CII
Confederation of Indian Industry

MM
MANUFACTURING MATTERS
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Highlights

Dr. Surinder Kapur
Chairman,
CII Manufacturing Council &
Chairman, Sona Koyo Steering
Systems Private Limited

From The Chairman's Desk

The manufacturing sector has made a good beginning to the year with segments such as chemical products, petroleum and coal products, machinery and equipment, and transport equipment and parts recording accelerated growth during April-December 2009. The uptick has positively impacted the IIP, raising expectations of sustained industrial recovery, although the headline growth in IIP in December 2009 was largely attributed to a low base effect and performance of automobiles and consumer goods. Nonetheless, automobile and consumer goods are final goods that have significant forward and backward linkages with other sectors. So, robust growth in these sectors will likely influence the other sectors too.

Budget 2010-11 was presented at a time when a strong recovery in economic indicators had raised questions about the relevance of the stimulus. CII continued to highlight that a sudden rollback of the stimulus measures could threaten the sustainability of the recovery which is still at a nascent stage. Fortunately, the Budget has largely maintained the stimulus measures.

The Finance Minister announced some key initiatives to incentivise growth and develop the competitiveness of some key sectors of the economy. Special emphasis has been put on value-addition in agriculture, competitiveness of the textiles industry, growth of renewable energy and infrastructure development.

With this backdrop, I have the pleasure of stating that the inaugural edition of Manufacturing Matters released in January this year had quite unwittingly timed itself with the glad tidings that came from the manufacturing sector. And, I must say that the bi-monthly journal had arrived not a day too soon. The inaugural edition has generated significant reader interest and several suggestions have come in for enhancing the editorial value of this journal.

The current edition has touched upon some of the critical issues that underpin the manufacturing sector, such as, manufacturing intelligence at the shop floor and promotion of exports. Hyphenating the manufacturing sector's myriad opportunities, this edition features an exclusive interview with Mr Arun Maira, Member, Planning Commission, Government of India. I personally believe that the conversation with Mr Maira on the subject opens up a whole window to our thinking on manufacturing and therefore would urge you to read it very carefully.

Certain key events that marked the CII Manufacturing Council's engagements since the beginning of the year have also been covered. The Council has decided to constitute three task forces, on labour, exports, and innovation. These deliberations have been covered in this edition. Likewise, the key takeaways from the CII Textile Industry Roundtable held in Mumbai and the National Seminar on Concrete Highway Projects held in New Delhi have been captured for your ready reference.

I would like to congratulate CII for coming out with a new annual publication titled Manufacturing Figures Status and Trends in Indian Manufacturing, which provides a comprehensive picture of the Indian manufacturing sector, based on data and statistics. Through this document, CII hopes to create a single reference point for all queries on the performance of the Indian manufacturing sector.

As this fiscal year draws to a close, the manufacturing sector would be looking to strengthen the foundation on which a larger edifice will be built in the coming fiscal. I invite our esteemed readers to participate in the editorials of Manufacturing Matters, and help us in making this journal the most definitive media communication vehicle for the manufacturing sector. MM

surinder.kapur@cii.in.

Inside This Issue

Highest industrial growth in 20 yrs at 16.8%

India's industrial output grew at its fastest year-on-year pace in almost two decades at 16.8% in December, signaling a strong recovery. The manufacturing sector, which constitutes around 80% of industrial output, expanded by 18.5% to set the pace of growth. As a pointer to rising domestic consumption strengthening future growth, consumer durables industries such as automobiles surged 46% and capital goods output rose by 38.8%. The latest numbers are much higher than a revised annual rise of 11.8% in November as well as forecasts of around 12%. It is the highest year-on-year growth registered in the index of industrial production (IIP) since April 1995, when the new series, which uses 1993-94 as base year, started. Even in the old series of the IIP, with base year 1980-81, March 1990 was the only month that had ever registered a higher growth rate, 23.8%. Besides manufacturing, mining output grew by 9.5% in December against 2.2% a year ago, while electricity generation rose by 5.4% against 1.6% in the previous corresponding period. MM

Manufacturing drives logistics growth

Driven by growth in the manufacturing sector in the country, the logistics industry is forecast to become an over Rs 5.55 lakh crore ($120.42 billion) market by 2014, a study by global consultancy Frost & Sullivan said. As per the research report, expansion in manufacturing sector over the past years has opened opportunities for the logistics market and the trend is likely to gain pace as India is emerging as one of the earliest economies to recover from the global slowdown. The (logistics) market is expected to reach $120.42 billion in 2014, witnessing a CAGR of 9.9% between 2009 and 2014," the report forecast. Interestingly, the market earned revenues of $75.19 billion in 2009, represent about 6.2% of the country's GDP. Transportation segment accounts for close to 62% of the total logistics market, reiterating the fact that it is the most important logistics function for all industries. MM

Maran urges global textile cos to 'sell from India'

After his success in attracting FDI in the telecom sector, Union Textile Minister, Mr Dayanidhi Maran, is now looking to replicate the success in the fashion industry, especially textiles. His philosophy of manufacture in India, sell in India and make money in India had earlier attracted global telecom giants during his stint as the telecom minister. Mr Maran is now trying to attract global textile giants from the Europe using the same policy, but with an added point sell from India by making India a regional hub for exports. With FDI as its theme, Mr Maran has led a high-level business delegation to Germany and France recently. A similar delegation had earlier visited Italy, Switzerland and Turkey. Companies from these countries are in talks for either a greenfield or a JV investment with Indian partners. Simultaneously, many global apparel and textiles companies have started sourcing higher volumes from India. The comprehensive investment strategy of the minister is to convince large global textile and clothing brands to not only sell in the Indian domestic market, but also set up a manufacturing base for their global markets in India. MM

Manufacturing shines on high demand

Manufacturing companies saw their profits double in the three months to December 2009, as a surge in demand and low interest costs helped them offset a rise in raw material prices. An ETIG study of the quarterly results of 375 manufacturing firms showed a 102% increase in net profit. This is the best performance for the set of companies in the past two years. The Q3 numbers came as a surprise as raw material costs rose by over 39% after three straight quarters of decline. However, the performance of these firms in the coming quarters will depend on volume of growth and their ability to rein in other costs, with commodity prices expected to firm up. Any increase in borrowing cost could impact their margins. The December quarter saw manufacturing firms clearly outperforming their counterparts in other sectors. The performance of manufacturing firms was reflected in their stock values. In 10 months, BSE Metal Index and BSE Auto Index shot up over three times since March 2009, a period that saw the benchmark Sensex doubling in value. MM

'Self-reliance in large defence manufacturing needed'

Defence Minister, Mr A K Antony, has called upon the private and public sectors to join hands to help India achieve self-reliance in defence production, asking them to set up a large, modern manufacturing base in the country. He also asked the industry to have more confidence in the indigenous technology and the DRDO to reduce the long gestation period of its projects and cut down on time and cost overruns. The need of the hour is for all stakeholders in the defence sector both in the public and private domain, to come together to achieve self-reliance in critical defence technologies, Mr Antony said at a DRDO Directors conference.

India's first AC double-decker rail coach

The Rail Coach Factory (RCF), Kapurthala, has developed a prototype of the country's first air-conditioned double-decker coach. The officials of the factory claim that the double-decker coach has been completed in a record time of eight months. The RCF started preparing such coaches after Union Railway Minister, Ms Mamata Banerjee, announced in her Railway Budget speech in 2009 that AC double-decker trains will be manufactured to cope up with heavy rush of commuters. RCF's general manager, Mr Pardeep Kumar, has been quoted saying that the preliminary testing of the double-decker prototype has been conducted successfully, and it would be rolled out soon. Mr Kumar further said that after the successful completion of the oscillation trails by the Research Design and Standards Organisation (RDSO), the RCF would start manufacturing double-decker coaches for trains. The new coach shell design is capable of running at a speed of 160 kilometer/hour, and it will be 1.5 feet higher than the normal coach and will have a seating capacity of about 130.

India as vaccine manufacturing hub

According to a research titled Global Vaccine Market Forecast to 2012, the vaccine market in India is forecasted to grow at a CAGR of around 23% from 2009-10 to 2011-12. The research has found that focus of vaccine majors has shifted towards developing countries like China, India and Brazil. Most of the investments at the global level are being done in these countries to tap the benefits offered by them and expand business operations. The report also provided information about the key players existing in these markets along with the information of their business revenues and product portfolio. The research envisaged the key strategies adopted by these players to provide a comprehensive overview of the market. The report has analysed segments of the vaccine industry to give qualitative information, quantitative data and comparable statistics to help clients under the market dynamics and trends.

India to enhance steel production

The country will enhance steel production to the tune of 115 MT by 2012-13 and the demand for steel would continue rising for another 20 years. This was stated by Mr Atul Chaturvedi, Secretary (Steel), Government of India, while inaugurating an international conference on Process innovation and cost optimisation in iron and steel making (PRIISM-2010)" at the Research & Development Centre for Iron and Steel (RDCIS), SAIL. Pointing out that the India has immense potential for the consumption of steel, Mr Chaturdevi said, There is a need for international players to involve local partner so that equipment procurement should not be an issue. The conference focused on innovation and cost optimisation as key to future survival and growth for the industry. Indian steel industry is poised for a quantum leap and cutting-edge technology with innovative engineering can only ensure sustainable growth at competitive cost, the speakers on the occasion observed.

Road To Future

The cement industry has a key role cut out in major highway projects, especially since Government plans to build more concrete roads.

With the Government planning for incremental use of cement for the construction of highways, the cement industry will be called upon to enhance its capacity and enforce greater quality standards. Speaking at the National Seminar on Concrete Highway Projects, organised by CII in collaboration with the Department of Industrial Policy and Promotion, Government of India, in New Delhi on January 14, Mr Kamal Nath, Minister of Road Transport & Highways, said that the highways programme would be oriented for incremental usage of concrete, and for this the cement industry must assure adequate capacity and supply.

Mr Kamal Nath further added that the cement industry has an important role to play for concrete highway projects. The minister informed, "There is a need to have at least 20,000 km of work-in-progress to be able to attain 20 km of road building capacity per day or 7,000 km of roads a year". The minister said this would translate into approximately $50 billion of investments every year.

As such, concrete roads have distinct advantages over asphalt roads, in terms of fuel savings, low maintenance cost, smooth ride, resistance to different weather conditions and oil spills, low input costs, environmentally sustainability and use of indigenous materials.

Regarding fuel saving, surveys have shown that laden goods carriers consume 15-20% less fuel on concrete roads as compared to bituminous roads. Considering that some 60% of domestic goods traffic moves by road, construction of a nation-wide network of concrete roads could save Government huge sums.

Concrete roads also have a life of 40 years or more, compared to 10 years for bituminous ones. They require almost no maintenance, whereas bituminous roads need frequent repairs due to damage by traffic, weather, oil spills and the like.

Importantly, concrete roads are environment friendly considering that the production of concrete does not foul the atmosphere like the hot-mix bitumen-based plants. Secondly, concrete pavements can utilise fly ash, a polluting byproduct of thermal power plants. Addition of fly ash to concrete increases its density as well as its resistance to chemical attack.

Concrete roads, however, have one disadvantage vis-a-vis bituminous ones, in that they are initially costlier to construct. However, with the price of bitumen going up steadily, and the use of fly ash in making concrete mixes for pavements now being accepted, the relative cost of these two types of pavements could become quite comparable.

Elaborating the Government plan to step up the pace of highway constructions and use of concrete for the same, Mr Brahm Dutt, Secretary, Ministry of Road Transport & Highways, said at the national seminar that the National Highways Development Project (NHDP) was aiming at building 6 and 8 lane highways in the next 4-5 years costing over $80 billion. Government will implement its greenfield project of building 16,000 km of expressways at an investment of $100 billion once sufficient progress is made in the current National Highways projects. This project would be routed through the BOT mode and concrete applications would be a considerable part of the project.

Mr Brahm Dutt said the road building programme would offer considerable opportunity to the cement industry. He added that expressways can be built mostly with cement but quality and supply must maintain paramount standards. At the same time, he expressed hope that the cement industry will meet the rising demand with high quality products at reasonable cost. In the last 2-3 years, the cement industry did not maintain its commitment on price and quality of cement and this was a deterrent to the development of concrete projects and many such projects could not take off, he said citing an example from a Golden Quadrilateral Project where 10% pavements were supposed to be made from cement.

Focusing attention on the advantages of using concrete for road constructions, Mr Sumit Banerjee, Chairman of the CII Cement Industry Division & Managing Director, ACC Ltd, said that concrete roads are durable, maintenance-free for 20-30 years and have a life of up to 50 years. Concrete roads offer 15-20 % economy in fuel consumption and 10-15 % in vehicle running costs compared to bitumen ones.

Citing norms in Europe, Mr Banerjee said, "With fly-ash based cements, it is possible for concrete roads to be cost competitive apart from this being an environment friendly practice. Concrete roads can play a useful role in the gainful deployment of a waste pollutant like fly-ash."

Mr Paul Hugentobler, Member of Executive Committee, Holcim Ltd, in his special address said that cement as a raw material had maintained its price level over the last couple of years as compared to asphalt. He said the cost difference between concrete and asphalt roads is narrowing and would soon be reverted.

Mr Hugentobler urged the government to invest more money in developing concrete road systems and reaffirmed the readiness of the cement industry to contribute meaningfully to India's concrete road projects.

It follows from the above that the cement industry will have a lot going for it in view of the Government plans to accelerate highway constructions and build more concrete roads. The cement industry in turn will look to Government for due fiscal incentives to support its capacity expansion. MM

'Promote tech upgradation of aging plants'

Sumit Banerjee, Chairman,
CII Cement Industry Division &
Managing Director, ACC Ltd

What are the key imperatives for the cement industry?

The cement industry should adopt remunerative pricing to be able to create additional capacity. It is a capital-intensive industry (at $120-150 per tonne) with long-gestation periods of three years and more. I should say the industry has done well to stay cost-competitive in the face of these challenges. Looking into the future, the focus could be on enhancing capacity, reducing cost, faster execution of projects and higher energy efficiency.

Coming to the demand aspect, India has a low per capita cement consumption compared with the developed countries and China. The urban demand has not picked up along expected lines due to delay in physical infrastructure projects. The rural demand too is rather limited.

Would you recommend any policy action in support of the industry?

The industry requires key policy support. For this, certain notions have to be dispelled with regarding the size and performance of the industry. The cement industry in India is the second most energy efficient industry of its kind after Japan. It is also the second largest in the world after China.

Besides, the cement industry has the lowest unit cost of production at a mere Rs 6 per kg (Rs 250-300 per 50kg cement bag). But, to put up a cement unit, the investment required is in excess of Rs 1,000 crore. Yet, this industry is heavily taxed.

It is not fair on the industry to be paying import duty on coal and gypsum imports, especially when import of cement is duty-free. This anomaly needs to be addressed. Also, there are many aging cement plants that need to be revived with technological upgradation. Government should extend fiscal incentives to these plants for modernisation. This will help save many jobs, apart from capacity augmentation. CII has provided a common platform for the industry to take up these issues. This is good for all stakeholders. MM

'Industry should make a firm commitment to meet demand for concrete'

Dr Shiraz Tayabji, Senior Consultant,
Fugro Consultant Inc., USA

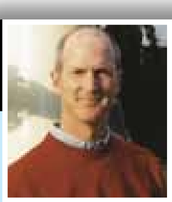
What is a good roadmap for the Indian cement industry?

India is the second largest producer of cement. The domestic industry needs to make a firm commitment to meet future demand for concrete arising out of physical infrastructure development projects. Meaning, India needs to build greater capacity for concrete. Also, placement of concrete is equally important. There should be wider use of slipform paving equipment instead of manual placement. This can be largely achieved by bringing into the contractors into the loop.

How will this be achieved?

India has not developed a strong contracting network. There should be a partnership between the cement industry and contractors. At the policy level, what is needed is focus on good equipment, good techniques, good delivery systems to carry concrete to the project sites. CII could help promote this dialogue. Events like the national seminar will sow the seeds of change. MM

'To build quiet roads, the focus has to be on smoothness'



Ronald M. Guntert, President & CEO,
Guntert & Zimmerman Const. Div., Inc., USA

You have talked about quiet roads. Could you please explain?

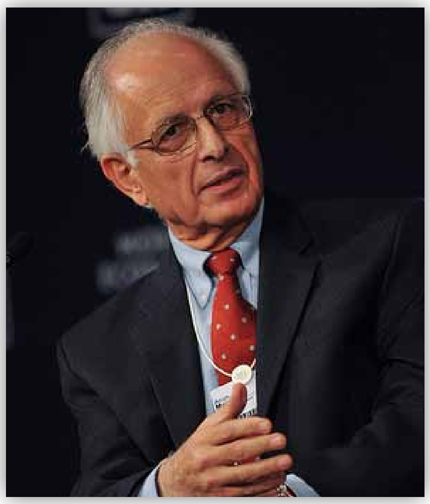
Smoothness of roads is important for the motoring public. Since 2000, there has been marked improvement in the quality of roads in India. To build quiet roads, the focus has to be on smoothness. This will come about with the use of the right material and right equipment.

To achieve this, the contractors in particular need to believe in the process of delivering high quality concrete. They need to have total control over material supplies and enforce uniform standards for crucial aggregates. Focus on quality control and quality assurances will be key to good quality roads. The stockpile should also be stored properly.

What steps are needed to build a system that delivers good quality concrete roads?

The delivery of smooth concrete roads should be incentivised by the government. In Australia, this has been done to good effect, wherein 75% of incentives are based on the measure of concrete quality, and 25% for project delivery and quality. In the US, the state engineers drive this. A collaborative effort will bring the necessary results. A national seminar like this will promote PPP for higher quality concrete roads. The tax paying public will eventually have a good experience on the roads. MM

'Manufacturing companies will improve global competitiveness by meeting domestic needs for goods at low prices'



Arun Maira
Member, Planning Commission, Government of India

How critical is manufacturing for India's sustained GDP growth?

The manufacturing sector is of critical importance to the national economy. The sector is key to employment generation, though current data shows that it has not succeeded in this compared with the services sector. In a sense, manufacturing has not pulled its weight for the economy as much as one would have liked to see.

The second imperative for the manufacturing sector is that it should produce goods that people need. It should have the capacity to meet the basic and specific needs of our people.

The third imperative, which is just as important, is that it has the responsibility to produce goods that are of strategic importance to the country, such as defence equipment. It is the manufacturing sector that will determine the country's self-reliance in these strategic areas, which is critical to the country's national interest and security.

If I were to look at these three imperatives, employment generation has a lot left to be desired, whereas the market needs and strategic requirements have been partially met.

If we were to look at some of the sub-sectors, we will see that, even though the domestic market has grown large, we have not grown depth in manufacturing. The telecom sector, for example. Even though we have one of the largest markets in the world, equipment is being imported from China, rather than being manufactured in India. Power equipment manufacturing is another. For some time, domestic manufacture may not have been economically justified because domestic demand was low. Now, with a huge domestic demand for power equipment, why should not it be made in India?

Coming to the issue of what people need -

until 4-5 years ago, the prevailing view was that the Indian market was not large enough to justify manufacturing capacity for production of quality goods at low cost. The focus was on the number of people who could afford the sort of products that were being made and sold by manufacturers abroad. Therefore, investors waited for the Indian market to grow before they could sell more in India. However, the right approach lies in not waiting for the markets to grow, but in creating demand though innovations in products and distribution models. The example of shampoo sachets expanding demand for shampoo is well known. And there are many more examples. The Korean consumer goods companies have amply demonstrated how white goods can reach a greater number. Likewise, Hero Honda has taken the motorcycle to the large rural markets. The Nano is a great innovation that can make cars affordable to people at much lower income levels. And, Godrej's NaniCool fridge is another one.

I would reiterate that the manufacturing sector is essential for our growth because it can generate employment, meet the basic needs of our people, and support the strategic needs of the country.

Can India's recent pattern of growth be sustained?

The current growth pattern cannot be sustained as the technologies currently used are largely western in origin. Western technologies have proved to be unsustainable in those very economies and hence they will not be sustainable in the Indian context too.

The current growth pattern is also not sustainable from the environmental perspective. Take, for instance, the management of water resources. We are not only fast running out of water resources, but the existing water resources are being polluted. So, we need to think of another growth model, one that is sustainable.

The desire for inclusion in a fair way in the benefits from the country's industrial growth is becoming manifest in many ways. We have to contend with these aspirations. For example, when we take land from people for setting up industries, there should be clear-cut benefits for them to part with the ownership of land. Only an inclusive approach can result in sustainable growth.

What key steps are needed to build Indian manufacturing sector's global competitiveness? Would you recommend any specific measures to grow the global markets for Indian manufactures?

The wage rates in India are very low. This should encourage the manufacturing sector to use more human resources wherever possible instead of investing in costly equipment. This will make our manufacturing sector cost-competitive in the world markets. At the same time, the manufacturing sector should invest much more in skilling this workforce. This is not just a cost issue. It is the form of manufacturing technology that we shall have to develop to make our industry more inclusive by using more labour than capital than in countries where labour is scarce and expensive. A competitive strategy would be to use the resource that we have in abundance compared to the one that is in short supply.

However, it is important that the manufacturing sector is oriented to meet the large domestic demand. By meeting the domestic needs for goods at low prices, the manufacturing companies will improve their competitiveness in international markets also. Whereas if they focus only on capturing the profits they can obtain from (richer) customers in export markets, they will miss the potential of the domestic market and, with it, the opportunity to sharpen their competitiveness.

Going forward, should India have a separate manufacturing policy, and if so, what should be its contours?

We better have one! The manufacturing policy should focus on ways to improve competitiveness and innovation of domestic manufacturers in all sectors micro, small, medium, and large. It should provide more income generation and employment opportunities. It should provide goods to the masses at lower price points. It must not just protect but also improve the quality of the environment. It should promote environmental standards that are ahead of current paradigms and engage more people, not just as employees but more importantly as entrepreneurs. Let there be a million entrepreneurs and innovators. They should operate in clusters so that they get the benefits of shared resources and scale. These clusters could include small and large nodal manufacturing enterprises. Thus, our manufacturing sector can scale up even though many units may be small.

On the issue of scale vs depth in the manufacturing sector, what in your view should be the strategy that the government must follow?

First of all, we need to make sure that goods manufactured in India are not costlier than those imported. We must have an open economy but we must also ensure a level playing field for domestic manufacturers vis-a-vis imports. Therefore, we must be sensitive to the situation of our domestic industries, especially those wherein we wish to build depth. For example, in power equipment. No doubt we want power equipment to be easily available for power production because the country needs to generate a lot more power. So, imports must not be restricted. But, inadvertently, while enabling imports, we should not tilt the playing field against our own manufacturers. Therefore, we need policies that ensure both availability of goods at good prices as well as local manufacture that generates employment and gives us strategic security. All countries that have rapidly built industries with depth Japan, Korea, and now China--have managed policies for growing their own industries very well.

The nurturing of the growth of domestic industries need not be through protection because that can have a bad effect on the economy and even on the competitiveness of domestic industry. It must be through judicious support of R&D, better infrastructure in SEZs and clusters, rapid skilling programmes, etc

Clearly, the world is changing. Globally, there is great openness to trade and greater demand for openness than there was when Japan and Korea built their manufacturing sectors. Therefore, India cannot adopt the strategies they did. But that does not mean that Indian policy-makers do not have any strategy at all. It means that they have to be more sophisticated in their strategies for nurturing and building the type of manufacturing companies India needs. Especially, when our industries have to compete with Chinese manufacturers who are supported by their Government in many ways, not least by an undervalued currency.

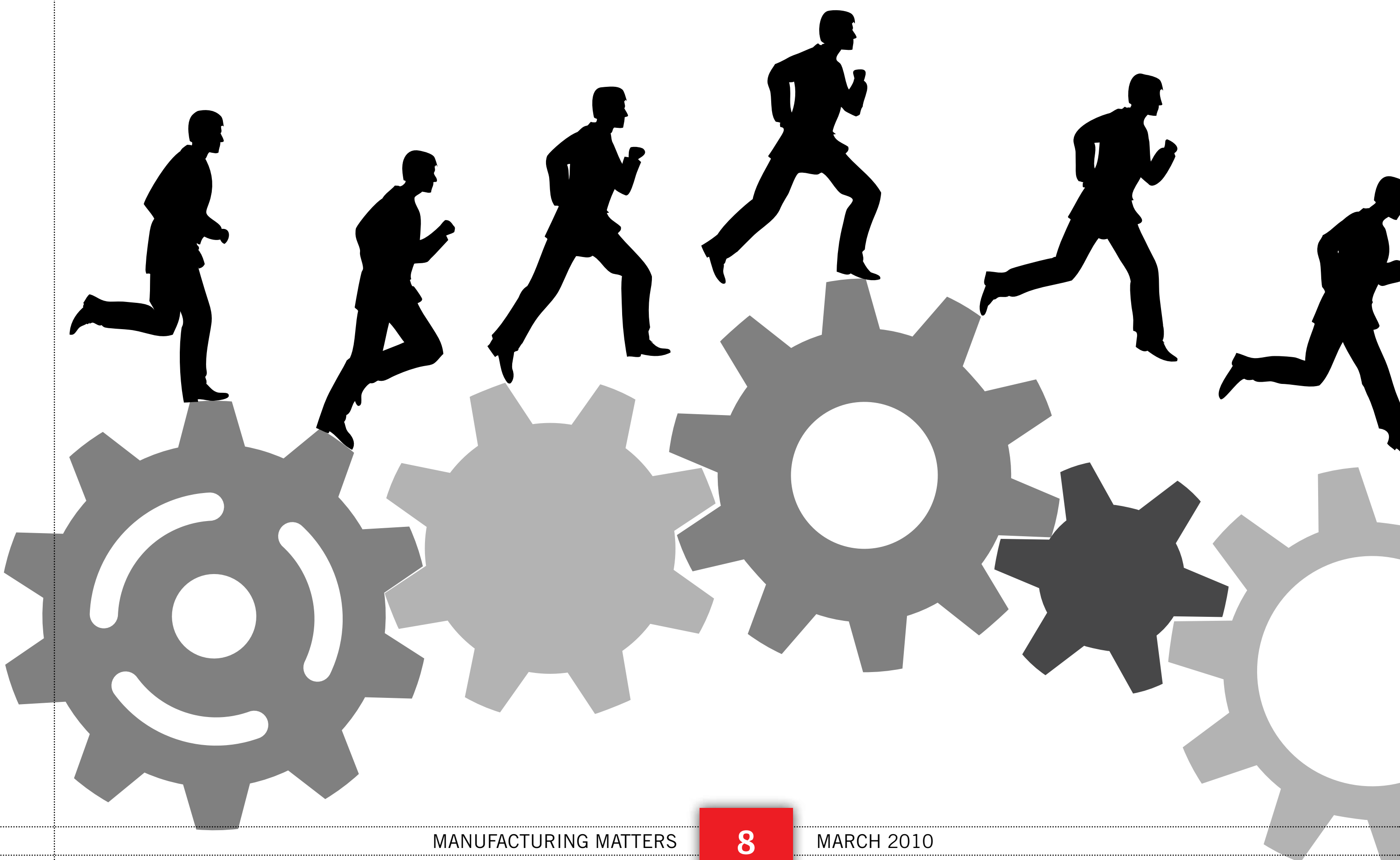
Ultimately, all national Governments, whether they are elected or not, are accountable to their own people. Therefore, they must adopt strategies that serve national interests. In the case of manufacturing, as mentioned before, the strategies must create more jobs in the country and more strategic depth in domestic industries for the security of the country and future competitiveness and growth of its economy.

This leads to some deep questions about ownership and control of companies and technologies. What is an Indian company in a globalised world in which company strategies are to produce wherever is best, sell wherever they can, hire the best talent from everywhere, and invite investments from everywhere too? In which country's interests will the managers of such a global company decide when there is a crunch? This may not matter in many sectors but in some like defence equipment and energy supplies, it may matter.

China is acquiring raw material and energy resources abroad in a big way to feed its growth machine. India needs to develop a strategy too. But who will acquire material assets abroad for the national interests? A global Indian company must feed its operations wherever they may be, not necessarily in India, and in that way protect manufacturing in those countries. Does this serve India's strategic interests?

Development of a sound manufacturing policy requires close interaction between producers and policy-makers. Producers know where the shoe pinches, and intelligent policy actions must relieve the pressure precisely at those points. In Japan, the MITI and Keidanren operated in what is called Japan Inc. Likewise, in Korea, the chaebols worked closely with the government. In China, most enterprises are state-owned. Similar, in Singapore the industry has worked very closely with the Government to bring about the desired kind of industrialisation.

While, the understanding between the policy makers and the producers should not result in some form of crony capitalism, the policy should focus upon building a healthy environment for manufacturing. Here, industry bodies like CII have a key role, in improving the business environment and in promoting nation building. They can assess the inter-sectoral requirements to bring more depth to the manufacturing sector. They should also assess the manufacturing sector and make their recommendations from the viewpoint of inclusion, through more employment and entrepreneurship, and the viewpoint of environmental sustainability too.



Do you see India becoming a major user of green technologies or also a producer of green technologies? How important is this for India?
We have not invested in green technologies to the extent that we need. Now, the time has come for us to leap-frog in this direction. But, industry should not wait for the technologies to come from outside but instead develop them. In time, India should be able to license out these technologies to the world.

Whenever there is talk about competitiveness of Indian manufacturing, the issue of flexibility of labour comes up. In your view, how can this flexibility be brought about given that India does not have a comprehensive social security system?
The common refrain is there should be flexibility to hire as well as to let go when not required. Hire and fire may be a fair game when there is a good social safety net and a vibrant job market. We have not reached that stage in India yet. A nation-wide social safety net will take a while to build, and employers will have to contribute to build it, which will be a tax for them. Until then, companies must be innovative and self insure to obtain the flexibility they need with compassion for the workers they have to let go. VRS is one such self insurance mechanism companies have used to reduce their work-forces substantially when they had to. Innovative ways may be devised to manage costs while caring for workers who are not required temporarily.

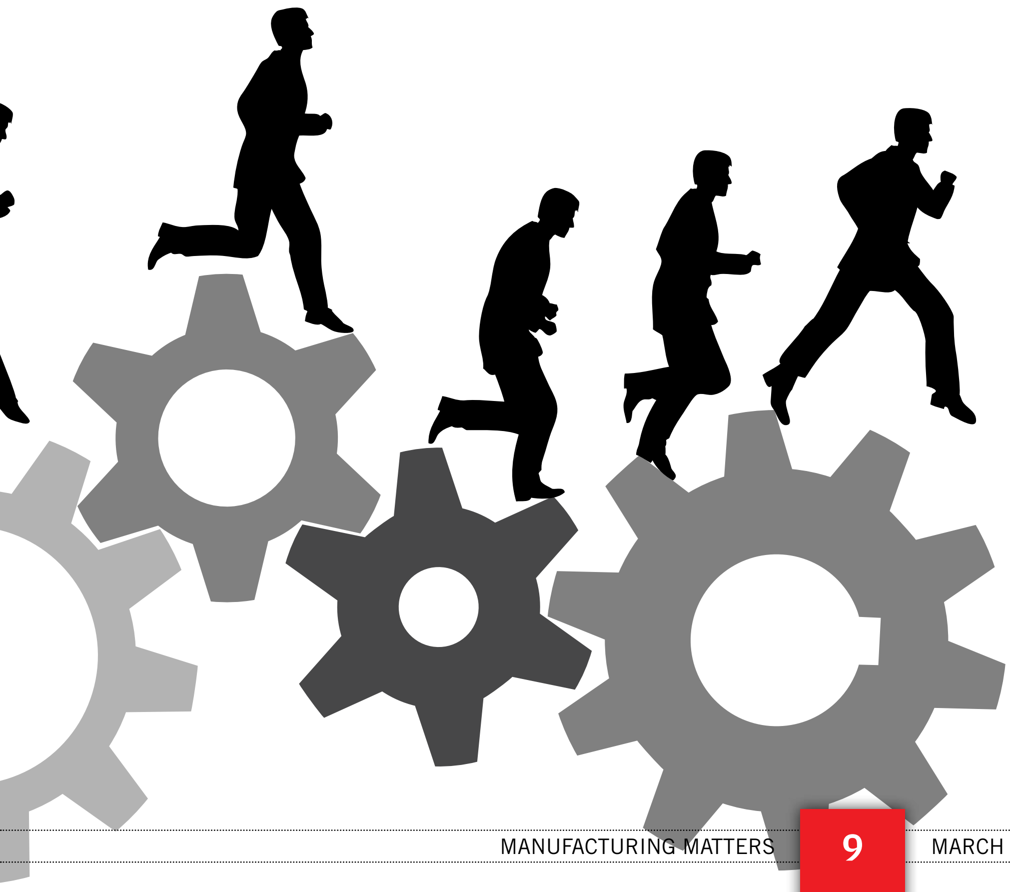
Actually, there can be an enduring competitive advantage by building the capabilities and commitment of employees to the enterprise. People are the only appreciating assets that an enterprise has. Machinery depreciates, buildings depreciate, even knowledge becomes dated. Whereas people have the ability to learn and improve their capabilities if they want to and are enabled to. Like sound enterprises, people can emerge stronger through hard times, with more insights and more commitment too. In fact, the insights that enterprises gain through adversity are in people not in the machines. How can owners capitalise on this value that can be created while managing their current costs also in slack periods? This requires innovations in management.

I would add though that there is one aspect of labour regulations that does not add value to anyone. It is the inspector raj created by the plethora of rules. Therefore, Government is trying to reduce this burden by simplifying the administration of the laws which affects small enterprises even more than the large ones.

In the area of skill development, are the efforts of Government and industry enough? Do you see requirement for additional measures to harness the demographic dividend?
Unlike education, vocational skills are meant for generating income. There has to be a symbiotic relationship between the developer of skills and user of skills. Only then will the skill development remain relevant. Also, industry has a role in giving people on-the-job training which is a necessary aspect of vocational skills unlike general education. The best companies know this. They know they obtain a sustainable competitive advantage if they have a good pipeline of skill development finishing right inside their enterprise. However, many more companies must take responsibility for skill development. The National Skills Development Corporation (NSDC) is playing an important role in this. To obtain the so-called demographic dividend that will boost India's economic growth, we need to equip our people with relevant skills and provide them opportunities to earn through employment and entrepreneurship. If we do not do this, we will not earn a dividend but can have a demographic disaster.

You have been a proponent of clusters in manufacturing as a future growth model. Do the current models of cluster development meet your vision of clusters? How would you like clusters to develop? In the manufacturing future of India, what role do you see the MSMEs playing?
Clusters are an effective way for small enterprises to obtain several benefits of scale. Clusters also enable financial institutions and purchasers and others to overcome the last mile problems of reach and costs they say they have when small enterprises are scattered over a large area. A study of clusters undertaken as part of the Mid-Term Review of the Eleventh Plan revealed the problems and the success factors for clusters. The enterprises in the cluster must manage the cluster. They have a clear view of what they need. They should be helped by good coaches who can assist them to set up good governance and management. Many Government schemes are there to give them technical assistance, financial support, etc. But they have to use it effectively. Therefore, they must pull in what they want rather than it being pushed on them in some bureaucratic fashion.

India's challenge in industry, and indeed in its overall governance, is how to create one cohesive and collaborative enterprise of many independent small enterprises without swallowing the smaller enterprises into a centrally controlled larger one. Therefore, in industry, innovative institutional models are required to achieve this objective. India's innovation agenda for inclusive and sustainable industrial growth must include not only innovations in products and production processes, but also innovations in business models and constitutions of enterprises. MM



Electronic Manufacturing: The Next Big Wave

India has the making of a global electronics manufacturing hub, but key policy actions are required to build an investment friendly eco-system

by **Sachin Saxena**
Member, CII CEO's Council on Manufacturing
& Operations Director, Nokia India Pvt Ltd

The current global economic trends indicate that several economies have come out of the downturn and are gradually moving towards growth. For the US electronics manufacturing industry, the recent past was perhaps the worst period that it ever experienced. However, the Asian electronics manufacturing sectors continued to do well thanks to some great innovations and healthy consumer confidence, especially in emerging markets like India and China, where they contributed significantly to the overall growth of the region s electronics industry. The consumer electronics segment includes LCD TVs, DVD players, mobile phones, notebook PCs, video game consoles, etc.

According to World Bank s World Development Indicators online database, in June 2007, East and Southeast Asia accounted for more than 40% of the world s combined GDP for exports of manufactured products. India, with its automotive and consumer electronics segments, remained very strong on this count, followed by Vietnam. Japanese manufacturing in Thailand too experienced growth as manufacturers tended to look at places that guaranteed cost efficiencies. Malaysia also moved up the value chain as some manufacturers moved out of China due to labour and taxation laws. Meanwhile, Russia emerged as a promising investment destination for electronics manufacturers.

It's no secret that North American and Western European manufacturing capacity have been significantly downsized over the past few years. However, the surprise is that though China commands significant influence in electronics manufacturing, all investments are not headed there other regions too are exerting a certain pull.

Changing Paradigm

In early 2000, manufacturing capacity abruptly shifted from the high-cost regions of North America and Western Europe to the low-cost mainland China. However, in the second half of the last decade, the focus shifted from labour cost to total cost of ownership, which considers managerial resources, organisational structuring, manufacturing competencies, intellectual property and logistics. The compelling factors for investments in this sector were seen as:

- Proximity to large, local markets with fast-growing product segments that are critical to ODMs. ODMs appear to be looking to diversify their manufacturing profile and so require environments that foster continuous improvement of manufacturing technologies.
- Streamlined processes to minimise costs and optimise manufacturing.
- Broader scope of activities and strategies to move up the value chain.
- A strong ecosystem of vendors.
- Friendly investment climate and easy availability of talent and manpower.
- Rising penetration of emerging regional economies, a factor that continues to be critical for many EMS and ODM providers.

Technology & Product Appeal

The electronics industry is perhaps the most dynamic of its kind. Technologies come in and fade away ever so quickly as more and more innovations enter the market. In this situation, the only way for businesses to stay ahead is to invest and innovate. Understand the consumer groove and make inroads in all markets, especially in the emerging ones and set new trends. One fine example of innovation by Nokia has been the Nokia Life Tools which was piloted in India. It has touched the common man and continues to bring great amount of value to his lifestyle through simple and innovative solutions. Nokia has transformed itself into a solutions mode and believes that both devices and services need to go hand in hand to penetrate the markets and bring about a huge positive change in the lives of people.

Banking on India

Nokia has done the fastest ramp-up of its production at its Chennai factory compared to all other eight factories across the globe. If we have done this, why not have a component supplier or any other electronics manufacturer to deliver the same.

Unfortunately, the facts are not encouraging. There are a little over 10 companies regularly exporting their products from India and a few international players who have set up manufacturing in India. To meet the demand-supply gap, huge investments over the next 5 years are required.

Government has to proactively take measures to create a substantial manufacturing base here to bridge this gap. Indian market for electronic products had been growing at the rate of 30% per annum and it was projected to exceed $75 billion by 2010 and $150 billion by 2015 from $40 billion at present.

There is an excellent opportunity for the PCB industry to grow and expand here to become an international hub. India had been gaining in stature with regard to the quality of its PCB industry, backed by strong R&D capabilities. The PCB industry should scale up its operations to meet the demanding national and international standards and Government should support this industry.

The world electronics hardware market is valued at $1,400 billion with 44% accounted for by Asia Pacific, of which China takes a major share. China's electronic hardware market has seen steady growth over the years. Though the Indian PCB industry produces international quality products, the Chinese have been pricing their products 5-10% lower than Indian products and hence India imports mostly from China.

India as Global ICTE Hub

Progressively, strengths in ICT will determine the future of a country. The greater the advancement in ICT, the greater would be the value addition and economic power. To make the country technologically strong, it is necessary to treat IT/Electronic hardware industry like a mother industry, similar to the capital goods industry.

Recognising the importance of this sector, Government has constituted a Task Fore under the Chairmanship of the Principal Secretary to the Prime Minister. A sub-committee of the Task Force has submitted a report identifying several actions required to strengthen this industry. It is estimated that the total requirement of ICT manufactured products would be of the order of $320 billion by year 2015, of which less than 50% would be manufactured in India, indicating the very low domestic manufacturing capacity in the country.

Evidently, the report seems to envisage that even by 2015 the country would be dependent on heavy imports. The aim should be to produce bulk of the ICT requirements domestically, which are also competitive enough for export. Currently, only 20% of the total value of IT and electronic hardware sector is derived from domestic sources and it mainly consists of low technology components. Bulk of the value comes from imported products. A situation of this type cannot be continued if the country has to become a strong modern economy. However, India needs to draw up comprehensive policies to ensure that the entire value chain gets located in the country. The task for achieving this is gigantic and cannot be undertaken unless major steps are taken. A mission mode approach would be required

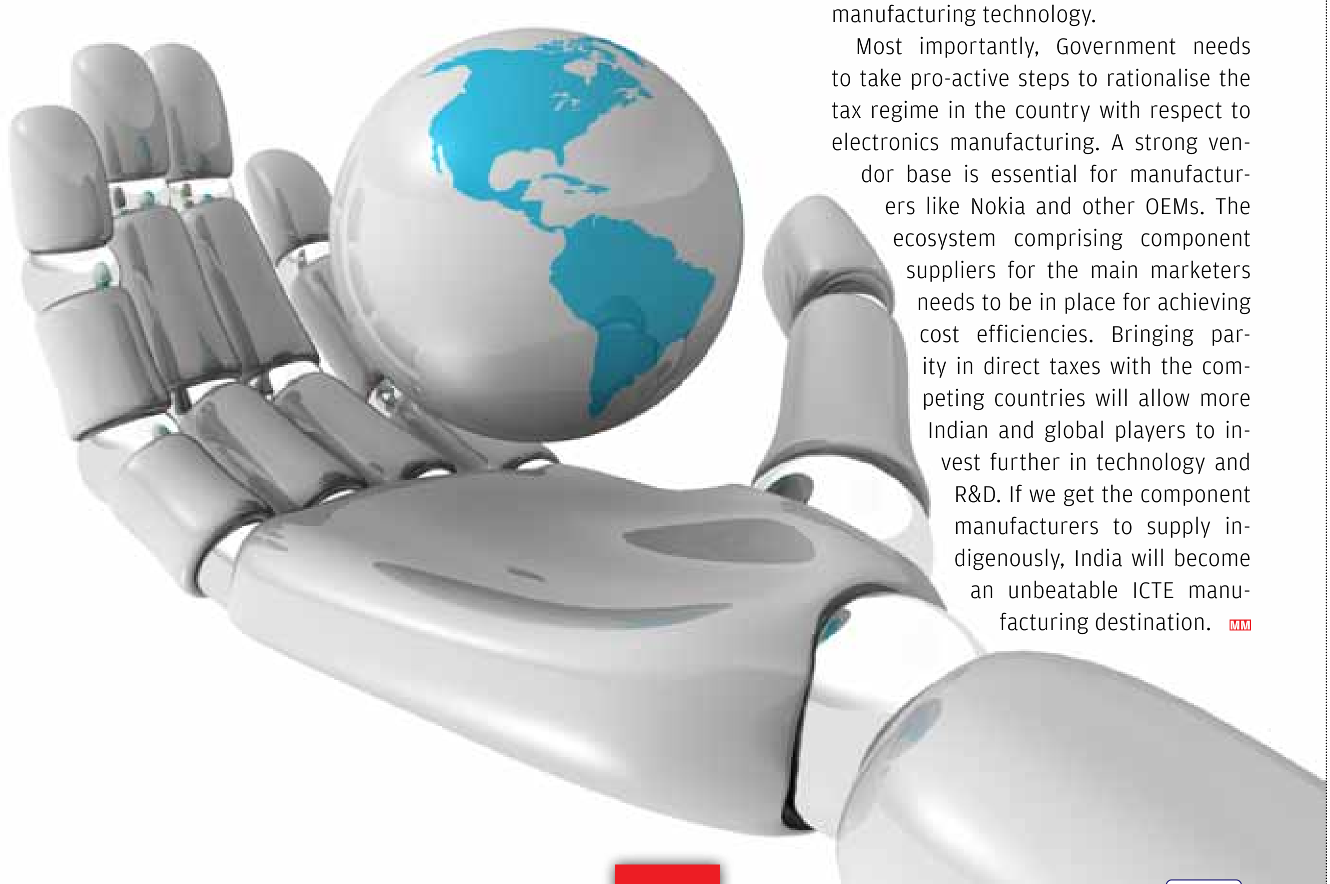
Opportunity beckons India

The continued expansion of the electronics manfacturers role in terms of design for manufacturability and supply chain, innovation, operational excellence and sustainability are key factors for the growth of the industry. This can also be achieved by adopting cost-saving measures like energy-efficient manufacturing and initiatives to decrease the harmful effects to the global environment, and to uphold health and safety directives.

Core manufacturing competencies and growing cost-effective skilled workforce will help India in becoming a leader in electronics manufacturing in the coming years. Taking advantage of these competencies and also by constantly improving upon the skills and strategies to move up the value chain, India will become a leading global production hub and exporter of electronics.

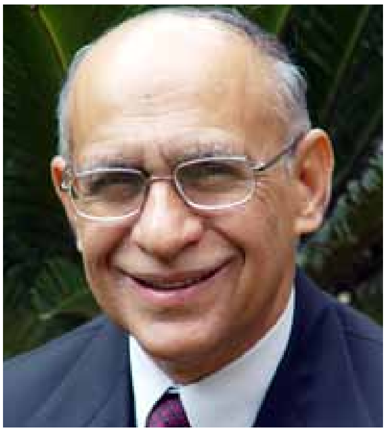
The challenge is to identify the higher value segments in the electronic components market, such as, integrated circuits, testing and development of components and even design, that require higher levels of skilled workers to utilise advanced manufacturing technology.

Most importantly, Government needs to take pro-active steps to rationalise the tax regime in the country with respect to electronics manufacturing. A strong vendor base is essential for manufacturers like Nokia and other OEMs. The ecosystem comprising component suppliers for the main marketers needs to be in place for achieving cost efficiencies. Bringing parity in direct taxes with the competing countries will allow more Indian and global players to invest further in technology and R&D. If we get the component manufacturers to supply indigenously, India will become an unbeatable ICTE manufacturing destination. MM



Manufacturing Intelligence: At The Shop Floor

Monitoring and acting upon real time KPIs is key to ensuring on-time product delivery and reduced manufacturing costs



by **Ashok Soota**
Past President, CII & Co-Founder & Executive Chairman, MindTree

The challenges posed by the global economic scenario as well as the increased competitive environment always demand manufacturers to reduce the operational costs associated with manufacturing. While the necessity to optimise and lower costs in itself is a no-brainer, manufacturers struggle to see where and what to target for optimisation at the plant level.

Most manufacturing enterprises have embraced IT systems and applications to help tackle these growing business challenges:

- Enterprise resource planning (ERP) at the enterprise level help to standardise and automate the way of working for organisations and in planning at a broad level for the shop floor.
- The Human Machine Interface (HMI) or SCADA (Supervisory Control and Data Acquisition) provides data from the actual machine systems.
- The Shop Floor Business Layer Manufacturing Execution Systems (MES)

The coming of age of distributed manufacturing and global corporations has necessitated additional collaboration across the various business units as well as introduced need for synergy between enterprise level data and plans and the operational level execution at the shop floor.

The Need for MI Systems

ERP systems traditionally churn out the planned orders to be manufactured, inventory levels, etc., at the enterprise level. However, at the shop floor there could be disruptions, sudden downturn and unexpected quality issues that sway the actual completion from the plan at the enterprise level. With globally distributed factories and complex product lines, the variance between the actual on-ground scenario and the higher level plan would need to be monitored and acted upon in a timely manner.

The key is not in just monitoring and getting to know missed schedules or in turning on alerts of downtime. Current environment needs proactive managing and optimising the flow and process of manufacturing. Enterprise Manufacturing Intelligence (EMI) or Manufacturing Intelligence (MI) stems from this critical need to unify silos of data and information across the enterprise and to enable proactive ability to predict, control and drive execution.

EMI brings visibility for corporation's manufacturing-related data coming from many sources for the purposes of reporting, analysis, visual summaries, and passing data between enterprise-level and plant-floor systems. The data is combined from multiple sources and given a new structure or context that will help users find what they need regardless of where it came from. It also:

- Provides measures to analyse, control, and manage operations performance and efficiency.
- Helps to view and analyse monitored production data anywhere, any time.
- Incorporates a primary goal to turn large amounts of manufacturing data into real knowledge and drive business results on that basis.

EMI thus provides real time visibility into shop floor, which helps significant cost reductions. A lean enterprise requires real time data for the smooth execution of production with zero waste. Continuous improvement decisions can be taken by analysing past performance.

An MI system needs to have 3 core capabilities:

- Capture: Data capture from enterprise, control systems and shop floor business layer.
- Analyse: Transform data into real time performance intelligence through the application of business rules.
- Visualisation: Graphical and visual representation that displays contextual data in an easy to absorb and easy to act format.

MI gives insights into all operational areas including manufacturing execution, production planning, quality, design, plant maintenance and materials management. The significant advantages of implementing MI are:

- Higher value to technology investments With this incremental small investment on top of the investments related to enterprise IT systems, the ROI will be manifold.
- Higher productivity for shop-floor personnel MI aggregates data from multiple systems to deliver useful information to plant employees through alerts, reports, and key performance indicators (KPIs). A single view of analytic information through role-based, configurable dashboards enables fast, accurate decision-making.
- Continuous improvement in processes and performance MI delivers real-time analytics that enhance manufacturing performance. Production personnel can monitor, measure, and control process-improvement initiatives, including Six Sigma, lean manufacturing, and right-first-time manufacturing
- New product introduction and product variant impact analysis Challenges of global manufacturing of Design Anywhere and Manufacture Anywhere needing a seamless collaboration with multiple business units and enterprise systems will be addressed by MI.
- Higher asset usage MI provides the possibilities of plant-to-plant and asset-to-asset comparisons that enable benchmarking, better asset usage, and best practice sharing. This leads into a proactive technical support programme leading to significant cost savings.

Enabling a portal or a dashboard to view information is not the key to success in implementing an MI system. The focus and stress needs to be on Intelligence and hence the systems are appropriately named Manufacturing Intelligence. With multiple plants and global footprint, monitoring and acting on real time KPIs is the key to ensuring on-time product delivery and reduced cost in manufacture. Visibility of shop floor level data, predictive and proactive control through real time analytics and driving effective execution is what MI is all about. MM

For a Larger Global Marketshare

A roadmap for Indian textile industry to push ahead with exports

by **T Kannan**
Chairman, CII National Committee on Textiles & Managing Director, Thiagarajar Mills (P) Ltd

Indian textile industry accounts for 4% of the national GDP and 16% of total exports, and provides direct and indirect employment to over 35 million semi-skilled workers. The industry has successfully captured business from the shrinking western textile-bases in Europe and USA. As such, India's share of 3% of global textile trade may seem small, but the country still figures among the top 10 textile trading nations.

The domestic textile industry reached a tipping point in year 2005 when the curtains came down on textile quotas. There was a 22% increase in global business, but the momentum could not be sustained in the following years, primarily because India ceased to be a low-cost textile manufacturing base.

With rising cost of labour and material inputs, the domestic industry had look at new ways to compete with their counterparts in major regional textile exporting countries like Bangladesh, China, Pakistan and Turkey. Much of this would depend on the adoption of higher quality standards and new technologies, which in turn would result in India doubling its textile exports to $ 50 billion. The key imponderables for this are:

The China Factor

There is perhaps no immediate end in sight to the debate over whether India should replicate the Chinese approach toward building global textile marketshare. However, it is important to note that the two countries have two different set-ups. India has a large base of medium and large textile mills that are largely private-owned and possess the capability to turnaround quickly, absorb new technologies and nimble-footed in marketing. China to the contrary has mainly state-owned, state-funded textile companies capable of mass production. That being so, Indian textile industry would be well advised to focus on its competitive strengths in producing versatile and diverse products instead of looking to emulate the Chinese approach.

Technology Adoption

Indian textile handicraft was known globally for its special qualities. But, its distinctiveness has considerably reduced with similar products being manufactured now. These machine-made textiles give a near Indian handicraft appearance, denuding the Indian handicraft of any competitive edge. In this situation, the Indian industry should look to adopt such technologies, reduce cost of production and wrest back the lost ground instead of getting stuck with the exceptional Indian handicraft that is not cost-competitive.

Meeting Domestic Demand

It was not long ago that the Indian textile industry followed two quality standards: for exports and domestic market. But, that has changed now. The young and affluent Indian consumers have catalysed a retail revolution in the country, thereby generating huge demand for high quality goods. The Indian market is thus receptive to high quality products, though they come at a higher price. IT adoption, use of better design tools and stronger supply chains meant that the Indian textile industry could leverage the market potential within the country, and use the improved competitiveness to make a dent in global markets.

Leveraging TUF

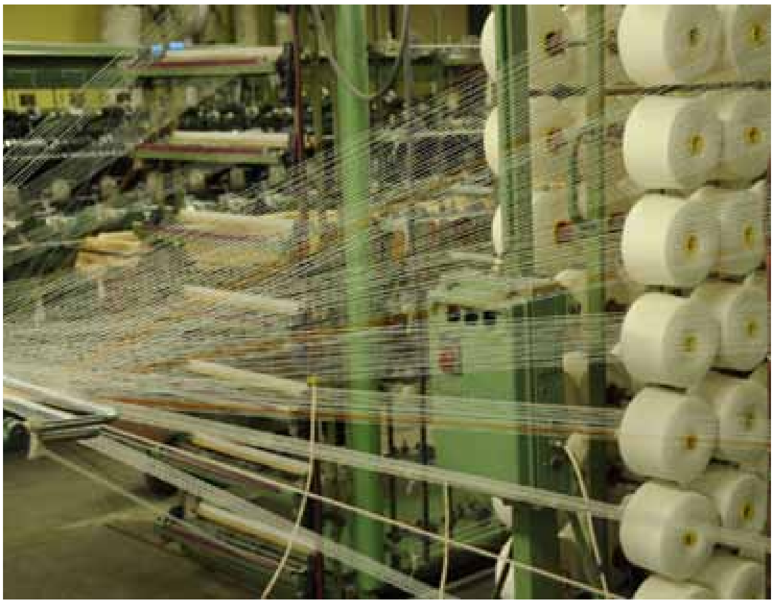
The Textile Upgradation Fund (TUF) Scheme that was launched in 2000 has led to unprecedented investments in the Indian textile industry (valued at Rs 1.5 lakh crore and more). The fund has helped the industry to tackle the issue of technology obsolescence with the adoption of new technologies and modern machines. The fund timed itself with the global economic boom in early 2000. However, the scheme is languishing for want of adequate budgetary provision to reimburse the interest subsidy. At least, Rs 4,500 crore per annum is required for this purpose but the budgetary allocation is not even half this amount. There is a three quarter interest subsidy backlog payable to the industry. This is acting as a big burden on an already cash-starved industry.

Accessing Raw Materials

With annual cotton crop of 300 lakh bales and synthetic production ranking third globally, Indian textile industry is more or less self-sufficient in raw-materials. Some 40 lakh bales of cotton are exported and 7-8 lakh bales, mostly extra long staple variety, are imported each year. Indian farmers enjoy access to the export market. The Cotton Technology Mission, which aimed at improving the cotton yield and in improving the ginning methods, has met with some success. Several thousand new ginning factories have sprung up along the cotton tract. This is a welcome development.

Research & Development

India has four Centrally-funded research laboratories. It is necessary to set new objectives for them to obtain better research output. India has one of the largest spinning and weaving capacities in the world. To sustain this, we need fundamental and breakthrough research output. Countries like Germany and Switzerland that do not grow even an ounce of cotton continue to be technology leaders and innovators in this field as they come up with new solutions and quality enhancement improvements. With renewed focus on research, it should be possible for us to find breakthrough solutions to build and enhance the industry's global competitiveness.



Access to Cheap Power

Textile industry is both power and labour intensive. Most of our competitors are able to obtain power at 0.075 USD/KWH. The cost of power to an Indian textile mill is nearly double that of comparable destinations for textile manufacturing globally. To address this issue, Government should look to identify gas-rich regions and encourage textile mills to move there. Such mills could generate their own power at internationally competitive prices.

The scheme of Integrated Textile Parks has brought in new cluster development. It is essential that these schemes are continued as they will serve as the key growth drivers.

Safeguard Actions

The rise of economic nationalism has prompted more and more countries to resort to anti-subsidy and related protectionist measures. Countries such as Turkey, Egypt and Peru have resorted to such actions in the last two years. The Buy USA clause, which forms part of the economic stimulus package, provided by the US Government is another glaring example.

Growing Indian exports have to contend with these challenges.

Conclusion

Government should ensure that the textile industry is provided a level playing field for exports with provision for full rebate on duties and power at international costs. The industry on its part will have to continue with its pace of modernisation and investments so as to remain a technology leader and thereby harness the world market with these strengths and advantages.

We need to encourage a thought process that can embrace radically different courses of development. At the same time, since we cannot waive off the existing constraints, we have to confront them and find new solutions so as to build a competitive advantage for India in the global textile and clothing sector. MM

Rail Budget 2010-11: Engine of Growth

An overview of the budgetary provisions that would be of particular interest to the manufacturing sector

Railway Budget 2010-11 has been hailed as a fine balancing act between growth imperatives and inclusivity. For the manufacturing sector, the focus on public-private partnerships (PPP) has been a welcoming approach. The decision to invite private expertise and resources for deployment in areas like new line development, manufacturing of rolling stock, port connectivity, mine connectivity and multi-layer parking facilities would be of particular interest to the sector and industry as a whole.

Industry has hailed the setting up of an AC wagon factory and introduction of modern coaches and locomotives and modernisation of railway stations. Opportunities have also been cited in the Rail Budget proposals to set up bottling plants, hospitals and enhanced passenger amenities, as part of the Railway's Mission 2020.

The manufacturing sector would benefit from the revamping of the Dedicated Freight Corridor Project, introduction of a dedicated passenger corridor under the Golden Rail Corridor initiative, rake allocation, modification of the Wagon Investment Scheme and safety concerns.

Industry has also welcomed the Railway Minister's commitment to have project clearances accorded within 100 days through a special task force to be set up for the purpose.

The Rail Budget has provided for new wagon making facilities at Burdwan and Guwahati and a refrigerated container factory through the PPP mode at Budge Budge near Kolkata. The factory for making refrigerated containers in Budge Budge will be the first of its kind in the country. It will open up a whole new market for mass movement of refrigerated cargo in domestic sector and add a new revenue stream for the Railways. It will be used for movement of frozen meat, fish or fresh vegetables and fruits. However, it will also need special warehousing facilities so Railways will have to invest in cold chain infrastructure.

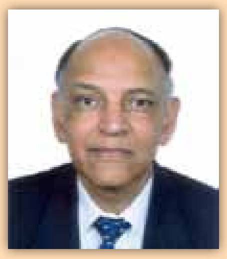
And, in what comes as a shot in the arm for R&D in railways, a centre for railway research has been planned at IIT Kharagpur. Railways is also trying to garner funds through PPP route in Sonnagar-Dankuni stretch of the Eastern Dedicated Freight Corridor is also slated to take place in 2010-11.

The budget has reiterated focus on Railway infrastructure upgradation with plans of 1,000 route km of track in the next one year, capacity expansion of CLW from 200 to 275 electric locomotives, 5 new wagon factories, modernisation of ICF, a new axle factory at New Jalpaiguri, and 10 auto auxiliary hubs.

Overall, the rail budget has been welcomed as balanced and forward-looking, one that befits the outlook of the manufacturing sector. MM

The accent on public-private partnerships (PPP) is encouraging but much would depend on how these are implemented. The Railway Budget has mentioned about fast-tracking the process of project approvals within 100 days, which is a key takeaway for industry. A large numbers of areas for PPP have been identified including new manufacturing units, new high speed trains, multi function complexes, station upgrades, etc. Also, the focus on rail safety is welcoming. The budget has identified the need to leverage high technology for safety evidenced by the clearance of 4 projects covering 824 route km for Train Protection & Warning System (TPWS).

Mr Rajeev Jyoti,
Chairman, CII Railway Equipment Division & President & Managing Director, Bombardier Transportation India Ltd



The PPP approach is laudable but there has to be clarity in the agreement on sharing revenues and structuring of the PPP projects. What is required is de-bottlenecking of the rail network, which can be achieved with improvisations and adoption of new technologies. Also, due attention is needed on line expansion, use of double stack containers which will reduce the freight cost, enhancement of port handling capacity, enhancement of HP of locomotives for efficient haulage and higher speed, and energy efficiency.

Mr Ajay Sinha,
Member, CII Railway Equipment Division & Regional Director (Corporate Development), EMD Locomotives

Union Budget 2010-11: Manufacturing Perspectives

A snapshot of the CII Analysis of the implications of Budget 2010-11 on the manufacturing sector

Budget 2010-11 was presented at a time when a strong recovery in economic indicators had raised questions about the relevance of the stimulus. CII continued to highlight that a sudden rollback of the stimulus measures could threaten the sustainability of the recovery which is still at a nascent stage. In the event, the Budget has largely maintained many of the stimulus measures. The general rate of excise duty on non-petroleum products has been increased by 2% as against the reduction of 6% that was done in the aftermath of the global recession. The service tax rate which was reduced by 2% in 2009 has been left unchanged. And support to exporters through an interest rate subvention of 2% has been extended for another year, though an extension of such a facility to other critical sectors like engineering goods, textiles, and agro products would have been welcome in an environment where overcapacity arising out of economic slowdown in export-oriented economies is distorting the exporter incentives.

What is truly impressive is that the Finance Minister has also made a serious effort towards fiscal consolidation. The FM has announced a commitment to target an explicit reduction in the government's debt-GDP ratio, as recommended by the Thirteenth Finance Commission.

Meanwhile, the FM has bet heavily in favour of growth, assuming that indirect tax collections will show strong growth. Overall gross tax revenue is assumed to grow by 17.6% in 2010-11 compared to a growth of just 4.6% in the previous year. While collections from excise are expected to accelerate, collections from customs and service tax are both expected to turnaround from a decline in the previous year. CII believes this is a gamble worth taking, as revenue buoyancy is likely to pick up strongly with the recovery in the economy.

The initiative to target an explicit reduction in the government's debt-GDP ratio could provide confidence to investors and the attempt to reduce fiscal deficit indicates reduction in government borrowing which will bring relief to the debt market. The calibrated unwinding of the stimulus package is also a welcome feature.

Mr Venu Srinivasan,
President, CII & Managing Director, Sundaram-Clayton Ltd.

Reduction in corporate surcharge and increase in deduction against R&D is a positive step. Change in income tax slab would provide greater disposable income in the hands of the consumers. Budget is pragmatic, positive, growth and development-oriented. Adequate attention has been given to the development of the social sector and rural sector to boost consumption and employment generation

Mr Hari S Bhartia,
Vice-President, CII and Co-chairman and Managing Director, Jubilant Organosys Ltd.

The FM's fine balancing act is visible in the Budget where on the one hand he has set the roadmap for fiscal consolidation by setting the targets for fiscal deficit reduction over the next three years, raising resources for capital expenditure by setting disinvestment targets and partially rolling back the excise duty stimulus, and on the other hand, he has ensured positive environment for growth.

Mr Chandrajit Banerjee,
Director-General, CII

Implications For Manufacturing Sector

Air Conditioning and Refrigeration: CII wanted that the FM should reduce customs duty from 7.5% to 5% on compressor used for manufacture of window/wall type self-contained air-conditioner and household compression type refrigerator along with reduction of customs duty to 5% on parts and other inputs for manufacture of such compressors, besides reducing customs duty from 10% to 7.5% on parts of air-conditioners and extending excise exemption to insulated compositive panels, cold store door and electrical control panels. However, in the Budget, cold storage/cold room (including for farm level pre-cooling) or industrial projects for preservation, storage or processing of agricultural, dairy, poultry, aquatic and marine produce and meat has been notified under project import and will attract customs duty of 5%.

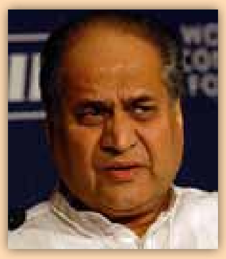
Alkalies: CII sought import of spares (other than membrane and parts thereof) for existing membrane cell caustic soda/ caustic potash plants at 5% customs duty and reduce customs duty from 5% to nil on steam coal. However, the excise duty has been increased from 8% to 10% on alkalies and a new cess to be called Clean Energy Cess is proposed to be imposed on coal and will be collected as a duty of excise from coal mines. This cess would also apply to imported coal as CVD.

Auto Components: CII had asked Government to create an Auto Component Technology & Modernization Fund and sought no further reduction in customs duty rates on auto components and that excise duty of 8% on auto components should be continued. However, the FM has raised excise duty from 8% to 10%.

Automobiles: CII wanted Government to reduce excise duty from 20% to 8% on MUVs, withdraw specific excise duty element of Rs 15,000 on passenger cars, extend the existing benefit of excise duty refund for taxis to vehicles having seating capacity of 10 persons when registered as maxi-cab (taxi), withdraw specific excise duty of Rs 10,000 on chassis fitted with engine of vehicles and withdraw 1% NCCD on motor vehicles. However, the FM increased excise duty on all vehicles by 2%, increased excise duty on all electrically-operated vehicles and their specified parts from nil to 4% and brought chassis fitted with engines under excise valuation based on retail price with abatement of 30%. But, excise duty has been fully exempted on self-loading or self-unloading

The Budget emphasises on need for accelerated development of high quality physical infrastructure, which are essential to sustaining economic growth and Rs 19,894 crore has been allotted for road transportation. Decision to build 20 km of road everyday is also a very positive step

Mr GV Sanjay Reddy,
Vice-Chairman, GVK Industries Limited



I am overall quite positive on the Budget. We have to see it in totality. This fiscal consolidation was necessary and I agree with it. The present fiscal deficit is not sustainable. The states are not counted below the line, oil bonds and all that are not included in 6.8%. If it had to be brought down to 5.5%, you have to get either some expenditure down or some revenue up.

Mr Rahul Bajaj,
Past President, CII & Chairman, Bajaj Auto

Car sales in India are largely of small and mid-sized cars, so the excise duty on large cars, multi-utility vehicles and sports-utility vehicles by 2%, from 20% to 22 % won t affect the industry. Even on the larger cars, the impact on an EMI of Rs 5,000 to Rs 6,000 will be an increase of Rs 200

Mr Karl Slym,
President and Managing Director, General Motors

trailers, and semi trailers for agricultural purposes.

Cement: CII asked Government to reduce customs duty from 5% to nil on non-coking coal and petroleum coke and allow abatement in excise duty charged on cement based on retail sale price. However, excise duty has been increased on cement and cement clinkers.

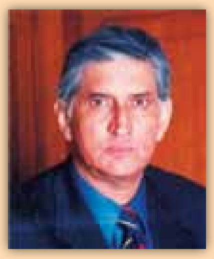
Drugs & Pharmaceuticals: CII had recommended reduction in excise duty from 16% to 8% on medicines covered by the M&P Act, make the provisions of M&TP Act as well as rules simpler and hurdle free at par with the Central Excise Act and Rules, extending CENVAT credit on inputs for medicines containing alcohol, inclusion of navelbine as life savings drug for cancer in list 4 of customs notification 21/2002 and allowing import of interferon beta-1b and Doxorubicin Hydrochloride Liposomal injection at concessional customs duty of 5%. The recommendation was accepted and excise duty on medical and toilet preparations has been reduced from 16% to 10% and CVD of 10% will be charged on imported goods. Both these changes will come into effect upon enactment of the Finance Bill.

Cold Chain Infrastructure: CII wanted Government to extend excise exemption to insulated compositive panels, cold store door and electrical control panels, to reduce customs duty from 7.5% to nil on truck refrigeration unit, reduce customs duty from 7.5% to 5% on controlled atmosphere/modified atmosphere control equipment and parts, humidifiers and humidification system, refrigeration controls for plant automation and energy efficiency, data monitoring and control equipment for safety and energy efficiency and management of cold store/ cold chain infrastructure. Considering the CII recommendation, Government has reduced customs duty from 7.5% to nil on truck refrigeration unit. However, cold storage/cold room (including for farm level pre-cooling) or industrial projects for preservation, storage or processing of agricultural, dairy, poultry, aquatic and marine produce and meat has been notified under project import and will attract customs duty of 5%. Description notified for 21 specified equipment covered by nil excise duty has also been amended.

Earth Moving & Construction Equipment: CII wanted Government to impose 4% special CVD on all type of projects and others which involve import of earth-moving and construction equipment to counter balance taxes such as CST/VAT, allow import of inputs by indigenous manufacturers at nil customs duties for manufacture of 20 specified road construction equipment mentioned in list 18 of customs notification 21/2002, reduce customs duty from 10% to 7.5% on seamless tubes and pipes of steel and hoses of vulcanised rubber used in the manufacture of earthmoving and construction equipment. However, the excise duty has been increased from 8% to 10%. Meanwhile, the earlier restriction of no sale for period of 5 years on 20 specified road construction equipment imported with nil basic customs duty has been relaxed. The importer can now dispose of such machinery on payment of customs duties on depreciated value.

Ferro Alloys: CII had asked the FM to reduce customs duty from 7.5% to 5% on vanadium pentaoxide and reduce customs duty from 7.5% to 2% on vanadium sludge. But, the excise duty has been increased from 8% to 10% on ferro alloys and their excisable inputs. However, no change in customs duty has been done.

Medical Equipment: CII had proposed reduction in customs duty from 7.5% to 5% on medical equipment (CTH 9018 to 9022) including their accessories, parts and spare parts, cut in customs duty to 5% and CVD to nil on automated peritoneal dialysis equipment, cut in basic customs duty and CVD to nil on implantable special grade stainless steel, titanium alloys, cobalt-chrome alloys and high density polyethylene used for manufacture of orthopedic implants and cut in customs duty from 7.5% to nil on endo stents. In line with recommendations, customs duty has been reduced from 7.5% to 5% on all medical, surgical, dental and veterinary equipment, accessories and parts. These goods have also been exempted from 4% SAD. Exemption from CVD on imports of hospital equip-



National Clean Energy Fund would facilitate adoption of clean technologies by the industry. Concessional customs duty for importing machineries & equipment for setting up of photovoltaic, solar thermal power plants and geo-thermal energy will reduce the capital cost. Excise duty exemption granted to manufacturers of specified inputs required for wind energy generators will encourage wind energy farms.

Mr Deepak Puri,
Deputy Chairman, CII Northern Region & CMD,
Moser Baer India Ltd

The focus was on infrastructure, job creation and boosting domestic demand to keep the economy going. The Budget was on expected lines. Proposed hike in spending on public healthcare to Rs 22,300 crore, up 14% from last year, is a welcome move. Health insurance has also been extended to more than 20% of the Indian population covered by the NREGA (National Rural employment Guarantee Act) programme.

Mr Malvinder Mohan Singh,
Chairman, CII Taskforce on Health Insurance & Group
Chairman, Fortis Healthcare Ltd and Religare Enterprises

Government has given due importance to all important sectors like power, roads, railways, renewable energy, etc. We appreciate the allocation of 46% of total plan outlay to the infrastructure industry. To facilitate 20,000 MMW of solar power by 2022 is another welcome step as development of renewable energy is extremely crucial for the country. Budget has presented a renewed sense of optimism over the country's growth.

Mr Atul Punj,
CII Gulf/MENA/CIS Committee & Chairman,
Punj Lloyd Group

ment for use in specified hospitals and life saving equipment has been withdrawn. These inputs will now attract CVD of 4%. As recommended by CII, customs duty has been exempted on special grade stainless steel, titanium alloys, cobaltchrome alloy and high-density polyethylene used for manufacture of orthopaedic implants.

Non-ferrous Metals: CII had recommended cut in customs duty from 5% to nil on scrap copper, zinc and lead, exemption of 4% SAD on scrap copper, zinc and lead. However, no change in customs duty structure has been effected. Consequently, problem of excess CENVAT credit will continue for recyclers of copper, zinc and lead scrap. Excise duty on metals as well as scrap has been increased from 8% to 10%.

Paper & Paper Board: CII wanted customs duty to be reduced from 5% to nil on waste and scrap of paper from 5% to nil. Government has exempted 4% additional duty of customs on import of waste paper and paper scrap. Excise duty has been reduced from 8% to 4% on cartons, boxes and cases of corrugated paper or paperboard manufactured by standalone manufactures who use bought out kraft paper and not having the facility to manufacture kraft paper in the same factory.

Quilted Textile Made-ups: CII suggested that Government should extend optional excise duty exemption to quilted textile made-ups falling under 9404 by including these in excise notification 30/2004. CII recommendation has been accepted and excise duty has been exempted on products wholly made of quilted textile materials without any preconditions.

Steel: CII urged the FM to reduce customs duty from 2% to nil on unwrought nickel not alloyed and nickel-oxide sinters and reduce customs duty on ferro-nickel from 5% to nil. However, no relief in customs duty on nickel and ferro-nickel has been offered.

Synthetic Fibres and Yarns: CII wanted Government to reduce customs duty from 5% to nil on naphtha, reduce customs duty from 10% to 7.5% on caprolactum, nylon 6, 12 chips and titanium dioxide anatase grade and to reduce customs duty from 7.5% to 5% on spin finish oil. However, no relief on customs duty on inputs has been provided.

Telecommunication: CII has asked Government to exempt excise duty on the fixed-line phones and broadband consumer premise equipment as well as on their parts used for the manufacture. The Budget gave excise duty exemption applicable to parts, components and accessories of mobile handsets including cellular phones and extended the same to parts, components of battery chargers and hands-free headphones of these devices. Mobile phones have been exempted from 4% SAD when imported in pre-packaged form intended for retail sale.

Textile Machinery: CII had asked the FM to allow the indigenous manufacturers of textile machines to import rubber components, seamless steel tubes and ceramic components at duty rate of 7.5%, to reduce customs duty from 7.5% to 5% on accessories, parts and components of textile machines falling under tariff heading 8448, reduce customs duty from 5% to nil on imported components of shuttleless looms, reduce excise duty from 8% to 4% on components of 40 specified textiles machinery and equipment to bring at par with the excise duty applicable on complete machines/ equipment. Government has not acted upon these recommendations.

Tractors: CII sought an extension of the existing provision of nil excise duty on parts of tractors when produced in any factory of the manufacturer. With the increase in excise duty on inputs from 8% to 10%, this sector would be adversely affected as no input tax credit is admissible due to nil excise duty on tractors if excess excise burden is not passed on to buyers who are mainly farmers.

Tyres & Tubes: CII recommended reduction in customs duty from 20% to 7.5% on natural rubber smoked sheets (4001 21 00) and technically specified natural rubber (4001 22 00) subject to tariff rate quota allocation in a financial year. However, the long pending demand of this sector about reduction of customs duty on natural rubber has not been accepted. MM

The Union Budget 2010-11 has met industry expectations. There has been moderate rolling back of fiscal stimulus measures. Government has focused on improving the fiscal deficit of the country. There are some concerns over the hike in customs duty on oil & oil products. Nevertheless, this is overall a balanced budget.

Dr Naushad Forbes,
Chairman, CII Western Region & Director, Forbes Marshall

The FM has taken care of the fiscal discipline by bringing down the fiscal deficit. There is laudable focus on agriculture, infrastructure, environment-friendly technology and products and renewable energy. More importantly, the Budget gives a strong directional focus with the roadmap for implementation of GST and Direct Tax Code by April 2011.

Mr Harpal Singh,
Chairman, CII Northern Region, Chairman, Impact Group & Mentor & Chairman-Emeritus, Fortis Healthcare Limited

The 2% excise duty hike was already factored in by industry so it will not affect the auto industry growth that we have seen in the past few months. The extension of the 2% interest subvention for exporters was needed for the auto component industry to reach its projected growth

Mr Jayant Davar,
President ACMA and Vice Chairman & Managing Director, Sandhar Technologies Ltd.

CEO's Council On Manufacturing, CII-BCG Report, Textiles & Mining

Meeting of CEO's Council On Manufacturing: The CEO's Council On Manufacturing convened a meeting in New Delhi on January 8 to focus attention on three key areas: labour, manufacturing exports, and action points based on the CII-BCG Report on Manufacturing. As lack of labour reforms is a hindrance toward achieving high manufacturing growth, the Council stressed on the need for labour reforms along with a robust policy framework to protect worker rights. On the issue of promoting manufacturing exports, the Council sought to discuss the ways and means for attracting and facilitating investments, faster project implementation, reducing transaction cost and improving logistics connectivity.In addition, the members discussed the action points drawn from the CII-BCG Report and decided to constitute three task forces to deal with specific themes. Three task forces were formed on Labour, Manufacturing Exports and Innovation.

CII-BCG Report Launched: The CII-BCG Report on Indian Manufacturing was launched in New Delhi on March 3. The report states that the domestic manufacturing sector has seen an impressive annual growth rate of around 6.8% over the last 10 years (1999-2009) making India one of the best performing manufacturing economies in the world. Manufacturing contributes about 15% of India's GDP, about 50% of exports and about 12% of the workforce and has a multiplier effect in generating indirect employment. It is in this context, that the CII-BCG Report addresses some key questions - What should be the growth aspirations of the manufacturing sector in the country given that India needs to generate nearly 220 million new jobs in next 15 years? How can India enhance competitiveness of its manufacturing sector? What are the impediments to achieving this aspiration?

To meet these challenges, the report sets out an aspirational growth rate of about 11% p.a. over the next 15 years which will make India the fourth largest manufacturing economy in the world by 2025 (current ranking of 13th) and generate 50-90 million additional jobs by 2025.

The aspirations have several critical implications. Gross fixed assets will need to increase by Rs 55-80 lakh crore by 2025. Exports growth will need to accelerate to 18-20% from the 11% seen in the last decade. India's labour productivity will need to increase substantially and close the growing gap with China. Finally, India will have to produce many more world beaters from the manufacturing sector with 3-4 fold increase in the number of Indian manufacturing companies with annual revenue in excess of $1billion from 25 today to 70-80 in 2025, and 4-5 firms with annual revenue in excess of $100 billion.

To achieve this aspiration, the report proposes a House of Manufacturing as a roadmap with three key pillars: (i) developing strong enabling infrastructure; (ii) exploring new avenues of growth; and (iii) driving higher productivity and competitiveness.

Government policy has played and needs

To purchase a copy of the CII-BCG Report on Manufacturing, please contact Ashish Jain at Email:ashish.jain@cii.in; Phone: 011-24653071

Mr Anand Sharma (second from left), Minister of Commerce and Industry, releasing CII-BCG Report on Manufacturing. Also in the picture (L-R) are Mr Hari S Bhartia, Vice-President, CII & Co-Chairman and Managing Director, Jubilant Organosys Ltd, Mr Venu Srinivasan, President, CII & Managing Director, Sundaram-Clayton Limited; and Mr Chandrajit Banerjee, Director-General, CII to continue to play a crucial role in achieving India's manufacturing aspirations. In the report, four policy themes have been identified and discussed: (i) focus on export-led growth; (ii) balancing scale and depth across industries; labour policy for manufacturing industry; and (iv) driving the right 'industrial structure' for India.

Textile Industry Roundtable: Speaking at the Textile Industry Roundtable organised by CII in Mumbai on February 16, Union Textile Minister, Mr Dayanidhi Maran, informed that the textile industry has well and truly come out of a recessionary phase. Recession was in India for just nine months. Now most of the companies are posting profits but there is still scope for improvement, the minister said, while adding that while more than 50% of textile production is exported, the industry would be well advised to leverage the business opportunities in the domestic markets as well.

On the global plane, the minister said the industry needs to look at aggressive investments to meet the challenges posed by competing countries like China, without losing focus on generation of new ideas to build global competitiveness.

He said that Indian exporters are more dependent on the European and US markets. Both markets tend to move in tandem. That being so, Indian exporters should focus on other big markets as well. The entire US import markets fell by 12.04%, yet the Indian exports to the US maintained their share and fell by a smaller percentage of 7.56%. A similar trend is also seen in the EU market, he said.

On the sector's growth plans ahead, he said, India's domestic textile consumption is the third largest in the world. In this environment, we have targeted 12% growth for the next five years and global trade share of 7%. We have to focus on the rural market. Malls and retail space created by malls are not the avenues to increase business. Instead, garment companies should focus on big rural markets.

Mr T Kannan, Chairman, CII National Committee on Textiles & MD, Thiagarajar Mills, said that the industry needs to scale up productivity through clustering. He called for the setting up of integrated textile parks near sources of gas supplies. He also appealed to the minister to extend the coverage of TUFs.

CII Mining Mission to Cape Town, South Africa: A 12-member CII Mining delegation visited Cape Town, South Africa during 1-4 February, coinciding with Mining Indaba - the largest international mining exhibition and conference. The delegation included senior officials from public and private sector companies interested in the mining and mineral sectors in Africa. The delegation was led by Mr S Vijay Kumar, Special Secretary of the Ministry of Mines, Government of India.

Apart from the Mining Indaba, the CII delegation participated in separate meetings and briefings organised for it by the Indian Consulate General in Johannesburg. The meetings included an interaction jointly hosted by the Indian Consulate with the Rand Mercantile Bank, and separate interactions with leading law firm, Edward Nathan Sonnenbergs, consultant Frost & Sullivan, mining solution specialist Shaft Sinkers, investment and resource holding firm Kopano Holdings, and Standard Bank.

During these interactions, the CII delegation underlined the interest of Indian industry in a range of opportunities presented by the resource sector in Africa. Representatives spoke of their interest in offtake opportunities in coal, iron ore, chromium, uranium and manganese, and underlined their readiness to consider investment as well, if suitable opportunities presented themselves.

In his briefings, Mr Kumar underlined that with the consistent growth of India's GDP at 7% and more for the past several years, the mineral resource sector was booming along with industrial growth, fuelled by strong internal demand. India's need for metallic minerals was likely to increase significantly over the next few years. MM

Mr Dayanidhi Maran, Minister of Textiles, Government of India, addressing the Textile Industry Roundtable

Mr S. Vijay Kumar, Special Secretary, Ministry of Mines and H.E. Ms Susan Shanbangu, Minister of Mining, South Africa.

Manufacturing: Key Growth Drivers

The manufacturing sector has been one of the key growth drivers of the Indian economy in the post-2000 period. However, a cyclical slowdown began in the industrial sector in 2007-08 and was compounded by the twin global shocks in 2008-09. Economic Survey 2009-10 notes that the effects lingered on briefly in the current fiscal, but growth rebound is now amply evident. GDP growth has clearly revived in the second quarter of year the current year 2009-10 and the industrial sector has emerged as one of the prime movers of the process.

Manufacturing Retraces Growth

The downward trend observed in the rate of growth of the IIP that spanned almost eight quarters (beginning the first quarter of 2007-08 and continuing through to the last quarter of 2008-09 stands reversed. After reaching a trough of 0.6 per cent during the second half of 2008-09, growth in the IIP revived to a level of 7.7 per cent during April-November 2009-10. Manufacturing, which hit a low of 0.5% and 0.3% growth in third and fourth quarters of 2008-09, grew by 3.4% in the first quarter of 2009-10, followed by spectacular growth of 9.3% and 11.9% in second and third quarters of 2009-10, respectively. Table 1 illustrates this growth path.

Growth in the IIP and its Major Components

(per cent)

Period	Mining	Manufacturing	Electricity
2006-07	5.4	12.5	7.2
Q1 2007-08	2.7	11.1	8.3
Q2 2007-08	7.4	8.9	7.1
Q3 2007-08	5.5	8.9	4.6
Q4 2007-08	5.2	7.3	5.5
Q1 2008-09	4.0	5.8	2.0
Q2 2008-09	3.8	4.9	3.2
Q3 2008-09	2.0	0.5	2.9
Q4 2008-09	0.9	0.3	3.0
Q1 2009-10	6.8	3.4	6.0
Q2 2009-10	9.0	9.3	7.5
Oct-Nov. 09	9.5	11.9	4.0

Source: Central Statistical Organisation (CSO).

Industrial Groups

Major industrial groups like automobiles, rubber and plastic products, wool and silk textiles, wood products, chemicals and miscellaneous manufacturing staged strong recovery during April-November 2009, while machinery and textile products reinforced their growth. Led by cement, non-metallic mineral products also staged a recovery. After posting a growth of around 14% annually in the eight-year period ending 2008-09, beverages and tobacco products experienced a slump in the current year. Product groups like paper, leather, food and jute textiles did not evince any visible recovery. Cotton textiles and metal products have also been experiencing lackluster.

Growth by Industrial Groups (Figures in per cent based on the IIP; 1993-94=100)

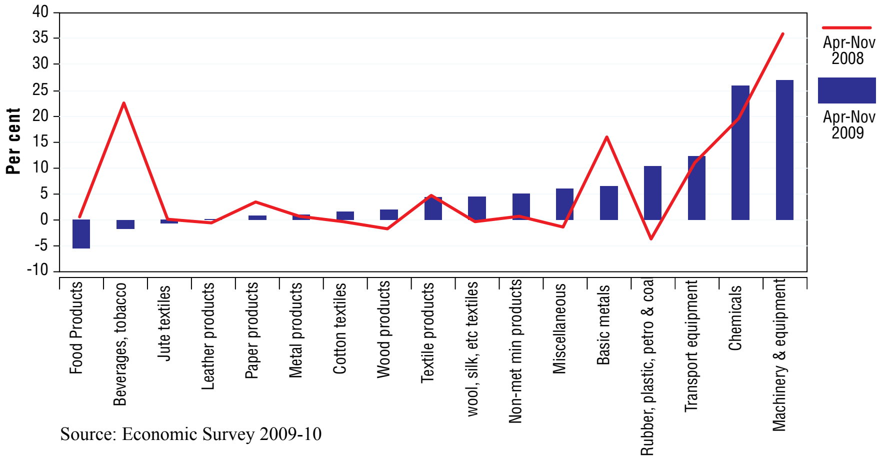
	2007-08	2008-09	H1 2008-09	H2 2008-09	2009-10 (April-Nov.)
Overall Manufacturing	9.0	2.8	5.3	0.4	7.7
	High growth in 2009-10 (April-November)				
Transport Equipment	2.9	2.5	12.2	-6.1	13.9
Rubber, Petroleum & Plastic	8.9	-1.5	-4.0	0.9	13.5
Wool, Silk & Man-made Textiles	4.8	0.0	-0.9	0.9	13.0
Miscellaneous Manufacturing	19.8	0.4	-1.1	1.7	12.3
Machinery & Equipment	10.4	8.8	10.1	7.6	12.1
Wood Products	40.5	-9.6	-6.1	-13.2	10.5
Chemicals	10.6	4.1	6.1	2.1	10.0
Textile Products	3.7	5.8	5.2	6.3	9.9
	Lower growth in 2009-10 (April-November)				
Non-metallic Mineral Products	5.7	1.2	0.6	1.8	6.4
Basic Metals	12.1	4.0	6.7	1.4	4.8
Metal Products	-5.6	-4.0	1.9	-9.4	4.0
Cotton Textiles	4.3	-1.9	0.1	-3.9	3.2
Paper Products	2.7	1.8	4.6	-0.8	2.1
Leather Products	11.7	-6.9	-1.8	-11.8	0.9
	Decline in 2009-10 (April-November)				
Beverages, Tobacco	12.0	16.2	20.3	12.3	-2.2
Food Products	7.0	-9.7	-1.0	-15.1	-7.2
Jute Textiles	33.1	-10.0	-5.4	-14.6	-16.2

Source: CSO

Contribution to Manufacturing Growth

Among the use-based industrial groups, basic goods (with a weight of 35.6% in the IIP) are composed mainly of basic chemicals, basic metals, cement, electricity and minerals. Electricity and mining account for about 58% of the weight of basic goods captured by the IIP and the growth of basic goods during April-December 2009 largely reflected the growth in the two sectors. While other important basic goods like cement and fertilizers recorded reasonable growth, different components of the iron and steel industry showed a mixed picture.

Contributions of Product Groups to Manufacturing Growth (In per cent)

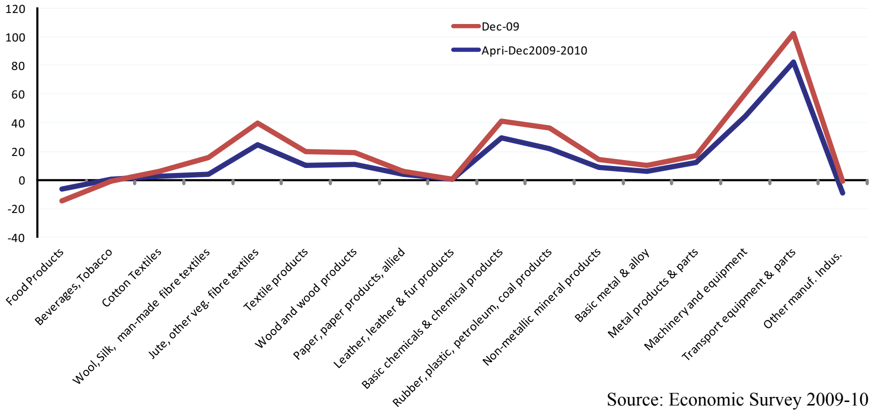


Source: Economic Survey 2009-10

Industry Groups: Growth Trends

The Quick Estimates of Index of Industrial Production (IIP) with base 1993-94 for the month of December 2009 released by CSO shows that the cumulative growth for the period April-December 2009-10 stood at 8.6% over the corresponding period of the pervious year. In terms of industries, as many as 14 out of the 17 industry groups (as per 2-digit NIC-1987) have shown positive growth during the month of December 2009 as compared to the corresponding month of the previous year. The industry group Transport Equipment and Parts has shown the highest growth of 82.2%, followed by 44.6% in Machinery and Equipment other than Transport Equipment.

IIP (Growth at 2-digit level) - (Base: 1993-94=100)



Source: Economic Survey 2009-10

Exports Rising

Exports lagged manufacturing in IIP and Industrial Production in first eight months of year 2009, only to reverse the trend in November 2009. Exports which recorded negative growth of (-) 28.44%, (-) 18.25% and (-) 13.81% in the months July, August and September, respectively, recovered remarkably to record (-) 6.64% and a spectacular 18.24% growth in November 2009. This turnaround followed the remarkable growth in manufacturing over the months August, September and October when it grew by 10.00%, 9.95% and 11.13%, respectively. The recovering of manufacturing sector and its impact on exports was thus clearly established.

Manufacturing, Industrial Production & Export - Monthwise % Growth Y-o-Y

	Manufacturing in IIP			Industrial Production			Exports		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
Jan	12.26	6.72	0.96	11.60	6.18	1.03	16.64	37.22	-15.87
Feb	12.04	9.64	0.20	10.95	9.52	0.22	13.25	47.21	-21.19
Mar	16.04	5.67	-0.30	14.77	5.47	0.33	8.85	37.11	-33.26
Apr	12.37	6.70	0.39	11.32	6.22	1.13	27.45	46.77	-33.17
May	11.31	4.49	1.84	10.59	4.37	2.08	21.54	27.35	-29.20
Jun	9.70	6.14	7.95	8.92	5.44	8.32	14.08	49.39	-27.73
Jul	8.77	6.85	7.37	8.28	6.39	7.19	17.96	52.85	-28.44
Aug	10.75	1.72	10.99	10.86	1.69	10.96	18.23	40.51	-18.25
Sep	7.37	6.19	9.95	6.98	6.03	9.63	16.08	26.77	-13.81
Oct	13.76	-0.57	11.13	12.22	0.11	10.35	48.75	-3.13	-6.64
Nov	4.73	2.65		4.90	2.53		29.82	-12.57	18.24
Dec	8.58	-0.59		7.96	-0.25		23.19	0.00	

Source: Ministry of Statistics & Programme Implementation & Ministry of Commerce

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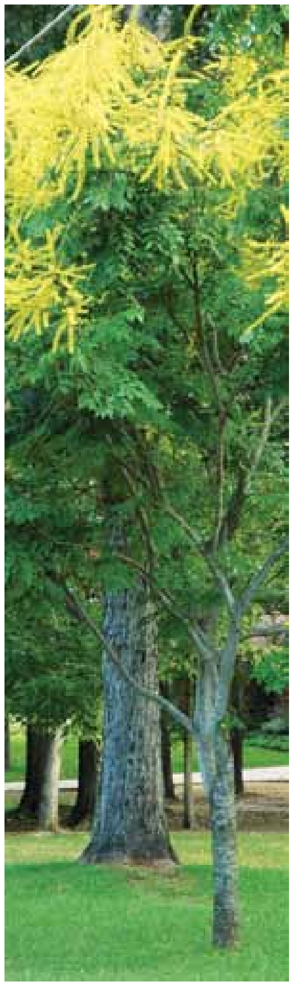

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