



India's Manufacturing Growth Dream: A Critical Analysis

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Abstract

The secondary sector has served as an engine of growth for many developing economies across the world, however, unlike most others, India's secondary sector particularly its manufacturing has failed to 'take off'. Currently, the manufacturing sector contributes approximately 16-17% to India's GDP, and its share in world manufacturing is a meager 1.8%. This is in stark contrast to China; where manufacturing contributes 34% to the GDP and is 13.7% of world manufacturing – up from 2.9% in 1991. The rapid growth of its services sector and the near stagnation of its manufacturing sector and agricultural sector has raised questions about the India's developmental model and its sustainability in the long run. It is evident that India's development pattern runs counter to the conventional pattern of economic growth as identified by most neo-classical economists. Simon Kuznets envisaged a structural growth of an economy from an agrarian to a predominantly service economy en route the industrial sector. The seminal studies by Chenery and Syrquin (1975), describe this as a natural progression, which occurs as economies grow. In the Kaldorian analysis, this transition in economic activity is typically accompanied by a shift of comparable magnitude in employment from agriculture to industry, which leads to productivity increases in both sectors. This observed counter-factual in terms of sequence of growth and employment as also the apparent imbalance between the two in India could hinder its long-term growth prospects.

The 'Make In India' initiative of the incumbent Modi government, at this juncture, is therefore a welcome step, which is aimed to facilitate investment, foster innovation and skill development in its manufacturing sector. Global giants such as GE, Siemens, HTC, Toshiba, and Boeing are looking for investment opportunities to set up manufacturing plants in India. However we need to assess the feasibility of 'Make In India' policy for India in the light of some harsh ground realities. The development of the manufacturing sector is critical to economic growth as it fuels growth, productivity, employment, and provides a thrust to agriculture and service sectors as well. Against this background, this research paper attempts to critically analyze India's manufacturing sector performance against the emerging global manufacturing landscape- in terms of its size, employment generation capacity, contribution to GVA,

exports and future growth prospects in order to identify the favorable trends and impediments which lie ahead and could stall India's 'manufacturing growth' dream.

Keywords: Manufacturing, value-added, Growth-rate, employment

1. Introduction

The secondary sector has served as an engine of growth for many developing economies across the world, however, unlike most others, India's secondary sector particularly its manufacturing has failed to 'take off'. Currently, India's manufacturing sector contributes about 16-17 % to the GDP, and its share in world manufacturing is a meager 1.8%. This is in stark contrast to China; where manufacturing contributes 34% to the GDP and is 13.7% of world manufacturing – up from 2.9% in 1991. It is evident that India's development pattern runs counter to the conventional pattern of economic growth as identified by most neo-classical economists. Simon Kuznets envisaged a structural growth of an economy from an agrarian to a predominantly service economy en route the industrial sector. The seminal studies by Chenery and Syrquin (1975), describe this as a natural progression, which occurs as economies grow. In the Kaldorian analysis, this transition in economic activity is typically accompanied by a shift of comparable magnitude in employment from agriculture to industry, which leads to productivity increases in both sectors. This observed counter-factual in terms of sequence of growth and employment as also the apparent imbalance between the two in India could hinder its long-term growth prospects.

2. Scope of Study

The emergence of India as one of the fastest growth nations in the recent years has been largely due to the stellar performance of its services sector. In contrast its manufacturing sector has been less robust contributing just 3.3% to the country's growth in 2013 as against 83% contribution made by the services sector. The development of the manufacturing sector is critical to economic growth as it fuels productivity, innovation, employment and provides a thrust to agriculture and

service sectors as well. India’s demographic profile ensures an abundance of human resource, though there are serious concerns about its employability especially in the manufacturing sector. The manufacturing sector in India has the potential to reach \$ 1 trillion by 2025 and contribute approximately 25 to 30 per cent to India’s GDP. It also has the potential create approximately 90 million jobs by 2025. The ‘Make In India’ initiative of the incumbent Modi government, at this juncture, is therefore a welcome step, which is aimed to facilitate investment, foster innovation and skill development in its manufacturing sector. However we need to assess the feasibility of ‘Make In India’ policy for India in the light of some harsh ground realities.

3. Objectives of Research

Against this background, this research paper attempts to critically analyze India’s manufacturing sector performance against the emerging global manufacturing landscape- in terms of its size, employment generation capacity, contribution to GVA, exports and future growth prospects. It also attempts to study the feasibility of ‘Make In India’ policy for India in order to identify the favorable trends and challenges which could stall India’s ‘manufacturing growth’ dream.

4. Research Methodology

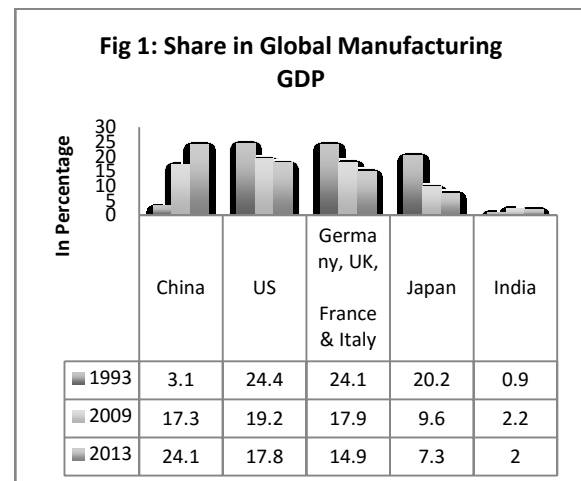
This research study is analytical in nature and is based on secondary data. Most of the research data has been obtained from cited books, newspaper articles, and journals. The global manufacturing share has been obtained from the online databases of the World Bank, while the sectoral growth trends, share in value added and employment has been obtained from the published databases of World Bank, RBI, CSO, 66th NSSO Report on Employment and Unemployment Situation in India & Economic Survey 2016-17. Trends in employment elasticity have been obtained from the ISID Working Paper No 2013/01 ‘Economic Growth and Employment Linkages: Indian Experience’ by T.S Papola. Compound average growth trends (CAGR) and percentage shares have been calculated wherever necessary. In addition to the quantitative analysis of its manufacturing sector, relevant qualitative dimensions have also been examined.

5. Data Interpretation & Analysis

India’s Manufacturing in a Globalized World

The share of India’s manufacturing sector in global manufacturing GDP, in the past 20 years, has grown at almost the same pace as the Indian economy. India’s share of global manufacturing has grown from 0.9 to 2.0 percent during this period while our share of global GDP

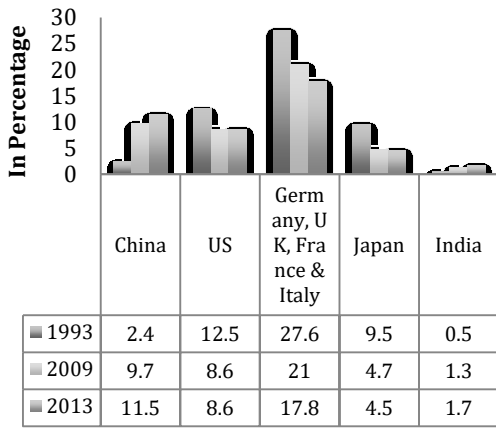
share has grown from 1.2 to 2.5 percent. However over the last five years, India’s share in global manufacturing GDP has been falling from 2.2 to 2.0 percent between 2009 and 2013, even as the country’s share of global GDP grew by 0.3% during the same period. China’s contribution to global manufacturing GDP has been rising consistently overtaking several developed countries like US, Germany, UK, France and Italy. From a meager share of 3.1% in 1993, its contribution had risen to 24.1% by 2013.



Source: World Bank.

The relative share of the manufacturing in India’s GDP has remained stagnant contributing just 13 to 15% of India’s GDP since 1993, while in most other countries, its share has reached above 20% of their GDP. The manufacturing sector in Thailand contributed 34% of its GDP in 2012, in China -32%, in Malaysia-24% and in Indonesia -24%. India’s share in global merchandise exports has also been extremely low in comparison to other economies like China and US. In fact, China’s share of global merchandise exports has been rising consistently from 2.4% in 1993 to 11.5% in 2013 even against unfavorable global cyclical trends and a declining export demand. The share of other developed countries though are on a declining trend, but are way above India’s modest share of 1.7% (in 2013).

Fig 2: Share in Global Merchandise Exports

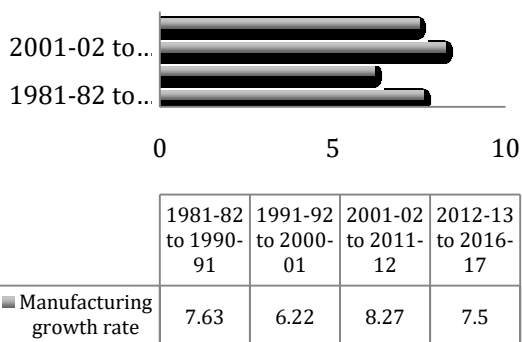


Source: World Bank.

India's manufacturing Growth Trends and Future Prospects

India's manufacturing sector, which accounts in terms of weightage of 75.53 per cent of the industrial sector, has not shown any strong trends in growth over the last 2 decades averaging a growth rate of 7.16 per year from 1981-82 to 2011-12. The growth rate during 1980s had been 7.63% due to expansionary policies of the manufacturing industries, liberalization of capital goods imports etc. The manufacturing growth rate however declined in the first decade of the liberalization from 1991-92 to 2000-01, to 6.22% per annum.

Fig 3: Trends in Growth Rate of India's Manufacturing Sector

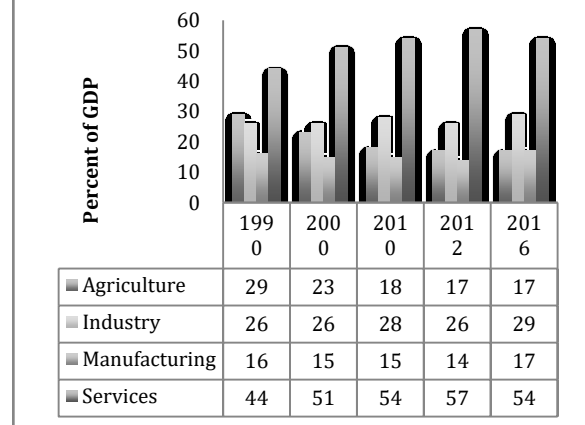


Source: Reserve Bank of India, Handbook of Statistics, Various years.

It is important to note that while the growth rate of India's manufacturing sector had picked up in during 1995-96, however it tapered off towards the end of the

decade due to the Asian financial crisis of 1997 and the downswing experienced by the European and North American economies. The decade of 2000s opened with world-wide recession with low rate of growth in manufacturing. The economy briefly recovered during 2003-2008 and averaged a growth rate of 8.27% per annum during 2001-02 to 2011-12 but again dipped to an average growth rate of 7.5% in the last five years.

Fig 4: Share of value added by India's Manufacturing Sector

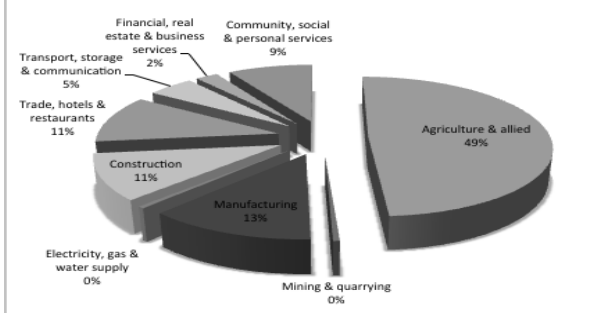


Source: World Bank, World Development Indicators; Figures rounded off to two decimal places

The share of value-added by India's industrial and manufacturing sector has remained low over the last 15 years in comparison to India's services sector. The share of MVA as a percentage of India's GDP has been hovering between 14-16% for the last two and a half decades. Only in 2016, its share managed to reach 17% at par with agriculture. The share of value-added by India's services sector had been increasing consistently from 44% in 1990 to 57% in 2012 only to dip to 54% in 2016. The top five performing sectors in manufacturing are food products, basic metals, rubber and petrochemicals, chemicals, and electrical machinery. Together they account for over 66.0 per cent of total revenues in manufacturing. However, these verticals rely primarily on domestic demand for a major part of their revenues.

In terms of employment, the manufacturing sector share in total employment in 2011 was approximately 13% in comparison to 49% contribution by agriculture and 27% contribution by the services sector. It is important to note that the number of jobs in this sector has remained low over the last 20 years, increasing only by 1.8% per year in comparison to an increase of 6.5% experienced by the services sector over the same period.

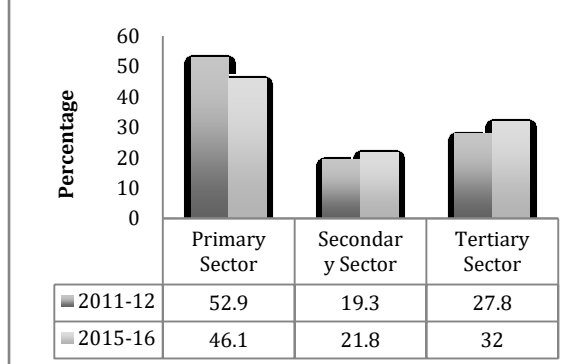
Fig 5: Employment Share of Different Sectors in 2011



Source: CSO

However the results revealed by the latest Annual Employment and Unemployment Survey (EUS) conducted by the Labour Bureau, Ministry of Labour and Employment (5th Round) in 2015-16, indicate a positive trend.

Fig 6: Changing Employment Share of Different Sectors in 2015-16



Source: CSO

The results reveal a clear shift in employment towards secondary & tertiary sector away from primary sector, though the shift is more pronounced in the tertiary sector in comparison to the secondary sector.

India's 'Make In India' Policy & Future Growth Prospects

It is a matter of concern that the manufacturing sector has not shared in the dynamism of the economy in the last few years. As a result, the share of the manufacturing sector in the country's GDP has remained stagnant at 15% for the last 30 years. Growth in the manufacturing sector, in fact, had fallen to a negative 0.7% in 2014 and its share in India's GDP declined further from 15.8% in 2013 to 14.9% in 2014. This does not augur well for the economy especially one which is at such a critical stage in its evolutionary path. Manufacturing is a very important sector for India both

in terms of its growth potential and employment generation capacity. It is also one of the few sectors with significant spillover effects. According to estimates, the manufacturing sector in India has the potential to reach \$1 trillion by 2025 and contribute approximately 25 to 30 per cent to India's GDP. It also has the potential to create approximately 90 million jobs by 2025. However, challenges such as infrastructural constraints, corruption, unfriendly business environment and complex regulations related to land acquisition, labor and taxation have all restricted India's manufacturing growth potential. India's 'Make In India' initiative by the incumbent Modi government is therefore a welcome step in this direction aimed at facilitating investments, encouraging innovation and building high-class manufacturing infrastructure and ensuring skill development. Some of the highlights of India's New Manufacturing policy are as follows:

- . Deregulation of diesel prices and easing of FDI rules in construction.
- . Amendment of Land Acquisition Act to make it less onerous thereby easing the cost of doing business.
- . Easing FDI rules in construction and FDI cap in insurance sector to 49%
- . Reduction of income tax rate for MSME companies
- . Establishment of Centres of Excellence (CoE) for select industries
- . Introduction of "Strategic Partnership" model for establishing foreign collaborations & encouraging technology transfer
- . Labor reforms such as transparent labor inspection scheme, a ShramSuvidha portal with more radical reforms proposed for later.
- . Replacement of VAT with a unified destination based tax GST w.e.f July 1st 2017.
- . Demonetization to promote digitization of financial services and to bring a greater part of unorganized manufacturing under organized sector
- . Amendments of the Mines and Minerals (Development and Regulation) Act of 2015 to revive the stagnant mining sector of the country.

Favorable trends

It is important to note that it is an opportune time to embark on important policy reform measures, as there are several favorable global economic and domestic trends, which can help propel India's manufacturing sector on a new growth trajectory. These are

- **Falling Crude oil prices**
In view of the shale gas revolution in US and the falling demand, the global crude oil prices have plummeted to a six time low from \$115/bbl in mid-2014 to a low of \$28/bbl in January 2016. Changes in crude oil prices have direct bearing on India's macroeconomic fundamentals- namely inflation, fiscal

deficit and current account deficit. Historically, crude oil imports accounted for a substantial portion of the country's total imports. In 2013-14, POL imports accounted for 36.6 per cent of total imports. It is estimated that a fall of \$10 in the price of crude oil could reduce the current account deficit by roughly 0.5 % of GDP and the fiscal deficit by around 0.1 % of GDP. The sharp fall in crude oil prices is expected to boost global aggregate demand and exports. Lower fuel cost will also ensure cost competitiveness of India's domestic manufacturing and provide a fillip to several sectors like automobiles, plastic manufacturing, chemical industry, footwear etc

- **Demographic Dividend**

Another competitive advantage for India has been its "demographic dividend" – a young and burgeoning workforce, which can help, boost domestic production, consumption, savings and economic growth for our country. This 'demographic dividend' is a unique advantage and is likely to occur at a point when the world will witness a shortage of skilled manpower to the extent of around 56 million workers by 2020. This important 'human resource' can turn out to be a great blessing provided appropriate policies related to health, education and employment generation are formulated.

- **Implementation of GST**

India has moved from a complex multi-layered indirect tax system towards a unified indirect tax system w.e.f 1st July 2017. GST is a destination-based tax to be levied on the supply of goods or services in India. The manufacturing sector in India was earlier plagued by a complex tax structure, which had been increasing transaction costs and leading to supply chain inefficiencies. India's indirect tax system, had also been favoring foreign production over domestically produced goods as the countervailing duties which were levied to offset the excise duty imposed on domestic producers, was not applied on a whole range of imports, thus providing negative protection to foreign produced goods over domestically produced goods. The implementation of a comprehensive GST in India is expected, ceteris paribus, to boost domestic production, lead to efficient allocation of factors of production thus bringing about gains in GDP and exports. It will also help to reduce the cascading effect of taxation, lower cost of production, ensure hassle free supply of goods, thereby leading to manufacturing synergy in India.

- **Labor Sector reforms**

The incumbent Modi-government has taken several significant policy initiatives and one of the most important one has been in the area of labor reforms. The multiplicity of labor laws and difficulty in complying with them has always been cited as an

impediment to industrial development in India. Hence a number of labor sector reforms have been introduced such as introduction of a transparent labor inspection scheme via computerized system as per risk-based criteria, a ShramSuvidha portal has been launched for online registration of units, a Universal Account Number has been launched facilitating portable, hassle-free, and universally accessible Provident Fund accounts for employees. The Apprentices Act, 1961 has been amended so as to make it flexible and attractive to youth and industry. It is evident that the Indian labor laws have always constrained labor-intensive industrialization and led to the declining fortunes of labor-intensive industries like textile and leather. All this will ensure that India's cost advantage is retained and its young population truly turns out to be an asset.

- **Rising share of Manufacturing in India's Exports**

Another favorable trend for India has been the rising share of manufacturing in India's exports. India's merchandise exports grew from 12.1% of GDP in 2004-05 to 17% of GDP in 2013-14. As a result, its share in global manufacturing exports has increased from 0.5% in 1993 to 1.7% in 2013-14 on account of its relatively inexpensive and adequate skilled labor force, cost-effective and competitive prices of goods produced, large manufacturing base and proximity to fast growing Asian markets. Given the competitiveness of this sector in the global arena and its rising share in India's exports, it is therefore imperative that strong policy reforms are introduced to transform India into a global manufacturing hub.

- **Macro-Economic stability**

It is important to note that the period between 2007–12 was marked by unfavorable global economic conditions which led to weakening of global demand, exchange-rate volatility and economic and business uncertainty. The year 2009–10 witnessed a transitory return of manufacturing upswing largely on account of a few sectors such as the automotive sector, cotton textiles, leather and food products. While the global recovery has been slow, the macro-economy has been rendered more stable now. The deceleration in growth has ended, inflation is under control, current account deficit is declining on account of falling oil prices. The decline in rural wages, against rising wage costs in China will also prove to be beneficial for providing a fillip to domestic manufacturing. On the external front, India's foreign exchange reserves are rising consistently from 18,250.5 billion (in Rupee terms) in Dec 2013 to 23,427.5 billion in Dec 2015 and up to 25383.8 billion by December 2017. Among the major economies with current account deficit, India is the second largest foreign exchange reserve holder after

Brazil. India's Investor confidence Index rank has also improved.

Given these favorable domestic and global trends, India's 'Make In India' initiative is fortuitous, however there are several daunting challenges, which cannot be ignored.

Challenges

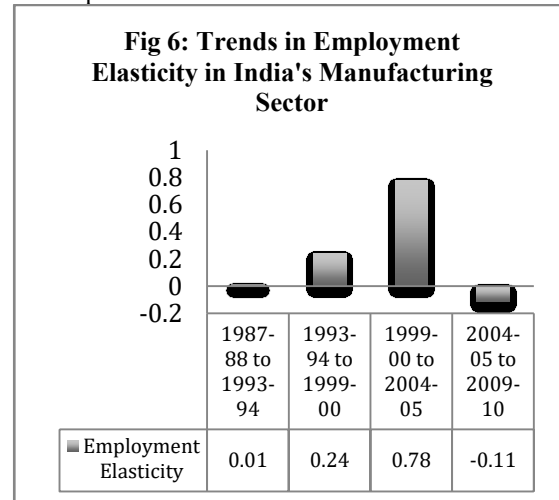
- **Infrastructure constraints and the rising number of stalled projects**

One of the biggest challenges for India in realizing its manufacturing growth dream would be infrastructural constraints and the rising number of stalled projects. Statistics reveal that the number of stalled projects have been rising phenomenally over the past five years and the value of stalled projects is almost 8 to 9 percent of India's GDP. Most of the private projects being stalled are in the manufacturing; mining and electricity sectors while government-stalled projects are predominantly in infrastructure. It is important to note that stalling of projects is severely affecting the balance sheets of the corporate sector and public sector banks, which in turn is constraining future private investment. Higher private sector investment is critical for India's growth as it is likely to fuel future manufacturing growth.

- **Jobless growth and declining employment elasticity in the manufacturing sector**

Another trend, which could hamper India's long-term future prospects, is the phenomenon of jobless growth being witnessed since the last 5 years. The compound annual average growth rate of employment was 2.8% during 1999-2000 which had fallen to 0.5% during 2004-05 to 2011-12. A major impediment to the pace of quality employment generation in India is the small share of manufacturing in total employment. In fact, employment elasticity of manufacturing has fallen from 0.78 during 1999-00 to 2004-05 to a negative of 0.11 during 2004-05 to 2009-10 (Fig 6). Recent studies also indicate that with increasing competition, inflexibility in hiring labor and rigid labor laws, most of the organized manufacturing sector is moving towards a capital intensive mode of production. The contribution of females in the country's work force is also declining. All these trends do not augur well for the economy. In fact, the inability of the manufacturing sector to create adequate employment opportunities for its emerging workforce could serve as a major setback, as this sector has a high correlation with economic growth. There is indeed a "structural change bonus" from industrialization because productivity in manufacturing tends to be much higher than in agriculture or services. There are several opportunities for capital accumulation and for realizing large-scale economies. Given the high-income elasticity of this

sector, it is capable of creating dynamic spill-over effects and serving as a catalyst for technological development.



Source: Papola, T.S. (2013), Economic Growth and Employment Linkages: Indian Experience. ISID Working Paper No. 2013/01, Table 3, Pp 6.

- **Skilling Indian Labor**

India's demographic profile ensures an abundance of human resources, however there are serious concerns about its employability, especially in the manufacturing sector. At present, the current size of India's formally skilled workforce is small, approximately 2 per cent (Labor Bureau Report 2014). This number contrasts poorly with smaller countries like South Korea and Japan that report figures of 96 and 80 per cent respectively. Their ability to get absorbed in India's growth potential sectors like manufacturing is low as less than 7 per cent of persons aged 15 years and above are reported to have received/are receiving any vocational training at the all India level. The BJP-led government is making an effort to promote skill and entrepreneurial development by setting up of a new Ministry of Skill Development and Entrepreneurship, setting up industry/employer-led Sector Skill Councils (SSCs), creating common standards for skills training and certification in the country. However, these measures for skilling India's labor force is grossly inadequate and needs to be speedily scaled up to meet immediate skill needs of the country. As per studies conducted by National Skill Development Corporation (NSDC) for the period between 2013 and 2022, there is an incremental requirement of 120 million skilled people in the non-farm sector. It is important to realize that the benefits of demographic dividend is not given state but a one-time gift accruing from age structural transition. Without adequate skills or employment opportunities this burgeoning workforce could prove to be a burden rather than an asset.

- **Urbanization**

Another daunting challenge for India would be urbanization- India, it is said, is at the threshold of an urban flare-up. As population increases, demand for every key service will increase five-to sevenfold. These trends combined with the current challenges of poverty eradication, food and energy security, urban waste management, and water scarcity will put further pressure on our limited resources. However, with more than half of the India of 2030 yet to be built, we have an opportunity to avoid excessive dependence on fossil fuel-based energy systems in the manufacturing sector and carbon lock-ins that many industrialized countries face today.

- **Declining share of domestic value added in total exports and growing regional competition in low-technology manufacturing exports.**

In the Indian context, the foreign value added share in exports is increasing while the share of domestic value added exports in total exports is declining consistently from 86.9 % in 1998-99 to 84.1 % in 2003-04 and further to 79 % in 2014-15. The contribution of labor to domestic value addition has decreased for merchandise exports by 6% points and increased for service exports by 2 % points over the period 1998-99 to 2007-08. This is indeed an unfavorable trend and indicates a deepening of the process of international production fragmentation. It is important to meet the growing manufacturing export demand by leveraging domestic production facilities and human resource. The growing competition for traditional /low-technology manufactured exports among its Southeast Asian regional partners could also hamper its export growth process. Hence the economy needs to structurally shift towards high value sub-sectors like high precision machinery, pharmaceuticals, biotechnology, ship building, defense production and aerospace industry which provide scope for diversification and technology spillovers.

6. Conclusion

It is important to note that India's manufacturing sector faces a defining moment in its evolutionary path driven by its valuable human resource, a strong base of entrepreneurs, and a robust and growing domestic demand. During 2012-13 to 2016-17, India's manufacturing sector grew at a rate of 7.5 %, which was higher than GDP growth rate, and manufactured exports grew at a CAGR of 19.6%. The fundamentals of the economy have emerged as the driving force for growth of this sector. As per the National Manufacturing Competitiveness Council, the manufacturing sector in India has the potential to contribute approximately 25 to 30 per cent to India's GDP and create 90 million jobs by 2025. To achieve these targets, the manufacturing sector

is expected to grow at an average of 14 per cent per annum during 2011-12 to 2021-22. As per the McKinsey Report, India's urbanization is expected to increase from 29% to 38% by 2025 and India's middle class is expected to expand 12 times. Thus the future represents a mix of both opportunities and challenges. It is important that the Modi's 'Make in India' aspiration factors in these challenges. The issues of jobless growth being witnessed in recent years, infrastructural bottlenecks and rising number of stalled projects, limited employment potential of its emerging workforce, the challenges of urbanization, the declining share of domestic value added in India's manufactured export and increasing competition from its south east Asian partners particularly China are likely to serve as major impediments for the future development of this sector. Eliminating these obstacles is therefore critical to unleashing the potential of this sector and in realizing India's manufacturing growth dream.

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