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1. Manufacturing Sector Overview

India’s GDP has been growing at an average rate of over 8% a year since 2005. Manufacturing sector accounts for an average contribution of over 15% in the national GDP. According to the Index of Industrial Production (IIP), the manufacturing industry index has been growing at an average rate of 9% per year since 2006. Besides its contribution to the national GDP, in the year 2010 the manufacturing industry provided employment to more than 62 million individuals in the country including highly educated professionals as well as the lesser educated individuals.

From the manufacturing of luxury motor vehicles to the manufacturing of organic foods, the Indian industry has seen a diverse blend of emerging factors contributing to its development. The booming Indian market is leading companies and industry bodies to invest in this sector to cater to the increasing demand. According to a recent Confederation of Indian Industry (CII) - ASCON survey, 34% of the total sectors in the manufacturing industry are estimated to grow at 20% or more in 2010-11 as against 28% sectors that had reported such growth during 2009-10; the top performers being air conditioners, tractors, fertilisers, construction equipment, tyres, etc. Manufacturing companies are continuing to explore ample opportunities both in the global and domestic markets. Strategic alliances between domestic and international organisations leveraging one’s technological advantage with the other’s strong foothold in the local market are increasingly being witnessed in the industry. Companies are not only introducing new products in the market but also are reinventing their existing product portfolio to expand the market.

According to the current (2010-11) Index of Industrial Production (IIP), the manufacturing industry can be divided into 17 sub-verticals including fast growing industries such as:

- Transport Equipment and Parts
- Jute and other Vegetable Fibre Textiles
- Food Products
- Rubber, Plastic, Petroleum and Coal Products
- Metal Products and Parts [except Machinery and Equipment]
2. **Key Trends in the Manufacturing Sector in India**

Over the last few years, the manufacturing sector in India has witnessed the evolution of certain key trends which are converging towards the growth of the sector. Trends including foreign investments, mergers and acquisitions, strategic alliances between industry players, favourable Government policies and industry initiatives, use of technology and customer centricity etc. are increasingly being observed across the sub sectors of the manufacturing sector.

2.1 **Riding on the growth wave, the sector will continue to attract larger foreign investments**

With its growing market and large pool of technically qualified & low cost manpower, India has become an attractive destination for foreign investors. Statistics show that India has witnessed cumulative FDI equity inflows worth USD 193.73 billion between April 2000 and February 2011. Out of this, the manufacturing industry has attracted FDI’s worth more than USD 34 billion (i.e. 17.5% of the total FDI).

Government policies allowing up to 100% FDI in many manufacturing sub verticals, such as food and beverages, textiles, automobiles, etc. have been successful in attracting increasing amount of investments in the country. Government’s plan to invest USD 47 billion worth of funds for infrastructure development during fiscal 2011-12, have also been instrumental in attracting the FDI’s.

FDI’s in the manufacturing industry have been encouraging and are expected to grow over the coming years:

- A target of USD 25.1 billion worth of FDI inflows to Food Processing Industries has been set to be achieved by 2015. The amount of FDI inflow for the sector was reported at USD 1.2 billion between April 2000 and February 2011. Many foreign players such as Puratos, the bread and bakery ingredients major from Belgium, and Fonterra, dairy products major from New Zealand, are expanding into India.
• The drugs and pharmaceuticals sector has attracted FDI worth USD 1.9 billion between April 2000 and February 2011. Examples including Helvöet Pharma’s (part of the Daetwyler Group, Switzerland) first Greenfield production facility near Pune are encouraging investments in the sector.

• The textiles industry has attracted FDI worth USD 0.9 billion between April 2000 and February 2011. International apparel companies like Hugo Boss, Liz Claiborne, Diesel, Ahlstorm, Kanz, Baird McNutt, etc have already started their operations in India and are growing rapidly in the local market.

• The massive growth of infrastructure in the country has attracted FDI’s worth USD 2.3 billion between April 2000 and February 2011 in the cement and gypsum products. Large investments such as that of Switzerland based cement company, Holcim, which is planning to invest USD 1 billion to set up 2-3 Greenfield manufacturing plants in the country by 2015 are further propelling the growth.

• The chemical industry (excluding fertilisers) has attracted FDI’s worth USD 2.9 billion between April 2000 and February 2011. US-based Chemtura Corporation’s plan to invest USD 100-150 million by 2015 in India shows increasing confidence in the sector.

Besides investments aimed at establishing manufacturing bases or expanding operations in the country, companies are also focusing on developing new products specifically for the Indian market. Out of the box innovations have been experienced in this sector in specific verticals such as automotive. Examples such as Tata Motor’s Nano car have led other companies, such as Ashok Leyland and Nissan Motors to look at the sector and contemplate development of similar or better products, in turn benefitting the end user.

2.2 The growth of the Indian manufacturing industry will create increased M&A opportunities in the future

In 2010, the manufacturing industry witnessed more than 240 mergers and acquisitions (M&A’s) including approximately 123 domestic, 81 outbound and 38 inbound deals. The mergers and acquisitions were seen in a wide array of manufacturing industries including the pharmaceutical industry, the automobile industry, the textile industry, etc. Increasing confidence in the Indian
economy, successful mergers and acquisitions in the past, improving global perception of India and growing Indian customer base were the driving factors which contributed to significant M&A activity in the country and these factors will further the number of deals in the future. Some of the recent mergers and acquisitions in the industry are as follows:

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<td>Mahindra and Mahindra</td>
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<td>3</td>
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<td>Controlling Stake</td>
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<td>4</td>
<td>Loyal textile mills</td>
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<td>JSW Steel</td>
<td>Metal and Ores</td>
<td>Minority Stake</td>
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<td>4</td>
<td>E-Land</td>
<td>Mudra Lifestyle Ltd</td>
<td>Textile</td>
<td>Majority Stake</td>
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2.3 Government initiatives and policies will aggressively favour the growth of the sector

The Government of India has taken up several initiatives to boost the manufacturing industry. The National Manufacturing Policy aims towards setting up NMIZ’s (National Manufacturing and Investment Zones) and encourage investments (both national and international) in the manufacturing industry, double the employment, increase the contribution of manufacturing in the national GDP to 25% by 2022 and enhance the competitiveness of the manufacturing sector. The Government of India has further taken sub vertical specific initiatives to enhance the growth in the industry:

- **Food and Beverage Industry**: The Government has adopted Vision 2015 to enhance the level of processing of perishables from the current 6% to 20%, and value addition from 20% to 35%. In the 11th Five Year Plan the Government has targeted setting up of 30 Mega Food Parks by the end of 2012. Other initiatives include full exemption from excise duty to specified equipment for preservation, storage or transport of apiary, horticultural, dairy, poultry, aquatic & marine produce and meat and processing.

- **Automotive Industry**: The Ministry of New & Renewable Energy (MNRE) is supporting implementation of alternative fuels for surface transportation programme, especially Electric Vehicles in India and has announced an incentive package worth USD 21 million for all types of Battery Operated Vehicles (BOVs), Plug-in Hybrid Vehicles (PHEVs), Hybrid Electric Vehicles (HEVs) and Electric / Exercise-Bike Generator Inverter (E2BI) for use for transportation. DHI (Department of Heavy Industries) is also looking for fund raising from the Government for innovations of new technology to upgrade the auto component sector.

- **Textile Industry**: Under the Scheme for Integrated Textile Park (SITP), 40 textile parks have been sanctioned (up till December 2010) in 9 states. These parks have together attracted USD 770 million investments. The Government is planning to launch USD 44.21 million missions for promotion of technical textiles, which include products like mosquito and fishing nets, shoe laces and medical glove. The Ministry of Textile has sanctioned a total of USD 133 million under Technology Upgradation Fund Scheme (TUFS) during September 2010.
• **Pharmaceutical Industry:** The Government is making efforts to regulate the prices of patented medicines. It will make public details of every medicine patented in the country to bring transparency. This is expected to help Indian drug makers to challenge patent holders and sell low-cost version of high-priced patented drugs.

• **Petroleum Products:** The Government launched the petroleum chemicals and petrochemicals investment regions (PCPIR) policy in 2007. The Government has so far approved four PCPIRs and a fifth PCPIR is under process of approval at Cuddalore in Tamil Nadu. The Government is encouraging FDI’s in Exploration & Production [E&P], permitting up to 100% FDI, for small and medium sized oil fields under the New Exploration Licensing Policy (NELP).

2.4 Industry will make investments in skilling and re-skilling of the manufacturing resources

Employee skill enhancement is one of the key factors that results in any industry’s success. The training sessions act as a point of reference to determine the current skill set of the employees and to further enhance the existing skill set. Such training sessions result not only in increased productivity of the employees but also in decreased need of supervision. These sessions keep the companies at par with the competitive standards by making the employees familiar with the new skill sets.

Companies have been actively involved in organising such employee skill enhancement programmes and such initiatives shall soon be adopted throughout the industry. Some initiatives are as follows:

• To build a robust supply chain for production and marketing of organic fruits with farmers across various states in the country, ITC is training farmers to deploy organic farming techniques, ‘Good Agriculture Practises’ (Global GAP) and product traceability systems through demonstration plots and extension services designed to help them obtain international organic certification.
• Maruti Suzuki organised a total of 46,200 man-days of training for employees across all levels during the year 2009-10. The Company also has higher education schemes for its employees.

• In 2009-10, Reliance Industries Ltd. organised Learning and Development sessions comprising of 3,092,403 man-hours at its manufacturing divisions. E-learning modules have been introduced to upgrade the skills and competencies of individuals working both in the technical domain and in the management domain.

• In 2009-10, SAIL had organised a skill enhancement programme for its employees. Nearly 46,180 employees were trained during the year on different contemporary technical and managerial modules. Specialised advance management programmes were conducted for the higher management.

• The Confederation of Indian Textile Industry (CITI) is planning to set up a special purpose vehicle (SPV) with the support of National Skill Development Corporation (NSDC) for training of skilled and semi-skilled work force as well as those at supervisory and managerial levels.

• Alliances with educational institutions to generate graduates with customised skills for the industry, for instance Tata Steel has entered into an alliance with the Indian Institute of Metals & Vel-Tech University to launch a PG Course on “Iron and Steel Making” which would imbibe the required skill sets in the graduating students.

Emphasising growth and development of personnel creates an availability of qualified professional and addresses the employee attrition challenge in the industry. It also ensures adequate and suitable man-power in case of expansion projects led by the companies. Skilling and re-skilling initiatives undertaken by the manufacturing companies in India are expected to enable the next phase of growth for many of them.
2.5 Alliances and joint ventures will drive the strategic expansion of manufacturing units

Industry players are forming strategic alliances/joint ventures (JV’s) to establish a stronger foothold in the Indian market. Among domestic players, alliances are being formed to increase the production capacities to cater to the growing demand of products in the Indian market. India is aggressively forming strategic alliances with countries, such as France, Japan, etc in order to boost the bilateral trade relations between the countries. Foreign players are also forming alliances with Indian companies in a bid to enter the market. These cross border alliances leverages the domestic companies’ market presence with the product offering of the foreign players. The emphasis on the development of products better suited for the Indian markets shall further contribute to the success of these alliances in the domestic market. Such alliances have occurred across verticals and an increasing number of such alliances will be witnessed in the future. Some examples are as follows:

- Starbucks has signed a Memorandum of Understanding (MoU) with Tata Coffee Limited for sourcing and roasting high-quality green coffee beans and to jointly explore the development of Starbucks retail stores in associated retail outlets and hotels. They will also train local farmers, technicians and agriculturists to improve their coffee-growing and milling skills.

- Mahindra and Mahindra and Navistar, Eicher Motors and Volvo, Force Motors and MAN, The Renault-Nissan and Bajaj Auto, and Ashok Leyland and Nissan, have formed JV’s aimed towards adapting premium products for local-markets and entering the low-cost segment through local engineering, sourcing, and production.

- US drug maker Merck and India’s Sun Pharmaceutical Industries has formed a JV to bring innovative formulations to emerging markets. While Sun will lend its product development skills and manufacturing facilities, Merck will help with its regulatory competence and market presence.
• Domestic companies are providing professional expertise to companies abroad, for instance Tata Chemicals has signed an agreement with Notore Chemicals Industries of Nigeria for providing technical advisory services. TCL will send its experts to help Notore improve the systems and processes, improving the efficiencies of area of operations and maintenance.

• Companies are forming strategic alliances with State Governments to establish manufacturing units, for instance, Birla Corporation has signed a memorandum of understanding with the Assam Mineral Development Corporation (AMDC), to set up a 1 million tonne Greenfield cement plant in Assam.

2.6 The tier II/III cities will continue to emerge as locations of choice for manufacturing

The presence of the progressive middle class is giving rise to a huge customer base in the tier II/III cities. More so, the presence of good quality educational institutions in these areas ensures skilled labour for the industry. The lower costs of land and lower wage demand by the labourers act as an attractive agent for the industry players. These factors are leading to the establishment of manufacturing units in tier II/III cities which in turn would enable economic growth in these areas. Some examples of projects coming up in the tier II/III cities are:

• Rishab Special Yarns plans to open a new Texturising of Polyester Yarn plant at Bhilwara, Rajasthan.

• Duncans industries has formed a JV with Jaypee Fertilisers and Industries as a strategic investor to revive and rehabilitate its fertiliser unit at Panki in Kanpur.

• Reliance Industries has partnered with a Russian petrochemical firm Sibur investing USD 450 million to set up a butyl rubber plant at Jamnagar in Gujarat.

• NMDC is planning to sign a Joint Venture with Tata Steel for setting up a 2-mtpa steel plant at Bastar in Chhattisgarh.

• Reliance Industries Limited (RIL) is planning to set up a 5 million tonne cement capacity manufacturing plant in Kutch, Gujarat.
2.7 Manufacturing companies will continue product diversification to address customer needs

Domestic players (including large conglomerate business houses) are making a foray into new avenues outside of their existing line of business to expand their product portfolios. While some of the large companies are looking to address the dynamic needs of the market through diversification, these initiatives are driving other players also to venture into new areas in the Indian landscape. Some recent examples of product diversification ventures are:

- Mahindra has made a foray into the two wheeler manufacturing sector consequent to its acquisition of Kinetic. Since 2009, it has launched gearless two wheelers and motorcycles for the Indian market.

- Raymond is planning to invest USD 5.5-6.5 million in FY-12 to expand its accessories business and to add new products, such as sunglasses.

- Pharmaceutical companies are making a foray in the FMCG manufacturing sector, for example, Mankind has launched a range of deodorants under the brand name of “Addiction”.

- Cement maker Birla Corporation is planning to make a foray into coal mining, real estate, power generation and construction businesses.

- National Fertilisers has entered the power generation industry and is building a 14.7-Mw wind energy project in Rajasthan for commercial use.

- Steel Authority of India (SAIL) is under talks with coke miners abroad and is planning to acquire coking coal miners in Australia and South Africa.

2.8 Manufacturing enterprises will aggressively invest in technology towards business process enablement and up gradation

Companies are aggressively tapping the benefits of technology implementation in its businesses. To improve their production processes and quality of products, companies will continue to invest in technology absorption, adoption and innovation. Such implementations are aimed towards increasing productivity, standardising business processes, supply chain optimisation and training of employees. Examples of such implementations are as follows:
• Indian Rayon Unit (Aditya Birla Nuvo) has implemented server and desktop virtualisation to run eight critical production apps, and the Data Recovery (DR) for four applications on the virtualised platform.

• Coca-Cola has implemented IT solutions, such as ERP, a business intelligence solution, GPS-based fleet management, GIS-based analytics, sales force automation, and distributor automation, for itself and its franchise owners to enable standardisation of business processes.

• To achieve scalability and supply chain visibility, New Holland Fiat India has implemented ERP in its systems. This has resulted in increased delivery reliability by 98 per cent and increased material availability up to 100 per cent.

• Vardhman Textiles limited has invested approximately USD 1 million between 2008 and 2010 for its technology up-gradation.

2.9 Indian manufacturers would also compete on foreign turfs and grow their businesses

Domestic players are making a foray into the international markets to capture the customer base. Innovation to produce new products has led to an increasing demand of Indian products in the foreign markets. The exclusivity of the Indian products and the growing markets for such products is driving companies to establish manufacturing bases abroad. In other cases the abundance of raw materials on foreign land is driving players to establish manufacturing bases abroad.

• Tata is setting up a new facility in Indonesia for the production of the Nano. This plant will have a capacity of approximately 5,000 units a year and is aimed at establishing a stronger base in countries such as Indonesia, Philippines, Malaysia and Thailand.

• Aurobindo Pharma will manufacture and market Fosinopril Sodium tablets, used for the treatment of hypertension, in the American market.

• GAIL and RIL are under talks with Qatar Petrochemical Company (QAPCO) to set up a USD 1.3 billion petrochemical plant in Qatar. GAIL and RIL are exploring opportunities in Middle East, Russia and Former Soviet Union (FSU) countries for the setting up of petrochemical plants.
To establish a stronger foothold in the African market, Tata Chemicals Ltd’s (TCL) has invested in a Greenfield fertiliser project in the west central African country of Gabon acquiring a 25.1 per cent stake the project.

- Welspun Group is establishing a Greenfield manufacturing plant in the US for the production of line pipe.
- Steel Authority of India (SAIL) is planning to set up a 3 million tonne per annum (mtpa) plant in Mongolia at a cost of around USD 3.3 billion.

2.10 Companies to continue product innovation and revamping to address customer needs

The growing consumer demands are driving the industry to develop and market new products. Changing lifestyles of individuals, increasing paying capacities, greater demand for luxury products in the tier II and tier III cities, and competitive efforts by companies to gain losing market will drive the industry to invest more and more on research and development, and to launch innovative products in the market.

- The organic food market is booming and Indian products have received a wide acceptance in many mature markets of the US and Europe. The overall growth of organic food exports was 50.31 per cent over the previous year. India exported 135 organic products (2010) under 18 categories. The total volume was 44,476 tonnes, realising over USD 125 million. India has set a target of exporting organic food worth USD 1 billion in the next five years (till 2015).

- The luxury car market is growing at an average of 25% per year in India. All major luxury car makers, such as BMW, Bentley, Porsche, etc have opened their manufacturing units in India. Honda (CBR) and Kawasaki (Ninja) have also launched a version of their high segment motorbikes in India. Maserati and Aston Martin have entered the Indian market.

- 15% of Yamaha Motors sales come from the rural market, for which it has launched a new bike YBR 110.
- Yamaha is planning to launch its electric motorcycle in India.
• Patented drugs are predicted to capture up to a 10% share of the total Indian pharmaceutical industry by 2015 with a market size of USD 2 billion. Sun Pharma has invested approximately USD 70 million towards research and development in 2009-2010. Ranbaxy is under process of introducing its anti-malaria drug in the market. Glenmark Pharmaceuticals has discovered a new drug molecule which can treat blood and lymph cancer, besides inflammatory disorders.

2.11 Companies will explore efficient tools and methods to optimise business practices

In industries like the food and beverage manufacturing industry, the presence of a large number of members in the supply chain creates inefficiencies and it leads to a substantial amount of wastage of the food products. In other industries, the cost volatility of raw materials poses a challenge for the manufacturers. These factors often give rise to a gap between the demand and supply which is driving companies to explore alternative arrangements to optimise for their manufacturing processes.

• Citing the volatile prices of sugar that range from USD 55 per ton to USD 88 per ton [2010] manufacturers of IMFL [India made foreign liquor] are switching towards production of spirits from grain instead of molasses. The share of grain-based products of all potable alcohol produced in India was about 2% – 3% about 5 years ago, but has increased to about 10% currently [2010]. While United Spirits (the largest user of molasses) plans to use grain for its premium products, Pernod Ricard’s products are already all grain-based.

• Companies are switching from coal to other fuels like rubber tyres and rice husks to reduce costs. Companies such as Grasim Industries, ACC, Shiva Cement have started using alternative fuels in their plants while other cement firms are exploring similar techniques to deal with the fuel shortage.

• Companies are optimising the supply chain in order to reduce losses from wastage of products like fruits, vegetables, etc. and to reduce cost increases accompanied by the long supply chains. For example, Contract farming which is a forward agreement between farmers and buyers for the production and supply of farm produce is being practised. ITC, PepsiCo etc., have contracts with farmers in Punjab to supply them with the products like soyabean, potato, chilli, etc.
3. Conclusion

India is fast emerging as a global manufacturing hub with a large number of companies shifting their manufacturing bases into the country. Growing foreign investments, establishment of Greenfield projects, greater number of mergers and acquisitions, and increasing strategic alliances between industry players are all a clear indication of the growing attractiveness of the Indian market. From business process up gradation to employee skill enhancement, constant endeavours to improve industry practises will drive India’s emergence as a manufacturing superpower. As many as 21 Indian companies have received the Deming Excellence awards; 153 companies have achieved Total Productive Maintenance (TPM) Excellence Award for their total productivity management practises by the Japan Institute of Plant Maintenance [JIPM] committee.

Through concentrated efforts, the Indian manufacturing industry has been able to strengthen its competitiveness on the global map. The pharmaceutical industry, for example, ranks third globally in terms of volume of production. India ranks as the second largest producer of food, the third largest producer and eighth largest exporter of tobacco, the seventh largest producer of automobiles, the fourth largest producer of crude steel, the largest producer of direct reduced iron (DRI) or sponge iron and the largest textile industry in the world.

Proactive steps by the Government, policies and economic reforms, have made India one of the fastest growing economies of the world. The Government of India is continually taking initiatives to create a favourable policy environment for the manufacturing industry to flourish in India. The National Manufacturing Policy is a strong step forward towards the development of the manufacturing industry in India. The National Manufacturing Investment Zones (NMIZ) will empower the industry with all the world class facilities aimed towards increasing the domestic and export led production, and generating employment. Such initiatives shall ensure the industry’s growth and India’s strong foothold in the global manufacturing landscape.

Today, India is believed to have reached the inflection point in the manufacturing space and is ready to witness accelerated growth of the industry. Companies in the manufacturing space are looking towards the next wave of growth and are investing in automation of the manufacturing processes, optimisation of the supply chain, introduction of new innovative products and exploring untapped horizons. Companies are making efforts to introduce the best known industry
In industries like the food and beverage manufacturing industry, the presence of a large number of members in the supply chain creates inefficiencies and it leads to a substantial amount of wastage of the food products. In other industries, the cost volatility of raw materials poses a challenge for the manufacturers. These factors often give rise to a gap between the demand and supply which is driving companies to explore alternative arrangements to optimise for their manufacturing processes.
4. Appendix

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