

## INDIA'S MANUFACTURING COMPETITIVENESS IN GLOBALIZED ERA

Paper submitted

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## INDIA'S MANUFACTURING COMPETITIVENESS IN GLOBALIZED ERA

### ABSTRACT

India has all the potential to develop the “*made in India*” brand because of competitive advantage over other countries. We can compare India in relation to its East Asian counterparts like China and Korea which have been able to build up its brand image and establish “*made in china*” brand. We are now in a globalized era, where boundary less business transactions are being done. Hence in today's flat world, branding with reference to the country can be viewed in a new perspective. In this paper an attempt has been made in order to understand manufacturing capabilities of India and key manufacturing indicators. It is imperative for the share of manufacturing sector to pick up if India has to survive and succeed globally and create employment opportunities in India. A robust manufacturing sector is needed to boost up production activities and reflected through economic indicators like GDP, NI, and PCI.

**KEY WORDS:** *comparative advantage and competitiveness of India, employment potential, India's manufacturing competitiveness, manufacturing capability of India, made in India brand, global competitiveness of India.*

## I INTRODUCTION

Over the last hundred years there has been a proliferation of products due to mass production and distribution. As technologies developed it became increasingly difficult to differentiate in a given product category. Without having strong brands, consumers find it difficult to make a choice between a large number of products and services. In such situations, strong brands can differentiate between similar products and consumers use brands as a mechanism to make purchase decisions. This has become increasingly important as functional differences between products have become almost inconsequential (but not necessarily unimportant). Indeed, there is hardly any category which is bought and sold that does not have a brand name in the world of today. Ultimately brands should motivate consumers to buy the brand offering in preference to other alternatives. Taking the discussion at the country's level or international level branding plays an important role.

We are now in times where competitiveness has crossed national boundaries because of integration of world economy and macro economics parameters become important. The paper aims at understanding India's position at the world forum, major indicators of manufacturing which are useful in drawing policies and there are positive signs for India to establish not just "**made in brand**" and remain next only to china but become international manufacturing hub and drawing distinctive competitive advantage in relation to its global counterparts. As discussed in the paper, India's economic history reveals India's commanding position in world trade in ancient times, India is yet again gearing up to repeat its history and strategically position itself in the new world order.

## II ECONOMIC HISTORY OF INDIA

The known **Economic history of India** begins with the Indus Valley civilization. The Indus civilization's economy appears to have depended significantly on trade, which was facilitated by advances in transport. The period was marked by intensive trade activity and urban development. India produced its classical civilizations such as the Rashtrakutas, Hoysalas and Western Gangas. During this period India is estimated to

have had the largest economy of the ancient and medieval world between the 1st and 17th centuries AD, controlling between one third and one fourth of the world's wealth up to the time of the Marathas, from whence it rapidly declined during European rule.

### 2.1 Indus Valley civilization

The Indus Valley civilization, the first known permanent and predominantly urban settlement that flourished between 2800 BC to 1800 BC boasted of an advanced and thriving economic system. Its citizens practiced agriculture, domesticated animals, made sharp tools and weapons from copper, bronze and tin and traded with other cities.

### 2.2 Ancient and medieval India

Though ancient India had a significant urban population, much of India's population resided in villages, whose economy was largely isolated and self-sustaining. Agriculture was the predominant occupation of the populace and satisfied a village's food requirements besides providing raw materials for hand based industries like textile, food processing and crafts. Besides farmers, other classes of people were barbers, carpenters, doctors (Ayurvedic practitioners), goldsmiths, weavers etc.

### 2.3 Maurya Empire

During the Maurya Empire (321-185 BC), there were a number of important changes and developments to the Indian economy. With an empire in place, the trade routes throughout India became more secure thereby reducing the risk associated with the transportation of goods. During this time, the *Arthashastra* ("science of the state") was written by the Chanakya, an adviser to Chandragupta Maurya. The *Arthashastra* is one of the most important ancient texts on economics, politics and administration. It was a treatise on how to maintain and expand power, obtain material gain, and administer an empire. It covers both theory and implementation and contains many clear and detailed rules regarding the governing of an empire.

## 2.4 British rule

During the period, 1780–1860, India changed from being an exporter of processed goods for which it received payment in bullion, to being an exporter of raw materials and a buyer of manufactured goods. More specifically, in the 1750s, mostly fine cotton and silk was exported from India to markets in Europe, Asia, and Africa; by the second quarter of the 19th century, raw materials, which chiefly consisted of raw cotton, opium, and indigo, accounted for most of India's exports. Also, from the late 18th century British cotton mill industry began to lobby the government to both tax Indian imports and allow them access to markets in India. Starting in the 1830s, British textiles began to appear in—and soon to inundate—the Indian markets, with the value of the textile imports growing from £5.2 million 1850 to £18.4 million in 1896.

## III CHINA'S COMPETITIVENESS IN TERMS OF MANUFACTURING

When a discussion is made about manufacturing it is inevitable to exclude china, especially when the discussion pertains to India, China's Asian counterpart, one must understand cost advantages or competitiveness of countries which gives a country edge, strategic advantage, core competence, distinctive competence over others in a given trade. As we are integrating into a world economy, manufacturing competence converted into competitiveness is imperative.

Let's try to understand over the past few decades, China's rapid economic transformation into a global manufacturing hub has attracted billions of dollars in foreign direct investment. In 2000, China's GDP was just a quarter of Japan's but in 2010 China became the second largest economy in the world. In comparison with the U.S. GDP, China's GDP was a little more than a tenth in 2000 but reached two fifths in 2010. Standard Chartered Bank issued a report in November 2010 stating that China would likely overtake the U.S. to become the world's largest economy by 2020.

Chinese companies have competitiveness in producing low-value, labor-intensive goods. Today, Chinese competitiveness is not confined to traditional areas. China successfully

absorbed foreign technologies and has become a strong competitor to companies of the developed countries.

What does IT brand Intex, mobile phone brands like Micromax, Maxx, Zen, Wynncom, Karbonn, high-end bike brand Firefox, Future Group's private labels Koryo and Sensei, ITC's Essenza Di Wills brand of perfumes have in common? Apart from being Indian brands and relatively young ones at that, all of them are manufactured abroad.

Entrepreneurs behind these brands have taken the smart route to competitive manufacturing by outsourcing production to countries such as China, Korea and Taiwan. With high production costs in India and ready availability of large-scale dedicated manufacturers, good support infrastructure, cheap skilled labour and technology abroad, this outsourcing comes as no surprise.

Companies, big and small, are getting manufacturing done all over the world and for everything from a low-cost mobile phone to high-end computers and appliances.” And what attracts these companies to hubs like China? “Production costs are very low in China mainly because of the scale of manufacturing that goes on in that country, especially in electronics. Indian companies save on a lot of capital and infrastructure costs by outsourcing manufacturing, as they are not investing in setting up production facilities of their own in India. “Firstly, the kind of scale of production available there can't be matched by India. Secondly, there are large-scale dedicated manufacturers abroad who are in the business since years and have the required set-up in place. This arrangement leaves Indian companies with more traction to focus strongly on other key aspects of advertising, marketing and distribution etc.

Walk into any Wal-Mart and you won't be surprised to see the shelves sagging with Chinese-made goods-everything from shoes and garments to toys and electronics. But the ubiquitous "Made in China" label obscures an important point: few of these products are made by indigenous Chinese companies. In fact, not even a single homegrown Chinese firm that operates on a global scale markets its own products abroad.

That is because China's export-led manufacturing boom is largely a creation of foreign direct investment (FDI), which effectively serves as a substitute for domestic entrepreneurship. During the last 20 years, the Chinese economy has taken off, but few local firms have followed, leaving the country's private sector with no world-class companies to rival the big multinationals.

India has not attracted anywhere near the amount of FDI that China has. In part, this disparity reflects the confidence international investors have in China's prospects and their skepticism about India's commitment to free-market reforms. In the process, India has managed to spawn a number of companies that now compete internationally with the best that Europe and the United States have to offer. Moreover, many of these firms are in the most cutting-edge, knowledge-based industries—software giants Infosys and Wipro and pharmaceutical and biotechnology powerhouses Ranbaxy and Dr. Reddy's Labs, to name just a few. Last year, the Forbes 200, an annual ranking of the world's best small companies, included 13 Indian firms but just four from mainland China.

#### IV INDIA'S MANUFACTURING CAPABILITIES

So let's take stock of India's manufacturing sector as it is poised today - The country is increasingly getting recognized for high value goods requiring a fair amount of engineering precision and quality. However to get a realistic picture of the achievements of the manufacturing sector, one only has to compare its performance to that of India's sunrise industry- software services.

India's strong manufacturing capability can be seen through recent example of *Walmart to sell Hero bicycles worldwide. Breaking the near monopoly of Chinese bicycle manufacturers, the Pankaj Munjal-promoted Hero Cycles has clinched an agreement with Walmart, the world's largest retailer, to supply bicycles across the world. It will supply bicycles priced at \$200 (roughly Rs 10,000) a piece.* The US retail major sources virtually all its bicycles from manufacturing units in China and Hero Cycles would be the first Indian supplier. Walmart, the largest seller of bicycles in the US, used to source a large part of its bicycles from Huffy's plant in Ohio in the 1990s. But, increased pressure

from Walmart to cut costs forced Huffy to close its plants in the US and rely increasingly on factories in China to keep production competitive. That led to Walmart's reliance on China's low-cost producers.

India's attractiveness, Hero Cycles executives say, is that manufacturing costs are cheaper than in China currently, with Chinese labour costs having risen in recent years. China is cost-competitive. But, manufacturing expenses in India are lower. Where China scores over us in government subsidies, costs are on a par and so is the quality. The Chinese government offers 14 per cent subsidy and pays for inland freight on exported bicycles. In India, a duty draw-back of nine per cent or Rs 298 a piece is given to bicycle exporters, whichever is lower.

Hero Cycles has commenced supplies to Walmart cash-and-carry stores in India, and is in advanced talks to firm up the product line for retail operations globally. While the bicycles are being sold under the Hero brand in the country, a call is yet to be taken on branding the products for international sale. Walmart has 10,130 retail outlets in 27 countries. It operates in India through a joint venture Bharti Walmart Pvt Ltd, which has 17 cash-and-carry outlets.

Dr. Ashwani Kumar, Minister of State for Industry, has stated that the Government aims to increase the share of manufacturing sector in GDP from 17% to 25% and eventually to 33%. While delivering the keynote address at the 3rd session of the Indo-US Economic Summit, he emphasised the importance of Manufacturing in India's growth story. *Manufacturing contributes about 53% of India's exports and receives more than two-thirds of the total foreign investments. It accounts for 11% of the workforce of about 45 million.*

In January, 2005 when the Multi Fibre Agreement lapsed and it become free for all in the global apparel market are the Indian companies going to perform ? Are they geared to meet the challenge?

The industry, on the eve of the dismantling of the Multi-Fibre Agreement (MFA) wears a different look now. The bigger units supply their wares to some of the leading retail

chains in the developed world such as Wal Mart, Marks and Spencer, C&A and many others. Many of the products wear labels of some of the top brands.

Although the top factories have increased their capacities substantially, by and large the country is not ready for the post-quota advantage. “There is going to be a huge capacity crunch, looking at the volume of business coming our way.”

The capacity crunch is the direct fallout of policies that encouraged the proliferation of small units with their inherent inefficiencies, at the cost of large-scale production. While China has created huge capacities and capitalised on economies of scale, India has an incredibly fragmented industry which is simply not geared to meet the challenges of a rapidly changing global industry. There are hundreds of thousands of powerloom units producing 90-95 per cent of the fabrics in the country, while the organised sector turns out just over 5 per cent.

## V MANUFACTURING SOME IMPORTANT INDICATORS

### 5.1). The Index of Industrial Production

Index of Industrial Production (IIP) in simplest terms is an index which details out the growth of various sectors in an economy. E.g. Indian IIP will focus on sectors like mining, electricity, Manufacturing & General. Also base year needs to be decided on the basis of which all the index figures would be arrived at, the magnitude of which represents the status of production in the industrial sector for a given period of time as compared to a reference period of time.

**As per the IIP data released by the Central Statistics Office (CSO), even as industrial** growth in January 2012 was lower than the 7.5 per cent increase notched up during the same month last year, the bounce-back within a month has been owing to a healthy 8.5 per cent growth in the manufacturing sector which constitutes over 75 per cent of the index. For April-January this fiscal, IIP growth stands pegged at 4 per cent as compared to a healthy 8.3 per cent achieved in the same period in 2010-11.

The break-up of the manufacturing sector can be understood as follows;

- Capital goods segment — which indicates corporate investment saw a negative growth of 1.5 per cent in January 2012 as against an output increase of 5.3 per cent in the same month last year, the consumer goods expanded by 20.2 per cent during the month as compared to 8.3 per cent in the year-ago period.
- Manufacturing growth appears to have been boosted by the consumer non-durables segment which saw a 42.1 per cent spurt in output during. Output of basic goods also went up by mere 1.6 per cent as against 7.7 per cent a year ago while growth in intermediate goods contracted by 3.2 per cent as compared to an expansion of 7.4 per cent in January last year.

Commenting on the latest data, Finance Minister Pranab Mukherjee said “IIP growth is 6.8 per in January. There is strong recovery in the backdrop of last December's figure where IIP grew by 2.8 per cent”. However, sectoral analysis of the data, he said, “show there is not much progress in capital goods, which is a matter of concern. Consumer non-durables had contributed substantially in this growth, but not so much in consumer durables. In course of time, efforts will have to be made to build up these areas”.

## 5.2). Indian Textile

Indian textile enjoys a rich heritage and the origin of textiles in India traces back to the Indus valley Civilization where people used homespun cotton for weaving their clothes. If we talk about the Indian Textiles Industry in the present era, it is one of the leading industries in the world. The WTO has played an important role in the growth and development of the textiles industry at global level. Various steps have been taken to uplift the sector. In the year 1995, WTO had renewed its MFA and adopted Agreement on Textiles and Clothing (ATC) which stated that all quotas on textiles and clothing shall be removed among the WTO member countries by 2005. The MFA phased out and the textiles trade got integrated in to GATT provisions by 2005.

### 5.3). Central Statistical Organization (CSO)

Confirming fears of an overall slowdown owing to sagging investor confidence in the wake of high interest rates, continued spike in international oil prices and slack demand for goods at home and abroad, India's economic growth decelerated to 6.1 per cent during the third quarter (October-December) of 2011-12 as against a healthy 8.3 per cent expansion witnessed in the same quarter a year ago. The third quarter GDP (gross domestic product) expansion at a tad over 6 per cent — the lowest in over two years and lower than the 6.9 per cent expansion officially projected for the entire fiscal year — should ring alarm bells. The sectors primarily responsible for the sharp slide in growth year-on-year were the major ones such as manufacturing, mining and agriculture.

As per the estimates of GDP for the third quarter released by the Central Statistical Organisation (CSO), the manufacturing sector saw a sharp deceleration in growth to a mere 0.4 per cent in October-December 2011 from 7.8 per cent in the same period a year ago.

Commenting on the CSO data, Prime Minister's Economic Advisory Council (PMEAC) Member M. Govinda Rao said, “There is, of course, a deceleration of growth rate as far as this quarter GDP is concerned. We need to undertake reforms and speed up implementation of various programmes to revive growth momentum”.

### 5.4). GLOBAL MANUFACTURING COMPETITIVENESS INDEX 2010

The 2010 Global Manufacturing Competitiveness Index is collaboration between *Deloitte Touche Tohmatsu (Deloitte)* and the *U. S. Council on Competitiveness (Council)*. The study gathered data from CEOs and senior manufacturing business unit leaders in late 2009 and early 2010 and represents the first major deliverable of a multi-year initiative by the Council exploring the issues of policy and capability development necessary for a nation to achieve superior manufacturing competitiveness.

As viewed by the manufacturing executives who participated in the study, the drivers of countries manufacturing competitiveness have been ranked in terms of importance (see

Table 1). And while distinct, the drivers are critically correlated, working together in an integrated way to define the competitive landscape upon which a nation’s manufacturing sector either flourishes or withers. Each of the ten drivers is discussed below in rank order as determined by their index value. Reflective of at least one of the 25 component indicators included in the study, the drivers are described in terms of their relative importance and the rationale and implications of their rankings.

**Table 1: Drivers of global manufacturing competitiveness**

RANK	DRIVERS	DRIVER SCORE <i>10=High 1=Low</i>
1.	Talent - driven innovation	9.22
2.	Cost of labor and materials	7.67
3.	Energy cost and policies	7.31
4.	Economic, trade, financial and tax systems	7.26
5.	Quality of physical infrastructure	7.15
6.	Government investments in manufacturing and innovation	6.62
7.	Legal and regulatory system	6.48
8.	Supplier network	5.91
9.	Local business dynamics	4.01
10.	Quality and availability of healthcare	1.81

*Source: Deloitte and US Council on Competitiveness - 2010 Global Manufacturing Competitiveness Index  
©Deloitte Touche Tohmatsu, 2010.*

**Table 2**

**Current competitiveness**

<b>RANK</b>	<b>COUNTRY</b>	<b>INDEX SCORE</b> <b>10=High 1=Low</b>
1.	China	10.00
2.	India	8.15
3.	Republic of Korea	6.79
4.	United States of America	5.84
5.	Brazil	5.41
6.	Japan	5.11
7.	Mexico	4.84
8.	Germany	4.80
9.	Singapore	4.69
10.	Poland	4.49
11.	Czech Republic	4.38
12.	Thailand	4.17
13.	Canada	4.11
14.	Switzerland	3.07
15.	Australia	3.07
16.	Netherlands	2.90
17.	United Kingdom	2.82
18.	Ireland	2.78
19.	Spain	2.67
20.	Russia	2.58
21.	Italy	2.42
22.	South Africa	2.28
23.	France	1.70
24.	Belgium	1.18

25. Argentina	1.03
26. Saudi Arabia	1.00

Source: Deloitte and US Council on Competitiveness - 2010 Global Manufacturing Competitiveness Index  
 ©Deloitte Touche Tohmatsu, 2010.

**Table 3**

**Competitiveness in 5 years**

<b>RANK</b>	<b>COUNTRY</b>	<b>INDEX SCORE</b> <b>10=High 1=Low</b>
27.	China	10.00
28.	India	9.01
29.	Republic of Korea	6.53
30.	Brazil	6.32
31.	United States of America	5.38
32.	Mexico	4.84
33.	Japan	4.74
34.	Germany	4.53
35.	Poland	4.52
36.	Thailand	4.35
37.	Singapore	4.30
38.	Czech Republic	3.95
39.	Canada	3.71
40.	Russia	3.47
41.	Australia	3.40
42.	Spain	2.63
43.	Netherlands	2.63
44.	Switzerland	2.62
45.	South Africa	2.52
46.	United Kingdom	2.51
47.	Ireland	2.43
48.	Italy	2.37

49.	France	1.92
50.	Argentina	1.53
51.	Saudi Arabia	1.32
52.	Belgium	1.00

*Source: Deloitte and US Council on Competitiveness - 2010 Global Manufacturing Competitiveness Index  
©Deloitte Touche Tohmatsu, 2010.*

China's ascent to the top of the list is not surprising, given its rising eminence in the manufacturing sector over the past ten years, particularly as a regional hub for foreign outsourced production, foreign direct investments, and joint ventures. Executives see China as possessing strength along most of the top drivers of competitiveness. An abundance of highly skilled workers, scientists, researchers, and engineers contributes to a high rating for talent-driven innovation. The government's dedication to investments in science, technology, and manufacturing physical infrastructure is aimed at accelerating the technological value-add of Chinese production and innovation. Couple this advantage with a relatively low-cost base that is geographically mutable, and China has a clear leadership position, taking the top spot for manufacturing competitiveness, now and in the near future. Because of the speed and magnitude of change over the past two decades, China's role as a manufacturing superpower has been solidified.

### **India**

Perhaps more surprising is that India is now positioned at number two—and gaining an even stronger foothold on that position over the next five years. India's rich talent pool of scientists, researchers, and engineers as well as its large, well-educated English-speaking workforce and democratic regime make it an attractive destination for manufacturers. Since the mid-1990s, India's software industry has escalated to new heights and post-economic liberation has also opened a pathway to unprecedented market opportunities for Indian manufacturing. Moreover, beyond low-cost, Indian manufacturers gained experience in quality improvement and Japanese principles of quality management, with the largest number of Deming Award winners outside of Japan. The country is also rapidly expanding its capabilities in engineering design and development and embedded software development, which form an integral part of many modern-day manufactured products. The importance of India to manufacturing executives around the world

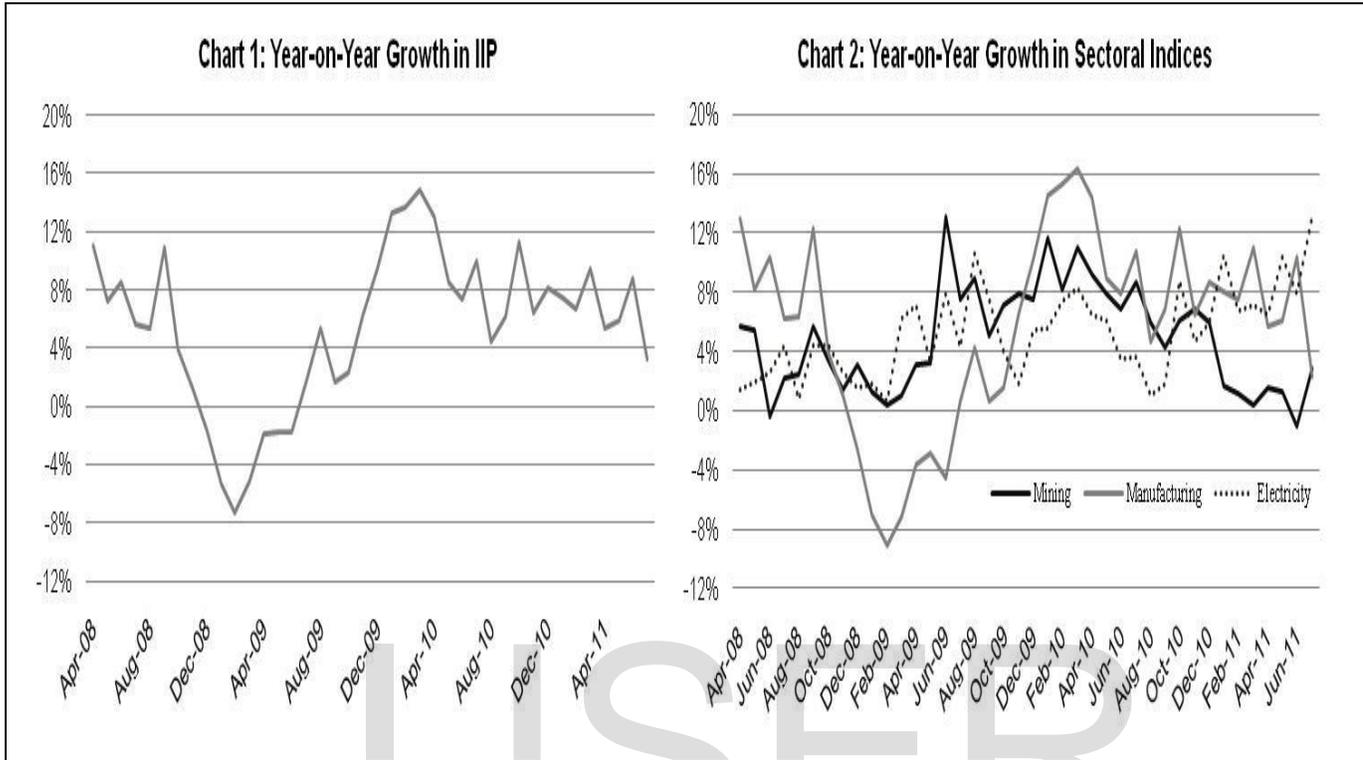
underscores two important points. First, strength in research and development—paired with engineering, software, and technology integration abilities—are viewed by global executives as a vital element of the talent-driven and innovative manufacturing enterprise of the 21st century. Second, manufacturing executives increasingly view India as a place where they can design, develop and manufacture innovative products for sale in local as well as in global markets. These factors explain, in part, India’s rise from a low-cost, “back office” location to a country that is well-positioned to be an active participant in the entire value chain—as well as it now being viewed by many executives as an integral part of their global manufacturing enterprise and location strategy.

**Table 4**  
**Trend in IIP Growth**

	IIP	SECTORAL			USE-BASED CLASSIFICATION				
		Minning	Manufacturing	Electricity	Basic	Capital	Inter-mediate	Durables	Non-Durables
<b>Weight</b>	100.00%	14.16%	75.53%	10.32%	45.68%	8.83%	15.69%	8.46%	21.35%
<b>Month</b>									
<b>June-10</b>	7.4%	6.9%	7.9%	3.5%	3.7%	3.7%	8.5%	21.2%	7.5%
<b>July-10</b>	9.9%	8.7%	10.8%	3.7%	4.4%	40.7%	8.5%	14.8%	-0.9%
<b>June-11</b>	8.8%	-1.0%	10.3%	7.9%	7.5%	38.2%	0.6%	1.5%	3.0%
<b>July-11</b>	3.3%	2.8%	2.3%	13.1%	10.1%	-15.2%	-1.1%	8.6%	4.1%
<b>Apr-July FY11</b>	9.7%	8.2%	10.5%	5.0%	5.2%	23.1%	10.1%	18.4%	3.8%
<b>Apr-July FY12</b>	5.8%	1.2%	6.1%	9.4%	8.0%	7.6%	0.9%	4.2%	4.9%

Source: Central Statistics Office (CSO)

**Chart 1**



Source: Central Statistics Office (CSO)

5.5). Sectoral Growth

**Manufacturing** performance in July 2011 marked the slowest rate of expansion since November 2009. Overall, the pace of growth remained highly uneven across the 22 sub-sectors of the manufacturing sector. Although the number of sub-sectors displaying contraction remained constant at seven in June and July 2011 (see *Table 5*), the combined weight of the sub-sectors undergoing contraction rose (to 26.9% in July 2011 from 23.6% in June 2011) and the extent of de-growth worsened (to 13.9% in July 2011 from 3.6% in June 2011). Moreover, the pace of growth of the five sub-sectors making the highest contribution to manufacturing growth declined to 15% in July 2011 from 25% in June 2011.

Textiles displayed a contraction for the fourth consecutive month in July 2011, while wearing apparel, dressing & dyeing of fur; chemicals & chemical products; and medical,

precision & optical instruments, watches & clocks underwent a contraction for the second month in a row.

**Table 5**

**Sub-Sectors Displaying Contraction**

Sector	June 2011	July 2011
Sub Sector	7	7
Weight	23.6	26.9
Combined De-growth	-3.6%	-13.9%
Contribution to Growth	-1.2%	-5.1%
Weight in the IIP Index	23.6%	26.9%

*Source: CSO; ICRA Analysis*

5.6). National Manufacturing Competitiveness Council

The National Manufacturing Competitiveness Council (NMCC) has been set up by the Government to provide a continuing forum for policy dialogue to energise and sustain the growth of manufacturing industries in India. The NMCC is expected to suggest various ways and means for enhancing the competitiveness of manufacturing sector including identification of manufacturing sectors which have potential for global competitiveness; current strengths and constraints of identified sectors, and recommend National level industry/sector specific policy initiatives as may be required for augmenting the growth of manufacturing sector. The National Common Minimum Programme had identified the need to have a continuing forum consisting of representatives from Government, the Industry and the Academia for policy dialogue to energize and sustain the growth of the manufacturing industry. Food processing, Textiles and Garments, Engineering, Consumer goods, Pharmaceuticals, Capital goods, Leather and IT hardware are among the priority items specifically mentioned in the Common Minimum Programme.

1. Accordingly, the NMCC has discussed in detailed with relevant stakeholders. This Scheme, once put in operation, could help in improving

the competitiveness of Indian firms”.

2. Ensuring that the Small Scale Sector grows at a healthy rate is crucial for the overall growth of Manufacturing Sector as also the National Economy. For this to happen the small scale sector has to become competitive.
3. To obtain national competitiveness or sectoral competitiveness a number of actions would be needed at various levels.
4. Ultimately, it is firms that compete in the market and not countries. The firm level competitiveness has to be strengthened by having an appropriate policy environment.
5. A National Lean Manufacturing Competitiveness Programme needs to be implemented so that it would cover various important sectors of the industry.
6. The Ministry of SSI has been implementing several schemes for the growth and development of the small scale industries.
7. Innovation is clearly crucial to the future of Indian manufacturing industry. To improve IPR awareness the need is to target SMEs to ensure they can use the IP systems effectively.
8. A National Quality Campaign as enabling platform for developing competitiveness in the Indian manufacturing industry is needed. This is key to their survival.
9. The Design Clinic scheme is being proposed to be implemented to bring Indian manufacturing sector and design expertise on to a common platform and to provide expert advice and cost effective solutions.
10. Current Stage of IT adoption in Indian manufacturing sector is not encouraging. Indian manufacturing industries are facing various challenges in terms of global competitiveness partly due to lack of IT enablement of their business processes and management practices.

11. Basically, the approach to be followed under the scheme would be selection of some clusters and firms based on some identified criteria and doing a diagnostic study. The following four major areas could be covered for suitable action based on the diagnostic study and the particular requirements of the firm/cluster/industry:

- Manufacturing and engineering
- Marketing Financial and general management
- Information technology

#### 5.7). National Manufacturing Policy

The concern about the stagnant and low share of the manufacturing sector in India's GDP necessitated a dedicated policy for the sector with a view to accelerated development, inclusive growth and provision of gainful employment. The DIPP's vision to increase the share of manufacturing in GDP from 16% to 25% was endorsed in the conference of State Industry Ministers on 17 November 2009. The Hon'ble Commerce and Industry Minister made an announcement thereafter that the Government will come out with a manufacturing policy. Following this announcement, a draft was prepared and placed on the department's website on 31 March 2010 for stakeholder comments. As a response, the NMCC proposed a draft national manufacturing policy. Recently, the Planning Commission has prepared what it calls the National Manufacturing Plan.

Government of India decided to bring out the National Manufacturing Policy to bring about a quantitative and qualitative change with the following six objectives:

- i. Increase manufacturing sector growth to 12-14% over the medium term to make it the engine of growth for the economy. The 2 to 4 % differential over the medium term growth rate of the overall economy will enable manufacturing to contribute at least 25% of the National GDP by 2022.
- ii. Increase the rate of job creation in manufacturing to create 100 million additional jobs by 2022.

- iii. Creation of appropriate skill sets among the rural migrant and urban poor to make growth inclusive.
- iv. Increase domestic value addition and technological depth in manufacturing.
- v. Enhance global competitiveness of Indian manufacturing through appropriate policy support.
- vi. Ensure sustainability of growth, particularly with regard to the environment including energy efficiency, optimal utilization of natural resources and restoration of damaged/ degraded eco-systems.

In order to achieve these goals:

- i. Foreign investments and technologies will be welcomed while leveraging the country's expanding market for manufactured goods to induce the building of more manufacturing capabilities and technologies within the country.
- ii. Competitiveness of enterprises in the country will be the guiding principle in the design and implementation of policies and programmes.
- iii. Compliance burden on industry arising out of procedural and regulatory formalities will be reduced through rationalization of business regulations.
- iv. Innovation will be encouraged for augmenting productivity, quality, and growth of enterprises and
- v. Effective consultative mechanism with all stake holders will be instituted to ensure mid-course corrections.

The following industry verticals will be given special attention:

- i. Employment intensive industries
- ii. Capital Goods
- iii. Industries with strategic significance
- iv. Industries where India enjoys a competitive advantage
- v. Small and Medium
- vi. Public Sector Enterprises

#### 5.8). The National Strategy For Manufacturing

The share of manufacturing has remained constant for 15 years since 1990 at 17%. The share of manufacturing should be raised to 30% to 35% of GDP by year 2020. Keeping this objective in mind the NMCC has brought out the “National Strategy for Manufacturing 2006” which is intended to serve as a guideline for future work.

#### 5.9). Economic Survey 2012

The economic survey 2012, sees growth at 7.6% in financial year 2013. The country's current growth at 6.9% this fiscal. The growth momentum to pick up in next two fiscals to 7.6% in 2012-13 and 8.6% in 2013-14.

The above mentioned manufacturing indicators show a slow down nevertheless there are signs of potential growth of the manufacturing sector of India. The data reveals optimism about the growth of the sector, it is a compulsion for India to enhance its capabilities not only to achieve the target rate of growth of the economy but also to increase its share in global economy and maintain competitiveness to build up its brand image at the international level.

#### VI CHALLENGES FACING THE MANUFACTURING INDUSTRY

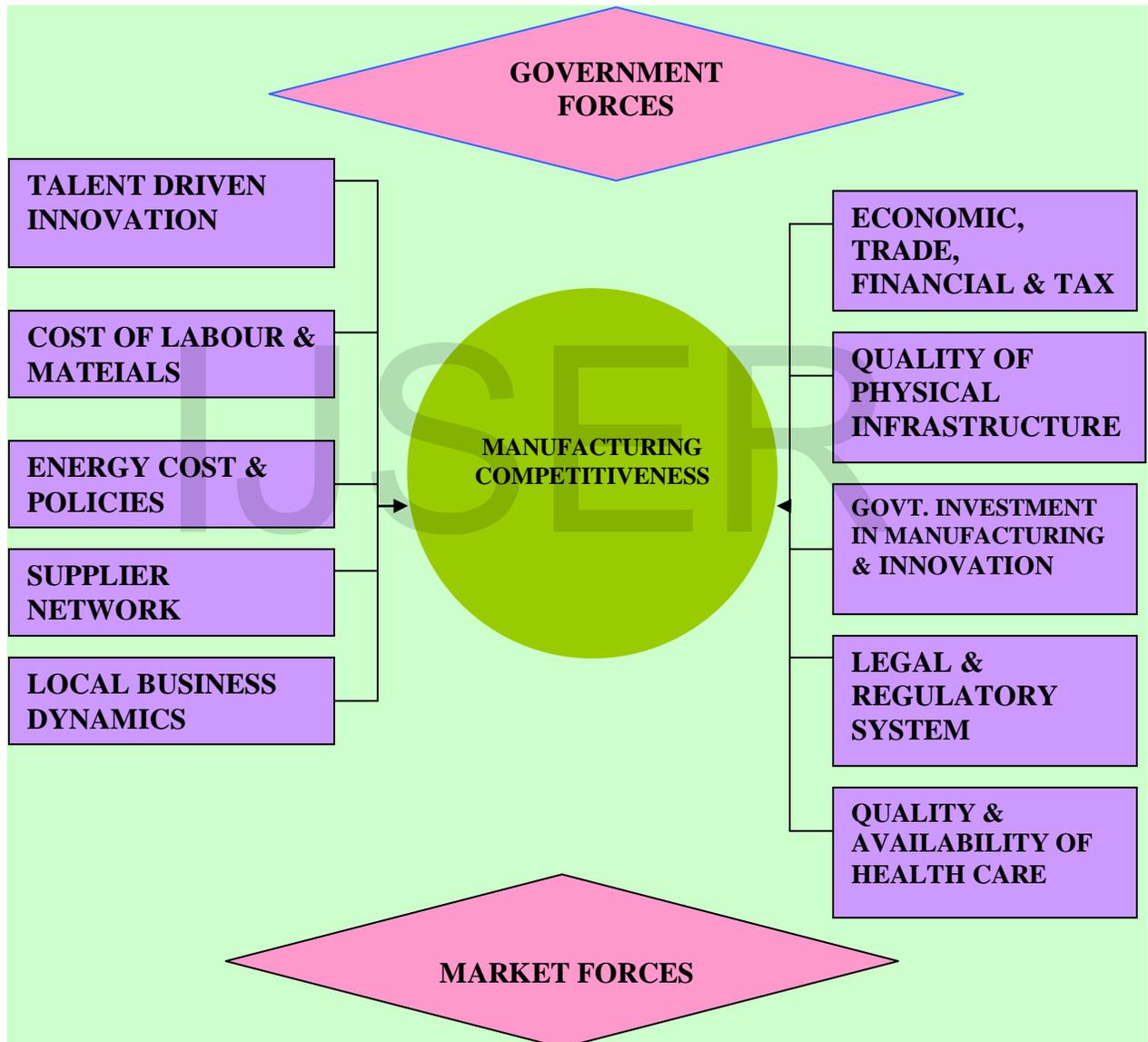
There is need to increase productivity on the shop floor. In today's business environment, manufacturers must increase productivity through the entire supply chain. An effective, profitable supply chain today is driven by customer demand. The new supply chains will need to respond quickly to demand and command a better price without having to discount excess inventory, meet evolving and more rigorous external and internal compliance mandates, such as radio frequency identification (RFID) and enterprise resource planning (ERP) extensions, not to mention outsource functions without losing control, visibility, speed, quality, or other requirements.

Faced with increasingly demanding customers and intensifying global competition, manufacturers must find ways to achieve greater efficiency and speed in the product development process. It follows that today shorter product lifecycles are putting more pressure on development organizations to bring products to market more quickly. Lack of

access to the same information set can result in costly engineering change orders, unanticipated problems with regulatory compliance, and higher support costs after product introduction. Companies lack the flexibility to expand their labor pools or reduce development costs with contractors and off-shore development teams.

**Figure 1**

**Drivers of global manufacturing competitiveness**



Source: Deloitte and US Council on Competitiveness - 2010 Global Manufacturing Competitiveness Index ©Deloitte Touche Tohmatsu, 2010.

## VII COMPARATIVE ADVANTAGE AND INTERNATIONAL COMPETITIVENESS

The explanation of international competitiveness by economists goes back many years to the theory of comparative advantage and factor pricing (Ricardo and Heckscher-Ohlin).

Comparative advantage may lie at the heart of the theory of specialization and trade but it is not always closely related to real world discussions of competitiveness. First, comparative advantage is a microeconomic concept, focusing on industry-specific trade, explaining why one country might export labor-intensive products while another country might specialize in capital-intensive ones. By definition each country has a comparative advantage in the production of some products—those for which it has a lower relative (opportunity) cost than its competitors. Therefore, comparative advantage has little significance from a macroeconomic perspective.

Competitiveness, a term used widely in the business administration literature (Porter, 1990), has been often been applied in Europe and the US to represent the failures or successes of the economy. By competitiveness we mean the ability under present conditions of a country's products to command world markets.

In contrast to comparative advantage, it is appropriate to talk meaningfully about international competitiveness both on the macro and micro level. International competitiveness is a matter largely of costs: which country is able to deliver the product to the market most cheaply. Contributing to costs are factors that directly affect input prices, such as exchange rates, domestic wages and material costs, and productivity, but also capabilities to produce goods of appropriate quality and meeting market specifications. Transportation and communication costs, and trade barriers and trade strategy may all play a role. Competitiveness is not an equilibrium concept. It represents a position at a point in time or its change over time. Since adjustment on the product supply side is likely to be very slow—it takes many years to establish production facilities and export markets—competitiveness typically refers to a time of disequilibrium when a country can increase its share of export markets. In other words, competitiveness often refers to dynamic rather than static perspectives.

At the macro level, a country's exports may be highly competitive in the destination countries or in comparison with products originating in other countries. That may reflect

underlying factor cost and productivity considerations. It may also reflect the current exchange rate, undervaluation or overvaluation, as well as tariffs, transportation costs and trade restrictions as well as product quality and specifications. From a micro perspective as well, it is possible to ask whether certain industries are competitive in world markets. This calls for a cost comparison, at a prevailing exchange rate, involving such factors as wages and capital costs, scale of production, and, of course, productivity. A dynamic improvement in competitiveness may mean that the competitiveness of currently exporting industries improves or that new products, perhaps technologically more advanced ones, become competitive. In the past decade, the export performance of the Chinese economy has been phenomenal. The issue of Chinese competitiveness has expanded in scope from a regional question—“Why is China so competitive with respect to other East Asian exporters?”—to a worldwide question—“Why are Chinese goods so competitive in the world market? Some observers have expressed concern about the growing centralization of the world’s manufacturing production in East Asia, and particularly in China.

In the current situation, it is instead the multinational corporations of the United States, Japan, and other advanced economies who are shifting their own production into China either through foreign direct investment or outsourcing. The issues are less about technological supremacy than they are about the implications for developed country economies of a continuing outflow of investment and labor market displacements from the associated shifts in production and trade

## VIII CONCLUSION

Today, manufacturing spans ideas, products, and services- well beyond the sole production of goods, as in the 20th century. This post-industrial manufacturing ecosystem represents a complex and highly integrated globalized value web. This web includes cutting-edge science and technology, innovation, talent, sustainable design, systems engineering, supply chain excellence and a wide range of smart services, as well as energy-efficient, sustainable and low-carbon manufacturing. Manufacturing is slowly but surely sweeping back in the national economic space. India

is witnessing a wave of growth in manufacturing after its decline in the late nineties. The current surge in the manufacturing sector is touted to be much more promising than the first wave. With this new manufacturing opportunity slated to be more skills intensive, the industry leaders foresee India as well poised to take advantage of this shift.

Over and above the feel good factor of being given a second chance, there are graver reasons that necessitate the country's success in manufacturing this time round. Manufacturing has linkages with the all other sectors of the economy. The progress of manufacturing still sets the tone for the overall business cycle and the health of this sector is very much at the core of India's socio-economic fabric.

Given India's rapid economic development, future decline of working-age population in China, puts India in a very favourable position in the new boundry less, flat global economic order. It is time now for India to reformulate policies, come up with much needed and delayed reforms, take quick decisions on issues like FDI, GST etc as they are co related with Indis's progress and taking up a strategic position globally.

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