of MSMEs – all this will place survival of MSMEs at stake in an era of competition.

It is also expected that a large part of Fourth Industrialisation will happen in the developed world and thus, the contours of global production will shift from the South to the North. Under liberal trade regimes, cheap machine-based production will find routes in global markets and thus, will raise further the standard of living of the masses. However, this may pose an alarming situation for developing countries that are having an abundant supply of

manpower. The implications of such industrialisation for livelihood and meaningful engagement of workforce have been largely discussed in literature and the concerns are raised about the likely future of jobs (Deloitte 2018; WEF 2018). It is doubted whether there would remain any opportunities for meaningful employment or the labour-processes will get displaced by machines? Will there emerge new and innovative ways of doing work? What role would be played by educational systems? Along what lines, these systems will get modified to contain emerging realities that pose the risk of leaving those out, who will not possess minimal skill to perform some task in a more cost-effective manner?

Along with China, India in the 21st century is expected to emerge globally as the third-largest economy (Wilson and Purushothaman 2006). With huge stock of working age population, cheap raw materials and large and vibrant market, the onslaught of Fourth Industrialisation is fraught with both opportunities and threats in this country. A careful review of these opportunities and threats is therefore required to help policy-makers in gaining a balanced view of expected gains from Fourth Industrialisation. It will also help in adjusting our sails and thus, planning for better outcomes. Given this background, this paper aims at providing a balanced overview of emerging opportunities and threats of Fourth Industrialisation especially in the Indian context. While discussing these, the study brings in the role of MSMEs in a changing economic environment.

The paper is divided into two sections. Section I provides a brief overview of the nature and characterization of Fourth Industrialisation as it is expected to happen in developed world along with bringing in the Indian context that raises possibilities for its gaining from Fourth Industrialisation. It also raises concerns over pitfalls that may undermine such possibilities. Section II discusses the nature and scope of the 'Make in India' initiative of Indian Government. It also brings in the significance of MSMEs by pointing out how they may serve as key channels to attain high levels of industrial growth and output. It concludes by upholding the significance of innovation and human capital in India’s attainment of 21st century industrialisation.

Section I

Fourth Industrial Revolution as Expected to Happen in the Developed World

So far, the world has witnessed three industrial revolutions. The attainment of modern economic growth is largely the direct or indirect outcome of these industrial revolutions. Now, the world is going to experience a new tide of 'Fourth Industrial Revolution' (4IR) which is largely viewed as an upcoming opportunity for enhanced production.

Prime movers of 4IR are a set of new technologies. In fact, a whole range of new technologies has emerged fast in recent past and it is through the rapid adoption of these technologies, the researchers are visualising, in near future, the emergence of 4IR. These 4IR technologies are related to i) Additive manufacturing with 3D printing; ii) Manufacturing of advanced materials with better functionalities; iii) Artificial intelligence; iv) Robots; v) Drones &

autonomous vehicles; vi) Bio-technologies; vii) Energy capture, storage & transmission technologies; viii) Block-chain technologies; ix) Geo-engineering; x) Internet of Things (IoT); xi) Neuro-technologies; xii) New computing technologies; xiii) Advanced sensor platforms and xiv) Virtual augmented and mixed realities (PWC, 2017).

It is expected that these technologies will remain central to the evolution and transformation of production especially in the developed world. WEF (2018) notes that there would happen four main radical shifts in the short to medium term: First, the manufacturing processes will become self-organizing and more autonomous due to highly connected smart shop floors; Second, the value chains will be seamlessly connected from end to end, which will augment the pace of manufacturing through fastened product innovation; Third, there will happen greater business-to-business integration when supply chains will get connected to a broader supplier ecosystem that will function as a single platform, and Fourth, there will be the creation of new services and innovation in business models with the help of data .

These changes will be beneficial to the customers who will get access to better products matching their tastes and requirements. Similarly, the business firms would be able to easily capture the preferences and behaviours of customers, which they would be using as an input to customize new designs. There will take place an enhanced automation. The computers and advanced robots would be performing the routine physical activities and thus relieving a vast set of working population for better productivity work. This would require the retraining and reskilling of workforce for new operations. Similarly, there will emerge the demand for new technicians.

Emerging Opportunities for India to Gain from Fourth Industrialisation

As far as India is concerned, the onslaught of Fourth Industrialisation is going to generate a vast set of opportunities both directly and indirectly. In some of the segments such as automobile manufacturing, the usage of 4IR technologies, i.e., Robots is already going on. Mani (2017) reports that the density of robots in the Indian manufacturing sector is increasing at a slow rate and most of robot usage has confined to automotive industry in general and in the application area of welding in particular. It is expected that the usage of other 4IR technologies would take place at a relatively fast pace in segments such as pharmaceuticals, food processing, health, banking, tourism etc. In fact, such adoption of 4IR technologies would be made fast in those processes or activities which are repetitive and possess greater possibilities of automation and process control. Large and growing market in India with a rising middle class will provide further boost to the adoption of Fourth Industrialisation processes in these segments.

The availability of a relatively large stock of working age population, in both absolute and the relative sense, will provide further opportunity to India to gain from Fourth Industrialisation. In comparison to other major economies of the world, India is going to have the largest stock of population in the age group 15-64 years in the post-2020 period and this comparative advantage prevails for 21st century (Table 1).

Table 1: Working Age (aged 15-64 Year) Population Size in Selected Economies (in Million)

Year	India	China	United States	Japan	Germany	UK	France	Brazil
1950	223.43	341.13	103.17	49.45	47.09	33.77	27.62	29.94
1960	254.57	373.09	112.44	60.06	49.24	34.13	28.50	38.78
1970	309.08	460.90	129.57	72.41	49.56	34.94	31.74	51.82
1980	398.06	592.32	151.07	79.54	51.50	36.02	34.58	70.15
1990	506.79	768.97	165.89	86.73	54.70	37.32	37.65	90.36
2000	640.95	878.51	186.05	87.02	55.29	38.36	38.87	113.61
2010	787.77	1002.84	206.34	82.46	53.31	41.71	40.82	134.54
2020	924.93	1002.17	214.64	74.70	53.42	42.48	40.43	149.20
2030	1028.78	973.60	217.81	69.90	48.98	43.03	40.24	154.20
2040	1097.81	882.09	226.83	61.65	46.14	43.58	39.73	153.44
2050	1123.45	814.86	236.42	55.57	44.71	43.97	40.02	145.24
2060	1105.25	717.17	239.80	52.19	42.13	44.07	40.52	134.81
2070	1062.03	681.61	243.67	49.45	41.02	44.96	40.53	124.06
2080	1011.11	628.05	248.13	46.90	40.45	44.79	40.32	115.33
2090	954.84	583.78	250.28	44.93	39.09	44.41	40.33	107.38
2100	897.29	555.30	250.89	43.27	37.89	44.32	40.11	100.92

Source: United Nations (2017)

With several hands to work and new emergence of possibilities in various segments, it will be a great opportunity for India to engage its workforce in various productive avenues of work. At present, the share of manufacturing sector workforce in the total workforce is low and most of it is concentrated in unorganised segment as the organised segment, being capital intensive, is not generating adequate employment opportunities. Such industrial allocation of manpower would require a serious rethink and for this, an industry-specific approach and the manpower assimilation plan need to be worked out. Industry-level master plan documenting their vision, growth possibilities and potential markets, need to be prepared along with specifying each industry's ability to generate productive employment at various layers. An optimal capital-labour substitution ratio need to be worked out at which the industry should be not only able to grow but also generate productive and decent employment.

As per Census of India (2011), 31.16% of the Indian population resides in urban areas and it increased to 33.6% in 2017. In comparison to other countries such as China (57.96%), Brazil (86.30%) and South Africa (65.85%), the magnitude of India's urbanisation is very low. There lies the need for raising these urbanisation levels. Moreover, the quality of urbanisation needs to be improved. Most of the Indian urbanisation is concentrated and there lies greater pressures to ensure the delivery of quality services linked with electricity, water and

sanitation. With the emergence of new industrialization, there is going to be a change in the existing situation and there would be the requirement for the building up of a sound infrastructural base. For this, a city level planning would be ideal. A positive move is made by the government in this direction through its Smart City Projects. Similarly, a drive to develop the slums and providing better housing and shelter would play a critical role in providing further boost to the industrial growth.

The agriculture sector contributed 17.5% to the national gross value added in 2015-16. This share of agriculture sector has been declining. Following Kuznets, a standard argument is made that the primary sector share in GDP declines over the period of time. Such assertion is true to some extent but if this decline may also be the outcome of a very high incidence of yield gaps, as witnessed in the case of Indian agriculture (Jain and Singh 2015) and it is really a cause of concern. Various studies indicate the existence of crop-specific yield gaps. If these yield gaps are bridged, there lies a considerable scope for the augmentation of agricultural output and thus increasing the share and significance of agricultural sector in GDP. This whole exercise of bridging yield gaps provides the manufacturing sector another set of opportunities to devise such solutions which are practical.

Similarly, the agro-processing industry is in its preliminary stages. In the 21st century industrialisation, one may visualize the critical role played by the agro-processing industries especially in the developing world because these industries will play a direct role in raising the income levels of the farming classes besides meeting the basic needs of the masses. With the emergence of mechanised production systems in Fourth Industrialisation, there lies a considerable scope for the technical upgradation of this industry. India being the agricultural economy with significant stock of raw materials and agricultural produce will provide a significant opportunity for this industry.

Another opportunity lies in the growth of various export-oriented industries. The manufacturing of garments, sports goods, gems and stones are some examples of such industries. The adoption of technologies such as 3-D printing is going to provide an opportunity for these industries to grow. With this, there would emerge the demand for skilled workforce. Similarly, an increased use of robotics in high-end operations will raise the demand for highly skilled workforce and the technicians.

Challenges before India's Attainment of 21st Century Industrialisation

However, there are numerous challenges that may cripple these possibilities. Foremost among all is the challenge of transforming vast human resource into effective human capital that may support actively the attainment of 21st century industrialisation in India. As per Census of India (2011), the average literacy rate is 82.14% for males and 65.46% for females. There exist wide state-level differences with Bihar at the bottom, 73.39% for males and 53.33% for females, of average literacy level. For any nation, whose masses do not possess the basic knowledge of reading and writing – leave aside the numeracy skills, it would be difficult to engage them in productive employment. In such a situation, mere possession of

a large reserve of working-age population may not serve the purpose; rather the state has to intervene effectively in raising the human capital levels of the masses.

South Korea's case holds significance here. The state in South Korea intervened effectively to raise the human capital levels of the masses in such a way that they could be accommodated in productive employments (Lee 1996; Kim 2001). In the case of India, the state is also concerned about improving literacy levels but the desirable outcomes are not yet obtained even after 70 years of independence. The quality of infrastructure and education standard in public schools is low. With a vision to develop skilled-India, the state has launched, on July 2015, the National Skill Development Mission that aims at training over 400 million people in different skills by 2022. Under this mission, the state has launched National Policy for Skill Development and Entrepreneurship, 2015; Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and the Skill Loan Scheme – the outcomes of all these initiatives are yet to be experienced.

Nonetheless, one may assert that the state has to intervene effectively at various levels of education starting from elementary to middle to secondary and higher education. Given the rising craze for adoption of Physics, Chemistry and Mathematics in the 10+1 level and the sprawl of private engineering colleges, the number of engineers has increased manifold during the past few decades. As per one estimate, 1.5 million engineering graduates pass out every year (Mahajan 2014). But, there exist wide differences in the quality of engineering skills possessed by each pass-out engineer. It is doubted whether the engineering pass-outs are actually employable. As per ET (2018), 94% of engineering graduates are not fit for hiring and the private companies are not much interested in hiring these engineers as most often, what they have learned does not match with the everyday changing technical needs of the industry. Business Today (2018) reports that the Indian engineers are not comparable to those produced in China and Russia which implies that the engineering institutes in India do not equip its engineers with the latest state of the art knowledge of the global standards. There exist wide skill gaps. Such existence of skill gaps in various segments is going to debilitate the attainments that could be made if there are no such gaps.

Singh (2017) argued that there are primarily three broad kinds of skill mismatches. First, there prevails the lack of basic education in primary sector workforce. They possess no skills to transform traditional agriculture into precision agriculture and connecting it with agri-business. Second, the technical and general education imparted by educational institutions do not produce workforce which may be absorbed in the modern industrial sector that is facing global competition. Third, the existing stock of technical and skilled workforce remains not only inadequate but they also do not produce new innovations that has the potential to provide a window of opportunity to leapfrog from the path of low productivity – low wage to high productivity – high wage economic activities.

Existence of a broad-bottom industrial structure poses another challenge. As per NSSO's 73rd Round, in 2015-16, the estimated number of micro, small and medium enterprises has been 633.88 lakh – 51.25% of which are located in rural areas. With such broad based industrial structure, what is more worrying is the fact that a large chunk of these enterprises operate at

the lower levels of productivity. These enterprises remain exposed to a variety of constraints such as lack of access to finance and credit, infrastructural problems, inverted tariff structure and raw material availability, obsolescence of machinery and equipment, marketing problems, lack of skilled workers, extreme competition, delayed payments etc. (Chandraiah and Vani 2014). With very low resilience levels, these firms find it difficult to take risk and face competition that is emerging from both internal and external market dynamism. Transformation of these enterprises into active agents would be the main challenge when the country would be experiencing the outcomes of the fourth industrialization.

Another major challenge for India to attain 21st century industrialisation may lie in its ability to transform institutional framework and the work cultures. It is progressing slowly in this direction. If one takes the World Bank's 'Ease of Doing Business Index' as the yardstick to gauge India's readiness for adapting to Fourth Industrialisation, one may remain surprised to find that in 2018, India is ranked globally at 77th in this index. Though it emerges as the first country in South Asia and the third country among the BRICS nations after Russia (31) and China (46) (World Bank 2018), it remains far below in business ranking from South-east Asian counterparts like Thailand (27), Malaysia (15), Indonesia (73). The situation becomes quite alarming when we visualise India as the third largest growing economy of the world in coming times and the low global ranking in the Ease of Doing Business Index, is a cause of concern.

Table 2: India's Relative Rank in 'Ease of Doing Business Index', 2018 by Sub-components

	India	**China**	**Russia**	**Malaysia**	**Thailand**	**Indonesia**
Overall Index	77	46	31	15	27	73
Registering Property	166	27	12	29	66	100
Enforcing Contracts	163	6	18	33	35	146
Starting A Business	137	28	32	122	39	134
Paying Taxes	121	114	53	72	59	112
Resolving Insolvency	108	61	55	41	24	36
Trading Across Borders	80	65	99	48	59	116
Dealing with Construction Permits	52	121	48	3	67	112
Getting Electricity	24	14	12	4	6	33
Getting Credit	22	73	22	32	44	44
Protecting Minority Investors	7	64	57	2	15	51

Source: World Bank (2018) & http://www.doingbusiness.org/en/rankings? income Group= lower-middle-income

A deeper inquiry informs that the situation is very grim as India is ranked 166 in difficulty in Registering Property (Table 2), which is high in comparison to that found in countries like China, Russia, Malaysia, Thailand and Indonesia. Similar is the situation with Enforcing Contracts. 'Starting a Business' in India is very difficult. Same is the case with Paying Taxes and Resolving Insolvency. In all these indicators, India is relatively worse than China, Russia, Malaysia, Thailand and Indonesia. Given the fact that India ranked 130th in 2017, its attainment of 77th position is cheered but a detailed look at where we improved leaves much concern.

Similarly, the infrastructural bottlenecks may further trouble this vision. Though during recent past, the Indian government is taking keen interest in the development of infrastructure, there are still miles to go. Road networks need to be expanded and railway connectivity needs to be improved. India, with the cooperation of Japan, has envisioned the introduction of bullet train on the one hand and there exist issues in the expansion and broadening of rail tracks on the other. Safety in trains and frequent occurrences of train accidents and the loss of life and property is raising concern.

There also exist issues related to power shortages. The manufacturing sector experiences severe shortage of electricity. The power availability is not round the clock for the manufacturing sector. Very high cost of electricity is another issue that troubles the competitiveness of manufacturing sector. In fact, there prevails the practice of cross-subsidisation by which the electricity supply to the industry and the commercial sector is largely over-priced whereas the same to the domestic and the agricultural sector is subsidized. All this raises the cost of electricity for the industrial sector (Jain 2010). Issues also prevail in the composition of installed generating capacities of the power sector. With 344GW of electricity generation installed capacity, India's thermal-based capacity is 64.79%, out of which, 88.45% is coal-based. This coal-based generation in India contributes to GHG emissions. Given the rising concerns about global warming, such coal-based generation cannot be sustained for longer periods. To contain the situation, however, the Indian government is trying to raise the share of clean energy. By 2022, it has aimed at installing 175 GW of renewable electricity generation capacities across the nation (Niti Aayog 2015).

Section II

India's Initiative to Regain Industrialisation: Case of 'Make in India' Initiative

With a view to regain industrialisation and transforming India as a global manufacturing hub, the government of India, on September 2014, visualised 'Make in India' initiative under which it urged, both local and foreign, firms to invest in India and thus contributing positively to growth and employment in the country. A prime focus of this initiative has been on the twenty-five key sectors of the Indian economy. These sectors are automobiles, automobile components, aviation, biotechnology, chemicals, construction, defense manufacturing, electrical machinery, electronic systems, food processing, information technology and business process management, leather, media and entertainment, mining, oil and gas, pharmaceuticals, ports and shipping, railways, renewable energy, roads and highways, space,

textiles and garments, thermal power, tourism and hospitality and wellness. Such long list of various sectors is an indicative of the concern that the government has shown to revive the manufacturing sector. A series of interventions are made to facilitate firms in this direction (Table 3).

Table 3 : Policy Innovations Made by State under 'Make in India' Initiative

Sn.	Intervention	Purpose
1	Invest India Cell	To serve as the First Reference Point for foreign investors. It'll guide them about various aspects of regulatory & policy issues. It may also assist in obtaining regulatory clearances.
2	e-Biz Single Window Online Portal	To enable fast and efficient access to Government-to-Business Services through online portal.
3	Easing Policies & Laws	To make effort in this direction especially related to industrial de-licensing and labour-reforms.
4	Global visitor connectivity	To develop connectivity with visitors across geographical locations, interests etc. and to provide relevant information and newsletters.
5	Companies (Amendment) Act, 2015	To simplify a number of regulatory requirements and to remove requirements of minimum paid-up capital and common seal for companies.
6	Investor Facilitation Cell	To act as a dedicated investment promotion agency for attracting funds in the country.
7	Country-level Management Teams	To set up special management teams for facilitating country-wise fast track investment proposals. DIPP has already set-up Japan Desk, Korea Desk, China Desk, Canada Desk and USA Desk.
8	Protecting Minority Investors	To safeguard shareholders of private companies and to help minority investors.

Source: Based on Kamal (2017)

Though impressive, these initiatives are bound to deliver limited results as there remain issues with land acquisition, labour laws, prevailing tax regimes and governance. A survey by Kamal (2017) reveals that 93 percent entrepreneurs find the whole land acquisition process very tedious and costly – an outcome emerging out of the lack of a sound land acquisition policy in the country. Similarly, the rigid and inflexible nature of labour laws takes the

potential entrepreneurs on the back foot. A classic case is of the sports good industry which is export-oriented. Here, the entrepreneurs find it very difficult to hire workers to meet sudden pressures to meet export targets. Lack of a rationalized tax structure in the Indian economy dims further the Make in India initiative. Current slabs in Goods and Services Tax, being very high , reduces the international competitiveness of the Indian-made products in international markets.

Owing to all these, the attainments made so far are very limited. In some sectors such as auto and auto-components, FDI equity flow to the tune of US $ 6.9 billion has been there during April 2014 to March 2017 period which has been higher than US $ 3.9 billion during April 2011 to March 2014 period. Similarly, the FDI equity flow has increased to US $ 3.3 billion from US $ 0.9 billion over the same period. In all other sectors, the outcomes are yet to be realized. In fact, the lack of a sound institutional support system and the Research and Development (R&D) framework at the national level has dampened the heat generated by the 'Make in India' initiative.

Nonetheless, it cannot be denied that the vision of the government has been very noble and it aims at developing India as a global manufacturing hub that intends to house world's factories which can export anywhere across the world without any restrictions. Such an initiative, if followed indiscriminately, will not deliver the benefits and visions that it has made. Nonetheless, a major criticism of the 'Make in India' initiative emerges out of the fact that it ignored the vast set of micro, small and medium enterprises. Rather than considering and promoting these enterprises as the engines of manufacturing sector growth, the approach of the 'Make in India' initiative has been largely outward-oriented through which it has sought to invite foreign firms to invest in India. Some examples of such foreign collaborations may be found in Indo-Japanese and Indo-Korean collaborations. Similar has been the case with retailing where Walmart and Big Bazars have gained the lion share.

The state expects that with the arrival of foreign firms, the MSMEs would gain both the direct and indirect benefits. Nonetheless, the possibilities are bleak to the extent that these enterprises would be contracting out their productions to the MSMEs. Evidence shows that the large plants have their whole in-house production systems and they rarely hire local firms. A standard argument made in favour of foreign direct investment is that the new firms will bring technology with them that will trickle-down to the local firms and the new learning will take place through imitation. But, the happening of such outcomes may be doubtful in the case of those MNCs who rarely contract and associate with local firms.

Along with this, the state could have adopted another route of tracing out the most important segments in the MSMEs and then it could have provided special attention to these enterprises. A classic example is of the Sports Good Manufacturing enterprises. This industry evolved from the ruins of partition as a cottage industry and since its inception, it is catering the export markets across the world. Export data available from the Ministry of Commerce reveals that in 2017-18, the export of sports goods by India is made to 203 countries. In 1996-97, the volume of total exports has been US $69.02 Million which increased at the average annual

growth rate of 7.35 percent over the 1996-2018 period. In 2017-18, it rose to US $305.81 Million. After looking at such export performance, one may say if the industry could record such remarkable export performance on its own or without any support, then what it could have recorded if it could have been provided a sound support from the state. Similar is the case with all other export-oriented industries.

Visualising the Role of India's Micro, Small and Medium Enterprises in 21st Century

As the 21st century industrialisation is expected to be more driven by technology, what would be the place of micro, small and medium enterprises? Will they get wiped in front of machine-made cheap goods or they will bear a new incarnation? What will happen in countries like India where they constitute a majority of the enterprises? These are certain questions that emerge when we visualise the role of India's micro, small and medium enterprises in the 21st century industrialisation.

When we foresee the state of MSMEs in the 21st century industrialisation, some aspects become clear. No one can deny that the MSMEs as they are operating today cannot continue for long especially in the era of 21st century industrialistion. They have to chart out new ways of functioning. For this, they have to be innovative. In the current paradigm, the MSMEs are largely ignorant of innovation. They are merely surviving and striving on cost-cutting and through extensive and intensive usage of labour. Our study across six industrial clusters reveals that the enterprises are using second-hand obsolete machinery and they neither have access to latest technical know-how nor they intended to gain or learn – there have been very few who gained a competitive edge by devising their own innovative ways of doing the similar operations in a more cost-effective manner (Jain and Joshi 2017).

The industrialisation in the 21st century is going to bring in numerous opportunities for the manufacturing sector. But, at the same time, it will pose the threats of competition as well. In such situation, only those firms would gain advantage that have developed systems and devoted a considerable attention to innovation, RD & D and skill-building. It is only through innovation, the firms can gain the competitive edge. The entrepreneurs have to venture into new product lines and explore the possibilities for introducing new processes and production systems.

The whole framework of industrial evolution in the Indian context will also be required to give a critical attention. Now, the government is following the cluster approach where the firms are striving and thriving together and in the process, they are learning from each other. But, there is no conscious effort neither on the part of the state nor the industry associations. The firms are merely operating on the lines of competition and thus, in the process, they are cutting each other's growth. Rather than this, they should adopt the model of cooperative competition. Under this model, all the firms are considered as partners in the larger economic activity performed in the cluster and the share and returns to each firm are pre-defined and transparent. There prevails no information gap and the whole industry moves together and competes globally as a single unit.

The state should also play a supportive role. It should provide the required infrastructure on the priority basis. In this respect, the state should follow the world standards and in each product line, an assessment of the availability of infrastructure across competing countries should be reviewed and the state should provide similar or better infrastructure to the industry. Secondly, it should provide adequate incentives to the exporting firms. The state should not consider the exporting firms as the source of (taxation) revenue; rather it should treat these firms as the agents who can bring foreign exchange to the nation and thus can strengthen country's trade balance and foreign exchange reserves. The exporting firms should be provided all sorts of incentives. At present, most of the exporting firms are making exports through their own efforts. Here, the state should play an active role in the marketing of Indian brands across the globe. It should help in evolving new brands. For this, the state should set up high norms (at global standards) for product design, quality, price etc.

Rather than sticking to low-end markets, the MSMEs in the era of 21st century industrialisation have to make wise choices. They cannot just get in each and every activity; rather they have to be prudent enough to opt for such product lines that offer high scope for innovation and growth. Most of the MSMEs would emerge as the ancillaries of the large enterprises that would be contracting out their production outside. Getting connected with the large value chain systems would be another avenue for the MSMEs that they should explore.

Conclusion

After having a detailed understanding of the nature and characterisation of the Fourth Industrialisation and the range of emerging opportunities and the probable threats along with understanding the 'Make in India' initiative and the role of MSMEs in the 21st century industrialisation, it may be said that the onslaught of Fourth Industrialisation is going to bring challenges for the developing world and India is no exception to it even if it carries certain advantages over others. In order to safeguard and reap benefits of this industrialisation, the country has to think ahead and streamline its industrial structure in such a way that it emerges as the country with sound manufacturing base. It would be better if in its planning and vision, it places an adequate emphasis on the growth and development of micro, small and medium enterprises. Most of these enterprises today belong to the unorganised segment mainly due to their small size. But, there exist equal need for introducing some organisation and systematic development of these enterprises. For this organisation, efforts should be made at the levels of industry associations under the guidance of the state. Moreover, the state should provide the required institutional and financial support to the micro, small and medium enterprises. Innovation and enrichment of human capital along with skilling of the labour force will go a long way to ensure high returns in the 21st century industrialisation. For this, the state should devise a careful strategy involving all stakeholders in the industry. The state should go a step forward in devising an industry-level visionary document, strategy and the action plan to gain global competitiveness in each product line.

In brief, it can be said that there are challenges before India's industrialisation strategy. It has to not only gain global significance but also evolve its micro, small and medium enterprises that provide livelihood to a significant proportion of the manufacturing sector workforce. For this, it would require a systematic planned approach at both industry association and the government level.

Notes

[i] World Development Indicators, 2017.

[ii] Prior to 2012-13, the estimates on the sectoral contribution to the national pool were provided in GDP terms. It is only after 2012-13, CSO has started providing estimates in terms of Gross Value Added (GVA).

[iii] As pointed in Wheebox (2017, 2018).

[iv] CSO points out that in 2015-16, the MSMEs contributed 31.60% in the total GVA (as reported in GoI 2018: 22).

[v] As on 31.03.2018 (CEA 2018).

[vi] Recently, the Finance Minister has announced that the 28% tax slab would be abolished soon.

[vii] Some such instances of recent sectoral policies are National Policy on Electronics (2012), National Textile Policy, National Capital Goods Policy (2016), Automotive Mission Plan (2016-26) and National Electric Mobility Mission Plan (2020).

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