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Manufacturing Sectors in India: Outlook and Challenges

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Abstract

India is fast becoming one of the most lucrative options for manufacturing industry to prosper. This research was carried out to study the current manufacturing strategies implied by India for its growth in the manufacturing sector. An analysis was done on the factors which affect the manufacturing sector in different states across the country. Good infrastructure, compliance to tax & labour laws and meeting the desired environmental standards were some of the factors responsible for better performance of states like Gujarat and Andhra Pradesh." International Monetary Fund (IMF) raised a concern about the pace of the reforms which are being passed. They pointed out that Indian economy is facing "decelerating pace of reforms". Recently the long waited GST bill had been passed by the government of India which would enable an easy and a cost cutting flow of goods across different states of the country. It presents a wonderful opportunity for the manufacturing sector to re-establish the logistic sector of the country. A strong infrastructure is an essential ingredient for any manufacturing sector to grow. Keeping that in mind the government of India is investing a lot of funds in building a strong network of roads, rails and transport to foster the growth of the manufacturing sector. As many industrial corridors and road networks rapidly are being formed, this paper focuses on how these networks are catering to the growth of this sector. From this research we found out how new laws especially on land and labour coupled with constant improvement in the infrastructure is aiding India to emerge as the new manufacturing sector hub.

Peer-review under responsibility of the organizing committee of the 13th Global Congress on Manufacturing and Management

Keywords: Manufacturing Strategy; Infrastructure; Labour Laws; Environmental Standards; Cost-Cutting;, Logistic Sector; Industrial Corridors

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1. Introduction

Post-independence, Indian economy was heavily dependent on the agricultural sector. It contributed to more than 50% to the GDP. Over the years India gradually shifted from agriculture based economy to the service based economy. Many economists believe that skipping the secondary sector is the main reason as to why Indian economy has not developed as fast as other economies of the world.

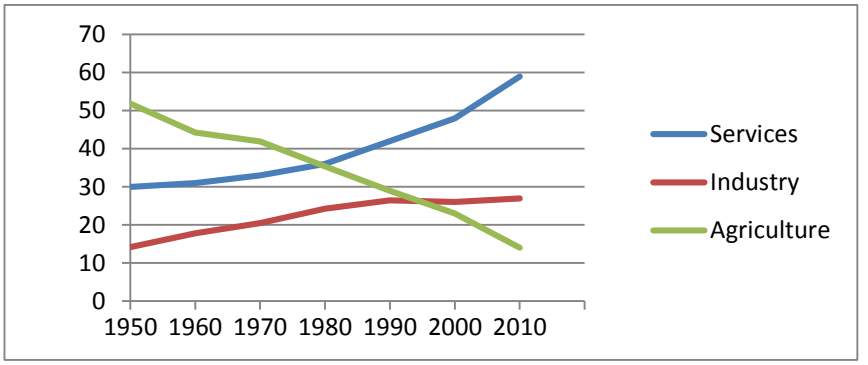

Fig 1 Sector-wise contribution to GDP

In recent years the manufacturing sector has been the major focus for the government of India. Realising the importance of manufacturing sector and the amount of employment it can generate, many initiatives are being taken up by the current government to foster the growth of this sector. Having the benefit of a high amount of educated population & skilled labour, there is enough scope for the manufacturing sector to further develop in the country. The 'Make in India' campaign started by the current government is one of the biggest initiatives taken by any government in order to attract foreign investors to invest and start manufacturing in India. The government is providing adequate infrastructure like electricity and strong network of roads and railways for easy transportation of goods and services. Many laws favouring the labours and land acquisition are being implemented so that it is easier for the foreign investors to start their business in India. Their main motive is to manufacture goods with zero defects so that none of the exported goods are returned back to India. With 'Make in India' campaign, the government doesn't want to compromise on the environmental standards. They want to follow a sustainable and environmentally sensitive path to prosperity. Some of the major industries which are on a high rise are the automobile industry, electronic & semiconductor industries, machinery, chemical, pharmaceutical industries and aviation industries [1]G.S.Dangayach et.al (2007). Many foreign investors are looking to invest in the defence sector of the country as well. Along with foreign investors, domestic companies having good leadership and manufacturing technology are also encouraged to invest, so that they can compete with the global leaders. [2]

2. State-wise analysis

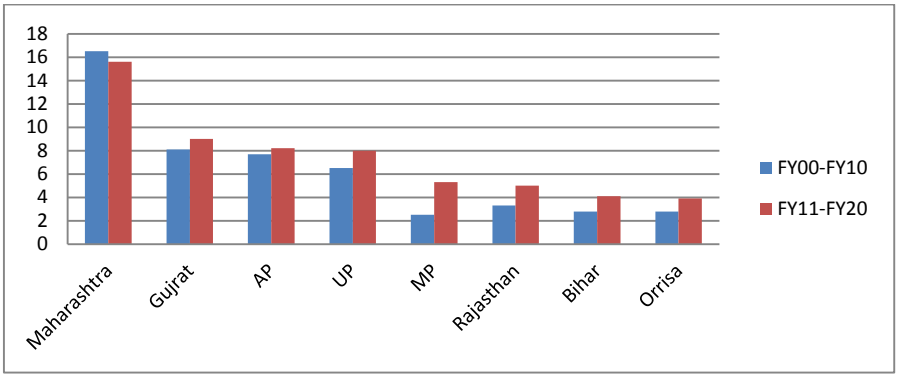

Figure 2: State-wise contribution to GDP

Fig.2 shows the increase in % GDP of some of the states in India. Apart from Maharashtra, all the above states are expected to have a rise in GDP by the year 2020. If we observe from the graph, the states Bihar, MP, Rajasthan & UP (BIMARU) were not very effective in contributing to the GDP of the country; they lacked way behind in the development of the country. Lack of education, lack of planning commission and political fights were major issues which plagued these states. High level of corruption was also a major factor which made these states under developed. Most of the population in these states were dependant on the agriculture sector only, and many people remained below the poverty line (BPL).

Several steps were taken to increase the productivity of these states. First step for the growth of these states was to improve the infrastructure. Lack of training centres, paved roads, health care facilities and electricity were some of the facilities which states like Bihar, MP lacked.

Due to good governance by the state governments, fate of some of these states is changing. Improvement in public order and good infrastructural facilities has helped Bihar grow economically. In 2001-11 the literacy rate in Bihar improved by a commendable 16.8% points. In MP the government has given approval for 51 SEZ's to develop. The central government is setting up industrial corridors which will be covering the entire length and breadth of the country. Across these corridors there will be massive amount of industrialisation, which will help these states to setup manufacturing industries and generate employment. Industrial area like Peethampur-Dhar-Mhow in MP has been included in the Delhi-Mumbai Industrial corridor which can create a strong base in that region.

UP is the most populous of India. Approximately 17% of the country's population resides in UP but still the literacy rate of this state is amongst the lowest in the country. Hence many schemes and programmes are being taken up the government for educating the youth of this state. A lot of investment is going into the education sector. A rise from Rs 73.8bn in FY 05 to Rs 180.8bn in FY 10 has taken place in this sector. These types of investments can readily improve the quality of man power.

Now if we focus on some of the higher developed states, we see that states like Gujarat and Andhra Pradesh have performed significantly well in the industrial growth. Why these states have

performed better than other states is due to good infrastructure provided by the state governments to set up various industries in the states. Many software & IT parks, SEZ's & special investment regions (SIRs) were setup by these states to make them a prime destination for industrialisation.[3] Radhicka Kapoor (2014), found out that states with more inflexible labour regulations have witnessed slower growth in employment and output in manufacturing than states with more flexible labour market regulations.

2.1 CASE STUDY ON GUJARAT AND ANDHRA PRADESH INDUSTRIAL MODEL

2.1.1 Vibrant Gujarat

Governemnt of Gujarat, was highly ambitious to make Gujarat a vibrant state for the manufacturing industries to start their buisness. It is one of the leading producer of automobile & its parts in the country. Along with being an automobile hub it also has high output of electronic and textile industry. Some of the statistics are shown which show the monumental rise of Gujarat as a manufacturing hub:

- Prior to 2001 the states trend growth rate of real GDP was 6.34 %, which was marginally lower than national growth rate of 6.35%. But during 2004-05 to 2011-12, the states trend growth rate was 9.83%, quite higher than national growth rate of 8.48%
- The annual average growth rate during 2004-05 to 2011-12 of industrial sector in Gujarat(10.64%) much higher than national(8.25%).
- Even the service sector has grown at a rate of 10.85% faster than national average of 9.95%.

Gujarat offers a favourable enviornment for foreign investors and other local companies to initiate the buisness. It is one of the leading places to do buisness in India. According to the world bank it is the leading state in the ease of doing buisness in India.

Table 1: Ranking Of Gujarat on ease of doing buisness

	Gujarat
Overall Ranking	1
Land Allotment & Obtaining Construction Permit	2
Complying with Enviornemntal Procedures	1
Complying with Labour Regulations	2
Obtaining Infrastructure Related Utilities	2
Carrying Out Inspections	2
Enforcing Contracts	3

One of the reasons why it has been able to perform so well is due to good connectivity of roads, ports and the airport. It has the highest percentage of paved roads in the country, and the state governement is planning a 6000km state highway development to enhance the transportation sector. Being in the western part of the country, Gujarat also has a location advantage as compared to other

eastern states and countries as its closer to the European markets. It has the Mundra port which is the largest private port in the country. Along with this it also houses approximately 40% of the Delhi-Mumbai corridor which is one of the most ambitious project taken up the govrnment of India. Along this stretch many large scale industries are coming up along with SMART cities. Government in this has provided essential facilities like water and electricity in adequate amounts infact Gujarat is an electricity surplus state, as it produces more electricity than it consumes.

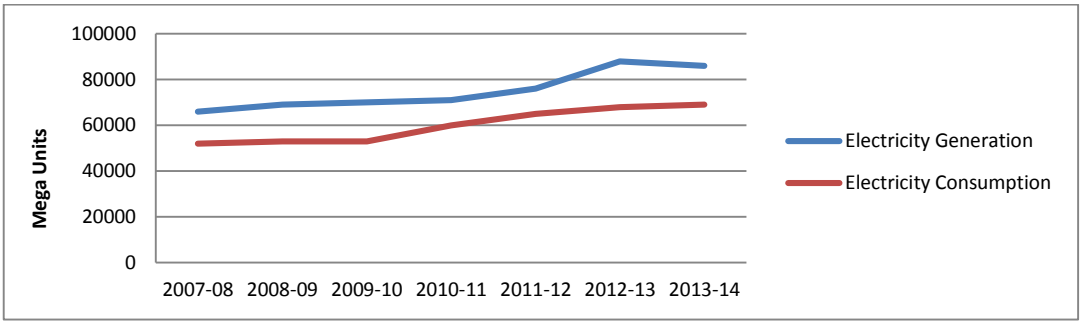

Figure 3: Gujarat is an electricity surplus state

Along with good infrastructure, state also offers various tax incentives, registertion & stamp duty concession & subsidy on power tariff, which makes it a dream for any investor to come here and start their buisness.

Gujarat model has been one of the greatest success stories in recent times & it has paved way for other states to follow a similar path in its growth. [4]Sebastian Morris (2012) showcases how Gujarat's performance on agriculture and electricity has influenced the industrialisation and how it has been able to maintain its comparative advantage despite a high level per capita income.

2.1.2 Rise of Andhra Pradesh

Government of AP was instrumental in making Hyderabad, its capital city as one of the key IT destination in the country. With the 'Make in India' campaign growing rapidly in the country, there are plans made to make AP as a mega electronics manufacturing hub.

The government is aiming to attract $5 billion investment & generate employment worth 400,000 people by the year 2020. AP is fast becoming the mobile making capital of India. Foxcomm partnering Xiaomi & Gionee have already begun their operations at Sri City. Other big players like Micromax, Celkonn & Karbonn are investing Rs 200 Crores each. It is currently home to more than 300 electronic hardware units that manufacture electronic devices as well as many of large Public Sector Units such as Electronic cooperation of India, Hindustan Aeronautics ltd. & Bharat Heavy Electricals ltd. AP was the first state to implement the Electronics Hardware Policy, which stated that all the electronics hardware projects promoted by the government would source 20% of the value of their requirements from SME's. AP has global connectivity to the sea ports and the airports along with high availability of high skilled manpower. One of the distinctive features of this state is that it has industrial parks which are not too far away from the main city and urban townships are located close to the parks.

Some of the leading MNCs like Emerson Network Power Systems, Cypress Technology & Renesas Technology already have their base in AP. The government is also encouraging small scale industries to improve their productivity levels so that they can aim at higher global competitiveness by acquiring ISO 9000 certification. The government is setting up technology development centre which will help small scale industries to have access to new & modern technologies. Rules and regulations are being simplified which will make it easier for small scale industries to setup their business. The government is also planning to improve the data base which will monitor the sector by indicating new developments, productions, exports, employment creation etc. Associations are being encouraged to hold training camps, workshops for transfer of technology & creating social responsibilities in areas like environment protection and safety of workers. Maintenance of industrial estates, marketing estates, etc. will also be taken care of by these associations.

Following on the footsteps of Gujarat & other leading manufacturing states, AP aims to become one of the leading manufacturing states by 2020.[5]R.K.Mishra.et.al (2013), examine the industrial structure and performance, at all India, AP and Gujarat levels using the ASI data from 2000-01 to 2010-11 on some of the major structural and technical parameters.

3. Logistics & Transportation sector

Logistic sector is the backbone of an economy. In India Most of the retail, automobile & pharmaceutical organisations outsource their logistics department to the third party logistics (3PL). It is one of the busiest sectors in the country. Annually there are 2.2 million heavy duty trucks and 0.6 million light duty trucks covering more than 18, 00,000 km of length.

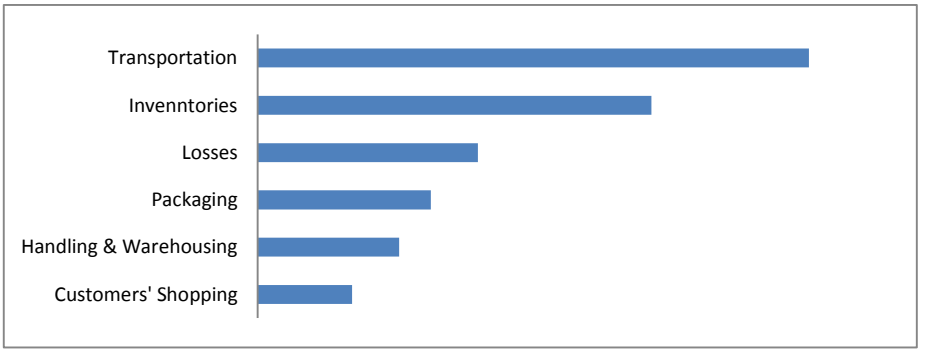

Figure 4: Elements of logistic cost

[6]Pankaj Chandra et.al (2007) outlined key challenges the logistic sector in India is facing and highlighted some of the key initiatives the firms are taking to manage their logistics.

3.1 Challenges

Logistic sector in India contributes to around 14% of the total GDP of the country, which is higher than USA and many European countries. For a developing economy such high share of GDP in logistic sector is deemed unhealthy. When we compare with BRIC nations, the ranking for other countries in the logistic sector index is constantly improving. According to the World Bank's 2014 logistics performance India is positioned at 54 much below than other countries like South Africa

(34), Vietnam (48), and Chile (42). There are a plenty of reasons for the poor showing of India in this department. Poor networks of roads, inadequate air & sea port capacities along with undeveloped railway networks are hindering the growth of this sector. This leads to slow & inefficient delivery of the product to the customers. The turnaround times are also high due to heavy congestion on berths and slow evacuation of cargo unloaded at berths. High cost of fuel & high waiting times negatively impact the logistic sector.

The transportation industry is also severely unorganised. The employees of this sector have inadequate skills which lead to inefficient supply of goods. Low level of technology and poor maintenance of the tools are also responsible for inefficiency of the transportation industry.

[7] The warehouses are mostly run by small or medium players with small capacity therefore poor handling and management takes place

3.2 Overcoming the challenges

To improve the state of the manufacturing sector, strong emphasis is being given to the logistic sector. Cost cutting in the logistic sector is one of the most critical aspects in improving the shape of this sector. According to a study, if the logistics cost is brought down from 14% to 9% of the GDP, India can save roughly $50 billion.

The government in order to cut down the cost has proposed to setup multimodal logistic parks across the country. 15 parks have been proposed in the first phase which has the highest freight movement which will solve key functions like freight aggregation & distribution, multimodal freight movement, storage and warehousing, and value added service such as custom clearances. These parks are a part of an initiative called Logistics Efficiency Enhancement Program (LEEP) which was initiated to improve the efficiency and cut down the logistic cost. These parks will cover approximately 5000 acres at an approximate cost of Rs. 33,000 crore. The multimodal hubs will be critical in shifting of goods from one mode of transport to another with less wastage of time and cost. This shifting will be more efficient and streamlined including the government clearances. There is a huge opportunity for warehouse market as only 8% of the total warehousing space in India is held by the organised players. The government has set up free-trade warehousing zones which will facilitate trade of goods in free currency. It is also encouraging public-private partnerships in cold storage industry and with the opening of FDI in multi brand retail, this industry is bound to pick up. Several global companies have started coming up in the logistic sector mostly being tie ups with the local ones. For instance, DHL has acquired 68% of the total stake in Blue-Dart. [8] Pravakar Sahoo (2014) highlights India's foreign direct investment (FDI) policies and highlights challenges for foreign investors, recent policy developments, and the potential for foreign firms.

4. Freight Movement

Freight movements in India are dominated by the road & rail transport. According to 2013 data India (4.7 million km) is only behind USA in the total road length in the world. The central government finances the national highway, state government the state highways & local government the rest of the road. The national highway carries 40% of the total road traffic. The government in order to improve the quality and capacity of the national highway is developing

multi-phase projects by significantly using Public Private Partnership (PPP) model. Over the next decade going by the current trajectory, USD 500 billion is expected to be spent. 50% of this will be spent on road, 40% on rail and the remaining on waterways and ports majorly for international trade.

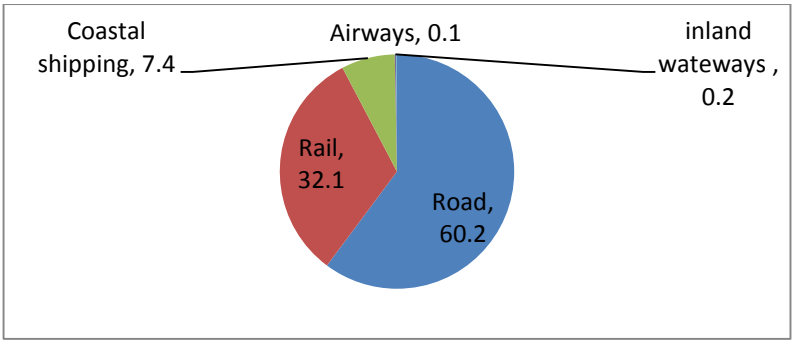

Figure 5: Modes of Freight Movement in India

Fig 5 shows that majority of freight movement takes place via road, there are plans being made to increase the share of rail transport for freight movements in the country. Rail network in India is quite extensive which is highly beneficial for a huge country like India. Moreover freight movement via rail is a better method of goods movement because it is less polluting than the road transport. It will help in reducing the environmental concerns often encountered by this industry.

With the Make in India campaign, freight movement in India is expected to grow till 2020. It is estimated that:

- The freight transport market is expected to grow at a CAGR of 13.35% driven by the rise in manufacturing.
- Road freight movement will increase at a CAGR of 15% predominantly due to growth in FMCG, retail and pharmaceutical sectors
- Indian rail freight market will grow at a CAGR of 10%
- With the increase in exports of automobile parts, the India sea freight market will grow at a CAGR of 12%
- With more number of private airlines entering the market and demand for fast delivery Indian air freight market is expected to significantly rise at an impressive rate of 12.5%.

[9] G. Raghuram (2015) analysed the road transport & the trucking industry in India. The importance of the road transport was signified by examining its share its modal & GDP share.

4.1 Industrial & Freight Corridors

In the recent years, Indian market has seen a significant rise. Successful implementation and planning of various infrastructural projects has been the chief architect behind this growth. In order to sustain this growth and further develop the industrial sector, Indian government is setting up new industrial and freight corridors.

In order to transfer goods in a faster and a more efficient way, India proposed a master plan linking all the major centres of production via roads and highways. The ministry of road, transport & highways came up with a project, linking four major cities (Delhi, Mumbai, Chennai and Kolkata) across different regions forming a quadrilateral. This project was termed as 'The Golden Quadrilateral'. More than 5,000 km of road & a total of 13 states are covered by this project. It has been one of the biggest success stories in the recent years as it has been highly beneficial for the growth of the Indian Economy. It has reduced the travel time between the major cities considerably and the goods are able to reach in lesser time. Due to better quality of roads, multi-axle trucks are being used to carry the goods which bring down the transportation cost. Buyers and suppliers have immensely benefited from this project as there is higher efficiency of transportation of goods. It has also led to the connectivity among the port cities like Visakhapatnam on the eastern coast of India to Kolkata and Mumbai on the other coast to Delhi. Due to improved connectivity with the major cities smaller towns and cities have emerged as potential manufacturing destinations which have further given employment to the previously unemployed states like UP, Orissa, etc. This connectivity has played a major role in making Gujarat and Andhra Pradesh which have a combined 1500km of the total distance, the leading manufacturing destinations for local and foreign investors. Places like Surat in Gujarat and Srikakulam in Andhra Pradesh which lie on 10 km radius from the Golden Quadrilateral registered more than 100% increase in new output & new establishment counts.

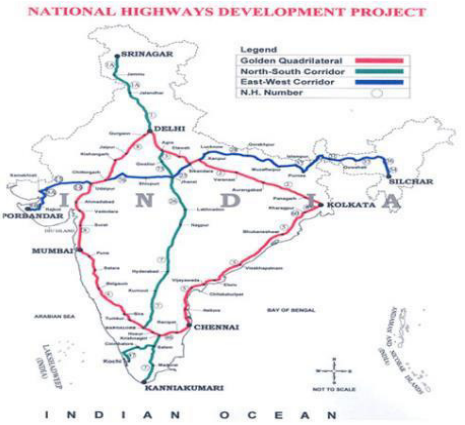

Figure 6: Golden Quadrilateral & Industrial Corridors

The government of India with the help of foreign investment have proposed the following industrial corridors to enhance the productivity: Delhi-Mumbai Industrial Corridor, Bengaluru-Mumbai Economic Corridor, Chennai-Bengaluru Industrial Corridor, Visakhapatnam-Chennai Industrial Corridor and Amritsar-Kolkata Industrial Corridor. These corridors will be generating massive employment across the nation especially in the less developed areas. The government has proposed many SMART cities across these corridors. These cities will be provided with good infrastructure & facilities for attracting investments. [10] Meha Singla et al. (2015) demonstrate how Industrial Corridor development is initiating the strengthening of national economy by bringing state-of-the-art infrastructure and opening up global competition.

Table 2: Industrial corridors

CORRIDOR	COVERING STATES	MAJOR CITIES	BENEFITS
Amritsar-Kolkata Industrial Corridor	Punjab, Haryana, UP, Jharkhand, Bihar, West Bengal, Jharkhand	Amritsar, Ludhiana, Delhi, Jalandhar, Patna, Kolkata, Varanasi	Boost for agriculture sector, Ludhiana a major textile centre, Varanasi can attract tourist as a 'Heritage City', employment to less employed states like Bihar, UP, Jharkhand
Delhi-Mumbai Industrial Corridor	Delhi, UP, Haryana, Rajasthan, Gujarat, Maharashtra, Madhya Pradesh	Delhi, Gurgaon, Mumbai, Jaipur, Ahmedabad, Vadodara,	Major boost by funding from Japan, Gujarat already reaping benefits as a manufacturing hub, connectivity to ports in Gujarat and Mumbai, Employment to Rajasthan , major IT hubs like Gurgaon & Vadodara
Bengaluru-Mumbai Economic Corridor	Maharashtra, Karnataka	Mumbai, Bangalore, Pune, Belgaum, Kolhapur	Joint Venture with British Government, Developing Micro Markets, covering two major IT cities (Bangalore & Pune), realty sector likely to prosper.
Chennai-Bengaluru Industrial Corridor	Tamil Nadu, Karnataka, AP	Chennai, Bangalore, Sriperumbudur, Hoskate, Chitoor	Japan agreed funding the project, major freight movement from Chennai to Bangalore, connectivity to Chennai port in Bay of Bengal, Chennai is a major automobile hub.
Visakhapatnam-Chennai Industrial Corridor	Tamil Nadu, Andhra Pradesh	Chennai, Nellore, Vizag, Vijayawada	Nellore is an aquaculture hub, Vijayawada new capital city of AP makes it a hot place for future investments, connectivity between the two major ports on Bay of Bengal i.e. Chennai & Vizag

Over the next 4 years, Indian railways with collaboration from Japanese government have also initiated dedicated freight corridors (DFC). Approx. 2500 km route will be covered by the two Eastern & Western Corridors. The western one would connect the JLN port in Mumbai to Dadri whereas the eastern corridor would connect Ludhiana to Sone Nagar. There are plans made to inter-link the two corridors at Khurja. Government has also planned four new projects:

- East-West DFC- connecting Kolkata and Mumbai- 2000km
- North-South DFC- connecting Delhi and Chennai- 2173km
- East coast DFC- connecting Kharagpur with Vijayawada- 1,100km
- South-West DFC- connecting Chennai with Goa- 890km

5. Laws & Regulations

According to the World Bank, India has one of the most stringent laws in the world. Strict laws on land, labour & trade exist making it difficult for the manufacturing to grow as smoothly as it has done in other countries like China & USA. Many believe that the existing barriers on trade will be the major hiccups for the 'Make in India' campaign to reap its full benefits. In order to maximise the potential of the 'Make in India' campaign, the government is rapidly making reforms which can potentially change the outlook of the Indian manufacturing sector and can give a massive boost to the Indian economy.

One of the most important decisions was to propose amendments in the land acquisition bill. With amendments in this law, land acquisition would be much easier and would also reduce the cost of acquiring land which was as high as 40% of the total cost. It also reduced exemptions for social infrastructural projects in PPP.

5.1 Labour Laws

Amendments and new innovation was needed in the existing laws as most of the labour laws which exist in India are out-dated and redundant. Some of the laws which the government have cleared for amendments:

Table 3: Labour laws

LAWS	AMMENDMENTS
The Apprenticeship Act, 1961	• Addition of 500 new trades to the list of 238 • Companies permitted to begin new trade without informing the central government • Addition of E-records • Daily wagers, contractual workers & casual labours to also come under this act

The Factories Act, 1948	• Double overtime of workers from 50 hours to 100 hours per quarter(further proposal to 125 hours) • Allowing women for night duty with safety measures and provision for transport after work
Labour Laws Act, 1988	• Exemption of small firms with up to 40 workers, against 10 currently from filing compliance reports • Working on changing the Child Labour's Act, 1986 & Minimum Wages Act, 1948.

Along with these amendments, government is also planning to introduce five new labour law bills; Industrial Relations Code Bill 2016, the Small Factories Bill, Shops and Establishments (Amendment) Bill, and Employees Provident Fund and Miscellaneous Provisions (Amendment) Bill.

These amendments and bills could prove to be highly beneficial in achieving economic growth for the Indian Manufacturing Sector. For an instance, the changes in Factory Act, 1948 will ensure ease of doing business in the country whereas the workers could benefit from the improved safety conditions. Previously the small firms were worst effected, but due to recent changes they can employ more workers with lower regulatory compliance burden. With the changes in labour laws, the state can dictate its own social-economic growth. Rajasthan has already benefited from this by generating more employment. It will also increase the foreign investment in labour intensive industries because under new laws it will be easier for the companies to dismiss the unproductive labour as compared to the previous laws where under some laws, consent of employees and prior notice was needed to dismiss the worker which made it difficult for the company to fire employees during a downtown in business [11].

5.2 Goods and Services Tax (GST) Bill

Trading in India is severely hampered by the indirect tax system. Various complexities exist in the tax system which is prevalent in India. In the current tax system the consumer is supposed to pay multiple taxes on the goods thereby increasing the burden on the consumers. After a long wait, finally the GST bill has been passed which will change the whole dynamics of the logistic and the manufacturing sector in the country.

The working of the GST bill can be demonstrated through a simple example:

Figure 7: The working of the GST bill

STAGE I

A manufacturer of shirts buys raw materials worth Rs 100 including Rs 10 of tax and he utilises this money to manufacture a shirt. Suppose he adds a value of Rs 30 to this shirt. The total amount now equates to Rs 130. At a 10% tax rate, he will have to pay a tax of Rs 13. But under GST he can set off this Rs 13 tax against the already paid amount of Rs 10 hence effectively he will only pay a

tax of Rs 13 – Rs 10 = Rs 3.

STAGE II

The wholesaler buys the goods at Rs 130 from the manufacturer, and adds his margin of Rs 20. Now the gross value which of the good which he sells is Rs 150. A tax of 10% on this amount will be of Rs 15. But under GST he can set off this output tax of Rs 15 against the tax paid on purchasing the good which was Rs 13. Hence effective tax he has to pay will be Rs 15 – Rs 13= Rs 2

STAGE III

Finally the retailer buys the shirt from the wholesaler at Rs 150. He then adds his margin of Rs 10. Hence gross value of the product comes out to be Rs 160. Now a 10% tax on this will account to Rs 16. Similarly he can set off this tax against the tax paid on purchasing which is 10% of Rs 150= Rs 15. Hence effectively he pays a tax of Rs 16 - Rs 15= Re 1.

Thus the total GST in the entire chain adds up to Rs 16, whereas in the non GST regime, the total tax comes out to be almost equal to Rs 58. Hence the total price for the consumer comes out to be Rs 166 instead of Rs 208.

Along with the benefit of single tax, it will also have other advantages like:

- Easy documentation
- Simpler tax returns
- Lesser tax burden
- More transparency in taxation
- More export
- Less tax evasion
- Easy business transaction
- Higher product demand due to lesser cost of the product
- Improved savings
- Hike in GDP growth rate

5.2.1 Impact on logistics and transportation industry

Currently each state in India taxes at different rates while transporting of goods across the borders. Hence during the freight movement, the goods are taxed multiple times. This lead to a rise of the total logistic cost in the country to as much as two-three times of the global benchmarks, according to the World Bank. Further, there are several time delays at the checkpoints of the inter-state border.

After clearance of the GST bill it will combine several state and central tax into a single tax. It will replace 15 state and federal taxes and tariffs for a single tax at the point of sale. Earlier operational and logistics efficiency was compromised for tax optimisation and administration. Inventories and warehouses were set up at a place where they could provide tax benefits. Now logistics service providers will have to rethink their supply chains, emphasising on the optimal locations. New warehouses and inventories will open up based on the logistic and operational efficiency. Plans will be made to open the warehouses in closer proximity to the manufacturing locations and consumptions. The smaller warehouses having a size of 15,000 -20,000 sq. ft. would be merged and larger ones of size 2 lakh sq. ft. would setup. The unorganised sector would also need to improve

their service levels. This could lead to collaboration of their business with the established companies.

With the time delays due to roadblocks and other stoppages are reduced, it could cut freight times by 20-30% and logistics cost to 30-40%. The distribution cost is also expected to come down by 10-15%. The primary freight cost is going to come down to 4.62 crores from the existing 4.82 crores. With larger warehouses, transportation lot sizes would also increase making way for bigger and efficient trucks. The transportation is also going to be more efficient, where principal transporters will connect manufacturers to the hubs, subsidiary transporters move from hubs to the distribution centres, , finally last-mile transporters to ensure customer delivery enhancing the competition in the transport industry.

6. Conclusion

Already showing tremendous progress in the service sector, now India's manufacturing sector is also gathering pace. With the 'Make in India' campaign India plans to be the leader of the manufacturing sector in the world. States like Gujarat have laid the foundation for other states to follow in its footsteps in order to become a manufacturing hub. Andhra Pradesh has already made a steady rise as a leading electronics manufacturer in the country with many foreign investors already making huge investments. With the help of good facilities and world class infrastructure by the state and the national government, most of the backward states are also making progress in terms of their contribution to the GDP. As the total cost on logistics being higher in India than other developing nations, various schemes and programs like the LEEP are being implemented. New policies would be formed and the face of the logistic sector is going to change as new and bigger warehouses and inventories will be set up in order to increase the efficiency of the delivery of the product. In order to increase the speed and efficiency of freight movement government has successfully initiated many projects which will improve the road and rail network of the country. With good connectivity between the major cities, dedicated industrial corridors are also coming up which will be beneficial in improving the manufacturing sector of the country. Amendments in old labour and land laws will bring a sea change to the Indian manufacturing sector with easy licensing to lands and flexible labour laws. Finally after a long wait, the GST bill had been cleared by the government which will abolish the compound tax system existing in the country and replacing it with single tax throughout the country which will be a massive boon for the Indian logistics and transportation sector. With so many positive changes taking place, Indian manufacturing sector is set to welcome its glory days.

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