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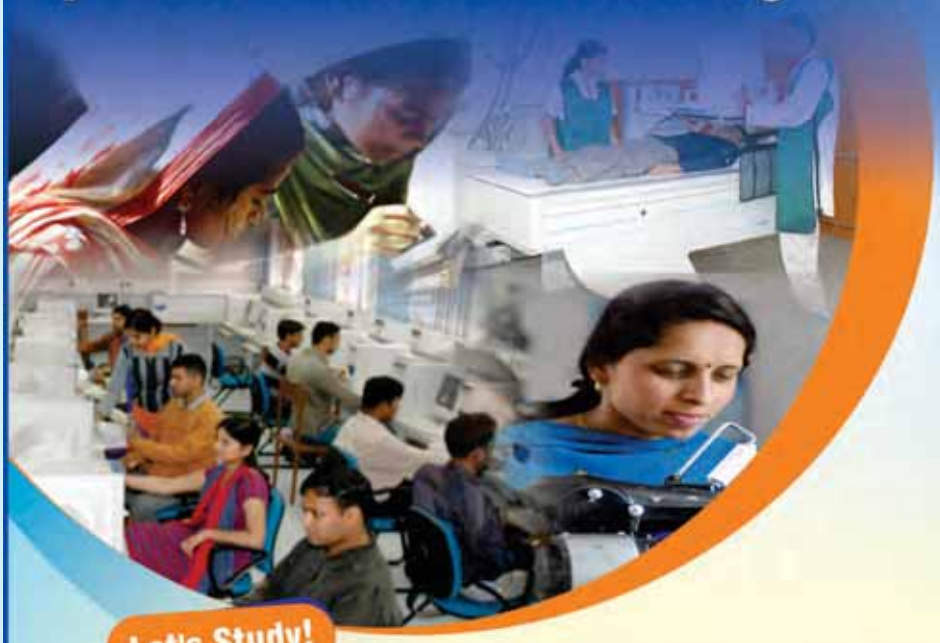

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Let noble thoughts come to us from all sides
Rig Veda

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Chief Editor's Desk

Scope for Growth

Manufacturing industry is of significant importance to the development of any economy. Developing countries like India largely depend on manufacturing industry for growth and employment.

Indian economy which has traditionally been agriculture based, is taking big leaps towards promoting manufacturing which constitutes 16 per cent of GDP in India. But, its contribution to employment sector and growth is well below its true potential. Restrictive and rigid labour laws, abundance of unskilled workforce over skilled workforce, lack of technology innovations are some of the factors contributing to this.

Diversity of resources and the varying degree of skills and qualification of the available labour makes it essential to understand the importance of both the small as well as large scale industries. The small-scale sector, largely dependent on the strengths of our traditional skills and knowledge, creates largest employment opportunities, next only to Agriculture. It also helps in alleviation of poverty and brings about equitable distribution of income and wealth. At the same time the large scale industry, apart from providing job opportunities, plays important role in promoting exports resulting in increased foreign exchange earnings and expanding demand base for domestic products leading to overall inclusive growth.

National manufacturing policy aims at enhancing the share of manufacturing in GDP to 25 per cent within a decade and creating 100 million jobs. It also seeks to empower rural youth by imparting necessary skill sets to make them employable. The recent budget of the Government has made efforts to provide favourable environment and facilities to promote domestic as well as international industry by simplification, rationalization and digitization of processes. Initiatives like "Make in India", Skill India, MUDRA etc are aimed at encouraging the spirit of entrepreneurship and making India the manufacturing hub of the world. The budget also tries to address issues relating to lack of robust infrastructure, constraints on energy supply, importance of innovation and technology etc.

The articles inside take a look at what has been done so far and what more needs to be done to give much needed impetus to the sector.

To conclude, one can say that manufacturing sector has the potential to play a crucial role for India to achieve its goal of becoming the fastest growing economy in the world. And the right mix of strong commitment from the government as well as the industry can make this a reality. ❑

Manufacturing in India: New Perspectives and Imperatives

P M Mathew

India needs a strategy to grow manufacturing 12 per cent to 14 per cent per annum, create 100 million new manufacturing jobs in the next 15 years to realise its 'demographic dividend', and create more depth in capital goods industries and innovation for its manufacturing sector to be competitive and sustainable. An innovation strategy must be closely intertwined with an integrated manufacturing strategy. This demands a radical departure from the strategies we are used to

INADEQUATE GROWTH in manufacturing has had its adverse impact on employment generation in India. The current mismatch between distribution of workforce and value added in agriculture is one of the main reasons for the large number of poor in our country. This needs urgent correction. Manufacturing has to be the sponge which absorbs people who need to move out of agriculture in pursuit of higher incomes.

In a highly globalised economy, the need for enhanced export competitiveness needs no introduction. India must aim to match China in manufacturing given the low-cost labour with the added virtue of skills. The share of the manufacturing sector in the gross domestic product in India is 17 per cent compared to 33 per cent in China, 29 per cent in Korea, 25 per cent Brazil and 27 per cent in Thailand. However, we are short in other resources and infrastructure that investors seek, a weakness that has checked the flow of investments into skill-intensive manufacturing. Recent trends in some sectors, such as auto and auto components, specialty chemicals, generic drugs and engineering, however, suggest a vast scope for global manufacturers to locate here. The policy thrust outlined by the Prime Minister through the two flagship programmes, 'Make in India' and 'Skill India' ,should be understood against this background.

And worryingly, it is losing depth. While China's GDP is 3.8 times larger than India's, its production of machine tools, the 'mother industry' of manufacturing, is 55 times more! India needs a strategy to grow manufacturing 12 per cent to 14 per cent per annum, create 100 million new manufacturing jobs in the next 15 years to realise its 'demographic dividend', and create more depth in capital goods industries and innovation for its manufacturing sector to be competitive and sustainable. An innovation strategy must be closely intertwined with an integrated manufacturing strategy. This demands a radical departure from the strategies we are used to.

Manufacturing Competitiveness: Meaning and Coverage

Competitive economies are those that have in place factors, driving the productivity enhancements on which their present and future prosperity is built. A competitiveness-supporting economic environment can help national economies to weather business cycle downturns and ensure that the

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mechanisms enabling solid economic performance going into the future are in place.

The World Economic Forum (WEF) defines *competitiveness* as *the set of institutions, policies, and factors that determine the level of productivity of a country.* The level of productivity, in turn, sets the sustainable level of prosperity that can be earned by an economy. In other words, more-competitive economies tend to be able to produce higher levels of income for their citizens.

Enterprise Size and Competitiveness

The mainstream debates on manufacturing , so far, has significantly focused on high technology businesses and large enterprises. Naturally, the academic discourse on manufacturing has significantly created a hegemony, wherein, the roles of small and medium enterprises was relegated to the background. It is the emergence of the emerging economies into the centre-stage, that helped to shift the attention more towards the MSMEs.

According to international statistics, over 50 per cent of small businesses fail within the first year and 95 per cent fail within the first five years. Apart from the usual causes of business failure like inexperienced entrepreneurs, poor locations and lack of capital for growth, another often overlooked reason for business failure is complacency. More often than not, businesses tend to rest on their laurels after achieving only moderate amount of success, failing to increase productivity level and enhance competitiveness, which eventually results in declining sales. Therefore, it is necessary to have a sustained effort in order to contribute significantly towards the productivity and quality enhancement of industry.

Manufacturing competitiveness, in the modern world, need to be discussed in relation to the process of globalization, and liberalization of the economy. With the dawn of the era of 'flexible specialisation', manufacturing competitiveness has acquired a new dimension. Manufacturing has become increasingly space- neutral, with both positive and negative consequences. The different processes of manufacturing that take place at different places, offer significant opportunities for tapping locational advantages relating to cost. Therefore, the extent and location of the market and the scale of operation are crucial in shaping the urge for manufacturing competitiveness.

Achievement of manufacturing competitiveness necessitates constant innovation. However, in the march forward innovation, it is also necessary to take care of other aspects of growth. Is the firm looking for an expanded market? Or is it more interested in achieving more short term goals such as protection of employment opportunities? Answers to these questions are important in any discussions on manufacturing competitiveness. Global competition brings with it many opportunities of wider market access, technological innovations and skill upgradation.

Manufacturing Competitiveness: Issues

MSMEs form the backbone of manufacturing sector not only in India, but even in the developed countries. Therefore, ensuring the competitiveness of MSMEs is important, as it would help in overall growth of manufacturing sector, as also of the national economy. A decade of experiments in 'collective efficiency' models indicate that, while these models have contributed to enhancement of overall productivity of firms under clusters, manufacturing capabilities of the country have suffered. It was in this context that the NMCP was launched.

Those SMEs which produce items on a stand- alone basis need to assess their position in a competitive world and accordingly take up actions to restructure their company. The issues relating to such units are indeed very difficult to handle in a globalizing world. They need to reinvent and restructure, in order to become competitive and take actions to implement them. SMEs can trigger a chain effect in innovation. They are the breeding ground for innovation and technology development, where it becomes the technology source for larger companies. Therefore, these enterprises need to be incentivised for technology development and enhanced competitiveness. Studies at the Institute of Small Enterprises and Development (ISED) have shown that , despite the series of public programmes and schemes of the concerned Ministries, none of them are really capable of addressing these issues adequately. There lies the need for radical changes.

A holistic convergence of technology, management and design, would be required to achieve enhanced competitiveness; however, this may not be always possible within MSMEs, and which is again the role of a designer, requiring them to look for external expertise. Minimizing the 'mind to market' time and its the risks, has become very important for being competitive in today's market, which will also necessitate a systemic and methodical approach taken by a consultant/designer, which needs to be communicated to the SMEs and effectively translated into practice.

Technology and Innovation Enhancement

There has essentially been two paradigms of enterprise development in the new millennium. The paradigm which is prevalent in most developing countries is one of significant role of the government in the areas of promotion and development. However, in the context of most industrialised countries, the focus has significantly been on innovation.

R&D expenditure as a percentage of the GDP is often used as an indicator of the state of innovation. In the Indian context, the situation has been widely discussed. There are arguments which indicate that the S&T capability of India has grown significantly over time. However, these aggregate figures do not lead us to a full picture. India is still far off the mark when it comes to innovations and R&D spending. Barely four Indian companies occupy a list of top thousand publicly trade companies in the world, which were leaders in research and development

expenditure. While the overall situation is as above, the situation relating to SMEs is far too encouraging. While the SME sector is characterized by the vast diversity of its products, the state of R&D is dismally low. This has been indicated very significantly by the ISED study on IPR. (ISED, 2009).

New products and processes get shaped in the world every day, as a result of the technological revolution. However, whether these processes and products get adopted by other firms, is a wider question which is contingent upon a few other critical factors. These critical factors can be broadly divided into: a) compulsive sequences; and b) permissive sequences.

Initiatives on Skill Upgradation

Every Ministry of the Union and State governments have, from time to time been involved in skill upgradation programmes of various types. However, these programmes often are based on a piece meal understanding of skill requirements at the sectoral or sub-sectoral levels. The economy becomes more productive, innovative and competitive through the existence of more skilled human potential. The level of employment, its composition and the growth in employment opportunities are the critical indicators of the process of development in any economy. Increasing pace of globalization and technological changes provide both challenges and growing opportunities for economic expansion and job creation. In taking advantage of these opportunities as well as in minimizing the social costs and dislocation, which the transition to a more open economy entails, the level and quality of skills that a nation possess are becoming critical factors. Countries with higher and better levels of skills adjust more effectively to the challenges and opportunities of globalization.

India has a huge problem of jobs – skill mismatch. It would help if people get vocational training and get employed. The scheme launched a year and a half back, is targeted at India's 93 per cent semi-skilled and skilled unorganized labour force, with little or negligible training. It aims to fill in a huge gap in the country's low skill training establishments. About 2.5 million vocational training seats are available in the country by 2020; 12.8 million people enter the labour market every year.

It has been estimated that the world needs 540 million skilled people by 2020, both highly skilled , and skilled, including doctors, engineers, managers etc, as also semi-skilled persons. Of this, as per the estimates nearly 50 per cent would be from India. Given the extent of out migration from the country, there is likely to be a skill gap at every level. However, the adverse effects would largely be on the MSME sector. While, on one hand, there is a general skill shortage within the country due to outmigration, the incidence of that would ultimately be on MSMEs, as labour from both the MSME sector, as also potential entrants to it, would increasingly be drawn away. Besides, it would also lead to enhancement of wage rates in the MSME sector, making many such units, unviable. It is therefore, important that the MSMEs get a permanent platform for addressing the issue of skill-gap.

The key task of public policy in the labour market is ensuring opportunities. While opportunities in a growing economy are aplenty, public policy has the key role of facilitating capabilities.

An integrated approach to skill development is a remarkable departure, as it was outlined by the Prime Minister in his Independence speech, as also by the Union Budget 2014,which put forward a National Multi-skilling Programme called 'Skill India'. The Programme is aimed at skilling the youth with an emphasis on employability and achievement motivation. It will also provide training and support for traditional professions like welders, carpenters, cobblers, masons, blacksmiths, weavers etc. Convergence of various schemes to attain this objective is also proposed. 'Skill India' implies an important paradigm shift in labour market intervention by public policy. The key task of public policy in the labour market is ensuring opportunities. While opportunities in a growing economy are aplenty, public policy has the key role of facilitating capabilities. Such capabilities arise out of a synergy of both modular and motivational skills, which the proposed Programme seeks to ensure. As such, the Programme, conceptually implies an important paradigm shift in policy perspectives on private sector development.

The Union Budget 2015 proposed accelerated initiatives in this area. Skills development has the largest impact in the education sector from this Budget. It is expected to lead to job creation at the bottom of the pyramid. The Budget proposes investing heavily into sectors like infrastructure, energy, and manufacturing, 'Swachh Bharat', Clean Ganga, and Digital India. This means skills-based training to produce industry and work-ready talent. ' Skill India' and 'National Skill Mission' are proposed to consolidate skills across 31 sectors.

The reconfiguration of the architectural linkages of a firm needs to be accompanied by changing management and organizational structures, along with new mechanisms of knowledge transfer and integration, as well as a policy environment more conducive to innovation and IPRs. It is necessary that knowledge-driven industries in India should increasingly attempt to embrace the network model of innovation and R&D by intensifying their collaboration with research institutes, universities and other counterparts. Such efforts need to be particularly supported and encouraged for the manufacturing sector. Improving awareness of IPR amongst businesses, particularly MSMEs, means that they will be able to make informed decisions about their strategies for protecting their idea.

While the importance of IPR is by now well recognized, its relevance in the context of SMEs has not received adequate attention. A key reason is the complexity of the subject which

is often unintelligible to the ordinary entrepreneurs. Besides, the small size of the firm, as also the focus on the immediate market, make the entrepreneurs pay very little attention to IPR issues. A perceived need for protection of IPR becomes so important as, many of the traditional domains of SMEs have been encroached upon by multinationals or the corporate sector . It is in this context that some of the virgin areas of IPR become all the more important.

Entrepreneurship Policy

Employment generation policies in India consist of a number of self-employment schemes which can be broadly clubbed as SME policies. These policies, in essence, represent a patchwork of financial measures to mitigate the disadvantages of small businesses vis-à-vis their large counterparts. SME policies mainly focus on creating small businesses, but not on entrepreneurs.

Entrepreneurs, given the right market signals, can create growing businesses at a time of high uncertainty, caused by rapidly changing technological and socio-political environment. The world over, it is now being increasingly felt that massive allocation for self-employment schemes and creating a good climate for small business are not enough to ensure growth-oriented entrepreneurial businesses, generate more employment and provide sustainable competitive advantage.

Measurement and monitoring of the progress regarding the shifting of the Indian economy to an entrepreneurial mode is crucial. Mechanisms need to be evolved for this. The implementation of a national entrepreneurship policy cannot be left to a single Ministry alone. Inter-ministerial working groups are necessary to make entrepreneurship development a priority. At the local level, this must translate into cooperation and collaboration between different educational, financial and socio-cultural organisations, both from the public as well as private sectors. This is not possible without a strong political leadership at local levels, that has the capability to bring together a broad spectrum of professionals and social activists. A young leadership that understands the need for an entrepreneurial economy better, is probably better suited to drive the process of entrepreneurial transformation of the nation. Having a manufacturing competitiveness agenda in place, this is the right time for India to launch a National Entrepreneurship Policy.

The rapid spread of globalisation has stimulated integration process of local SMEs into the international economy. In this dynamic marketplace, 'strategy' is of particular importance to businesses. Therefore, local enterprises should try to construct their own brands or form alliances with international enterprises in order to be better equipped to embrace competition; local SMEs who continue to operate in old style single shop method should also adjust their strategy and grasp every opportunity to improve their competitiveness and business environment, so as to improve the business environment, create a distinctive brand, and finally to excel in the competition.

Entrepreneurs, given the right market signals, can create growing businesses at a time of high uncertainty, caused by rapidly changing technological and socio-political environment.

Development of Knowledge Systems

Several studies on enterprise development in general, and SME development in specific, have brought to the fore the crucial role of knowledge inputs in enterprise development. While in the present knowledge- driven economy, such inputs are crucial, gender brings in an added dimension as well. Knowledge has emerged as one of the most important development resources, and it is perceived that full utilization of Knowledge can dramatically accelerate India's development. There is a growing gap between knowledge generation and knowledge application in India, which needs to be bridged through concrete strategies.

The speed and extent of development depends on the availability of material, technological and financial resources, but in its essence, development is a human process that is determined by the response of people to their external environment. Development depends on a very broad range of knowledge—technical knowledge of productive processes, commercial knowledge of markets and business practices, personal knowledge of human health and nutrition, knowledge of laws and legal processes, knowledge of political and administrative processes and public policies, knowledge of organization and management, knowledge of emerging fields of science and, perhaps the most important of all, a conceptual knowledge of the nature of the development process itself, so that we may have the wisdom to unleash and harness the energy, resourcefulness and creativity of the people.

The words, knowledge, information, and data, need to be distinguished. In the ascending phase that leads from experience to knowledge, raw data is distilled into information and ideas. Raw, unprocessed physical facts or data is the lowest grade. At the next higher level, these facts get categorized and organized as information. At a higher level, organized facts are processed and distilled into ideas, concepts, and theoretical propositions that provide a perspective which reveals their significance and interrelationships. Knowledge contributes to development in several different ways: 1)as a productive resource; 2) as an essential input for education, scientific research and industrial technology;3) as a catalyst for social change and economic development; and 4) as a basis for civilization and cultural values that promote social integrity and harmony, which is the essential foundation for development.

In the earlier stages of development, land and minerals constituted the key principle resources for development. Technology was rudimentary. Human beings were valued mainly for their

physical labour. The process of economic development is becoming more knowledge-intensive. By one recent estimate, 50-60 per cent of all industrial output is based on information. Modern manufacturing industries depend as much for their success on the management of information relating to quality, cost and scheduling as they do on the management of production processes. The service sector, which is the greatest source of new jobs and economic growth in the world economy, is essentially knowledge-based.

An approach, as above, needs both information management and knowledge management. **Information management** (**IM**) is the collection and management of information from one or more sources and the distribution of that information to one or more audiences. This, sometimes, involves those who have a stake in, or a right to that information. Management means the organization of and control over the planning, structure and organisation, controlling, processing, evaluating and reporting of information activities in order to meet client objectives and to enable corporate functions in the delivery of information. In short, information management entails organizing, retrieving, acquiring, securing and maintaining information. It is closely related to and overlapping with the practice of data management.

Knowledge Management (KM), however, is different. It is the process of capturing, developing, sharing, and effectively using sectoral or organisational knowledge. It refers to a multi-disciplined approach to achieving sectoral or organisational objectives by making the best use of knowledge. Knowledge management efforts typically focus on objectives, such as improved performance, competitive advantage, innovation, the sharing of lessons learned, integration and continuous improvements. KM efforts overlap with organisational learning and may be distinguished from that by a greater focus on the management of knowledge as a strategic asset and a focus on encouraging the sharing of knowledge. It is an enabler of learning with an organization, sector, or the economy as a whole.

Information management deals with organizing information such in databases forms; while KM deals with exploiting explicit and implicit knowledge of others as their experiences in which such shortcuts could enhance and transform a whole business. Thus, KM is so crucial and beneficial if management play it right. These, however, cannot be stand-alone activities. Structured systems and procedures are crucial in order to ensure sustainability.

Modern manufacturing industries depend as much for their success on the management of information relating to quality, cost and scheduling as they do on the management of production processes.

A development agenda takes shape based on four knowledge processes:

1. ***Knowledge Generation and Acquisition***: This happens through scientific discovery, R&D , transfer of technology, organization, and cultural practices.
2. ***Knowledge Adaptation***: This should happen through innovation to particular fields, needs and operating environments.
3. ***Knowledge Dissemination***: This should happen through formal and informal channels from knowledge developers and adapters to those responsible for applying the knowledge in society.
4. ***Knowledge Application***: This should happen through skilled action in fields, factories, classrooms, hospitals and every other field of activity to achieve practical results.

In the Indian context, these roles are performed by many stakeholders. Even within the stakeholder groups, there are different cultural practices and mandatory status.

Pooling such knowledge, emerging from both the public and private sectors, to the benefit of speedy development, is the challenge today. At the practical level, the imperative today is to thoroughly review the programmes and schemes of various economic Ministries and Departments. In fact, most of such schemes are either irrelevant or redundant. Channelising the expertise of the private sector through carefully thought out public-private partnerships alone can help to improve the situation.

Role of Infrastructure

A modern, well-organized and widespread infrastructure is a pre requisite for a country's economic growth. Ministry of Finance estimates that infrastructure projects of approx INR 1 lakh crore have been delayed. Time and cost overruns in implementation of projects continue to be one of the main reasons for under-achievement for the sector. Manufacturing sector which has seen a significant slowdown over the past few years needs to increase its share of GDP from 15 per cent to 25 per cent which could create as many as 100 million skilled jobs. Given the above, the new Government has, over the last couple of months, identified infrastructure development and growth in manufacturing sector as its key focus areas.

While attracting foreign investments and new technologies from abroad is crucial, they must result in jobs, innovations, and manufacturing depth in India. Appropriate receptors are required within a developing economy to absorb foreign technology. The receptors are production organisations in the host country that use the technology to produce things for the market - domestic or export. Merely an R&D lab as a counterpart to a foreign R&D lab will not result in the absorption of technology. Indeed, even domestic R&D labs require production organisations to convert their ideas into usable innovations The local partner must have an 'industrial' orientation, not merely a 'trading' one: a long-term ambition

to create an institution with technical depth, not merely an ambition to sell things and make quick profits. Therefore it is not surprising that absorption most often happens in private sector companies, which have ambitions to prove that 'it can be done in our country, and we will some day do it even better than you'

In China, manufacturing policies are framed to strengthen domestically-owned and managed capabilities. One of the principal fears that foreign companies have is that China will steal their intellectual property. China has a large market that tempts foreign companies to stay even when Chinese government policies turn inhospitable, as regards intellectual property. In fact, the Chinese government is framing IPR rules to further its own interests, suspecting that the rules being imposed on it have been devised principally to protect foreign companies' interests. China is using the lever of purchases by government agencies to develop indigenous technology. It is also using the lever of national standards drawn up to suit local enterprises and shut out foreign competition. In contrast, India's position regarding IPR must be to actively engage in the discourse with global advocates of strong IPR. However, whatever these advocates propose need not be accepted as proven truths about the value of IPR. India must discover the best approach to IPR for stimulating the ongoing innovation it needs without creating monopolies through IPR rules.

The time has come for Indian policymakers to sharpen the national manufacturing strategy, on the basis of the more recent evidences on the changes in the global economy, vis a vis India's comparative position. The sustainability of India's growth story depends on it. We must, of course, overcome weaknesses in infrastructure and administration. But we must also address tough policy questions to promote Indian enterprises. And the strategy cannot be a return to a planned economy. Nor can it be an imitation of China. This is the challenge for Indian policymakers. Enhancing Indian capabilities in manufacturing demands, first of all, enhancing the scientific and technological infrastructure.

The Way Forward

Given the importance of infrastructure development and manufacturing in our economy, the Government can play a key role of a catalyst in kick-starting growth in the sectors. The Union Budget 2015 has taken some steps to put the economy back on a high growth trajectory.

Extending the sunset clause in section 80IA for tax holiday for power generation from the existing date of 31 March 2014 to another 5 years and exemption from Minimum Alternate Tax (MAT) which otherwise nullifies the benefit of tax holiday would really provide a thrust to renewable and conventional energy sector.

Exemption from payment of tax under MAT provisions which was earlier available to units in SEZ and developers was withdrawn in 2012. This was not received well by existing units and developers who invested substantially in the SEZs based on Government's initial promise. MAT exemption should therefore be re-introduced, so that confidence of investors could be restored for further investment.

Implementation of section 14A provision significantly affects many of the infrastructure projects which are awarded through a bidding process and require setting up of Special Purpose Vehicles (SPV) below a holding company The SPV are funded through a combination of equity and debt. Section 14A disallows interest paid on debt funds since SPV pays dividend to holding/ promoter companies, which has a detrimental effect on the sector as debt funds is primary funding avenue. Some amendments are therefore necessary to tone down the rigour and the arbitrariness of this provision.

A long standing demand of the industry is grant of infrastructure status to social sectors such as health and education, areas which have been neglected so far. Financing companies/ banks investing in infrastructure companies have long been pushing for restoration of section 10(23G), withdrawn earlier, for exemption on interest income for financing infrastructure projects. If accepted, this will lower the cost of borrowing funds of infrastructure companies.

Section 32AC was introduced to provide tax deduction of 15 per cent of actual cost of new plant and machinery acquired and installed after 31 March 2013 but before 01 April 2015, where the aggregate amount exceeds INR 100 crores. In order to provide the necessary fillip to the sector, the period for investment allowance maybe extended to three years, threshold of minimum investment be reduced and quantum of deduction enhanced to 25 per cent.

On the indirect tax side, the Government should make its intentions of encouraging investment in these key sectors absolutely clear. For instance, the infrastructure sector would stand to gain from reduced rates of duty, exemptions and other incentives being awarded or certified at the time of the clearance of a project rather than being an on-going procedural hassle which makes it difficult for the tax payer to claim such benefits.

Uniform treatment of all infrastructure sectors is another area which demands the Government's attention. For instance, service tax on specified works contracts such as those in relation to airports, ports, railways etc. has been exempted, but such an exemption has not unequivocally been extended to other crucial infrastructure sectors such as water, power, transport, sewerage etc.

As for the manufacturing sector, there is a pressing need to liberalise Cenvat Credit regime so as to ensure that there is no cascading of taxes which unduly burden the domestic industry. Another pain point increasing the cost of procurement for the industry is double taxation on activities which are subject to Service tax under the list of declared services and VAT / CST as deemed sales. ❑

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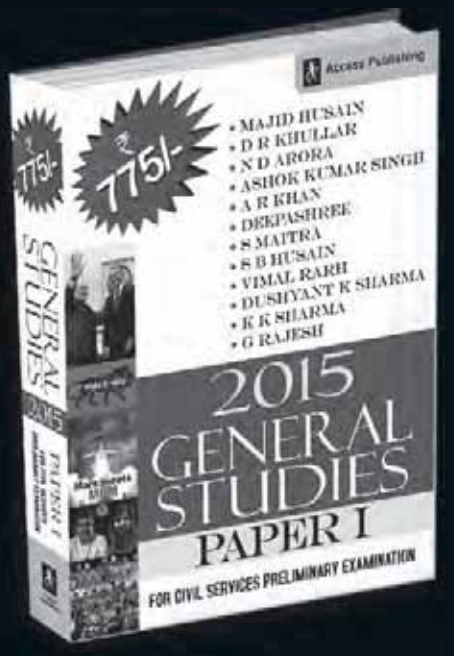

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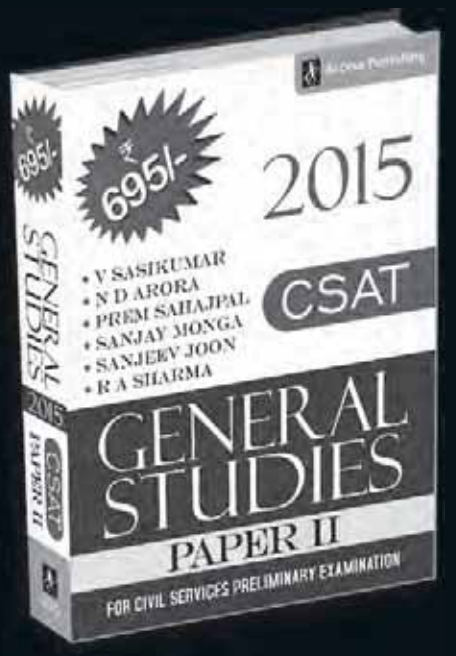

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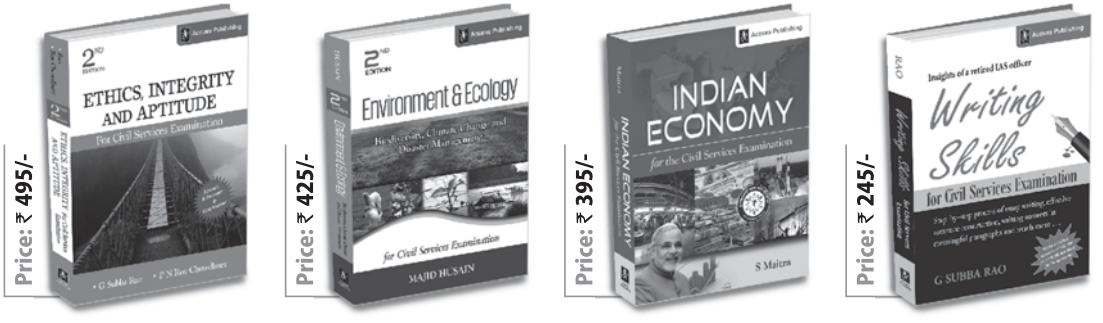

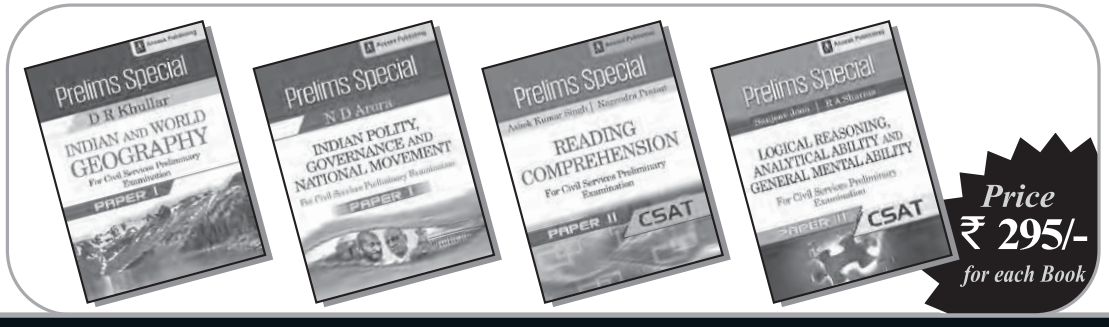

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Manufacturing-Led Growth, Competition and Challenges

Arup Mitra

...the challenges for Indian manufacturing exports are insurmountable but India has no choice if inclusive growth has to be experienced. The solution lies primarily in manufacturing-led-growth which in turn can be enhanced with manufacturing of exports

THE HISTORICAL experience of the present day developed nations suggests that one important determinant of economic growth is industrialization. Szirmai and Verspagen (2011) in the context of developing countries point out that manufacturing since 1990 is becoming a more difficult route to growth than before. They also find interesting interaction effects of manufacturing with education and income gaps. Dellas and Koubi (2001) argue that the industrialization of labour is the main engine of growth during the early stages of economic development. They emphasize the effects of investment on the composition of the labour force; and unlike recent claims pointing to industrialization via equipment investment, they suggest that employment industrialization policies may hold the key to success in the developing countries.

Growth

Globalization has compelled countries to enhance growth. Several growth-oriented strategies, that include trade-openness, FDI-inflows and capital mobility, including technology transfer, have been adopted in a big way. The argument, which is usually given in favour of technology transfer, is that the wheel that has already been adopted need not have to be rediscovered if countries seek to be cost efficient[1]. However, one important hypothesis in the context of sluggish employment growth in the industrial sector relates to the acquisition of capital intensive technology imported from abroad. The import of new technology, which is primarily capital intensive and skill-intensive, results in an increased demand for skilled workers and not for the less skilled ones (Wood, 1997).

Another line of argument is based on labour market regulations. The policy circle usually believes that labour laws in the Indian context are extremely outdated and pro-employee which in turn, tends to reduce labour absorption. Due to the lack of labour market flexibility, economic growth and employment generation, as it is believed, cannot receive an impetus in a sustainable manner. The advocates of economic reforms lay considerable emphasis on labour market deregulations. This is because globalization and shifts in the production activities are expected to impact on the labour market outcomes such as wages and labour productivity. Secondly and more importantly, for other reforms, in the area of trade for example, to be successful, labour market reforms are considered as essential prerequisites (Hasan, 2003). Scholars generally view that the labour markets in developing countries are rigid in terms of work practices, wages, hiring and firing policies, etc, and all this has been attributed to the existing labour laws (Fallon and Lucas, 1991). However, there are many other factors affecting investment, most notably, access to land, infrastructure, skilled workforce, etc.

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A third line of argument, particularly from the supply side, refers to skill shortage, pointing to the poor employability of the vast sections of the labour force. The lack of skill forces many to get residually absorbed in low productivity activities[2]. Improvement in employability is therefore, an important consideration from the policy point of view. For this, skill formation is an essential prerequisite which can be attained by accessing quality education and participating in institutions which impart training in skill formation. Such technical institutions, particularly which provide diplomas, are however few in number and thus government initiative is indeed crucial. From the point of view of the quality of vocational education, again greater efforts are called for. Besides, on the job training is another important way of eliminating skill mismatches.

Realising the fact that over the next decade, India has to create gainful employment opportunities for a large section of its population, with varying degrees of skills and qualifications, the manufacturing sector is expected to be the engine of this employment creation initiative. Apart from the employment imperative, the development of the manufacturing sector is critical from the point of view of ensuring a sustainable economic growth in India. Thus, with the objective of developing Indian manufacturing sector to reflect its true potential, the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry, embarked on creating a policy environment that would be suitable for the manufacturing sector to grow rapidly. Keeping in view the importance of the employment-industrialization-policies as mentioned above and also the fact that India has not been able to generate employment opportunities in the organized/formal manufacturing sector on a large scale, the National Manufacturing Policy comes as a silver lining.

National Manufacturing Policy

In the backdrop of a global recession and large job losses, if corrective steps are not taken, India's situation can be worse off. From this perspective, the National Manufacturing Policy (NMP) promises to create 100 million more jobs and contribute 25 per cent to country's GDP in a decade. In the face of dampening demand and rising cost of capital, the experts in the policy circle believed that it can change the fate of manufacturing in India and turn around the overall economy. The policy addresses in great detail, the environment and regulatory issues, labour laws and taxation, but it is the proposed creation of National Manufacturing Investment Zones (NIMZs) or clustering of manufacturing units that is treated as a unique way of integrating the industrial infrastructure and achieve economies of scale. NIMZs will be developed as integrated industrial townships with world class infrastructure and land use on the basis of zoning, clean and energy efficient technology with a size of at least 5000 hectares. The NIMZs will be on the non-agricultural land with adequate water supply and the ownership will be with the state government. It aims at introducing flexibility in the labour market by offering greater freedom to the employers while hiring and firing. It also enables the sunset industrial units to follow a simplified exit mechanism. At the same time, it insists on workers' rights which run the risk of being compromised in the name of flexibility.

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An important feature of the manufacturing policy is its financial and development incentives to the small and medium enterprises. On the whole, the policy promises to increase the share of manufacturing sector to the country's gross domestic product to 25 per cent from existing 16 per cent. However, the National Manufacturing Policy's objective of raising the industrial employment to an unprecedented level may not be realized as the organized manufacturing employment comprises only a fraction of the total manufacturing employment.

It may be therefore, useful to consider the employment potential of the unorganized manufacturing sector as well and tap the potentials to create quality-employment in this sector. Small and medium enterprises (SMEs) need to undergo an innovative revolution in terms of scale of operations, technology, financing and ways to upgrade skills of workers. Since, the labour intensive sectors like food processing, apparels and textiles, leather and footwear contribute to over 60 per cent of SMEs' employment (Kant, 2013), greater focus on the labour intensive sectors will enable productive absorption of surplus unskilled labour. The policy initiatives need to give top priority to labour intensive goods based industrial growth in regions characterized by greater magnitudes of unskilled labour and insignificant industrialization.

Issues relating to infrastructure shortage, constraints on energy supply, sluggish exports growth and poor performance of labour intensive exportable goods sector, the lack of innovations required for developing appropriate technology and bureaucratic rigidities in areas where they tend to hamper growth and employment or attract foreign investment are undoubtedly important.

Foreign Market Competition

The importance of exports in raising the economic growth is enormous. The dual objectives of enhancing foreign exchange earnings and at the same time, expanding the demand base for the domestically produced goods can be met through increased exports. Further, the exports of services cannot contribute significantly to the employment generation for the unskilled variety of the work force (Mitra, 2011). Therefore, it is the export of manufacturing goods which can result in an inclusive growth.

Particularly, the exports of labour intensive products can result in expanding the production of such goods which in turn, can result in creating employment opportunities for the labour to be shifted out from the agriculture to manufacturing sector. The possibility of shifting labour to high productivity services is limited because of their poor skill base. On the other hand, the absorption of labour in the manufacturing sector is not possible unless accompanied by a rising demand

for the products. It cannot lead to a rise in wage income. Further, also increased employment at higher wages will be possible only when productivity also grows simultaneously. From this point of view, the improvement in the capital base and technological progress is a must. Usually it is believed that technological progress is capital intensive which in turn, tends to reduce labour absorption. However, studies have pointed out that innovation does not result in an increased capital intensity in all the phases of the production process (Vivarelli, 2011). Even if it may reduce employment in certain phases, there are possibilities of increase at certain other levels. Besides, the new technology can be adopted at a larger scale and with the emergence of many new units, it can lead to a rise in the scale of production at the macro level. All this is expected to impact on employment positively.

The other issue relates to the export of high value products. There are several high value products which are labour intensive. The production of such products is limited in scale as the cost is high. But the saleability of such products in the developed countries' market is very high. With certain initiatives to manufacture finished goods adjusted for western taste and preferences, the exports of high value products can pick up with positive effects on both employment and foreign exchange earnings (e.g. garments made of silk fabric).

The major commodity groups in India's export basket were: manufactured goods (63.7 per cent), petroleum, crude and products (20.1 per cent), agriculture and allied products (13.8 per cent) and ores and minerals, excluding coal (1.8 per cent) in 2013-14. (Economic Survey, 2013-14. India's manufacturing exports in the total world exports is, however, not substantial and faces major threats from various countries. For example, the garment exports from India are severely challenged by the competing exports from Bangladesh. Even in relation to cotton products, which comprise a substantial share of India's exports and in which India is said to have a comparative advantage, most of the products are under threat from China and Bangladesh, except a few items like table linen and towel (Varma, 2002).

Challenges

The tariff structure in India was highly complex in early 1990s which then declined from 128 per cent in 1991-92 to 22.4 per cent as per interim budget for the year 2004-05[3]. Weighted average duty rates declined from 72.5 per cent to 18.2 per cent during this period. However, while average duty rates declined, still a large number of tariff rates prevailed ranging from zero per cent to over 150 per cent during 2004-05.Commodity Groups in range 100 per cent or higher in 2004-05 included coffee, tea, alcoholic beverages, essence and perfumes,

India's manufacturing exports in the total world exports is, however, not substantial and faces major threats from various countries. For example, the garment exports from India are severely challenged by the competing exports from Bangladesh.

sugar items, grapes and juices, motor cars and motor cycles. In the 50-100 per cent range, commodities were edible oils, wheat, rice and some other agricultural goods[4]. The effective levels of import tariffs came down further: in 2010, the peak tariff was around 10 per cent for a number of commodity groups such as power generating equipment, office machines and automatic data processing machines, telecom equipment, electrical goods and transport goods and though the MFN tariff profile is found to be quite comparable to other countries, there are several anomalies involved in Indian non-agricultural tariffs (Hoda and Rai, 2014). The Indian exporters are required to ship several documents such as letter of credit, copy of proof of advance payment, print-out of application form, foreign inward remittance certificate etc to government offices, accompanied by numerous visits which indeed pose major challenges to Indian exports (Sharma, 2014).

Anti-dumping action has also led to loss of Indian trade: out of the 90 anti-dumping measures taken against India during the period of January 1995 to June 2010, 22 relate to chemicals, 19 to plastics, 11 to textiles and 26 to metal products (mainly iron and steel) and these are the areas in which India has gained a degree of comparative advantage (Trade Policy Review Report by India, 2011).

The Foreign Trade Policy 2009-14 was announced in 2009 when there was a world-wide slowdown in exports (Trade Policy Review Report by India, 2011). The longterm policy objective is to double India's share in global trade by 2020 for which, a special emphasis was laid on employment intensive sectors such as textiles, leather, handicrafts, etc. For this, quality products with a wide range of variety need to be manufactured. There is need to explore newer destinations for exports as the directional pattern of India's trade has not changed much since 2007-08, and the top 15 trading partners continue to hold a share of around 60 per cent of the trade.

In order to address issues relating to high transaction costs and time involved in trade transactions, a Task Force on Transaction Costs in Exports was set up in 2009. Around 44 issues for reduction of transaction costs were identified by the Task Force out of which, 21 issues have already been addressed (Trade Policy Review Report by India, 2011).

The total factor productivity growth (TFPG) has to rise in a significant manner, particularly in industries which have export potentiality or for which, exports need to be increased with a view to raising the overall economic growth. Without TFPG, the competitiveness of the Indian products cannot be enhanced. Some of the major determinants of TFPG are infrastructure (physical, financial and social) and trade openness. The accessibility of units, particularly the small and micro ones, to ICT can assure a rise in both factor productivity and total factor productivity. Also, the agglomeration benefits need to be tapped to improve the competitiveness of the Indian goods. The agglomeration benefits often translate themselves in terms of productivity growth for the firms and, therefore, consecrated efforts need to be made to create clusters of production activities. When the old pockets of concentration tend to reach a saturation point, the new clusters need to be created for which, public investment is a key issue. The

spatial spread of the industry has to change in order to give rise to new clusters in areas where urbanization has been sluggish. The cost advantages can be reaped through such newer ways. On the whole, the challenges for Indian manufacturing exports are insurmountable but India has no choice if inclusive growth has to be experienced. The solution lies primarily in manufacturing-led-growth which in turn, can be enhanced with manufacturing of exports.

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Endnotes

1 It is argued that countries further from the frontier have lower R&D returns, implying that the cost of innovation is more in a poor country than in a rich country. Hence, it is still cheaper for a latecomer to buy the technology already invented by others than to re-invent the wheel though it is widely noted that international technology does not come cheap (UNIDO, 2005).

2 See Times of India, April 22, 2013

3 WTO Issues Concerning India: http://www.slideshare.net/yashshah007/wto-issues-concerning-india

4 http://www.slideshare.net/yashshah007/wto-issues-concerning-india ❑

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YE-352/2014

Need for Sustainability and Innovations in Indian Manufacturing

Balkrishna C Rao

Indian manufacturing sector needs to undertake more indigenous research and development (R&D) to align manufacturing with the principles of sustainable development. Other than catering to the growing needs of India, such R&D activity will also aid in making Indian manufacturing world leaders, along with China and some developed countries, in clean or green technologies

CLIMATE-CHANGE has been scientifically categorized as a serious threat facing humanity by independent world bodies such as the International Energy Agency (IEA), Millennium Ecosystem Assessment (MA) and the Intergovernmental Panel on Climate Change (IPCC). Such an event has been made possible by Green-House Gas (GHG) emissions through various anthropogenic activities over the years around the world. In fact, the negative impact of climate-change, resource scarcity and related effects will be pronounced for India considering its population density, large shore line and other features relevant to the well being of its citizens. Manufacturing is one such anthropogenic activity that since the dawn of the industrial revolution has been a critical part of the backbone of industrialized countries and, recently, of emerging markets such as China and India. With the advent of globalization, a number of manufacturing operations are being carried out in these emerging economies that house the foreign affiliates of major companies in the developed world. Such outsourcing of manufacturing activities has also added value to the large manufacturing base existing in emerging markets such as China and India.

The Indian manufacturing sector, having come of age, comprised a little over 1 per cent of global manufacturing output as reported in 2012[1] and has contributed 15 per cent of the share of Indian GDP[2] in 2014. With manufacturing poised to contribute significantly to the Indian GDP in the foreseeable future, it is vital for Indian manufacturers to embrace concepts of sustainability. This is because India, along with China, is currently clubbed among the top emitters of green house gases. Such high emissions of GHGs, continuing into the foreseeable future, will involve government mediated checks and balances for reducing the carbon footprint. Moreover, sustainability based credentials are also required for improving global trade due to demand for quality products that are environmentally benign in their production, use and end-of-life. Therefore, early adoption of sustainability based technologies and services against this background will give Indian manufacturers an upper leg vis-à-vis their rivals.

Sustainability and Make-In-India

Sustainability and, in particular, *sustainable development* is all-round development focusing on being benign to the environment. Climate-change and scarcity in resources, including water, are encouraging economies around the world to embrace this concept so as to

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leave a properly functioning planet to posterity. *Sustainable development* is a cradle-to-cradle approach, as opposed to being cradle-to-grave, wherein recycling, reusing and remanufacturing of discarded components are actively utilized to both minimize negative impact on the environment and improve the standard of living of society at large through good quality products and services. It should be noted that "cradle-to-grave" is the approach that has been followed through over the years where a product is discarded at the end of its useful life. The concept of sustainable development has a lot in store for the betterment of Indian manufacturing. The drive to adapt Indian manufacturing to the principles of sustainability will go a long way in achieving success in the Prime Minister's "Make in India" movement that has been envisaged for modernizing India's manufacturing infrastructure and prowess, thus making it truly competitive at a global level. This is due to countries such as China, an emerging and rapidly industrializing competitor and, Germany, an industrialized nation with its energy plan called *Energiewende*, adopting clean technologies, for mitigating climate change, in a wide range of sectors including manufacturing. Such early adoption of green technologies for tackling planetary crises has given these countries an early lead in creating manufacturing equipment and also processes that while improving productivity are also benign to the environment. Consequently, the race to develop these technologies by these countries would, in the least, lead to improvements in efficiency of manufacturing operations, which would translate into lower costs for the manufacturing sector, thus improving their profitability. Therefore development of clean manufacturing technologies bodes well for a growing economy like India even after excluding the threat of climate change. The successful roping in of sustainability into Indian manufacturing can lead to the development of both novel processes and advanced machine tools needed for the fabrication of both plain-vanilla and sophisticated components in sectors ranging from automotive through to healthcare and aerospace. The Indian machine-tool industry, in particular, should not lose this opportunity to design and produce equipment meeting green credentials that will majorly strengthen the manufacturing infrastructure. The concept of *sustainable manufacturing* entails the use of state of the art advances in science and engineering together with research and development for achieving its twin goals of product quality and minimal environmental impact. As a result, beyond leading the global pack in technology, *sustainable manufacturing* would create employment opportunities at various skill levels with the concomitant sophisticated knowledge base that would be sought after by other nations. Last but not least, such modernization in Indian manufacturing will also make the country self-sufficient in terms of civilian and defense applications.

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The manufacturing sector also offers good opportunities for innovations that are crucial to product development. An instance of such opportunities occurs when bottlenecks are observed in the design of a product while carrying out the fabrication process. Redesigning the product, which could be an incremental or a newfangled innovation, could iron out such bottlenecks. Such bottlenecks could also pave the way to modifying the process or designing altogether a new process for fabrication. In fact, such innovations can even significantly impact areas other than manufacturing. The current administration in the US having realized the loss in such opportunities by the offshoring of manufacturing activities has, in recent years, set a National Network for Manufacturing Innovation (NNMI) to partly encourage limiting manufacturing activities within American borders. Moreover, the Indian strength in innovating under constraints of scarcity should be tapped into, where possible, for delivering apt *frugal-innovations*. There is significant scope for manufacturing frugal products that are good in quality and also affordable to the Indian society at large, thereby raising the standard of living. In this regard, the recent applications of frugality to engineering and, not being limited to a grassroots phenomenon, are noteworthy. The frugal nature of these innovations would also aid in engendering sustainable development, which underlies the majority of products and services unleashed in vibrant economies the world over.

Need for More Research and Development

Overall, the Indian manufacturing sector needs to undertake more indigenous research and development (R&D) to align manufacturing with the principles of *sustainable development*. Other than catering to the growing needs of India, such R&D activity will also aid in making Indian manufacturing world leaders, along with China and some developed countries, in clean or green technologies. India has excellent centers of research to tap for rejuvenating Indian manufacturing. The centers of research alluded to include academic institutes such as the Indian Institutes of Technology (IIT), Indian Institute of Science (IISc) and other premier academic institutions, with their excellent academics and pool of research scholars, and various defense and non-defense related national laboratories. A strong nexus among the Indian private sector, many

of whose entities are world class companies, national laboratories and academia would also go a long way in achieving this goal.

Potential Areas for Sustainable Manufacturing

Apart from research in traditional areas of manufacturing, from the viewpoint of sustainability, the Indian academia and industry could also focus on some of the latest disruptive technologies. The advent of 3-D printing or additive manufacturing technology is one such technology that in recent decades has revolutionized some areas of manufacturing for components made primarily of non-metallic materials. This technology is in a primitive state as far as metals are concerned and, especially for metallic materials used in critical sectors such as healthcare and aerospace, and research will hopefully bridge the gap with parts produced through conventional or subtractive manufacturing processes in the foreseeable future. Additive manufacturing has the potential to reduce the cycle time and also give a near net shape without taking recourse to traditional processes for finishing the component, as is currently done, in the fabrication of 3-D printed parts in a wide range of sectors including aerospace. Therefore, from an Indian perspective on sustainability, more research and development could be directed at additive manufacturing to unlock its potential for possibly manufacturing with a lesser carbon footprint and also lesser amounts of raw materials for realizing frugal products that are affordable. Such research combining frugality, sustainability and disruptive technologies could also be our unique approach that could be exported to other countries. Moreover, the additive manufacturing process can be readily utilized in repairing components without resorting to replacements. Such ease of repair fits well with the cradle-to-cradle concept of sustainable manufacturing. Furthermore, the additive manufacturing technology also facilitates the creation and testing of new materials having enhanced properties that could find new applications.

Other areas beckoning for attention include automation with robots, artificial intelligence, big-data and cloud computing, to name a few. All of these areas have the capacity to modernize Indian manufacturing prowess while catering to our requirements through *sustainable development*. However, the use of these new concepts should also be tempered with the large pool of labour at various levels of skill available in this country.

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YE-380/2014

ANALYSIS

Participation in Global Production Networks for 'Make in India'

C Veeramani

India has a huge potential to emerge as a major hub for final assembly in several industries. However, it is important to resist the temptation of extending tariff protection for final goods assembly as it will have the detrimental effect of breeding inefficiencies. A level playing field should be created for different types of business entities – domestic, foreign and joint ventures. The domestic market for goods should be as contestable as is the export market for competing suppliers from around the world

RAPID EXPANSION of manufacturing sector has been a major objective of economic policy in India. Starting with the second five year plan in 1956 and culminated by the recent launching of 'Make in India' campaign, policy makers always stressed the need to expand India's manufacturing sector. A natural question is: why manufacturing? Historical evidence from difference parts of the world demonstrates the indispensable role that industrialization plays in the economic development process of countries. The experience of East Asian countries, in particular, shows that export-led industrialization is crucial for the attainment of sustained employment generation and poverty reduction. In countries like India, expansion of labour-intensive manufacturing offers a huge potential for generating low-skilled employment.

Since the 1980s, there has been a turnaround in India's GDP growth performance. Yet, the process of structural change, in terms of transferring large pools of surplus labour from agriculture to non-agriculture, has been very slow. Agriculture accounted for, on an average, about 18.1 per cent of India's GDP during 2011-13, but employed about 48.9 per cent of the total workforce in 2011 (Economic Survey, 2014-15). This over-concentration on agriculture is undesirable and explains why poverty still persists in India. The growth process in China and other East Asian countries followed the conventional pattern of shifting labour from agriculture to labour-intensive manufacturing. By contrast, India has been skipping the intermediate stage of industrialization and directly moving to the final stage of services led growth.

Growth and Structure of India's Manufacturing Sector: Some Anomalies

India's growth success has been driven by service producing industries, mostly those employing relatively skilled labour force. The average share of manufacturing value added in India's GDP remained low at 17.8 per cent during 2011-13 (Economic Survey, 2014-15). International comparisons suggest that the *actual* manufacturing share of GDP for India is lower than what is *predicted* while the opposite is the case for China (ADB, 2007)[1]. The share of manufacturing in India's merchandise exports declined from 73.5 per cent in 1992 to 65 per cent in 2012. By contrast, in China in 2012, manufacturing accounted for

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32 per cent of GDP and 94 per cent of merchandise exports. Between 1992 and 2012, China's share in the world exports of manufactures steadily increased from about 2.5 per cent to a whopping 16.8 per cent while India's share increased much slowly from 0.6 per cent to 1.6 per cent.

Within the manufacturing sector, India tends to specialize in relatively skill and capital intensive activities (Kochaar et al, 2006, Economic Survey 2014-15). The fast growing exports from the country are either skilled labour intensive (such as drugs and pharmaceuticals and fine chemicals), or capital intensive (such as automobiles and parts). Between 1993 and 2010, the share of capital-intensive products more than doubled from about 25 per cent to nearly 54 per cent while the share of unskilled labour-intensive products halved from 30 per cent to 15 per cent (Veeramani, 2012). In contrast to the employment-intensive growth of China, India's manufacturing growth followed a relatively capital intensive path[2]. Clearly, this is an anomaly given the fact that India's true comparative advantage lies in unskilled labour-intensive activities.

Growth of Global Production Networks (GPNs)

World-wide reduction in tariff barriers and technology-led decline in the costs of transportation and communication has made it possible to unbundle the production processes in several industries, with various stages occurring in different countries. Rapid growth of international fragmentation, notably since the 1980s, has led to a major change in the nature and pattern of world trade. Countries increasingly engage in trade by specializing in particular stages of good's production sequence or tasks rather than in final goods. Trade in parts and components (P&C) have grown much faster than trade in final goods as intermediate products cross national borders multiple times during the production process (see, for example, Feenstra 1998, Hummels et al 2001, Athukorala, 2012, Baldwin and Lopez-Gonzalez, 2013). The type of trade that result from interconnected production processes involving a sequential, vertical trading chain stretching across many countries, is described under various terminologies such as fragmentation trade, trade in middle products, task trade and vertical specialisation trade.

The concept of "global production network" (GPN) has been developed as a way to analyse the complex link between a lead or a key firm and its suppliers in different countries. Growth of global production networks implies that trade involves not only the exchange of end products but, increasingly, of P&C that go into making them. Each country specializes in a particular fragment of the production process based on its comparative advantage, which in turn, is determined by factor intensity of fragments and differences in factor prices across countries.

Growth of global production networks implies that trade involves not only the exchange of end products but, increasingly, of P&C that go into making them. Each country specializes in a particular fragment of the production process based on its comparative advantage, which in turn, is determined by factor intensity of fragments and differences in factor prices across countries.

In certain industries, such as electronics and automobiles, technology makes it possible to sub-divide the production process into discrete stages. In such industries, the fragmentation of production process into smaller and more specialised components allows firms to locate parts of production in countries where intensively used resources are available at lower costs. This geographic splintering of production gives rise to fragmentation based trade. Labour abundant countries ("factory economies") like China tend to specialize in low skilled labour-intensive activities involved in the production of a final good, while the capital and skill-intensive activities are being carried out in countries where those factors are abundant ("headquarter economies"). Thus, international firms might retain skill and knowledge-intensive stages of production (such as R& D and marketing) in the high-income headquarters (e.g., the U.S.A, E.U and Japan) but locate all or parts of their production in a low wage country (e.g., China and Vietnam).

Although the development of production networks is widespread, their growth in East Asia, and China, has been particularly impressive. A number of empirical studies show that a high level of intra - and extra-regional trade, based on fragmentation and vertical specialization, has been a key factor behind the export success of East Asian countries (e.g., Athukorala and Yamashita, 2006, Athukorala, 2012). China's export promotion policies since the 1990s relied heavily on a strategy of integrating its domestic industries with the global production networks. Though not as dynamic as the ones in East Asia, strong production networks also exist in Europe (for e.g., between Germany and Hungary/ Czechoslovakia) and North America (for e.g. within NAFTA).

A manifestation of China's participation in global production networks is the growing importance of machinery items in its export basket. In 2010, machinery and transport equipments contributed to about 52 per cent of Chinese exports and it accounted for about 20 per cent of the world exports in this product category. The fast growth of China's machinery exports has been driven by its high degree of integration with the regional and global production networks (Athukorala, 2012).

In particular, based on imported parts and components, China has emerged as a global hub for electrical and electronic goods assembly.

Typically, China imports the parts and components from other parts of East Asia and exports the finished goods to the United States and Europe. Since this strategy involves processing or assembly of imported parts and components, the net domestic value-added *per unit* of the exported good is generally not very high. However, since the scale of operations is usually very large, the *total* domestic value addition from these activities is considerably high contributing to employment generation for a large number of migrant workers in China.

India's Participation in GPNs

In contrast, due to its idiosyncratic specialization in relatively capital and skill intensive product lines, India has been locked out of the vertically integrated global and regional supply chains in manufacturing industries. The experience of East Asia suggests that one of the important reasons for the lacklustre performance of India's manufacturing sector is the lack of its participation in GPNs.

Krueger (2010, pp 424) notes that "….India has not succeeded in attracting foreign investors to use India as an export platform in many of the unskilled-labour intensive industries that have been attracted to east and southeast Asia". Athukorala (2014) notes that India has so far failed fitting into global production networks in electronics and electrical goods, which have been the prime movers of export dynamism in China and other high-performing East Asian countries. A number of large MNEs in electronics and electrical goods industries have set up production bases in India, but they are mainly involved in production for the domestic market. However, in the case of automobile industry, studies suggest a steady growth in India's integration with global production networks (Tewari, Veeramani and Singh, 2015; Athukorala, 2014). A number of leading automobile companies have established assembly plants in India and some of them have begun to use India as an export base within their global production networks. Since the early 2000s, India's exports of assembled cars (completely built units) have increased at a much faster rate than automobile parts (Athukorala, 2014). Overall, though India's exports of assembled vehicles recorded some growth, the country remains as a minor player in fragmentation based trade, particularly in electronics and electrical goods.

What Explains India's Lacklustre Participation in GPNs?

Because its policies discourage against labour-intensive industrial activities, India lags behind other fast-growing Asian countries in integrating domestic manufacturing with the global vertical production chain. India's import substitution policy regime created a bias in favour of capital- and skill-intensive manufacturing, and the reforms since 1991 have not been comprehensive enough to remove this bias. Though the post-1991 policy changes have gone a long way towards product market liberalization by easing entry barriers, factor markets (labour and land) are still plagued by severe distortions and policy induced rigidities. In particular, India's archaic labour laws create severe exit barriers and hence discourage large firms from choosing labour-intensive activities and technologies (Krueger 2010; Kochhar et al. 2006; Panagariya 2007).Government interventions in labour markets have had the unintended consequence of creating a bias in the incentive structure against labour-intensive manufacturing.

A number of leading automobile companies have established assembly plants in India and some of them have begun to use India as an export base within their global production networks. Since the early 2000s, India's exports of assembled cars (completely built units) have increased at a much faster rate than automobile parts.

Inward FDI has been instrumental in integrating China's manufacturing with the global vertical production chains. The bulk of the FDI flows to China's manufacturing sector has been vertical (export promoting) in nature, which represents international fragmentation of the production process by multinationals. By contrast, inward FDI into India is primarily horizontal (market seeking) rather than vertical in nature. What explains the fact that India has been attracting horizontal rather than vertical FDI while the opposite has been the case for China? First, there existed a powerful incentive for multinationals to undertake tariff jumping horizontal investment as Indian tariff rates, despite the reduction since 1991, remained relatively high until 2007. Higher tariff rates would have made India a relatively undesirable destination for vertical investments.

Second, vertical specialization has been discouraged in India also on account of restrictive labour laws, inadequate infrastructure, a burdensome regulatory environment, an inefficient land acquisition process, and poor trade facilitation. These issues are reflected in India's poor ranking among the countries in the region - in particular among the dynamic export-oriented economies in East Asia, in terms of various indicators of ease of doing business. The World Bank's annual 'Doing Business 2015' ranked India 142nd out of 189 countries in ease of doing business while China's rank stood much better at 90th. Faced with power shortages, capital and skill-intensive industries such as automobiles and pharmaceuticals might be in a position to rely on the high-cost internal sources of power. This option, however, is not affordable to firms in the labour-intensive segments that generally operate with low margins.

Way Forward

China's image as a low-cost location for manufacturing is rapidly changing due to labour shortages and increases in wages and in response, China is shifting its specialization from basic to relatively more sophisticated manufacturing. With the increasing wage costs, Chinese firms in the labour-intensive industries are increasingly under pressure and have started looking for other low cost locations such as Vietnam and Indonesia. An important question in this context, is: Can India become the next workshop of the world?

Recognizing the importance of a strong manufacturing sector for employment generation, the Prime Minister has recently launched "Make in India" campaign with an aim to boost India`s manufacturing sector. It is important to situate these new initiatives in the context of growing global production networks in manufacturing industries. Greater integration of domestic industries with global production networks must form an essential part of the "Make in India" initiative. What is important is the creation of an environment that allows entrepreneurs to freely search and identify opportunities in the vertically integrated global supply chains of various industries. Based on imported parts and components, India has a huge potential to emerge as a major hub for final assembly in several industries. However, it is important to resist the temptation of extending tariff protection for final goods assembly as it will have the detrimental effect of breeding inefficiencies. A level playing field should be created for different types of business entities – domestic, foreign and joint ventures. The domestic market for goods should be as contestable as is the export market for competing suppliers from around the world.

A flexible labour market, with appropriate social safety nets, is a crucial necessary condition for the growth of labour-intensive manufacturing in India. The recent amendments in labour laws in states such as Rajasthan and efforts to improve the ease of doing business are all moves in the right direction.

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Endnotes

1 Predicted shares are calculated from a cross-country regression of manufacturing shares on GDP per capita, GDP per capita squared, population and foreign trade to GDP ratio. For the year 2000, the predicted shares are about 20 per cent and 27 per cent respectively for India and China while the actual shares are 16 per cent for India and 35 per cent for China (ADB, 2007, pp 294).

2 That India's manufacturing growth followed a relatively capital-intensive path is evident from the much smaller growth rate of employment than capital stock and value added. During 1973-2003, registered manufacturing employment grew slowly (1.3 per cent per annum) while capital stock grew faster (7.3 per cent per annum) than manufacturing value added (6 per cent) (see Gupta et al, 2008). ❑

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YE-365/2014

The Need For 'Make In India'

Kasturi Chakrabarty
M Mishra

India is believed to have a demographic dividend wherein, the majority of our population falls in the working age group, which in itself is a double edged sword. Hence, the Government and the policy makers have started revisiting the Indian growth story, and addressing its flaws. The role and importance of the manufacturing sector comes in here both in terms of creating a self-reliant economy and in the process, generating the much needed employment

OVER THE last few years, when most of the developed countries of the world were struggling hard to get over the effects of financial recession and sovereign debt crisis, India was among the fastest growing economies of the world. Recently with the new methodology of GDP calculation released on January 31st, 2015, by the Ministry of Statistics and Programme Implementation (MOSPI), the country is believed to be the fastest growing. However, can we be in peace with this achievement? Probably no, because the benefits of this economic growth need to be well distributed among the entire society and that is where we are still lacking. The development of an economy is not solely dependent on the growth rates traced by it. It expands further to how these growth numbers have actually translated themselves into economic development by trickling down to the lower sections of society.

India is a country which has experienced a growth in GDP driven by its service sector throughout the last few decades; however, the service sector led growth has largely been jobless, thereby creating large segments of unemployed population. India is believed to have a demographic dividend wherein, the majority of our population falls in the working age group, which in itself is a double edged sword. Hence, the Government and the policy makers have started revisiting the Indian growth story, and addressing its flaws. The role and importance of the manufacturing sector comes in here both in terms of creating a self-reliant economy and in the process, generating the much needed employment.

Theoretical Perspective

It has been historically observed that the stages of growth followed by an economy to the path of development can be classified into three broad categories. The first stage is the traditional society where a majority of the workforce is involved in agricultural activities, followed by the phase of industrialization ruled by the emergence of leading manufacturing sectors that define the growth and finally, the developed economies which are led by the growth of their service sectors. This growth pattern has been largely followed by countries which constitute the developed world today, notably USA, Britain and Germany. The emerging Asian and South East Asian market economies like South Korea, China, Taiwan and Vietnam are also charting a similar growth story.

India's Sectoral Growth Pattern

India however, has taken a different course of growth, varying from the traditional growth theories. The growth rates over the plan periods have sustainably increased with small interim fluctuations. In the first few years post-independence, agriculture contributed to more than 50 per cent of India's GDP, services contributing to about 30 per cent and industry to less

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than 20 per cent of the GDP. A marked change took place in the sectoral distributions especially after the 1990's with the economy moving towards a service led growth (Chart 1).

The contribution of agriculture has been declining continuously and that of services has been increasing steeply with the share reaching nearly 60 per cent of GDP in the current years. India has charted this typical growth path, jumping directly from the agricultural sector to the service sector as the lead contributor to GDP, unlike other developed countries. During the entire period from 1951-2014, the contribution of the industrial sector to the total GDP has varied the least, being in the range of 16-26 per cent of GDP throughout. This trend for the industrial sector is a cause of concern because industry and manufacturing forms the basis of the real growth of the economy both in terms of production of goods and also in terms of employing the labour force of the country. To understand the effect of the growth and the changes in the sectoral contribution to GDP, we need to look at the employment-unemployment scenario which is a vital measure to check if the positives of economic growth are reaching all sections of the society.

Unemployment Scenario

The unemployment scenario in India continues to remain grim. Further, agriculture which now contributes to only around 14 per cent of the GDP continues to employ more than 50 per cent of the workforce, reflecting the mass of disguised labour in agriculture and also the low labour productivity. The service sector contributing nearly 60 per cent to the GDP, manages to employ only around 25 per cent of the workforce.

Table 1: The Unemployment Scenario

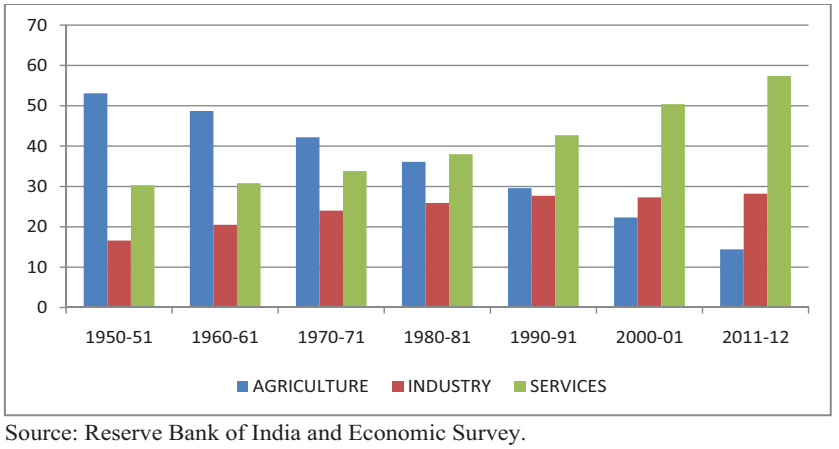
Year	Current Daily Status(CDS) unemployment rate per cent
1999-00	7.3
2004-05	8.2
2009-10	6.6
2011-12	5.6

Source: Economic Survey 2014-15

Service-led Growth

India indeed has a natural comparative advantage in services, which is explained as the splintering effect by Bhagawati, according to which, with the maturing of economies, industries tend to outsource different activities like legal and security services, research and development, etc. to specialists and this raises the share of services in GDP. Further, India has a natural advantage of low cost availability of manpower suitable for ITES. The foreign companies set up their back offices here and outsource services to the Indian companies on a large scale. Moreover, with the growth of per capita income levels in the economy, there is a larger spending on the service sectors like education, health and medical services, communication etc.

Chart 1: Sectoral Contribution to GDP (percentage share of GDP at 2004-05 prices



Source: Reserve Bank of India and Economic Survey.

Table 2: Change in Sectoral Employment Pattern

Year	Agriculture and Allied	Industry	Services
1951	72.1	10.6	17.3
1991	66.9	12.7	20.4
2009-10	53.2	21.5	25.3

From Table 2, it is seen that the employment structure of the Indian economy has not changed in tandem with the contributions of the different sectors. This analysis of the sectoral contributions to GDP and the sectoral employment patterns over time, drives us to the point that the service led growth path to development in India has enhanced the growth rates. However, it has been a jobless growth, not satisfying the larger objectives of creating an equitable development in India.

This generates the need to expand our focus from our comparative advantage of market determined service sector-led growth towards state intervention to boost the manufacturing sector in order to correct the anomalies of skewed gains from growth so far.

Manufacturing Sector: Focus

India is typical in its demography and demand patterns. The Prime Minister recently highlighted that India is a unique country with the characteristic 3Ds namely Democracy, Demand and Demography. There is a large domestic consumer base and the adequacies of domestic demands are reinforced by the good growth in per capita income. On the supply side, the proportion of economically active population in India has increased from 57.7 per cent to 63.3 per cent from 1991 to 2013 (Economic Survey 2014-15), which presents an optimum demand-supply combination for India to emerge as one of the world's manufacturing giants. The gains will be multiplied when a portion of this manufacturing activity spills over to the export sector.

Health of Indian Manufacturing

The post-independence phase of industrial production, till the opening up of the economy in early 1990's, is usually divided into three phases based on the performance of the industrial sector. Period from 1951-65 which witnessed an accelerated industrial

production (based on Mahalanobis Model); period from 1965-80 which witnessed industrial deceleration; and the period 1981-91, when some recovery in industry was registered. The period since then has been a mixed bag as far as industry in general and manufacturing in particular is concerned with growth rates averaging 5-7 per cent till the Eleventh Plan. However, the period since the Twelfth Plan (2012 onwards) has seen near stagnation in manufacturing. Economic Survey 2013-14 had observed that the two years, 2012-13 and 2013-14 were particularly disappointing for the manufacturing sector, with growth averaging 0.2 per cent per annum.

However, the survey had cautioned that the data on manufacturing growth during the last two years needs to be interpreted with care, given the possibility of revisions by the CSO. This occurs because the initial estimates of value added in the manufacturing sector are based on the IIP, while the second and the third revised estimates are based on more detailed data from the Annual Survey of Industries (ASI). The above mentioned problem of growth estimation in the manufacturing sector has been further compounded by the new series data.

Calculating with the New Base

There have been large discrepancies (of more than 5 per cent in 2012-13 and 2013-14) in the growth of the manufacturing sector figures in the new and the old methodology. These differences are more statistical than real, and can be partly attributed to more comprehensive and elaborate data set from the e-governance initiative under Ministry of Corporate Affairs under MCA 21. Also, the trade carried out by the manufacturing companies in the manufacturing sector itself has been incorporated, which earlier used to be accounted under service sector. Real growth in manufacturing was observed in textile, apparel and leather products with an average of 17.7 per cent during 2012-13 and 2013-14 (Economic Survey 2014-15).

It is pertinent to mention here that the registered manufacturing sector in India with high productivity has the potential of being the transformational sector for generating high growth. The productivity of the registered sector is 7.2 times that of the unregistered manufacturing sector (Economic Survey 2014-15).

Hindrances in the Sector

The manufacturing sector is still afflicted by problems of land acquisition, rehabilitation, multiple laws and rules to adhere to, lack of clarity for the entrepreneurs, multiple and complex process of clearances to be obtained to set-up a factory, lack of marketing strategies and export orientation, lack of infrastructure, power and water supplies. Economic Survey 2014-15 states that the manufacturing sector has one of the highest numbers of stalled projects in the last few quarters. Among manufacturing, the majority of stalled projects are in steel, cement, garments and processed food. 212 manufacturing projects are stalled due to lack of funds, demand and unfavorable market conditions.

Policies to Boost the Sector

The manufacturing sector revolves around two sets of major participants, the entrepreneurs and the workers. The Government comes in between these two, to balance and facilitate the interaction of the two segments and provide enough facilities for both sides so that the system continues to function smoothly. The policies and programmes rolled out by the Government come in this interplay and act like a catalyst for the manufacturing sector as a whole.

Why '*Make in India*'?

'Make in India' is a timely policy initiative to convert India into a global manufacturing hub. In order to attract new investments and promote manufacturing, this programme addresses the problem areas in the manufacturing sector through different channels of interventions. Some of the major interventions include the E-Biz portal enabling 24x7 applications of industrial license making the process seamless. The process of getting environment clearance has been made online. The policy has given approval to National Investment and Manufacturing Zones, wherein, the provision for single window clearance will be provided.

New Markets and Skilled Labour

The idea of developing new smart cities, industrial corridors and industrial clusters has potential for generating forward and backward linkages and promoting advanced manufacturing techniques at multiple levels. Creating market base for Indian manufactures in the world through project development companies to facilitate setting up manufacturing hubs in CMLV countries, namely, Cambodia, Myanmar, Laos and Vietnam has potential. Further, the initiative has included new youth focused programmes and institutions for skill development. A positive change has been in the form of a separate Ministry for skill development and entrepreneurship, where the ministry is actively engaging with the world, through the National Skill Development Corporation (NSDC) and National Skill Development Agency (NSDA), for acquiring new techniques of skill development for our youth. The ***Skill India*** initiative must focus on skilling the Indian youth on segments which are more labour intensive like leather, textile, food-processing, jute, sericulture, handicrafts etc. In skill development, major impetus has been given to Indian Leather Development Programme targeting to train 1,44,000 youth annually. National Manufacturing Policy (NMP) which was introduced in 2011 with a focus to boost manufacturing and a vision to create 100 million additional jobs by 2022 in manufacturing sector, would ensure that globally competitive manufacturing emerges.

High Value Industrial Sectors

The investment caps and controls on the high value industrial sector have been eased to encourage greater global participation. In the defence sector, FDI cap has been raised from 26 per

Table 3: Changes in Growth in Industry (Constant Prices) Per cent.

	2012-13		2013-14		2014-15 (Ae)	
	2004-05 Series	2011-12 Series	2004-05 Series	2011-12 Series	2004-05 Series	2011-12 Series
Manufacturing	1.1	6.2	-0.7	5.3	NA	6.8
Industry	1.0	2.4	0.4	4.5	NA	5.9

Source: Economic Survey 2014-15.

cent to 49 per cent and the portfolio investments in defense sector up to 24 per cent under automatic route. 100 per cent FDI has been allowed for modern and state of art technologies in defence, on a case to case basis. In railways, 100 per cent FDI under automatic route has been permitted in construction, operation and maintenance in specified rail infrastructure projects. These sectors can help India specialize in high value manufacturing.

Reforms: Workers/Labour Sector

The system of self- certification for all the non-risk and non- hazardous business will encourage small entrepreneurs to set up their businesses. With less than 5 per cent of our potential work force getting formal skill training, the initiative of the Government to launch the Deen Dayal Upadhyay Gramin Kaushal Yojana for rural youth should bring a change. Further, there is a need to consolidate the multiple skill development programmes spread across ministries into the National Skill Mission as pointed out by the FM in his budget speech.

Role of MSME in 'Make in India'

MSMEs can play a critical role to strengthen the 'Make in India' initiative by addressing the issues of job creation, increasing the manufacturing share in GDP and export promotion. Already, the sector contributes to around 45 per cent of the total manufacturing output and around 40 per cent of the country's exports.

There has been a sustained contribution of the MSME both in terms of output and employment, in spite of the slowdown in the economy as a whole and the manufacturing sector in particular. However, MSMEs remained a cause of concern due to the major problems faced by the sector, in particular, having limited access to capital and credit facility, lack of technology know-how, limited access, awareness and interaction with the global market, inadequate infrastructure like roads, power and water supply, multiplicity of labour laws, lack of skilled man-power for manufacturing and marketing of the products.

The major schemes run by the Government through National Manufacturing Competitiveness Programme, Credit Guarantee scheme, Cluster development, and the announcement of Micro Units Development Refinance Agency (MUDRA) bank with a corpus of 20,000 crores is a welcome step to strengthen this sector's contribution in 'Make in India'. The Apprentice Protsahan Yojana would boost the manufacturing sector of MSME. An innovative initiative is the launch of low cost and high quality MSME products on-line delivery system via www.msmeshopping.com facilitated by National Small Industries Corporation (NSIC).

Ease of Doing Business 'Make in India'

In the World Bank's Ease of Doing Business Index of 2015, the position of India is 142 out of 189 countries. It is a matter of concern that India is still far behind. Being globally competitive in the world regarding the ease of doing business.,'Make in India' has taken special care to facilitate business. Provisions of creating dedicated teams to guide and assist the first time investors and opening single window clearance systems, will boost investments in manufacturing. Furthermore, greater emphasis is being placed on a simple, certain and non-adversarial tax regime. Early roll-out of Goods and Services Tax (GST) would be a game changer in the way business will be done in India.

Way Ahead

Time is ripe for Indian manufacturers to tap on the *Go-green* phenomenon running across the world, which can be used to promote indigenous textile and jute products and also in encouraging manufacture of renewable energy equipment to generate wind and solar energy.

It is vital to strengthen the connectivity links both in the country and outside. Spreading the road, rail and waterway connectivity network and making good use of the vast coastline in India would lay strong foundations for the manufacturing sector. Work related to the dedicated freight and industrial corridor needs to be hastened as these could provide multi-level boost to manufacturing both enhancing its demand and supply sides. These will create a virtuous cycle of self-sustained demand for manufacturing.

Indigenous culture and tradition could help create employment and manufacturing. Timely protection, encouragement and promotion of ground level knowledge on a variety of art and craft and facilitating them with good marketing strategies to reach our domestic consumer base and compete globally, is required. Woolen products of Kashmir, Phulkari of Punjab, Bandhej of Rajasthan, Pochampalli of Andhra Pradesh, Jamdani and Tant of Bengal, Benarasi of UP etc. are some such indigenous styles of textiles which could be made popular across the world by creating platforms through frequent exhibitions, fairs and art shows globally. Further, the present generation is more attracted to online purchasing, hence online marketing and tie up with various online marketing companies needs to be done for all such products. These steps will help the youths to create jobs for themselves. Government, by keeping a check on the quality and facilitating to sell the products, could be creating income sources around homes in rural areas. This would ensure that the benefits of the believed demographic dividends are reaped optimally. ❑

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Table 4: Growth of MSME

Year	Percentage Share of MSME in Total Manufacturing Output	Employment in MSME (in lakhs)	Percentage share of MSME in the Total GDP
2006-07	42.02	805.23	7.73
2007-08	41.98	842.00	7.81
2008-09	40.79	880.84	7.52
2009-10	39.63	921.79	7.49
2010-11	38.48	965.15	7.42
2011-12	37.52	1011.80	7.28

Source: Annual Report of MSME 2013-14, Ministry of MSME.

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SPECIAL ARTICLE

Legal Aid in India and the Role of National Legal Services Authority (NALSA)

Manoj Kumar Sinha

The right to legal aid is basic to ensuring effective access to justice. Article 21, already identified as a non-derogable human right in the Indian Constitution, in fact, covers almost every aspect under its broad sweep. The Indian judiciary has tried to bring law into the service of the poor and oppressed

ACCESS TO justice is one of the most basic human rights and without its realisation, many of the human rights may stay merely on paper. At the international level, Article 14(3)(d) of the International Covenant on Civil and Political Rights provides:

"...the right to be tried in his presence, and to defend himself in person or through legal assistance of his own choosing; to be informed, if he does not have legal assistance, of this right; and to have legal assistance assigned to him, in any case where the interests of justice so require, and without payment by him in any such case if he does not have sufficient means to pay for it."

This provision for legal aid in Article 14(3) is set out among the minimum guarantees to which everyone is entitled, in full equality, in the determination of any criminal charge. Therefore, the right to free legal counsel is rooted in the idea of equality; however, this right is only specified in the context of the criminal justice system.

The Indian Constitution does not explicitly provide the right to free legal aid as a fundamental right. But under the "Directive Principles of State Policy", Article 39-A provides for free legal aid in all cases involving indigent persons. Article 39A of the Constitution stipulates:

"The State shall secure that the operation of the legal system promotes justice, on the basis of equal opportunity, and shall, in particular, provide free legal aid, by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disabilities.[1]"

The Supreme Court has held that legal aid to the poor and deserving is part of personal liberty as enshrined in Article 21 of the Constitution. In *M.H. Hoskot Vs. State of Maharashtra*,[2] the Supreme Court observed that free legal service for a citizen is implicit in Article 21 and an essential ingredient of a reasonable, fair and just procedure. In this case, J. Krishna Iyer, observed:

"If a prisoner sentenced to imprisonment is virtually unable to exercise his constitutional and statutory right of appeal...for want of legal assistance, there is implicit under Article 14 read with Articles 21 and 39-A of the Constitution, power [of the Court] to assign a counsel for such imprisoned individual for doing complete justice.[3]"

The author is Director, Indian Law Institute, New Delhi. He has published extensively in the field of human rights, humanitarian and refugee laws, constitutional laws in reputed national and international law journals. He is serving as the member of editorial boards of various journals. Prof Sinha holds a permanent position of Professor of Law at the West Bengal National University of Juridical Sciences, Kolkata.

In another case, *Khatri Vs. State of Bihar*,[4] the Supreme Court said that the right to free legal services is clearly an essential ingredient of a reasonable, fair and just procedure for a person accused of an offence and it is implied in Article 21. The State Government cannot avoid its constitutional obligation to provide free legal services to a poor accused by pleading financial or administrative inability. The State is under a constitutional mandate to provide free legal aid to an accused person who is unable to secure legal services on account of indigence and whatever is necessary for this purpose has to be done by the State.[5]

In *Sheela Barse Vs. Union of India*,[6] the Supreme Court held that constitutional obligations to provide free legal aid emanates from Articles 14,21 and 39A. In this case, the Court also expressed its unhappiness with the attitude of some lawyers. J. Bhagawati, clearly stressed the duty of lawyers to help people in distress. He said:

"The lawyers must positively reach out to those sections of humanity who are poor, illiterate and ignorant and who, when they are placed in a crisis such as accusation of crime or arrest or imprisonment, do not know what to do or where to go or to whom to turn. If lawyers, instead of coming to the rescue of persons in distress, exploit and prey upon them, the legal profession will come into disrepute and large masses of people in the country would lose faith in lawyers and that would be destruction of democracy and rule of law.[7]"

The Supreme Court went a step further in *Sukh Das Vs. Arunachal Pradesh*,[8] to remind the State of its constitutional obligation to provide free legal aid and brought this to its logical end. The Supreme Court said that the right of a poor person to have legal aid exists even if it is not demanded by him. Failure to provide free legal aid to an accused vitiates the trial even where legal aid was not demanded by the accused.

The Court has also brushed aside the contention that legal aid should not be made available when a person is accused of economic offences or offences relating to prostitution or child abuse. The Court felt, if the presumption that everyone is innocent unless his guilt is established is available to every accused, indigent persons accused of these offences too should be entitled to free legal aid.[9] It is now fairly settled that the right to legal aid and speedy trial are part of the guarantee of human rights envisaged by Article 21 of the Constitution of India.[10]

Legal Services Authorities Act

In pursuance of the Article 39-A, Legal Services Authorities Act, 1987(Act) was enacted. The Act was adopted to give a statutory base to legal aid programmes throughout the country. The Act was finally entered into force on 9th November 1995. On 5th December 1995, National Legal Services Authority (NALSA), a statutory body came into existence. NALSA has been constituted to lay down policies and principles for making legal services available under the provisions of the Act and to frame most effective and economical schemes for legal services. The Act establishes legal services authorities at National, State, District and Taluq levels. Section 3(2) (a) of the Act states that the Chief Justice of India shall be the Patron- in- Chief of the NALSA and a serving or retired Judge of the Supreme Court of India shall be nominated as Executive Chairman of the NALSA.[11] In each State, a State Legal Services Authority has been constituted to give effect to the policies and directions of the NALSA and to provide legal services to the people and conduct Lok Adalats in the State.[12] State Legal Services Authority is headed by the Chief Justice of the State High Court who is its Patron-has been in-Chief.[13] A serving or retired Judge of the High Court is nominated as its Executive Chairman. District Legal Services Authority is constituted in every District to implement Legal Aid Programmes and Schemes in the District level.[14] The District Judge of the District is its ex-officio Chairman.[15] Taluk Legal Services Committees are also constituted for each of the Taluk or Mandal or for group of Taluk or Mandals to coordinate the activities of legal services in the Taluk and to organize Lok Adalats.[16] Every Taluk Legal Services Committee is headed by a senior Civil Judge operating within the jurisdiction of the Committee who is its ex-officio Chairman.

The Supreme Court went a step further in Sukh Das Vs. Arunachal Pradesh,8 to remind the State of its constitutional obligation to provide free legal aid and brought this to its logical end. The Supreme Court said that the right of a poor person to have legal aid exists even if it is not demanded by him. Failure to provide free legal aid to an accused vitiates the trial even where legal aid was not demanded by the accused.

The main objective of this Act is provide free and competent legal services to the weaker sections of the society and to ensure that they are not deprived of it by reason of economic and other disabilities. The definition of "legal services", under Section 2(1) (c) of the Act, includes the rendering of any services in the conduct of any case or other legal proceeding before any court or other authority or tribunal and the giving of advice on any legal matter. NALSA is responsible for providing free legal assistance to poor and weaker sections of the society. It also provides for the organization of legal aid camps and encouraging the settlement of disputes through Lok Adalat. The Act imposed a duty on Central Authority to take necessary steps by way of social action litigation for the cause of weaker sections and give training to social workers in legal skills. It provides for clinical legal education programmes and legal aid clinics in Universities, law colleges and other institutions. The Central Authority, the State Authority

and the District Authority have been working in co-ordination with other government and non-governmental agencies and Universities to promote legal aid programmes. Section 12 of the Legal Services Authority Act, 1987 prescribes the criteria for giving legal services to the eligible persons. Legal Services Authority, after examining the eligibility criteria of an applicant and the existence of a *prima facie* case in his favour, provides him counsel at State expense, pay the required Court fee in the matter and bears all incidental expenses in connection with the case. The person to whom legal aid is provided is not called upon to spend anything on the litigation once it is supported by a Legal Services Authority. In order to provide free and competent legal service, NALSA has framed the National Legal Service Authority (Free and competent Legal service) Regulations, 2010. The salient feature of the Regulation is engaging senior competent lawyers on payment of regular fees in special cases like where the life and liberty of a person are in jeopardy.

No doubt, with the enactment of Legal Services Authorities Act, 1987, the structure for providing legal aid is now firmly in place. Since its inception, NALSA has been making sincere efforts to implement the objectives of the Legal Services Authorities Act, 1987. In addition to the court based legal aid, NALSA has been paying significant attention to conduct Lok Adalats all over the country as a part of its drive for Alternative Dispute Resolution (ADR).NALSA had conducted a large number of national regional conferences, workshops and training programmes throughout the country as a part of awareness programme. The big challenge before NALSA is how to reach to large population who are not aware of their rights because of illiteracy. Thus, it is important that NALSA should play a proactive role and provide legal services to all such people at their door steps and this can be achieved only through the involvement of neighbourhood law schools and the Non Governmental Organisations (NGOs). The information concerning the norms of law, is not accessible easily even to those who are affected by law.

Conclusion

The Act conferred permanent life and legal sanctity to the concept of the Lok Adalat as a better alternative dispute resolution system for dispensation of fair justice as per principles of natural justice, equity and good conscience. All international and regional human rights instruments and jurisprudence developed by the various human rights bodies confirm that access to justice to poor and disadvantaged through publicly funded legal aid is important human rights. Right are illusory if the State fails to provide free legal aid to indigent litigants in disputes involving the determination of rights. Simply put, in order to guarantee protected rights, the government must maintain adequate funding for legal aid. Interestingly, at the international level, the United Nations in year 2012 has adopted *the UN Principles and Guidelines on Access to Legal Aid in Criminal Justice Systems*. The Principles and Guidelines are based on the recognition that States should, where appropriate, undertake a series of measures for establishment of a properly working legal, aid system. This is the first instrument adopted at the international level to deal with legal aid. The right to legal aid is basic to ensuring effective access to justice. Article 21, already identified as a non-derogable human right in the Indian Constitution, in fact, covers almost every aspect under its broad sweep. The Indian judiciary has tried to bring law into the service of the poor and oppressed.

Endnotes

1 The Forty-Second Amendment Act 1976 included free legal aid as one of the Directive Principles of State Policy under Article 39A.

2 *M.H. Hoskot Vs. State of Maharashtra*, AIR 1978 SC 1548.

3 Ibid., p.1556.

4 *Khatri Vs. State of Bihar*, AIR 1981 SC 928.

5 Ibid., p.928.

6 *Sheela Barse Vs. Union of India*, AIR 1983 SC 378. The petition came up before the Supreme Court on complaint of custodial violence to women prisoners whilst confined in police lock up. The petitioner stated in her letter that she interviewed fifteen women prisoners in the Bombay Central Jail, five out of fifteen complained they had been assaulted by the police in the police lock up.

7 Ibid., p.380, para 2.

8 (1986)2 SCC 401.

9 Under the Legal Services Authorities Act, 1987, legal aid is available to indigent persons below certain income (the financial ceiling of legal aid varies from state to State) and to women, children, under Section 12, members of the Scheduled Castes and the Scheduled Tribes irrespective of any income.

Free legal aid is also available to:

(a) a victim of trafficking in human being or *begar* as referred to in Article 23 of the Constitution;

(b) a mentally ill or otherwise disabled person;

(c) A victim of mass disaster, ethnic violence, caste atrocity, flood, drought, earthquake or industrial disaster;

(d) an industrial worker; and

(e) a person in custody, including custody in protective home with meaning of clause (g) of Section 2 of the Immoral Traffic (Prevention) Act, 1956 or in a juvenile home within the meaning of clause (g) of the Juvenile Justice Act, 1986 or in a psychiatric hospital or psychiatric nursing home within the meaning of clause (g) of Section 2 of the Mental Health Act, 1987.

10 *State of Maharashtra Vs. Manubhai Pragaji Vashi*, AIR 1996 SC1. The prayer therein was to direct the Government of Maharashtra to extend the grant-in-aid scheme to the non-Government law colleges in the State retrospectively from April 1982.

11 At present Hon'ble Mr. Justice H.L. Dattu, the Chief Justice of India is the Patron-in-Chief and Hon'ble Mr. Justice T.S. Thakur, Judge, Supreme Court of India is the Executive Chairman of the Authority.

12 Section 6(1) of the Act

13 Section 6(2) of the Act

14 Section9(1) of the Act

15 Section9(2) of the Act

16 Section 11(A) of the Act ❑

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Labour Laws and India's Manufacturing Sector: The Need for Reforms

Devashish Mitra

...with the gradual reforms of labour regulations, not only will the political opposition to these reforms erode, the political support for such reforms will grow as workers realize that they are the biggest beneficiaries of such reforms

IN LABOUR-abundant India, labour-intensive manufacturing is concentrated mainly in small, "unorganized" or "unregistered" manufacturing firms which are rarely at the technological frontier, while most of the production activities within the "formal" manufacturing sector are capital-intensive (Panagariya, 2008 and Kochhar et al, 2006). Thus, despite its labour abundance and the large size of its population and economy, India has a small share of the world market in labour-intensive products. While some commentators have put the blame for this poor performance on India's rigid labour markets arising out of its restrictive labour regulations, others have argued that Indian businesses have found ways to get around these laws. In this article, I examine the role, if any, of labour regulations in constraining India's manufacturing sector and the possible need for labour reforms, along with some policy recommendations.

Labour Regulations in India

Rigidities in the Indian labour market mainly result from outdated labour regulations that are very restrictive in that, they make labour adjustment by firms in response to demand and technology shocks, very difficult. Among approximately 200 labour laws, including 52 Central Acts (Bhagwati and Panagariya, 2013), the most restrictive, though not the only restrictive, labour law is the Industrial Disputes Act (IDA). This Act requires firms employing more than 100 workers to seek permission from their respective state governments to retrench or lay off workers. This permission is seldom granted. In addition, the Industrial Employment (Standing Orders) Act makes job description modifications and inter-plant transfers within a firm (with more than 100 workers in some states and more than 50 in others) very difficult and virtually impossible. The Trade Union Act leads to the formation of multiple unions by allowing any seven workers within a firm to form a union. As one can imagine, the multiplicity of unions becomes a potentially difficult situation for employers to manage. The Trade Union Act also provides unions the right to strike and represent workers in legal disputes with employers. As this law requires a minimum of seven workers to form a union, it naturally does not apply to firms with less than seven workers. Thus, it encourages firms to remain very small, especially in labour-intensive industries.

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There are a number of other labour regulations, such as the Employees' State Insurance Act, the Factories Act, the Employees' Provident Fund and Miscellaneous Provisions Act, Minimum Wages Act, Maternity Benefits Act etc that become applicable at various threshold employment levels and apply to a wide variety of establishments (Bhagwati and Panagariya, 2013). These regulations specify minimum work conditions and benefits.

Finally, there is the Contract Labour Act that regulates and restricts the use of contract labour, thereby limiting the substitutability between permanent and contract workers, and restricting, at least on paper, an important channel through which, the firms can reduce costs. For certain tasks, the use of contract labour is prohibited.

Since the area of industrial relations belongs to the concurrent list of subjects of the Constitution of India, state governments have been able to make their own amendments to the IDA, even though it is a central (federal) act. Moreover, the implementation of labour laws falls within the jurisdiction of the states. Thus, there is considerable variation in labour market rigidity across states.

Recent Labour Reform Initiatives

Almost throughout the post-independence period, there have been amendments to labour laws by the states, to make those laws applicable within those states, either pro-employer or pro-employee relative to central regulations, depending on the ideological inclinations of those respective state governments. Unlike in the past, the recent changes to labour regulations are taking place in the context of attempts to attract Foreign Direct Investment (FDI), improve infrastructure and promote a more liberalized trade regime.

The State Government of Rajasthan's recent amendment raises the threshold for seeking permission from the state government for retrenching or laying off workers under the IDA from 100 to 300 workers. It also increases the threshold employment for registration of a firm under the Factories Act, which, as mentioned above, is a regulation that puts a number of stipulations on work hours, work days, minimum age requirement etc. In addition, Rajasthan is raising the minimum membership for the registration of a representative union from 15 per cent of the firm's employment to 30 per cent. Such a change can reduce productive managerial and labour time lost in building consensus and resolving conflict among multiple unions. In addition, the state government's amendment to the Apprenticeship Act will stimulate skill development, i.e., what economists call "human capital formation."

At the Centre, there has been a very little movement in the direction of labour reforms, with the burden of bringing about such reforms largely being put on the states. Among the very few important things done by the Centre in this regard is the recent setting up of a unified web portal where firms can themselves file their compliance reports pertaining to 16 central labour acts. Such a web portal is expected to have a built-in algorithm that will determine which firms need to be visited by inspectors. This is, therefore, a movement away from the Inspector Raj in that, by reducing the discretion of inspectors in this regard, harassment and rent seeking are expected to be considerably reduced. Moreover, the recent central reforms aimed to increase the portability of provident funds will encourage labour mobility as provident fund portability enables employees to transfer funds in their provident fund accounts when they change jobs. Furthermore, the modifications to the Apprenticeship Act by the current government will encourage skill formation. In addition, as mentioned in Finance Minister's recent budget speech, there is a now a new "Ministry for Skill Development" which will soon announce a number of important measures to further boost skill acquisition.

...the implementation of labour laws falls within the jurisdiction of the states. Thus, there is considerable variation in labour market rigidity across states.

It is important to note that restrictions on firing of workers also acts as virtual exit barriers. In addition, firms in India have always faced serious direct exit barriers, stemming from the lack of modern bankruptcy laws. These exit barriers, in turn, make new firms, foreign and domestic, reluctant to enter the Indian market. This problem will hopefully be made less severe by the "Bankruptcy Law Reform" through the design of a modern bankruptcy code that, according to the Finance Minister's budget speech, will bring about "legal certainty and speed," and is a top priority for him for the upcoming fiscal year.

The Impact of Labour Regulations on Economic Performance

As mentioned above, different states have brought about different kinds of amendments to centrally enacted labour laws. In addition, the degree of enforcement varies across states. This creates some variation in labour market rigidity across states that can be exploited by researchers to study how economic performance of the manufacturing sector, as seen at the firm/plant level or at the industry or even aggregate level varies across states that differ in their labour market flexibility. Besley and Burgess (2004) was the first study of this kind. Using state-level data on aggregate registered manufacturing output, investment, employment and productivity, they found that all these variables declined with pro-employee (restrictive or rigid) labour regulations. The corresponding aggregates for informal (unregistered) manufacturing showed the opposite relationship with such labour regulations, showing that the informal sector picks up the growth that is suppressed by labour market rigidities in the formal sector. Subsequent studies extend this work further by using more disaggregate data.

Hasan, Gupta and Kumar (2009) is a study at the level of industry by state. They find that states with relatively restrictive labour regulations have

experienced slower growth of labour-intensive industries and their overall employment than have other states. An even more disaggregate study is by Hasan and Jandoc (2013), where they pool data on formal and informal manufacturing firms. They find virtually no difference in the firm employment distribution between restrictive labour states and others. However, when they restrict focus to only labour-intensive sectors, the employment share of firms with 0-9 employees is much higher in the restrictive labour regulation (pro-worker) states than other (pro-employer) states (about 60 versus 40 per cent). The ranking is reversed for firms falling in the category of 200-plus employees (roughly 10 versus 25 per cent). They find nothing as striking when they perform a similar comparison between high- and low-infrastructure states. One interesting finding of their study is that while employment in the Indian apparel industry is concentrated in small firms (employing less than 9 workers each), in the Chinese apparel industry, it is concentrated in very large firms (each employing more than 2000 workers).

A recent paper by Dougherty, Frisancho Robles and Krishna (2014), using plant-level data along with the OECD employment protection measure (considered by them to be the most comprehensive with respect to coverage of both formal and informal sectors and the various acts and their implementation and monitoring) shows that total factor productivity in firms in labour-intensive industries as well as in industries facing highly volatile demand (requiring frequent input adjustments) was on average about 11-14 per cent higher in the states with less restrictive labour laws compared to others.

Labour Regulations and Globalization: Theory and Evidence

Given the above evidence on the negative effects of restrictive labour regulations, it is not surprising that labour-intensive enterprises in India are not growing rapidly despite major reforms in India's trade and foreign direct investment regimes, ending of small scale reservation in labour intensive industries, delicensing and the expiration of the Multi-Fiber Arrangement (See Bhagwati and Panagariya, 2013). Moreover, unskilled labour intensive sectors such as food and beverages, apparel, textiles, furniture etc have had a constant or even a slightly declining share in GDP over the last two decades, while skill-intensive and capital-intensive industries such as automobiles, petroleum, refining, engineering goods, telecommunication, pharmaceuticals, finance, software etc., have grown much faster and have increased their shares in India's exports from 41 per cent in 1990-91 to 65 per cent in 2007-08 (Das, Wadhwa and Kalita, 2009). On the contrary, given India's abundance in labour, trade liberalization (which normally leads to specialization in activities intensive in the use of the abundant inputs or factors of production) should have led

The small size of labour-intensive firms prevents them from reaping economies of scale, thereby lowering India's comparative advantage in labour-intensive manufacturing.

to the expansion of labour-intensive manufacturing relative to the rest of the economy. In fact, India has been losing world market share in apparel slowly to Bangladesh and quite rapidly to China. As mentioned above, while employment in the Chinese apparel industry is concentrated in very large firms (each employing more than 2000 workers), in the Indian apparel industry, it is concentrated in small firms (employing less than 9 workers each), thereby leading to the sacrifice of significant economies of scale. Unsurprisingly, India's performance in the apparel sector is considerably worse than that of Bangladesh, a much poorer country with a higher poverty rate, worse infrastructure and higher corruption levels. This comparison is highly suggestive of the negative role played by India's rigid labour regulations.

How do rigid labour regulations affect India's comparative advantage and the performance of labour-intensive firms in India relative to those in other parts of the world? Apart from directly raising labour costs, rigid labour regulations constrain the size of firms, as explained above (see Panagariya, 2001). The small size of labour-intensive firms prevents them from reaping economies of scale, thereby lowering India's comparative advantage in labour-intensive manufacturing.

Contrary to the inferences recently made by some commentators[1], the absence of bunching of firms at the employment thresholds associated with these laws does not mean that constraints imposed by these regulations are not binding. In labour-intensive firms, the selection of technology or product type requiring large-scale production might be discouraged by such regulations. The smaller-scale production techniques or product types that firms are pushed to choose by these regulations might have an optimal employment size that is much smaller than, for instance, the IDA threshold. Additionally, there is imperfect enforcement of these regulations. This means that small violations of the legal thresholds might either go unnoticed or disregarded by the inspectors.

Restrictive labour regulations prevent firms from making the required adjustments to their inputs in response to shocks to demand and technology. In the presence of trade, this can handicap domestic firms relative to firms in countries where labour market rigidity is not a problem. The realization of the beneficial effects of trade requires both substantial amounts of labour reallocation across industries as well as across firms within an industry. Both types of reallocation, inter- as well as intra-industry, are constrained by restrictive labour regulations. These laws also discourage firms from employing a large number of permanent workers and steer them towards employing more casual or contract workers, who have limited incentive to learn on the job and acquire firm-specific skills. In addition, these regulations will also

steer firms towards substituting capital for labour, i.e., they will end up using more capital-intensive techniques of production and produce relatively more capital-intensive varieties of products within each industry. Thus, these labour laws will be working against India's factor abundance based comparative advantage, which is in labour-intensive manufacturing, and will constrain its gains from trade.

We next turn to the empirical evidence regarding the interaction between international trade and labour laws and the impact of this interaction in determining firm performance. Mitra and Ural (2008) find a productivity increasing effect of trade reforms across various two-digit industries across the 15 largest states for the period 1988-2000, with this impact being 33 per cent greater than the rest in the relatively flexible labour market states. Qualitatively, similar effects are also found in the case of employment, output, value added, capital stock and investment. It is, therefore, not surprising that Sundaram, Ahsan and Mitra (2013) find that trade liberalization boosts employment, output and value added more in the rigid labour market states (as compared to the flexible labour market states) for informal enterprises with more than five workers. This indicates that the trade-induced growth of formal manufacturing that is constrained by restrictive labour regulations is picked up to a certain extent by the informal manufacturing sector.

As explained above, the relationship between trade and labour regulations can be further understood by looking at the impact of the latter on factor intensities, since it is factor intensities in combination with factor abundance that determines comparative advantage and specialization under trade and, in turn, the gains from trade. Looking across industries and countries over time, Hasan, Mitra and Sundaram (2013a) find that labour market imperfections, arising from restrictive labour regulations, in particular, the combination of hiring and firing regulations, minimum wage regulation and unemployment benefits, are associated with an increase in capital intensity in the various industries of the manufacturing sector, in particular, the unskilled labour intensive industries and industries whose demand and technology are volatile enough to demand frequent labour adjustments. Therefore, not surprisingly, Hasan, Mitra and Sundaram (2013b) find that India uses more capital-intensive techniques of production than predicted by its level of development than those used by China in many industries including paper and printing, leather, rubber and plastics, chemicals, non-metallic minerals, base metals, metal products, electrical equipment and instruments, petroleum etc.

Another important labour-market variable which we find that is affected by the interaction of trade and labour market rigidity is the unemployment rate. Hasan, Mitra, Ranjan and Ahsan (2012) find evidence for an unemployment reducing effect of trade liberalization in states with flexible labour markets, with roughly 37 per cent of the actual unemployment decline being possibly attributed to trade liberalization. These results on unemployment are consistent with the results of the study of Hasan, Mitra and Ramaswamy (2007) using two-digit industry level data by state for the period 1988-1997 which finds that trade reforms led to a statistically significant increase in the responsiveness of employment reductions to wage increases, with this responsiveness and the increase in it (due to trade liberalization) relatively greater in states with flexible labour markets (those with less restrictive labour laws). As Rodrik (1997) has argued, this responsiveness inversely reflects the bargaining power of workers which diminishes due to trade liberalization. One channel is quite direct and arises due to cheaper and a larger variety of inputs that can compete with the services of domestic labour after trade liberalization. The other channel is more subtle and arises from the fact that domestically produced goods face more competition from goods produced abroad after trade liberalization. This means that any wage increase, that leads to a cost increase and in turn, a price increase, now leads to a much bigger reduction in quantity of output demanded and, therefore, in employment. This might diminish negotiated wages, which most models of unemployment would predict to lead to a decline in unemployment. This channel is expected to work to its full potential in the presence of a relatively flexible labour market.

Policy Recommendations and Implications

There is clearly an overwhelming evidence to support the view that India's outdated and restrictive labour regulations are a serious impediment to growth of its manufacturing sector, especially the relatively labour-intensive industries within that sector. These regulations constrain the firms by curtailing their size and depriving them of significant potential economies of scale. They also force them to adopt relatively capital-intensive techniques of production and to choose the production of capital-intensive varieties of products within each industry, thereby making them go counter to India's factor-abundance based comparative advantage. Furthermore, these laws encourage the use of temporary workers who have no incentive to learn on the job and in whom, the firms have no incentive to invest. Thus, Indian manufacturing firms, especially in labour-intensive industries such as textiles and apparel, are seriously disadvantaged relative to their counterparts in China, Bangladesh, Vietnam etc where labour markets are much more flexible.

As is obvious, the only way to provide good jobs to India's vast working population is by expanding labour-intensive manufacturing. While the services sector in India recently has been expanding rapidly, it cannot be its main engine of growth beyond a point since it will run into the constraint imposed by the limited availability of educated workers. The transformation of the work force needed for sustained services-led growth to take place will take decades. Thus, labour regulations have the need to be reformed.

What kind of labour reforms are needed? While raising the IDA threshold employment from 100 to 300, as has been done in Rajasthan, might be useful, it should be further raised in steps to much higher levels, with the threshold ultimately completely done away with. And reforms need to go beyond Chapter VB of the IDA, which most commentators usually focus on. As regards the amendment of the Chapter VB of the IDA itself, Bhagwati and Panagariya (2013) suggest excluding, from the definition of retrenchment, the downsizing of employment in response to a shrinking demand or a change in technology and the non-confirmation of a worker on probation. Furthermore, they argue that the Industrial Employment (Standing Orders) Act should be modified to allow greater flexibility in moving a worker across tasks for which he/she is qualified.

I would recommend that multiple unions within a firm be disallowed as they can lead to messy situations resulting in huge productivity losses. As mentioned above, the newly initiated self-reporting of compliance with regulations on web portals is expected to end the Inspector Raj. The number of regulations covered under this scheme needs to be expanded.

While the economic costs of India's restrictive labour regulations are widely recognized, their reforms are viewed by most as politically not viable. Labour unions are viewed as politically very organized and pivotal in the political process. However, recent empirical evidence suggests that this political constraint need not be taken as given. For example, there is evidence now that greater trade openness has led to a decline in the bargaining power of formal sector workers in India, as well as to their deunionization in the form of declining union membership and union presence (see Ahsan and Mitra, 2014 and Ahsan, Ghosh and Mitra, 2015). Thus, with the gradual reforms of labour regulations, not only will the political opposition to these reforms erode, the political support for such reforms will grow as workers realize that they are the biggest beneficiaries of such reforms.

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Endnotes

1 See for instance Bardhan (2014) and Amirapu and Gechter (2014). See also Bhagwati and Panagariya (2013) for a counterargument to these inferences. The counterargument I provide in this article is effectively the same (only explained slightly differently). ❑

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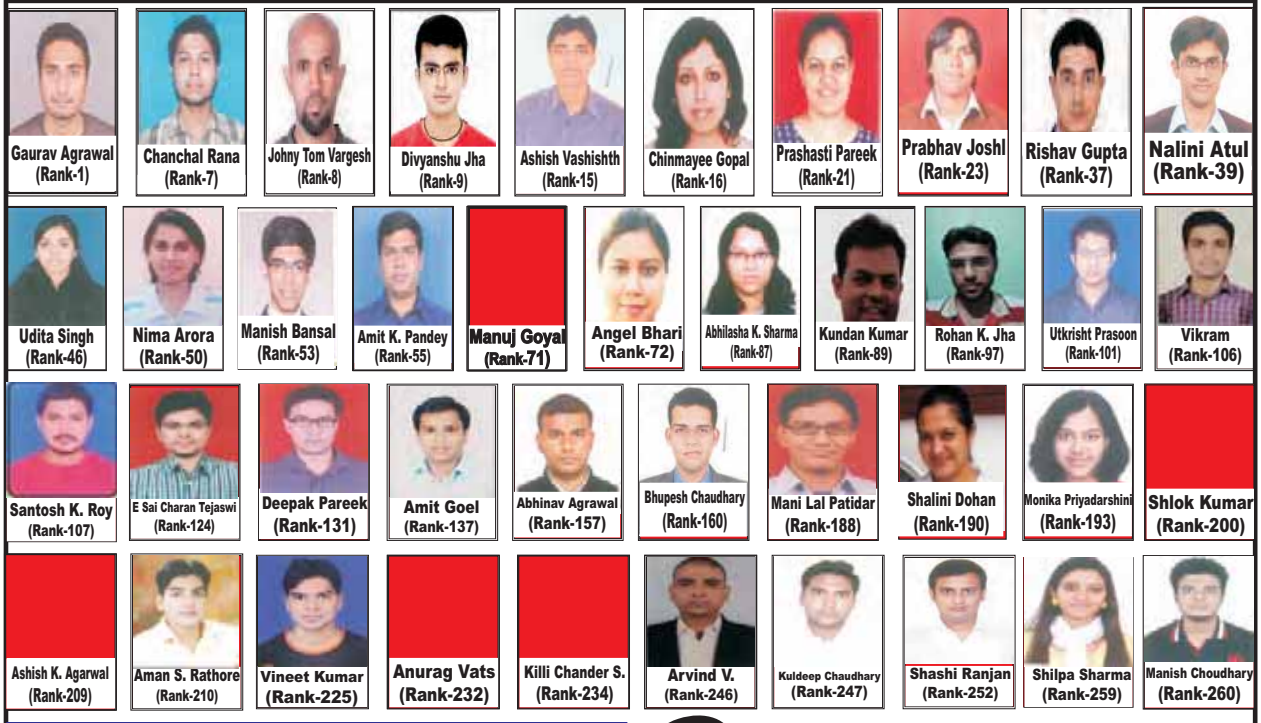

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Hi-Tech Manufacturing in India: An Unleashed Potential

Anand Sharma
Veerpal Kaur

Clearly, China has emerged as a manufacturing powerhouse in the recent years overtaking all the major economies of the world. The success of China's manufacturing is to some extent based on the increasing exports of hi-tech products. Given the significance of hi-tech exports in a nation's export portfolio, there should be a conscious effort by Indian policy makers to frame policies which raise India's share of hi-tech products

THE NEW government has been promoting the "Make in India" initiative since the very beginning of its formation in the last May 2014. The major objective of this campaign is to re-invigorate Indian economy by making India a "manufacturing hub" and to create more output and ample opportunities for employment. Under the 'Make in India' policy, the government aims to raise the share of manufacturing in GDP to 25 per cent till 2025 which has been stagnant at 15-16 per cent during the last two decades. India has been an outlier in the process of structural change with growth and share of services (57 per cent) overtaking the industrial sector (24.8 per cent) at the very early stage of the growth process. The slow growth of the industrial sector in India can be attributed to slow growth in it's manufacturing sector. According to Economic Survey 2014-15, the manufacturing sector continues to remain tepid; registering growth of 1.2 per cent in April-December 2014-15.The low growth in manufacturing is mainly due to the high rate of interest, infrastructure bottlenecks, and low domestic and external demand. The slow growth of manufacturing is very disappointing for the economy as a whole. India's manufacturing share (1.5 per cent) seems almost non-existent in relation to the world, whereas China's manufacturing has a share of around 14 per cent in total world manufacturing. One of the reasons for it is the less importance of hi-tech manufacturing in the production structure of Indian manufacturing

The new government has been trying to revive the performance of manufacturing sector as this sector has the capability to act as engine of growth and take the economy from low-income to high-income status. This is also evident from the industrial revolution which took place in England that resulted in a significant increase in per capita incomes and living standards. Kuznets also highlighted the structural transformation of an economy from primary to secondary and tertiary sector which is associated with modern economic growth. When structural transformation takes place in an economy, the trade composition of an economy also undergoes a change. This dynamic comparative advantage is well-illustrated by the success

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stories of South Korea, Singapore and more, recently China. In this context, manufacturing exports play an important role in fostering the growth and efficiency of the manufacturing sector and the entire economy. These exports are a source of foreign exchange earnings, technological spill overs, economies of scale and increased foreign direct investment (Lall, 2000). So if government really wants to implement successfully 'Make in India' programme, it will have to focus on promoting skill-intensive manufacturing as it insulates ample dynamism for faster growth of the economy and improves the export structure making it competitive on the international scale.

Manufacturing exports from an economy can be of varying technological intensity viz. low, medium and high-technology. Manufacturing giants like China, Germany, and the U.S. have been successful in shifting their export composition from low to medium and hi-tech products. Hi-tech products have been considered as the largest source of foreign exchange earnings (Agarwal, Gupta & Gandhi, 2004), and skilled job creation (EXIM Bank, 2014). The empirical literature has also established the positive effects of hi-tech intensity exports on the growth of manufacturing exports (Krugman, 1995; Lall, 1999). The importance of a diversified export structure is particularly important for developing countries like India. Although India manufactures all kinds of products from low technology unskilled labour intensive to high technology capital intensive, still it's a non-existent player in the global market and lags far behind its immediate neighbour China and other Asian economies. One of the reasons for poor performance of Indian exports in global markets is that India still needs to work on its high technology exports. High-technology exports are more competitive with regard to global standards, have elastic demand and generate much more revenue as compared to other categories of exports.

Table 1: 10 Largest Countries for Manufacturing Value Added

Rank	Percent of World Manufacturing in 2012	2012	2002	1992
1	22.4	China	U.S.	U.S.
2	17.4	U.S.	Japan	Japan
3	9.7	Japan	China	Germany
4	6	Germany	Germany	Italy
5	2.8	Korea	Italy	France
6	2.4	Italy	U.K.	U.K.
7	2.3	Russia	France	China
8	2.2	Brazil	Korea	Russia
9	**2.1**	**India**	Mexico	Spain
10	2	France	Canada	Canada

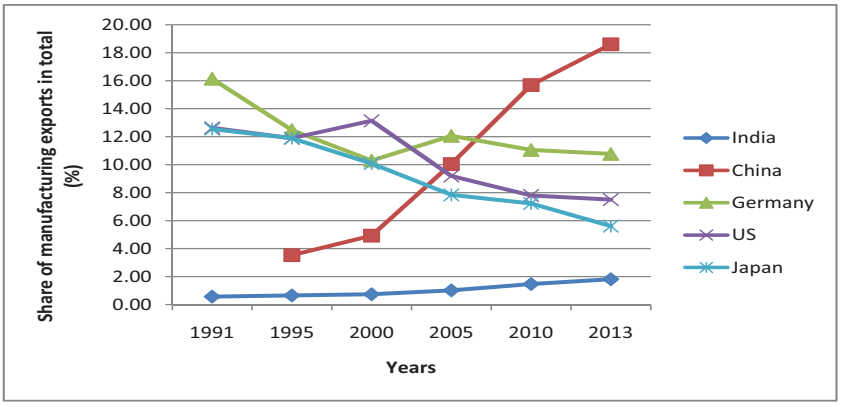
Source: MAPI

India's Position in World Manufacturing

Table 1 shows that India occupies an insignificant share in the world manufacturing with a share of 2.1 per cent in 2012. China has overtaken the developed economies like U.S., Japan and Germany to become the leader in world manufacturing with a share of 22.4 per cent in 2012. The four emerging economies of BRICS countries appear on the list for 2012. Next, we analyze share of manufacturing exports in total manufacturing exports of the world from India, China and some developed economies of the world.

For assessing India's performance in the context of other countries of the world, we have compared it with 21 major exporting countries from each strata of development i.e., underdeveloped, developing and developed. Figure 1 shows the share of manufacturing exports in total manufacturing exports from India and other major countries of the world. It is clear that India's share has remained insignificant in total manufacturing exports of group of countries considered rising marginally from 0.57 per cent in 1991 to 1.81 per cent in 2013. By contrast, China's share was the highest at 18.6 per cent in 2013. This figure highlights the growing strength of China in the manufacturing exports. Except China and India, all other countries have registered a decline in their share of manufacturing exports over the period 1991 to 2013. More interesting is

Figure 1: Share of Manufacturing Exports in Total Manufacturing Exports of World



Source: Calculated from WITS UN-Comtrade.

Appendix

A1: Share of Manufacturing Exports in World Manufacturing Exports

Countries	1990	1995	2000	2005	2010	2013	Rank in 2013
China		3.53	4.92	10.04	15.69	18.60	1
Germany	16.14	12.47	10.29	12.05	11.05	10.76	2
USA	12.63	11.89	13.14	9.19	7.79	7.50	3
Japan	12.54	11.89	10.08	7.84	7.23	5.61	4
Korea Rep	2.76	3.23	3.47	3.70	4.38	4.31	5
France	7.35	6.33	5.36	4.99	4.25	3.91	6
UK	6.74	5.41	4.97	4.24	3.04	2.84	7
Singapore	1.71	2.79	2.64	2.66	2.70	2.58	8
India	**0.57**	**0.65**	**0.74**	**1.02**	**1.47**	**1.81**	**9**
Switzerland	2.72	2.15	1.57	1.68	1.80	1.80	10
Malaysia	0.72	1.55	1.77	1.51	1.42	1.24	11
Hungary		0.24	0.54	0.76	0.83	0.79	12
Russian fed			0.56	0.65	0.60	0.78	13
Indonesia	0.41	0.65	0.79	0.58	0.62	0.61	14
Israel	0.48	0.48	0.58	0.51	0.58	0.55	15
Philippines		0.32	0.98	0.82	0.42	0.44	16
SA	0.55	0.39	0.58	0.58	0.43	0.38	17
Costa Rica		0.02	0.08	0.07	0.06	0.06	18
Malta	0.05	0.05	0.05	0.03	0.03	0.02	19
Kenya	0.01	0.01	0.01	0.02	0.02	0.02	20
Cyprus	0.01	0.01	0.00	0.00	0.00	0.00	21

Source: Calculated from WITS UN-Comtrade

A2: Share of Hi-tech Exports in Total Manufactured Exports of the Country

Countries	1990	1995	2000	2005	2010	2013	Rank in 2013
Philippines		39.3	73.4	73.5	61.8	56.4	1
Singapore	50.7	63.5	68.7	61.1	58.2	53.4	2
Malaysia	48.3	54.8	65.4	58.7	54.8	51.5	3
Malta	47.9	61.6	71.9	52.3	49.0	42.5	4
Costa Rica		3.7	51.9	38.8	35.6	39.8	5
China		15.3	25.3	36.2	37.2	35.5	6
Korea Rep	22.2	33.5	39.8	38.9	35.4	32.9	7
Hungary		13.9	31.5	34.3	38.0	27.0	8
France	17.1	20.8	25.4	20.4	24.2	25.4	9
Israel	18.0	20.1	26.7	16.7	22.8	23.6	10
Switzerland	13.1	15.2	16.7	17.8	21.4	22.9	11
Japan	28.1	32.6	32.9	25.6	22.0	20.9	12
USA	35.1	33.4	36.8	30.4	22.1	20.0	13
Germany	14.8	16.8	20.4	19.1	19.3	18.9	14
UK	22.4	29.0	31.2	24.4	17.2	16.6	15
Indonesia	2.5	7.7	20.8	17.8	15.3	13.1	16
Russian fed			10.1	8.6	10.1	11.6	17
India	**3.3**	**3.7**	**4.0**	**4.3**	**7.5**	**8.2**	**18**
SA	4.8	7.6	7.5	6.4	7.0	7.7	19
Cyprus	0.5	0.8	1.4	6.5	30.4	6.0	20
Kenya	4.8	2.5	1.2	2.3	6.7	4.9	21
World	20.3	23.8	28.8	25.0	24.8	24.0	

Source: Calculated from WITS UN-Comtrade

Table 2: Share of Hi-Tech Exports in Total Hi-Tech Exports of World: Major Countries

Countries	1990	1995	2000	2005	2010	2013	Rank in 2013
China		2.27	4.32	14.55	23.55	27.56	1
Germany	11.77	8.78	7.30	9.18	8.59	8.48	2
USA	21.88	16.67	16.79	11.16	6.96	6.27	3
Korea Rep	3.03	4.55	4.79	5.76	6.25	5.91	4
Singapore	4.27	7.45	6.28	6.48	6.34	5.75	5
Japan	17.38	16.30	11.51	8.02	6.41	4.90	6
France	6.21	5.53	4.73	4.08	4.16	4.15	7
Malaysia	1.72	3.58	4.01	3.55	3.13	2.66	8
UK	7.44	6.60	5.38	4.14	2.12	1.97	9
Switzerland	1.76	1.37	0.91	1.20	1.55	1.72	10
Hungary		0.27	0.90	1.41	1.70	1.02	11
Philippines		0.62	3.02	2.10	1.03	1.01	12
India	**0.09**	**0.10**	**0.10**	**0.18**	**0.44**	**0.62**	**13**
Israel	0.42	0.40	0.53	0.34	0.53	0.54	14
Russian fed			0.20	0.23	0.24	0.38	15
Indonesia	0.05	0.21	0.57	0.41	0.38	0.33	16
SA	0.13	0.13	0.15	0.15	0.12	0.12	17
Costa Rica		0.00	0.15	0.10	0.08	0.11	18
Malta	0.11	0.13	0.12	0.07	0.05	0.04	19
Kenya	0.00	0.00	0.00	0.00	0.01	0.00	20
Cyprus	0.00	0.00	0.00	0.00	0.00	0.00	21

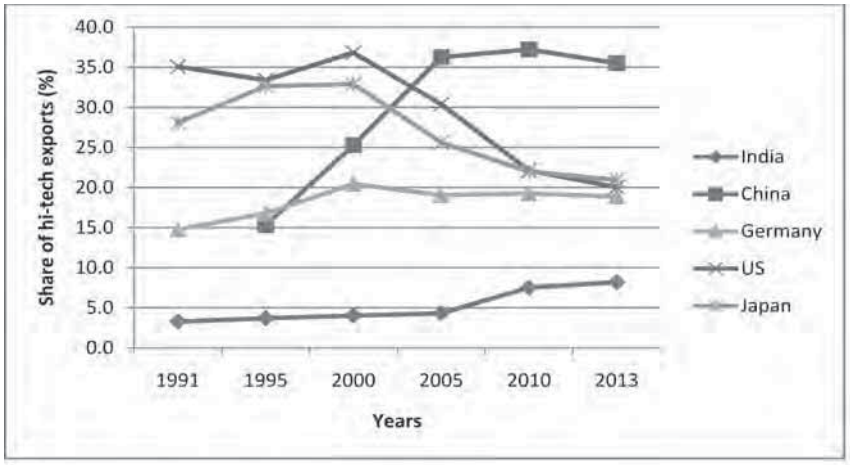
Source: Calculated from WITS UN-Comtrade.

the steep rise in China's share in last 13 years whereas India has shown a marginal increase over the same period. Therefore, it is no surprise that China ranks at no. 1 while India ranks at no. 9 in the share of manufacturing exports in total manufacturing exports of the world in 2013[1].

Table 2 shows the share of hi-tech exports in total hi-tech exports of the world for 21 countries of the world. The dominant position of China in the export of hi-tech products is clear. The share of China was highest in 2013 at 27.56 per cent of the total hi-tech exports of the world. The striking feature is the marked increase in this share between 2000 and 2013. Developed countries like Germany, U.S., and Japan were ahead of China in 1995, but their share is much lower than China in the recent years. India ranks at no. 13 in 2013 with a share of 0.62 per cent. This share has increased marginally from 0.09 per cent in 1990 to 0.62 per cent in 2013. Therefore, it is clear that India has a miniscule share in the total hi-tech exports of the world. This negligible share should be taken seriously by the Indian policymakers and policies should be framed to raise this share to a significant level.

Figure 2 shows the share of hi-tech exports in the total manufacturing exports from India and other countries from 1991 to 2013. In the case of India, hi-tech exports comprised only 3.3 per cent of the manufacturing exports in 1991. The share has shown

Figure 2: Share of Hi-tech Exports in Total Manufactured Exports of the Country



Source: Calculated from WITS UN-Comtrade

a rising trend, but the rate of increase has been slow. This share rose to 8.2 per cent in 2013. Of the five countries listed in the figure, China's share of hi-tech exports was highest[2] in 2013 at 35.5 per cent. The share of U.S. and Japan has shown a downward trend over the last decade. Germany's share has shown stagnation over this period. By contrast, China's share of hi-tech exports increased substantially between 1995 and 2005 and it has increased marginally thereafter. It appears that the decline in hi-tech exports of developed countries like U.S. and Japan has been appropriated by China. Clearly, China has emerged as a manufacturing powerhouse in the recent years overtaking all the major economies of the world. The success of China's manufacturing is to some extent based on the increasing exports of hi-tech products. Given the significance of hi-tech exports in a nation's export portfolio, there should be a conscious effort by Indian policy makers to frame policies which raise India's share of hi-tech products.

Comparing Hi-Tech Manufacturing in India and China

As seen in the analysis above, China has taken the lead in the global market. India and China share a lot of similarities like both have large domestic markets, both started from the same level of economic development in 1980s and both moved on the path of liberalization after facing low development by following socialist regime. Here we have made a comparative analysis of structure and revealed comparative analysis (RCA) of hi-tech exports of India and China.

Table 3 illustrates the structure of hi-tech exports in India & China over 1995-2013.Hi-tech exports are classified into two types: HT1 & HT2, following Lall (2000). HT-1 products include electronic & electrical products and HT-2 include other hi-tech products. For China, in the category of HT-1 products, the share of rotating electric plant (716), office machines (751), parts for office machines (759), television receivers (761), electrical power machinery parts (771) and electrical machinery apparatus (778) have shown a declining trend over the period 1995-2013. On the other hand, automatic data processing equipment (752), telecommunication equipment parts (764) and transistors valves (776) have shown an increasing trend over this period. Similarly, in the case of India, rotating electric

Table 3: Structure of Hi-Tech Exports in India and China: 1995-2013

RCA		China			India		
	HT-1 Products	**1995**	**2002**	**2013**	**1995**	**2002**	**2013**
716	Rotating Electric Plant	6.7	3.2	2.7	5.2	9.6	1.7
718	Oth. Powr. Genrtng. Machnry	0.2	0.1	0.3	0.5	1.4	10.8
751	Office Machines	5.3	2.7	2.9	1.1	0.9	0.6
752	Automatic.Data Proc.Equip	14.3	24.9	24.8	14.1	11.3	3.2
759	Parts, for Office Machins	10.3	17.2	5.6	18.5	10.6	3.3
761	Television Receivers Etc	5.0	3.0	3.2	5.7	3.2	3.2
764	Telecomm.Equip.Parts Nes	25.2	24.8	30.5	14.1	8.7	42.1
771	Elect Power Machny.Parts	9.6	5.2	4.2	7.0	9.1	11.1
774	Electro-Medical,Xray Equip	0.3	0.3	0.4	2.4	13.4	3.9
776	Transistors,Valves, Etc.	8.1	9.0	17.4	15.4	12.2	5.2
778	Electric. Mach. Appart. Nes	14.9	9.7	7.8	16.0	19.6	15.0
		China			**India**		
	HT-2 Products	**1995**	**2002**	**2013**	**1995**	**2002**	**2013**
525	Radio-Active Materials	7.3	3.9	1.0	0.1	0.1	0.1
541	Medicines, etc. Exc. Grp542	38.1	31.1	13.5	18.4	24.7	12.7
542	Medicaments	9.7	4.7	4.3	76.0	63.3	59.1
712	Steam Turbines	0.2	0.6	2.0	0.6	1.6	0.5
792	Aircraft, Assoctd. Equipnt	4.3	6.7	2.8	1.0	5.1	22.6
871	Optical Instruments, Nes	8.4	18.2	56.7	0.2	0.2	0.1
874	Measure, Control Instrmnt	11.8	18.5	18.2	3.6	4.5	4.6
881	Photograph Appar. etc.Nes	20.3	16.3	1.4	0.2	0.5	0.2

Source: Calculated from WITS UN-Comtrade

Table 4: Revealed Comparative Advantage of India & China in Hi-Tech: 2013

HT1			
RCA		**China**	**India**
716	Rotating Electric Plant	1.1	0.6
718	Oth. Powr. Genrtng. Machnry	0.5	0.4
751	Office Machines	2.3	0.1
752	Automatc. Data Proc. Equip	2.8	0.1
759	Parts, For Office Machins	1.5	0.1
761	Television Receivers Etc	1.5	0.2
764	Telecomm. Equip. Parts Nes	2.4	0.5
771	Elect Power Machny.Parts	1.8	0.7
774	Electro-Medcl,Xray Equip	0.4	0.5
776	Transistors,Valves, etc.	1.2	0.1
778	Electric. Mach. Appart. Nes	1.3	0.3
HT2			
525	Radio-Active Materials	0.3	0.1
541	Medicines, etc. Exc. Grp542	0.3	0.8
542	Medicaments	0.1	1.9
712	Steam Turbines	1.0	0.7
792	Aircraft, Assoctd. Equipnt	0.1	1.3
871	Optical Instruments, Nes	2.1	0.0
874	Measure, Control Instrmnt	0.4	0.3
881	Photograph Appar. etc.Nes	0.8	0.3

Source: Calculated from WITS UN-Comtrade

plant (776), office machines (751), automatic data processing equipment (752), parts for office machines (759), television receivers (761), transistors valves (776) and electrical machinery apparatus (778) exhibit a declining trend. In India major share in HT2 is contributed by medicaments (59.1 per cent) and aircraft and related equipments(22.7 per cent). Medicaments can basically be considered as a capital intensive sector whereas aircraft and related equipment is a skill based labour intensive sector.

Table 4 shows the revealed comparative advantage in high-tech exports for India & China for 2013. In this paper, we have used Blassa's (1965) measure of relative export performance of a country defined as a country's share in world exports of a particular commodity divided by its share in total world exports. In the category of HT-1 products, RCA (Revealed Comparative Advantage) of China is higher than India for all the products. This highlights the dominance of China over India in the export of hi-tech products. However, the RCA of India is slightly better in HT-2 exports. India has RCA only in Medicaments (542) and Aircraft (792) etc.

Conclusion & Policy Implications

The analysis presented here showed the various aspects of manufacturing exports giving an emphasis to hi-tech exports. In high tech products sectors like telecom equipment, power generating machinery, electrical apparatus, pharmaceuticals and aircraft components can be considered as major sectors which are contributing high shares to hi-tech exports of India. Out of these sectors except pharmaceuticals, all other sectors are skill based labour intensive sectors which can help to take advantage of growing youth population of India. China shows more diversified export structure of hi-tech products in terms of revealed comparative advantage as compared to India. To diversify its export structure India will have to concentrate more on increasing value added skill intensive manufacturing. As of now R&D expenditure of India is very low, it was just 0.7 per cent of GDP in 2012. For developing pharmaceutical sector, more R&D and labs should be opened. For telecom sector more incentives should be given to modernization of technology. Finance enables and favorable tax structure should be formularized for the identified sectors. Foreign Direct Investment should be enhanced and major technology players in international market should be encouraged to play in Indian market.

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Endnotes

1. See Appendix table A: 1 for details on the ranking of various countries.
2. Philippines ranks at no. 1 with the maximum share of hi-tech exports in manufacturing exports in 2013. The detailed ranking of several other countries is presented in Appendix table A:2. ❑

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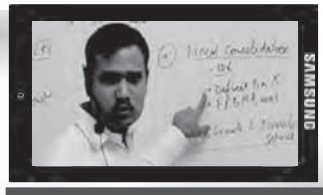

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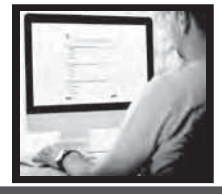

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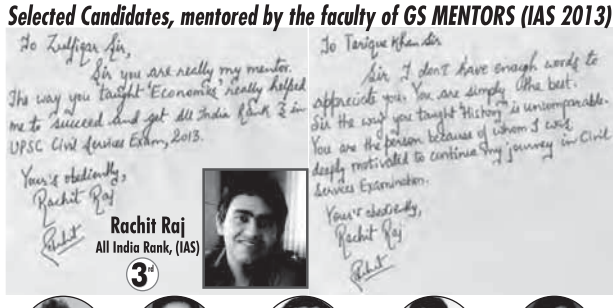

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YE-367/2014

Intellectual Property Issues in Fast Moving Consumer Goods (FMCGs) in India

Ashwini Siwal

India has become an open market where foreign investors are being invited through coveted schemes like "Make in India" to invest in manufacturing, automobiles, Food Processing etcetera. Given this fact that new food processing units, manufacturing units are going to be established in India in the ensuing time and the Indian rules and laws will remain applicable to the issues related to IP in these manufacturing units, it is highly incumbent on the Government to give some impetus to the anti-counterfeiting measures in India especially IP related issues so that maximum fruits can be reaped of schemes like Make in India

PRODUCTS LIKE soft drinks, toiletries, pharmaceutical drugs, packed eatables such as frozen meat etc., dairy products and baked goods are termed as fast moving consumer goods (hereinafter FMCGs) or consumer packaged goods. These are non-durable goods to be sold in shops and supermarket shelves at relatively lower costs. FMCGs business drives on branding and brand protection. Brand plays a key role in the identification of source/ manufacturer of goods. Brand strategy plays a primordial role in product identification and goodwill association. But look-alike and counterfeit drugs having identity (either Phonetic or ocular) with the original goods can cause confusion in the mind of the consumers who normally possess imperfect recollection. In India, 80 per cent of consumers get duped while buying FMCGs into believing that they are buying authenticate/original goods; says a report of Federation of Indian Chamber of Commerce and Industry.

Protecting the brand from pirated and counterfeited goods is a growing global challenge. Indian FMCG market is not an exception to this problem. The fact that India has a huge FMCGs market base i.e USD 44.9 billion recorded in 2013 which is expected to grow to the tune of USD 135 Billion by 2020, poses a great challenge so far as the responsibility on the shoulders of the government and on the industry to remain prepared with anti- counterfeiting measures to tackle with the egregious problem of piracy and Intellectual Property violation is concerned. The fact that new entrants in the marketplace strive really very hard to make their niche in the market multiplies the problem of counterfeiting and piracy in FMCGs sector. In India, the appetite for packaged goods among consumers even in the villages has seen a tremendous increase in last few years, which has led to the growth of incidents of piracy and counterfeiting. Processed food industry has also grown phenomenally in the last few years which adds to the already existing problem of counterfeiting in FMCGs.

Intellectual Property regime all over the world has brought new epistemic objects into visibility by bringing squarely even biological things into its gamut. IP regime is essence and spirit and possesses a potential for the innovator's growth and subsequent economic growth of the nation. Intellectual property regime plays two fold function, first it incentivizes the creator/ inventor by conferring the IP right i.e. a capacity for monopolistic appropriation (though not absolute monopolistic in nature as the property has to finally fall into the public domain after the stipulated term of protection) of the benefits of the property, secondly it serves a societal function by precluding the consumers from getting duped/cheated in the

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hands of unscrupulous players in the market. This full realization of the intellectual property and its potential is indispensable in enabling countries to reach their economic development goals. Trade in grey markets in a variety of goods had cost the national exchequer losses to the tune of Rs. 26,000 crore in 2012, a study by the Federation of Indian Chambers of Commerce and Industry (FICCI) and Committee Against Smuggling and Counterfeiting Activities Destroying the Economy (CASCADE) has estimated. The estimated tax loss to the government from spurious goods in sectors such as auto components, alcohol, computer hardware, FMCG (personal goods and packaged food), mobile phones and tobacco, for 2012 was Rs. 26,196 crore. The sales loss to the industry was calculated at Rs. 72,969 crore. Out of this, overall loss to the government due to counterfeit brands stands at Rs 16,546 cr in the Indian FMCG sector alone.

Trade Marks and Design issues are the central issues in the piracy/ counterfeiting of FMCGs.

Trade Mark Issues

A trademark is used or proposed to be used to distinguish the goods or services of one person from those of others in the course of trade. Though the registration of trademark is not compulsory, registration is a prima facie proof of the title and it gives the registered proprietor an exclusive right to use the trademark and take legal action in case of infringement. If a trademark is not registered and if someone not having the right in the trademark uses that trademark, the proprietor of the trademark can take the common law action of passing off.

The possibility of consumer having imperfect recollection to get easily deceived remains very high because of the deceptively/confusingly similar packaging, kind of near color combinations and deliberate jumbling of words and letters and misspellings. Food processing industry and packaged foods are highly vulnerable to the menace of piracy as counterfeiting in food products in an unorganized sector in India does have far reaching health implications. So is the case of pharmaceutical drugs where chances of either likelihood of confusion or likelihood of association are very high. Dealing once with medicinal products, Supreme Court in ***F. Hoffmann-La Roche & Co. Ltd.*** **v.** ***Geoffrey Manner & Co. (P) Ltd.*** [(1969) 2 SCC 716] had to consider whether the word "Protovit" belonging to the appellant was similar to the word "Dropovit" of the respondent. This Court, while deciding the test to be applied, observed at pp. 720-21 as follows: (SCC para 7)

"The test for comparison of the two word marks were formulated by Lord Parker in ***Pianotist Co. Ltd.'s application*** as follows:

Food processing industry and packaged foods are highly vulnerable to the menace of piracy as counterfeiting in food products in an unorganized sector in India does have far reaching health implications. So is the case of pharmaceutical drugs where chances of either likelihood of confusion or likelihood of association are very high.

You must take the two words. You must judge of them, both by their look and by their sound. You must consider the goods to which they are to be applied. You must consider the nature and kind of customer who would be likely to buy those goods. In fact, you must consider all the surrounding circumstances; and you must further consider what is likely to happen if each of those trademarks is used in a normal way as a trade mark for the goods of the respective owners of the marks. If, considering all those circumstances, you come to the conclusion that there will be a confusion, that is to say, not necessarily that one man will be injured and the other will gain illicit benefit, but that there will be a confusion in the mind of the public which will lead to confusion in the goods - then you may refuse the registration, or rather you must refuse the registration in that case". The court held that it was necessary to apply both the visual and phonetic tests.

Again, the Supreme Court of India in a celebrated case of ***Cadila Health Care Ltd v. Cadila Pharmaceuticals Ltd,*** **2001 PTC 541 (SC)**wherein words "FALCIGO" and "FALCITAB" were in contention, held that "The tests of confusing similarity are modified when the goods involved are medicinal products. Confusion of source or product between medicinal products may produce physically harmful results to purchasers and greater protection is required than in the ordinary case. If the goods involved are medicinal products each with different effects and designed for even subtly different uses, confusion among the products caused by similar marks could have disastrous effects. For these reasons, it is proper to require a lesser quantum of proof of confusing similarity for drugs and medicinal preparations. The same standard has been applied to medical products such as surgical sutures and clavicle splints."

According to some studies, fake drugs make up 20 per cent of the pharmaceutical market in India. These products are no longer limited to lifestyle drugs (i.e. Viagra), but now also include vital medication like cough syrups, painkillers, and even vitamin supplements. Given these statistics of medicinal counterfeiting, it seems that this is the high time for adequate enforcement of IP laws in compliance with the SC guidelines in the above mentioned celebrated cases.

Design Issues

To ensure compliance with TRIPs, a Designs Act, 2000 is in place. The act confers exclusive rights on the creator of a design and confers a copyright in the design to the owner of the property. It provides for relief in respect of infringement also. The following acts, if unauthorized, are considered to be piracy:

- Applying for the purposes of sale, the design or fraudulent or obvious imitation to an article;
- Importing any such article for sale; or
- Publishing or exposing for sale any article, in the knowledge that the design has been applied.

These stipulated design law prohibitions are violated rampantly in Indian FMCGs sector. Many articles of daily use are intentionally imitated in fraudulent or obvious manner. This

law in place in its sweep restricts the fraudulent or obvious imitation but the enforcement of the same is not iron clad. Courts in India on many occasions have highlighted the need of strengthening the design law enforcement. In the case of ***Reckitt Benkiser India Ltd vs Wyeth Ltd.*** 15 March, 2013, the full bench of the Delhi Court dealt with the infringement/piracy claim of appellant Reckitt by Wyeth of the design registered by Reckitt, having Design No.193988, dated December 5, 2003, in Class 99-00 with respect to an S-shaped spatula that was to be used for applying a cream for hair removal.

Many FMCG designs have been contested in various courts of the country. But all seems in vain when it comes to losses faced by this industry in terms of money and consumers satisfaction.

Remedies/ Reliefs

Several laws are in place to deal with the menace of counterfeiting of consumer goods. At present, the action against the wrong doer is taken by invoking either Indian Penal Code or Intellectual Property Laws, but despite strong IP and Penal Code, the problem of FMCGs piracy has not stopped. Intellectual Property is a branch of law which provides for the civil and criminal remedies in cases of piracy and counterfeiting of FMCGs.

Many players exist for the IP protection such as administrative machinery, judiciary providing civil remedies as well as criminal remedies, police and investigative agencies, associations and societies, remedies civil and criminal both, are available and can be used simultaneously to stop further infringement. Injunctions can also be passed to freeze/seize the contentious goods. Some of the examples of injunctions which can be very useful in the containment of piracy/counterfeiting which have been evolved by the courts in India and abroad to deal with the counterfeiting and piracy includes Anton Piller Order, Mareva Injunction, John Doe Order, Norwich Order. Court can levy Damages also.

Notwithstanding the above mentioned measures, the problem of counterfeiting has taken a giant shape and has become epidemic. In India, there is no sole all-encompassing law to deal with the issue of counterfeiting of FMCGs but several laws in place can be invoked and applied in case of such violations. Solutions like IP awareness and sensitization of masses about brands are viable and promising but there is a need to evolve few more plausible solutions to tackle this menace. India has become an open market where foreign investors are being invited through coveted schemes like "Make in India" to invest in manufacturing, automobiles, Food Processing etcetera. Given this fact that new food processing units, manufacturing units are going to be established in India in the ensuing time and the Indian rules and laws will remain applicable to the issues related to IP in these manufacturing units, it is highly incumbent on the Government to give some impetus to the anti- counterfeiting measures in India especially IP related issues so that maximum fruits can be reaped of schemes like Make in India. ❑

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YE-360/2014

Linkages with Formal Sector and Access to Credit

Ajit Kumar Jha
Sanjoy Saha

...the manufacturing sector is considered to be an important driver for the sustainable and higher growth rate for any economy. The new manufacturing policy, 2011 and the new initiatives like 'Make in India' are possibly important step recognising the need to move in this direction

The International Monetary Chief Christine Lagarde finds in an interview saying that India has a 'bright spot' on a 'cloudy horizon' as it has the potential to double the size of the economy by 2019 compared to 2009 (The Economics Times, 2015, March 17). At one side, this forecasting is made on the recent focuses of the government to produce more in the country through 'Make in India' initiatives, whereas on the other hand, it is based on the economic reforms initiated in the country since the early 1990s which helped India to grow more than 6 per cent on an average (Bajpai & Sachs, 2000). Not only that, it also managed to grow at 8 per cent plus for couple of years after 2000 but it didn't sustain to manage this momentum mainly after the global meltdown in 2007-08. While it's immediate neighbour and competitor China managed to grow at a higher rate during this period. An unsettled question emerged once again that India's growth rate is still service led which cannot be sustained for a longer time. It has been continuously argued that the Indian economy has not followed the conventional growth trajectory from agriculture to manufacturing and finally to service sector. Rather, Indian economy has jumped directly from agriculture to service sector missing the manufacturing. But, the manufacturing sector is considered to be an important driver for the sustainable and higher growth rate for any economy. The New Manufacturing Policy, 2011 and the new initiatives like 'Make in India' are possibly important steps recognising the need to move in this direction. The whole argument is basically based on the evidences which show that impetus of growth in developed and many of the developing countries most importantly in China, have come from the manufacturing sector (Unni and Rani, 2003).

Manufacturing sector in India comprises of formal or organized (hereafter organized) and informal or unorganized (hereafter unorganized) sectors. According to the National Accounts Statistics (NAS ,2007), all enterprises which are registered under the purview of the acts like 'Indian Factories Act, 1948', 'Mines and Mineral Act, 1957', 'The Company Law, Central/State Sales Tax Acts', 'The Shops and Establishments Acts'

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of the state government are broadly categorized as organized sector. Whereas unorganized manufacturing sector is defined as those enterprises which are not registered under section 2m (i) and 2m (ii) of 'The Factories Act, 1948' and 'Bidi & Cigar Workers Act, 1956'. According to the National Commission of Enterprises in Unorganised Sector (NCEUS, 2007), "the unorganized sector consists of all unincorporated private enterprises owned by individuals or household engaged in the sale and production of goods and services operated on a proprietary or partnership basis and with less than 10 total workers. In India, the unorganized manufacturing sector is broadly categorized into own account enterprises (OAMEs), Non Directory Manufacturing Establishments (NDMEs) and Directory Manufacturing Establishments (DMEs). In the present analysis, the unorganized manufacturing sector is divided into two categories, namely OAMESs and establishments (NDMEs+DMEs). The OAMESs are the enterprises which run without any hired wage workers or if so then not on fairly regular basis, whereas establishments are the enterprises which run with at least one hired wage worker and not more than 10 total workers.

It has generally been observed that the organized manufacturing sector has got more attention at the policy level due to its high productivity and its well defined structure. Whereas, the unorganized manufacturing sector has remained in the shadow because of its very low use of technology and its nature of high residual absorption of employment mostly unskilled [Siggel, 2010].Subrahmanya (2006) has argued that in the process of industrialization, the unorganized manufacturing sector will gradually diminish its significance because of its transformation into organized manufacturing and also phasing out due to increasing competition from its organized counterpart. In contrast, Unni (2003) has argued that the production linkages between the two sectors have increased considerably due to the rapid growth of value added and labour productivity in the unorganised manufacturing sector after the economic reforms. India being a developing economy, has more labour than capital. The unorganized manufacturing sector is mainly labour intensive in nature and vast in size. Therefore, it has a huge potential to provide employment along with mitigating the problem of locational and regional inequality. But, despite having all these potential, this sector faces a major financial constraint in terms of access to formal credit and outstanding loans.

The present study attempts to give an overview of the linkages between the unorganized and organized manufacturing sector and the potential of the former to create more productive employment opportunities. The study further tries to highlight the role of formal access to credit to unorganized manufacturing sector in generating more employment and increasing the output by institutionalizing this sector.

Linkages Between Formal and Informal Manufacturing

In India, production linkages are generally measured in terms of sub-contracting of production processes. The system of sub-contracting refers to a type of inter and/or intra firm relation which is primarily based on the principle of division of labour and specialization in production processes. Under this system, the large manufacturing units procure manufactured components, the small and tiny enterprises participate in the production of parts, components and sub-assemblies of final product. Sometimes, it is associated with 'job works' where large firms (contractors/ master units) provide necessary raw materials, technical and financial support to small firms which, turn these inputs into the required form at a specified time. The nature and types of subcontracting may be different for different industries and also depend on the economic and institutional factors [Nagaraj (1984), Ramaswamy (1999)].

The National Sample Survey reports of 2000-01, 2005-06 and 2010-11 provides some specific information which indicate the linkages between the organized and the unorganized manufacturing. Sahu (2010), argues that information provided for the years 2000-01 and 2005-06 are based on a very loose definition of contract and the information available is also limited as well as does not clearly mention whether this relation is of inter-firm or intra-firm in nature. However, Unni (2003) suggests that during the period of reform, the linkages between organised and unorganised manufacturing sector has increased. Therefore, in this study, we have assumed that the information

Table-1 Enterprise Working on Contract/ Marketing Agreement

Sector	2000-01	2005-06
Rural		
OAMEs	28	31.3
Establishment	21.6	21.5
Total	27.6	30.4
Urban		
OAMEs	38.8	36.5
Establishment	35.8	30.5
Total	37.9	34.7
All(R+U)		
OAMEs	30.7	32.5
Establishment	30.5	26.8
Total	30.7	31.7

Source: Author's estimation based on NSSO survey of 2000-01 and 2005-06

given for the large units are basically big organised enterprises.

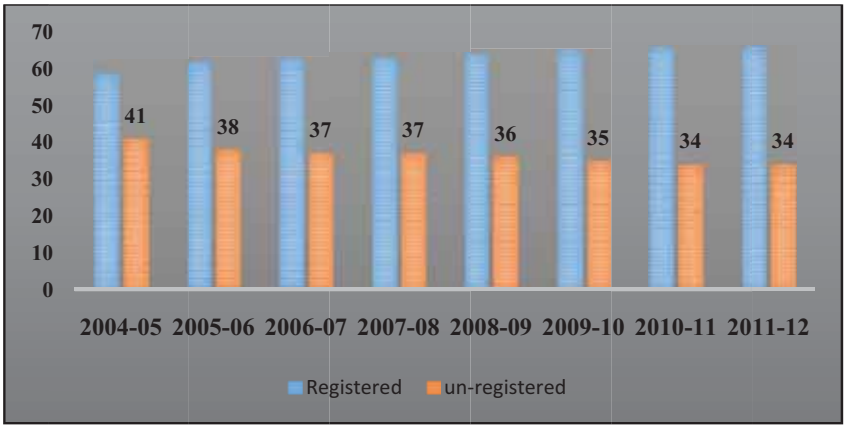
Although, some definition changes related to contracting has taken place over the years but on an average in the post reforms period (more specifically after 2000-01) 30 to 31 per cent of the total unorganized enterprises are found to be linked with the organized segment. Table-1 shows that in urban areas (34.7 per cent), more enterprises work on contract basis than in rural areas (30.4 per cent). Significantly, the own account enterprises reported to work more on contract basis (32.5 per cent in 2005-06) as depicted in Table-1. Although, how much output (gross value added) created by this contract has not been estimated here separately but it has been observed that, of the total manufacturing income, 35 per cent comes from unorganized manufacturing (see Figure-1). The organized manufacturing sector, on the contrary, contributes around 65 per cent in total manufacturing net domestic product (NDP). Figure-1 also shows that during the year 2004-05, the share of unorganized manufacturing sector accounted for 41 per cent of the total manufacturing income. However, in the subsequent year, the share of the unorganized manufacturing declined by 3 percentage point and after that, it has been continuously declining. The latest information for 2011-12 shows that its share declined from 41 per cent in 2004-05 to 34 per cent in 2011-12.

It has also been observed that the non-agro based enterprises which are mainly engaged in machinery, assembly line and equipment production are more linked to its organized counterpart than the agro based enterprises. Some of the studies have shown that the linkages of the informal sector to the formal sector is beneficial for the former sector. In some cases, the existence of the unorganized sector is dependent upon formal sector (Gupta, 1992, Mukherjee, 2003).

Access to Credit The access to credit is a prerequisite for any enterprise to work either in the formal or in the informal sector. The formal access to credit assumes critical importance to the unorganized sector enterprises. This financial access to credit generally indicates the availability of adequate amount at an affordable rate (Baruah, 2014). In India, there are a large number of informal enterprises which are spread across the sectors and regions. Hence, it becomes an important task for the government to meet the welfare needs of those engaged with these enterprises (NSC, 2012). Highlighting the importance and need of this sector, in January 2010, a task force on micro, small and medium enterprises (MSME) was constituted under the supervision of the then Prime Minister to look into this issue.

Generally, it has been seen that in the informal manufacturing sector, most of the enterprises face the problem of adequate formal access to credit and shortage of working capital. The most common reasons being that, very few enterprises are registered and also maintain an account throughout the year. The recent estimate based on the year 2010-11 depicts that only 14 per cent enterprises are registered with any registration authority. Whereas, 86 per cent are not registered with any registration authority. For example, an

Figure-1
Share of Organized and Unorganized in Total Manufacturing NDP at factor cost



Source: Estimation based on Central Statistical Organization

Table-2
Total Outstanding Loan per Enterprise in 2010-11 (in Rs.)

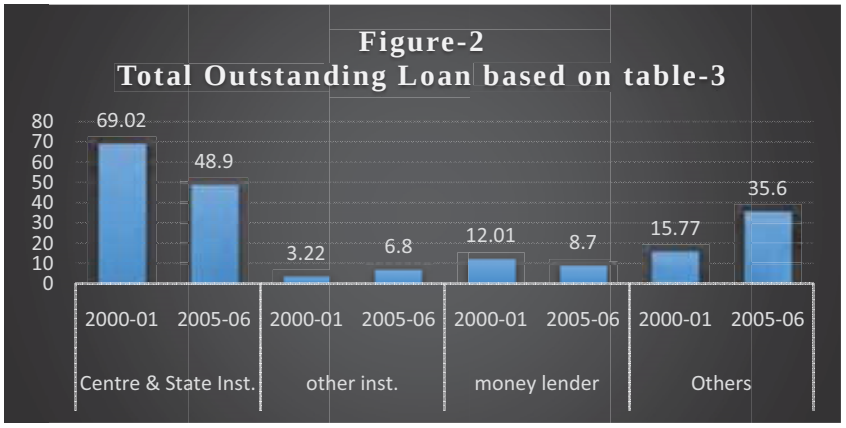
Segment	Rural	Urban	Rural +Urban
OAMEs	768	1775	1137
Estt.	60507	50278	53872
All	6537	14103	9656

Source: NSSO Survey, 2010-11

Table-3 Total Outstanding Loan by Different Sources (in per cent)

Sector	Centre & State Inst.		other inst.		money lender		Others	
	2000-01	2005-06	2000-01	2005-06	2000-01	2005-06	2000-01	2005-06
Rural	76.32	57.3	2.49	15.9	10.02	9.8	11.21	17.1
Urban	64.07	45.9	3.75	3.6	13.37	8.3	18.81	42.2
Total	69.02	48.9	3.22	6.8	12.01	8.7	15.77	35.6

Source: Estimation Based on NSSO, various rounds



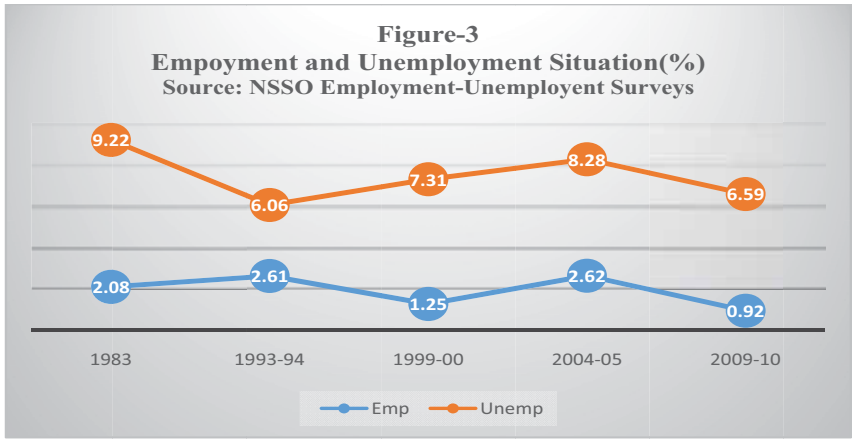
enterprise may register itself with the 'District Industries Centre', 'Khadi and Village Industry Commission', 'Development Commissioner of Handloom' and so on. Even the registration with these agencies do not necessarily make an enterprise an organized one (Baruah, 2014).

The inability of registration and irregular account maintenance pose a restriction for these enterprises to approach for formal credit to the centre and state financial institutions. Table-2 shows that on an average an enterprise received not more than Rs. 9656 from all sources in the year 2010-11. Although, enterprises big in size (establishment) and located in urban areas manage to get higher loan as compared to the OAMEs and those located in rural areas.

Table-3 depicts that mainly the central and state level term lending institutional banks and other societies provide loan to unorganized manufacturing enterprises.

During 2000-01, about 70 per cent of total loan was provided by these institutions whereas, its share declined to 49 per cent in 2005-06 (see also Figure-2). The other institutions like KVIC provide not more than 7 per cent of the total outstanding loan. In rural areas and more particularly in OAMEs, the money lender, friends and relatives constitute significant share of loan advance. It has been observed that mostly the bigger enterprises covered under establishment managed to avail higher credit facilities from the government agencies.

If any mechanism can be developed to bring these enterprises under formal registration process and higher financial loan can be made available at a lower rate, these enterprises will be the real backbone for the economy in creating both employment and output. The Finance Minister recently said that "While large corporates have a role to play, inclusive growth has to come from informal sector enterprises that generate maximum employment". Hence the proposed creation of a Micro Units Development and Refinance Agency (MUDRA) can be a potential game-changer to boost the financial health of the unorganized manufacturing enterprises.



Employment Scenario in the Post Reform Period

The post reform period is seen as a period of 'jobless growth'. Although, some positive changes in employment have been noticed but these are mainly of informal or part-time in nature. During 1993-94 to 2004-05, the unemployment growth rate increased from 6.06 per cent to 8.28 per cent. Whereas, employment growth rate declined from 2.62 per cent in 1993-94 to 1.25 per cent in 1999-00. And after 1999-00 to 2004-05, both the employment and unemployment growth increased, whereas after 2004-05, employment rate had started declining at a faster rate (0.92 per cent) (see Figure-3)

According to the estimates based on employment and unemployment survey, employment has mainly increased in the construction, electricity, gas and water supply and transport and communication sector. The manufacturing sector grew not more than 1 per cent during 2004-05 to 2011-12. Within the manufacturing sector, employment has mainly grown in the unorganised segment. The employment in unorganised manufacturing sector has been mainly informal in nature which are broadly divided into own account workers and hired workers.

Table-4 shows that there are around 17 million enterprises of all types in unorganised manufacturing which provide around 35 million direct and indirect employment. During the period of 1994-95 to 2010-11, employment grew at a rate of around 1 per cent. Whereas, in the first phase of reform (1994-95 to 2005-06), employment grew at a higher rate (2.02 per cent).

Table 4: Total Number of Enterprises and Employment in UMS

Type & Location	Enterprises (in millions)			Employment (in millions)		
	OAME	**Establishment**	**All Type**	**OAME**	**Establishment**	**All Type**
RURAL						
1994-95	8.6	0.9	9.5	16.6	4.2	20.7
2005-06 (05-06/94-95)	11.1 (2.6)	1.0 (1.6)	12.1 (2.45)	18 (0.81)	5.5 (2.73)	23.5 (1.28)
2010-11 (10-11/94-95)	9.138 (0.42)	0.977 (0.66)	10.115 (0.38)	13.213 (-1.42)	5.298 (1.46)	18.51 (-0.7)
URBAN						
1994-95	2.0	1.0	3.0	3.8	5.3	9.1
2005-06 (05-06/94-95)	3.5 (5.76)	1.4 (3.42)	4.9 (5.03)	5.7 (4.14)	7.3 (3.25)	13 (3.71)
2010-11 (10-11/94-95)	5.292 (6.28)	1.803 (3.74)	7.095 (5.53)	7.632 (4.43)	8.746 (3.15)	16.378 (3.75)
ALL (R+U)						
1994-95	10.6	1.9	12.5	20.4	9.4	29.8
2005-06 (05-06/94-95)	14.6 (3.25)	2.5 (2.78)	17.1 (3.18)	23.7 (1.51)	12.8 (3.14)	36.4 (2.02)
2010-11 (10-11/94-95)	14.43 (1.93)	2.78 (2.45)	17.21 (2.01)	20.844 (0.12)	14.044 (2.52)	34.888 (0.99)

Source: National Sample Survey (NSSO)Various Rounds
Note: figures in brackets are Compound Annual Growth Rate (CAGR).

In the urban areas, employment grew at a rate of around 4 per cent between 1994-95 and 2010-11, whereas in rural areas employment growth rate has been negative (-0.7 per cent) during the same period. Establishment segment which comprise both NDMEs and DMEs has been a major employment provider along with higher output contribution (around 63 per cent in 2010-11).

It has been observed that within the informal sector, construction and unorganised manufacturing sector have been the major source of employment generation after agriculture sector. According to the NSSO estimate, the construction sector has provided around 50 million employment in 2011-12. Together, construction and unorganised manufacturing sector provide around 85 million employment. Therefore, both these sector, require greater policy intervention and financial assistance which would be helpful to create more employment opportunities through skill development and other measures.

Conclusion and Policy Recommendations

In the last two decades of the post reform period, the Indian economy has witnessed significant changes. The informal manufacturing sector has also experienced these changes in terms of its size, structure and employment potential. The productivity of the sector has also increased but it has not been able to utilise its full capacity. Institutionalisation of the informal sector is prerequisite to generate more and more employment opportunities and to increase its share in total manufacturing output. At some level, it can be done through the well-defined agreement (linkages) with the formal sector. The agriculture sector is the biggest informal sector in India. So to promote and increase the productivity of agro-based industries, value addition should be facilitated at primary level by providing better infrastructure facilities in rural areas. The non-agro industries which are mainly engaged in assembly, component and equipment activities should be strengthened by providing more working capital and formal access to credit. The vocational and technical education should be promoted to facilitate the entrepreneurship skills in own account enterprises which are mainly run on proprietary basis. The study suggests the following policy recommendations.

Policy Recommendations

- To generate more productive employment opportunities in this sector, the government should focus on skill development and training programmes in both rural and urban areas keeping in view the requirement of the sector. Schemes like 'Deendayal Upadhyay Gramin Kaushal Yojana' can be better utilised to train unskilled youth in rural areas. The agriculture sector council (ASCI) would be a much better channel to create more non-agriculture jobs through skill and training programmes. Similarly, other national level skill development programmes can also be used in providing skills to those engaged directly and indirectly with the informal sector.
- Specific entrepreneurship promotion programmes for proprietorship and partnership enterprises should be developed by introducing the vocational courses and organising workshop in ITIs and government funded skill development centres at district level in collaboration with industries.
- The concept of 'Ease of Doing Business' should not be only restricted to the big corporate sector. It should also be extended

to the tiny and small enterprises which have a huge potential to generate output and employment.

- Credit given by banks and other financial institutions should be brought under the category of 'Priority Sector Lending'.
- The recently announced MUDRA bank can play the game-changing role in providing more formal access to credit and that too at reasonable interest rates.
- There is also a need to create a unified national level market on the lines of recently announced 'Unified Agriculture Market' where informal manufacturing enterprises can get a direct access of final market.

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NORTH EAST DIARY

IMPETUS FOR NORTH-EASTERN REGION

A sum of Rs 2,362.74 crores has been allocated to the North-Eastern Region (NER) for its development in the recently announced Union Budget. The budget emphasized many issues of the region like natural resources, financial inclusion, health, hygiene, girl education and youth employment, welfare of labour, enhancing agricultural productivity, digital connectivity, skill development for the youth, increase in farm income and improvement in the work culture in governance. A 24x7 television channel named "Arun Prabha" for the northeastern region will be launched with a cost of Rs.1,825.45 Crores. Apart from this , Rs.1,000 Crores have been allocated for rail connectivity and Rs.2,000 Crores for road connectivity. Meghalaya has been brought on the Railway map of India with its direct connectivity to Delhi. Rs.300 Crores have been given for 4,056 kms of Sino-India border stretching from 'Karakoram point' of Ladakh region in Jammu & Kashmir to 'Fish Tail' in Arunachal Pradesh. One All India Institute of Medical Sciences (AIIMS) in Assam, one Indian Institute of Science and Education Research in Nagaland and a Centre for Film Production, Animation and Gaming in Arunachal Pradesh have also been sanctioned.. ❑

SAIHA DISTRICT IN MIZORAM SELECTED FOR 'BETI BACHAO, BETI PADHAO' PROGRAMME

The Government of India's "Beti Bachao, Beti Padhao" (Save Girl-child, Educate Girl-child) programme, that was announced by Prime Minister has been formally launched in Northeast in the Saiha District in Mizoram that was selected among 100 districts from across India for this unique initiative on the occasion of International Women's Day. This decision has been motivated by a decline in the number of girls in the region. The decreasing number of girls in the North-east is not only because of the female foeticide but also due to a high occurrence infant mortality rate, unlike in other parts of the country. The women folk of this the region which is endowed with rich cultural and vocational heritage, have always been active in the work , shoulder to shoulder with their men peers in every aspect of life. So grooming the girl child and empowering women can prove to be a great asset for overall development of the region. Since there is a dearth of appropriate avenues for higher education in the North-eastern States. As a result, while the boys travel to other parts of the country to pursue their higher education, the number of girls travelling out is lesser, leading to a low rate of higher education among females. To that extent, the "Beti Bachao, Beti Padhao" programme will prove to be extremely beneficial in creating awareness regarding literacy among women in the region. ❑

Launch of Handicrafts & Carpet Sector Skill Council

A new institution, Handicrafts & Carpet Sector Skill Council, was launched recently to promote skill development among artisans, craft persons and workers of handicrafts and carpet products, at grassroots level. This would enable them to adopt latest techniques and become more productive. The Council, to operate from New Delhi, would be responsible for developing occupational standards; setting up labour market infrastructure; introducing certification & assessment mechanism and providing guidance to the artisans, crafts persons and workers in all aspects of skill development.

YOJANA

Forthcoming Issue

May 2015 & June 2015

May

Tourism Sector

June

Alternative Medicine

Start–Ups: Constraints and Policy Requirements

Manoj K Das

The need of the hour, however, is to focus on the various challenges faced by existing and new entrepreneurs in the way of venture creation. Policy initiatives should highlight on key requirements like institutional support for preparation of business plan and handholding for start-up, steps for start-up friendly venture capital and support, adequate market exposure and awareness creation, easy procurement facilities for bringing in latest technology and training support for developing technical and professional skills

THE NORTH East States of India consisting of the states of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland, Tripura and Sikkim, covers an area of 255,511 sq. km. It is a true frontier region. The region shares more than 4,500 kilometres of international border with China (South Tibet) in the north, Myanmar in the east, Bangladesh in the southwest, and Bhutan to the northwest. Sikkim was added in 2001 AD due to its similarity in developmental needs. Other seven (7) states are connected to the mainland with a 22 km wide chicken's neck. Sikkim is also linked through a small land area. Thus, the region is highly landlocked. The vast international border is inhospitable terrain and porous, infested with insurgents in many areas.

Partition of the country in 1947 dealt a severe blow to the economy of the region. It cut off the region, blocked natural transportation routes and severed its market access. For example, Kolkata to Agartala is only 300 km through Bangladesh, but via chicken's neck, its about 1800 km and takes more than 40 hrs to reach by road. Geopolitical issues have sealed the eastern corridor through Myanmar, which is ASEAN. The great waterways of Brahmaputra and Burma were blocked due to creation of East Pakistan. Even now, the transit has not been restored. Chittagong, which was natural port of NER was blocked. All these factors dealt heavy structural damage to the NER economy. There was a huge influx of people from the erstwhile Bengal province and later East Pakistan at various intervals. This has caused huge ethnic conflict, unrest and imbalances in the demography.

A country cannot progress without overall development of all its constituent regions. Recognizing the potential of the region, special requirements of the area and the need for significant levels of government investment, the North Eastern states have been categorized as Special Category states and Central Plan assistance to these states is provided on liberal terms till last FY on 90:10 (Grant: Loan) basis. 10 per cent of Gross Budgetary Support has to be mandatorily spent in the region except for few Ministries like S&T, DOS, DOOD etc. It was made non-lapsable after few years and a new Minsitry for Development of NER was created. The policies have been kept unchanged by successive governments. Due to these policies, huge fund flow has occurred in last one and half decade. Currently about Rs. 250000 Cr worth of Road and Bridge construction is going (East-West Corridor, Capital Connect Roads, PMGSY, Trans Arunachal Highway, Bogibeel Bridge, Choikhowa Bridge etc), Rs. 28000 cr worth of Rail projects (BG conversion in North Bank upto Murkongselek and South Bank upto Agartala, Imphal-Jiribam, Naharlogun-Harmuti etc), 220000 MTPA Assam Gas Cracker Project etc. These have given rise to downstream and ancillary opportunities. Hospitality and

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healthcare sector have been doing well. Guwahati alone is seeing construction of 6 five-star hotels.

The economy of the region was mostly in self sustaining mode. Commercialisation of products did not echo with the mindset leading to an overwhelming sense of lack of commercial attitude. Edward Gait mentions in his 'A History Assam' in 1905 about 'Sleeping Hollow of the Brahmaputra Valley' about the immense natural endowments and humid climate that is bound to make the inhabitants lazy and thus less enterprising.

However, with globalisation and changing economic conditions winds of change is sweeping the NER. With a strong natural and human resource base, the North Eastern Region of India has significant prospects for entrepreneurship development. The region has been acknowledged as the 'Eastern Gateway' in the 'Look East Policy' of Government of India. This has made North East more important and strategic. Realising the tourism potential of the region, it is now being promoted as 'Paradise Unexplored' by India Tourism. The region has to gear up to take up more challenges and capitalize on the opportunities thrown open by the huge market in China, South East Asian Countries and Pacific Rim that is bound to open up through its borders after some years. Already the East West corridor has been named as ASEAN Highway No 1 (AH-1) and car rallies have been held to showcase the connectivity.

The major industries found in the region include Mineral Based industries, Chemical and Plastic Based industries, Forest Based industries, Textiles, Engineering and Non Conventional industries and Services.

The organised industries of the north eastern region include tea, petroleum, paper, cement, plywood, coal, jute, sugar, fertiliser etc. The comprehensive North East Industrial Investment and Promotion Policy, 2007 exclusively meant for the NER, boosted up rapid and widespread industrial development in the North East Region, including not only large but also small and medium industry, as also in the services sector, including the hospitality industry and tourism; IT and ITES; and the health sector. Certain key benefits provided by the policy include:

- Enhanced capital investment subsidy @ 30 per cent of Plant and Machinery subject to a maximum of Rs.1.5 crore.
- Subsidy upto Rs.30 crore subject to the approval of an Empowered Committee for medium and large projects which have a significant potential for employment generation
- 3.5 per cent subsidy of Working Capital Interest
- Comprehensive Insurance Policy
- Central Freight Subsidy Scheme
- 10 years holiday on Excise and Income Tax

However, new registration under the policy has been suspended since December, 2014. Government of India is expected to come up with a remodelled policy to plug certain loop-holes.

Although, prospects exist for the establishment of enterprises in this region, industrialization is still lagging behind due to various reasons, one of them being the problems faced by entrepreneurs during starting up of a new venture. Constraints are in the form of land acquisition, availability of power, transport, logistics, co-lateral free loan, credit disbursal, skilled manpower, marketing network and issues in taxation.

Here, an overview of entrepreneurial start-up in the North Eastern Region vis-a-vis the prospects and constraints, and also a few suggested measures have been given.

The process of starting an entrepreneurial venture, in whatever industrial category, is a process. Entrepreneurs in North Eastern Region mainly consider the following major aspects in this context which include:

- **Preparation of a Business Plan**

  The business plan should generally be made by the entrepreneur himself/ herself. The plan should consist of a) Profile of the management (names of promoters and their qualifications and industry experience.) b) Kind of Business c) Short term and long term objectives of the new business venture, d) Financial requirements, e)Budget allocations, f) Market Analysis (Marketing, Sales Forecast, Gap Analysis, Pricing and Placement) g) Environmental Influences h) Quality control measures to be put into place for ensuring quality of the product/service i) Financial Plans showing projected profit and loss statements and cash flow statements j) Available Human Resources alongwith the organisation chart k) Ratio Analysis (BEP, DSCR, IRR) l) Sensitivity Analysis

- **Choosing a Form of Business Organisation**

  The right choice of the form of business is very crucial because it determines the power, control, risk and responsibility of the entrepreneur as well as the division of profits and losses. The choice of the business organisation is mainly done keeping in view the factors like nature of business, scale of operations, degree of control desired by owners, amount of capital required for the establishment and operation of a business, volume of risks and liabilities as well as the willingness of the owners to bear and pay tax liability. The major forms of business enterprises set up in this part of the country include sole proprietorship, partnership, cooperatives, Private and Public Limited Company, Hindu Undivided Family Business (HUF), Limited Liability Partnership (LLP) and Societies etc.

- **Naming and Registering a Business**

  The naming and registration of an enterprises are done as per rules and regulations provided under different Acts considering the form of business organization.

- **Making a Product or Service Choice**

  The choice of a product or service is another crucial decision. This is done keeping into view factors like size and structure of the market for the products, future demand pattern for each of them, competitive positions in the market, graphing the life cycle of each product, ease of availability of raw materials and technology for production.

- **Choosing the Location of the Industry**

  Location of the business is the most important factor influencing its success or failure. It is a long-term decision which should take into consideration not only the present requirements of the organization but also its future expansion plans. Certain factors affecting location decisions include availability of required raw materials, availability of required grades of labour, proximity to the product market, availability of transport and communication facilities, adequate supply of power & fuel, and Climatic factors based on the product types.

- **Setting up Infrastructure**

  Setting up of basic infrastructural facilities for commencing business operations is the next crucial step in starting up a new venture. The sustainability of the venture depends hugely on the quality of infrastructural facilities procured and implemented.

- **Sourcing Process, Raw Materials, Machineries and Equipments**

  The next important step is to select appropriate technology and equipment to produce the same. In addition to this, the source of raw material has to be decided upon. The requirements of all these can either be met through domestic sources or can be imported subject to the regulatory requirements of the Government.

- **Pricing Product**

  Fixing the right price for a product is the most difficult task as it affects the volume of sales of the product of the firm as well as the profits of the firm. Prices are set by a firm by taking into consideration factors like costs, profit targets, competition and perceived value of products.

- **Financing a Business**

  A financial plan needs to be prepared, which indicates the requirements of finance, sources for raising the finance and the application of funds. Financial planning for starting a business begins with estimating the total amount of capital required by the firm for the various need of the business.

- **Managing Human Resources**

  The management of human resources is critical in the sense that they are the most important assets of an enterprise. Important aspects that is taken into consideration in this regard include orientation or induction programme for newly appointed employees, good health and safety environment for the employees, systematic and scientific training of employees, employee benefits and work-life balance.

Constraints of Start-Up

Even though various facilities in the form of grants , subsidies and allotments have been provided for easing the start-up process in North Eastern Region, prospective entrepreneurs still find it difficult to continue with the start-up of their ventures due to innumerable constraints.

- **Lack of Facilitation of Business Planning and Guidance**

  The most dominating one is the failure of a good business plan. The plan, acts as the blueprint for creating a successful venture. However, entrepreneurs of the region find it hard to prepare a good plan due to lack of facilitation of Business Planning and Guidance.

- **Lack of Access to Finance**

  Poor financial base of entrepreneurs of the region compels them to leave the venture half way. The situation is aggravated by inadequate business plan which limits the chances of getting financial assistance from banks and other financial institutions.

- **Lack of Entrepreneurial Awareness and Spirit**

  Another major challenge hampering entrepreneurial start-up and development in the region is the lack of entrepreneurial awareness and spirit among the masses. The tendency of the people of the region to look for government jobs and putting entrepreneurial career as the last option is evident**.**

- **Latest Technology , Technical and Professional Skills: Absent**

  Thirdly, absence of latest technology along with lack of technical and professional skills have hampered successful venture start-up in the region. Moreover, the choice of technology available to enterprises is very limited in the Hills. Use of obsolete technology and excessive dependence on individual expertise are the major reasons for industrial sickness.

- **Inadequate Marketing System**

  Inadequate marketing system is another factor affecting market of enterprises of the region, specifically in case of the MSME sector. Relative isolation of the region from the main centers of trade and industry, competition from highly finished machine made goods, inadequate economic and physical infrastructure and lack of market awareness among the entrepreneurs have jeopardized MSME growth in the region.

- **Inadequate Support System**

  Last, but not the least, inadequate Support System has proved to be a major constraint towards starting up of new ventures in the region, and subsequent entrepreneurship development. Industrial support systems in this part of the country is characterized by inadequacy of facilities like tool rooms, repair shops and quality control systems. This has resulted in manufacturing of poor quality products and services.

Apart from these, lack of a good management team and poor business model are other constraints hindering successful start-up ventures.

Thus, enterprise development must be viewed in the context of generating higher production and employment. A multi prolonged approach, having entrepreneurial growth as an important part, needs to be followed for overcoming the problems of poverty and backwardness.

Prospects of Entrepreneurship

The North Eastern Region has significant potential for development of entrepreneurship. The added advantages of the region for the promotion of the entrepreneurship are:

- Dominated by a significant percentage of rural population.

- Highly dependent on agriculture as a major source of income.
- Potential activities like small tea growing, fisheries, economic forestry, livestock, handloom and handicrafts still act as a second line of economic defence to many.

Apart from women entrepreneurship, the service sector has also shown a promising trend. It is evident from the growing number of service based enterprises in the region like healthcare, wellness, garments, hotels & restaurants, repairing services and so on. There is an emerging trend in sectors like tourism, IT/ITES, organic farming, horticulture, rubber, spices, water transport, construction, hydropower, hospitality and healthcare. The potentiality of the tourism sector is immense due to the existence of unique cultural and ethnic diversity along with attractive tourist spots in the region. The sector is a source for generation of social and economic benefits. Development of this sector will, in turn, contribute to the development of handloom, handicraft and sericulture sector along with improvement of transportation and communication system of the region. Further, there is greater prominence for the hospitality and healthcare sector with the introduction of the Look East Policy. Again, certain small scale and cottage industries like the cane and bamboo sector, handloom sector and pottery/ terracotta have witnessed a growing trend due to initiatives undertaken by the Government along with the concerned agencies. However, majority of the entrepreneurs feel that limitations like difficulty in access to raw material, high cost of raw material, lack of infusion of technology and design and lack of market exposure are required to be addressed for development of these enterprises. Immediate facilitation of access to credit needs to be ensured for the development of these sectors. Initiatives like promotion of dedicated venture capital fund, collateral free time bound credit delivery from banks and other financial institutions and increasing financial literacy among the entrepreneurs are the need of the hour. There is also a need for intervention in facilitating cheap raw material, establishing raw material depots. Skill development of the existing work force on diversified products, designs and use of modern tools is also necessary for ensuring better productivity of the sector.

Efforts for technology and design upgradation along with market linkage promotion with large retail chains can generate substantial positive impact on productivity and income of the sector.

Some Policy Requirements

There is hardly any doubt that the North East economy is emerging as a major hub for development of entrepreneurship, which subsequently, can contribute immensely to the region's economy. The region presents immense possibilities due to its unique geographic and demographic characteristics as well as the host of benefits it has acquired from different policy measures for industrial development in the region. The need of the hour, however, is to focus on the various challenges faced by existing and new entrepreneurs in the way of venture creation. Policy initiatives should highlight on key requirements like institutional support for preparation of business plan and handholding for start-up, steps for start-up friendly venture capital and support, adequate market exposure and awareness creation, easy procurement facilities for bringing in latest technology and training support for developing technical and professional skills. ❑

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INDUSTRIAL CLUSTERS

Micro & Small Enterprises Cluster Development Programme (MSE-CDP)

The Micro and Small Enterprises – Cluster Development Programme (MSECDP) is being implemented for holistic and integrated development of micro and small enterprises in clusters through Soft Interventions (such as capacity building, marketing development, export promotion, skill development, technology upgradation, organizing workshops, seminars, training, study visits, exposure visits, etc.), Hard Interventions (setting up of Common Facility Centers) and Infrastructure Development (create/upgrade infrastructural facilities in the new/existing industrial areas/clusters of MSEs).

Assistance is provided for the following activities under the scheme- (i) Preparation of Diagnostic Study Report with Government of India (GoI) grant of maximum Rs 2.50 lakh (ii) Soft Interventions with GoI grant of 75 per cent of the sanctioned amount of the maximum project cost of Rs 25.00 lakh per cluster. For NE & Hill States, Clusters with more than 50 per cent (a) micro/ village (b) women owned (c) SC/ST units, the GoI grant will be 90 per cent. (iii) Detailed Project Report (DPR) with GoI grant of maximum Rs 5.00 lakh for preparation of a technical feasible and financially viable project report. (iv) Hard Interventions in the form of tangible assets like Common Facility Centre having machinery and equipment for critical processes, research and development, testing, etc. with GoI grant upto 70 per cent of the cost of project of maximum Rs 15.00 crore. For NE & Hill States, Clusters with more than 50 per cent (a) micro/ village (b) women owned (c) SC/ST units, the GoI grant will be 90 per cent. 7 (v) Infrastructure Development with GoI grant of upto 60 per cent of the cost of project of Rs 10.00 crore, excluding cost of land. GoI grant will be 80 per cent for projects in NE & Hill States, industrial areas/ estates with more than 50 per cent (a) micro (b) women owned (c) SC/ST units. (vi) The GoI assistance shall also be available to Associations of Women Entrepreneurs for establishing exhibition centres at central places for display and sale of products of women owned micro and small enterprises @ 40 per cent of the project cost. A total of 921 interventions in various clusters spread over 28 States and 1 UTs in the country have so far been taken under the programme for Diagnostic Study, Soft Interventions and Hard Interventions (CFCs). Further, 170 projects have been taken up for infrastructure development under the scheme.

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YE-362/2014

New Series on National Accounts: Why Manufacturing Sector Looks Better at Revised Base?

Jitender Singh

The exercise of rebasing national accounts brings up a fresh lot of information about the changes in economic structure of the economy, along with switching over to new base prices. This also helps in judging the size of the economy, correction of bases and looking afresh at the relative importance of sectors in the economy

THE STRUCTURE of economic activities changes over time due to changes in structure of production and demand in the economy. On the production side, the production pattern changes along with changes in technology and innovations in the system and in this process, some production becomes obsolete and other comes in vogue. While on demand side, the consumption pattern also changes over time. The changes in relative prices stimulate changes in the consumption and production choices. Therefore, to account for these structural changes and to update the prices, the rebasing exercise is needed after a certain period. The exercise of rebasing national accounts brings up a fresh lot of information about the changes in economic structure of the economy, along with switching over to new base prices. This also helps in judging the size of the economy, correction of bases and looking afresh at the relative importance of sectors in the economy.

The recent introduction of new series of national accounts by Central Statistics Office (CSO) revised the base for National Accounts Statistics to 2011-12 from 2004-05, which was last set in January, 2010. Along with revision of base, a number of methodological changes have also been made. This note tries to describe the changes made in the new series and why growth numbers for some of sectors, especially manufacturing, witnessed unexpected changes?

The new series of national accounts is an improvement upon old (base:2004-05) in terms of its comprehensive coverage of corporate sector and government activities and in corporating recent data generated through National Sample Surveys. It also brings up some change in methods of evaluation, approaches to account economic activities, introduces new concepts and incorporation of new classifications.

Incorporation of NIC-2008 classifications for industries is possibly one reason for the adjustments in the activities for an industry. The number of industries has increased from eight in old series to eleven in new series, the additional three industries reclassified within service sector named as "Transport, Storage, Communication & Services related to broadcasting", "Real Estate, Ownership of Dwelling & Professional Services", and "Other Services". The description of industries has also been changed, for example, earlier "Community Services etc." become "Public Administration and Defence".

New concepts, such as Gross Value Added (GVA) at Basic Price has been introduced, while some old concepts ceased to appear henceforth such as GDP at factor cost. GVA at basic prices is equal to GDP at factor cost plus net of production tax and subsidies. It would result in an effect on size of GVA compared to GDP at factor cost, which may be different for different sectors. For example, net production tax being positive in manufacturing would result

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in a higher GVA than GDP in the sector. New growth figures for GVA at Basic prices would also carry an impression of tax and subsidies which was not the case in GDP at factor cost.

The *production tax* has been distinguished from *product tax* as the first is independent of quantity produced while the second varies with it. Similar distinction is also made between production and product subsidies. GDP at market prices which is henceforth to be referred as GDP, can be computed by adding net of product tax and product subsidies in GVA at basic prices.

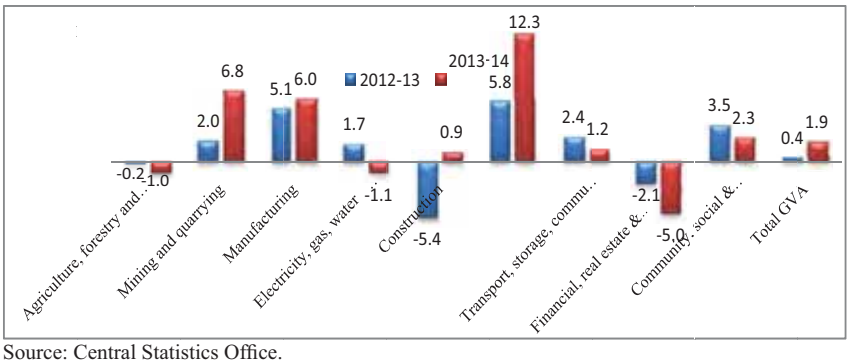
The new, "Effective Labour Input Method" has been adopted for Unincorporated Manufacturing & Services Enterprises for compiling their estimates for unorgansied non-agriculture sector. This method assigns due weights to different types of workers based on productivity and skills, unlike the earlier method which assumed equal value addition of each worker, irrespective of their skills and productivity. The adoption of new method is likely to result in better estimates of value addition in the unorgansied non-agriculture sector.

Differences in Statistics

The growth of GVA at constant prices reported higher at 4.9 per cent in 2012-13 with new base (2011-12) against 4.5 per cent growth of GDP at factor cost at old base (2004-05). In 2013-14, the growth of GVA at new base is reported at 6.6 per cent which was 4.7 per cent at old base. The growth of GVA for manufacturing has shown noticeable rise in 2012-13 and 2013-14, which is updated to 6.2 per cent and 5.3 per cent at new base year compared to earlier 1.1 per cent and 0.7 per cent at old base year respectively. The sectoral share of manufacturing has also substantially increased in 2012-13 and 2013-14, as reported at 17.9 per cent at new base compared to 14.1 per cent at old base in 2011-12. These differences are surely on account of better coverage and changed methodologies and possibly change in concepts and classifications. It is crucial to know how much difference these factors have made to GVA and in which sector.

The growth at constant prices, computed either using new base or old base prices, should not differ if other things remains the same. In other words, merely a shift in base year cannot account for the differences in growth at constant prices calculated using new or old base. With this logic, the differences in the sectoral growth rates calculated at constant prices of new and old base is plotted in the Graph-1. These differences inter-alia shows the under or overestimation bias in the growth of the economy, assuming that estimates in new series are better representation of the activities. In overall, the growth of the economy was underestimated with about two percentage point in 2013-14 in the old series. The reasons for this bais are not restricted only to structural changes, while the other factors such as conceptual changes, improved valuation methods, better coverage etc. have also been responsible. Among the sectors, the growth of 'Mining & Quarrying', 'Manufacturing', 'Trade, Repair and Hotels','Transport, Storage, etc', and 'Community Service etc', appears heavily underestimated, while the growth in 'Agriculture and Allied' and 'Financial, Real Estate & Business Services', was overestimated in old series.

Graph-I Difference in Sectoral Growth at Constant Prices of New and Old base



Source: Central Statistics Office.

Note: Estimates for the earlier series (2004-05 series) have been derived from GVA at factor cost, while estimates for the 2011-12 series have been derived from GVA at basic prices.

The reasons for the rise in growth for manufacturing sector at new base are structural as well as change in compilation methodology. The methodological changes includes the change in approach, better coverage, use of new valuation methods and introduction of new concepts. Some of these are as follows:

The Shift from Establishment Approach to Enterprise Approach: The establishment approach used in Annual Survey of Industries did not capture the activities of a unit other than manufacturing. Whereas, an enterprise along with its manufacturing activities is also engaged in activities other than manufacturing such as ancillary activities etc. Now, in new approach, the activities of a manufacturing company other than manufacturing are accounted in manufacturing sector. The enterprise approach is facilitated by MCA21 data with Ministry of Corporate Affairs. These changes possibly have increased the coverage of registered sector of manufacturing.

Incorporation of Findings of NSSO Surveys: The details of new NSS Surveys viz. Unincorporated Enterprises Surveys (2010-11) and Employment & Unemployed Survey, 2011-12 are now available, therefore incorporated in the new series. The updates are an improvement in the representation of activities in the unorganized manufacturing sector.

The Change in Labour Input Method: The new series has switched over to "Effective Labour Input Method" for Unincorporated Manufacturing & Services Enterprises. The earlier method was assigning equal weights to all types of workers, while the new method assigns different weight for workers as per their productivity.

The Inclusion of Production Tax Less Subsidies: The net of production tax and production subsidies is positive in manufacturing, while it is inter-alia negative in 'Agriculture and Allied' and 'Electricity, Gas etc'. Therefore, the positive net production tax would increase the size of GVA in the sector in absolute and relative to other sectors. Moreover, any change, including change in policy, if it alters the lump sum production tax and subsidies is also likely to reflect in the growth rates in the sector. ❑

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Dynamics of International and Domestic Oil Pricing

Hiranmoy Roy
Anil Kumar
Vijay Shekhawat

...the expectation from the Union Budget 2015-16 for the oil sector is that Government must adopt a sustainable policy for oil price mechanism, keeping in mind the enormous need of oil for overall growth and progress of the Indian economy, since oil is an essential input for sustenance and growth

THE SITUATION of oil price movement today that resembles historical precedent, it would be the period between the late 1970s and early 1980s, when the surge in prices in the previous decade led to a boom in Western oil production, and the development of resources and fields that were technologically challenging or commercially unviable in light of the low prices. Since the late 1970s, oil from Alaska and the North Sea entered the oil markets forcefully, fulfilling the growth in global demand and causing a boom in supplies that gradually reversed the continuous rise in international prices, with stagnation ensuing in the markets that lasted until the end of the millennium.

Since oil prices rose in 1973, OPEC played the role of market regulator, meaning effectively that OPEC had a spare productive capacity to the tune of millions of barrels, which allowed it to balance supply and demand whenever the need arose. By the early 1980s, global spare productive capacity was more or less OPEC's spare capacity, while producers outside the organization such as the US, Canada and Russia pumped as much oil as their reserves allowed, regardless of the state of prices.

Most of the spare productive capacity was in the hands of Saudi Arabia, which had reduced its oil exports to a large extent since the late 1970s with a view to preserve prices. There was a dispute between Saudi Arabia and OPEC regarding the best way to control the market: OPEC preferred controlling production and increasing or decreasing it through agreed upon quotas, while Saudi Arabia was opposed to this approach, and preferred defending a certain price instead of controlling the level of supply. In other words, Saudi Arabia would offer oil in international markets at the price it deemed suitable, and adjusted its output in accordance with the demand it had on the basis of its price. This led Saudi output to decrease 10 million barrels in the late 1970s to less than 3 million barrels in 1985.

In this sense, there are certain limits for the decline in prices after which production starts to decrease, starting with the costlier fields and those that are farthest from consumption zones. When this happens, the price dynamics are reversed and pressures on the market are relieved. For this reason, some experts believe that Saudi Arabia's goal is to keep oil prices within suitable levels, which would limit supplies without shaking the markets and threatening energy companies in the West.

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Today, the situation is completely different. Saudi Arabia does not have a spare productive capacity, and will not be able to flood the market with additional exports. In fact, many experts believe Saudi production in recent years is equivalent or close to its maximum productive capacity, and perhaps the most important development in the oil markets since the 1990s revolves around this point in particular: the fact that OPEC has lost its productive maneuverability margin it once had, after years of disputes among member states over quotas. This means OPEC's ability to intervene on the supply side is minimal, as OPEC knows well that securing the approval of its member states over serious cuts and their adherence is impossible.

We find that while macro-economic shocks have been the major upward driver of the real oil price since the mid-1980s, financial shocks have also sizably contributed since early 2000s and at a much larger extent since mid-2000s. Despite financial shocks which contributed to 44 per cent out of the 65 per cent real oil price increase over the period 2004-2010, the third oil price shock was a macro-financial episode, macroeconomic shocks actually largely accounting for the 2007-2008 oil price swing. While we support to the demand side view of real oil price determination, we also find a much larger role for financial shocks than previously mentioned in the literature.

Price rises since 2003, in turn, led to a similar boom in Western production, mostly from non-conventional sources this time, specifically shale oil and gas, tar sands, and other types of heavy oil, which until recently, was seen as impossible to extract or as uneconomical. With the exploitation of these new resources, made possible– in addition to high prices – new technologies that made it possible to extract heavy oil trapped in underground rocks, the trend in US oil production was reversed. US oil output had been declining steadily since the 1970s, reaching 5 million barrels per day in 2008, compared to over 8.5 million barrels per day today. Forecasts indicate that the US output may exceed 9.5 million barrels per day in 2016, and most of the extra production will come from non-conventional oil.

This increase in US output, in addition to the return of Iraqi production to the market, and the emergence of new major producers in Africa like Angola, not to mention Russian output increasing to levels that approach those achieved by the Soviet Union in its latter years, is behind the saturation in the market today. What many analysts focusing on political motivations do not pay attention to is that the pricing of oil involves complex equations and thresholds, exceeding which, is likely to backfire. There is always a price threshold that could lead to structural shifts in the market if the price of oil fluctuates dramatically, up or down.

The most important of these factors has to do with the extraction of heavy oil. While the cost of extracting one barrel of oil in Saudi Arabia does not exceed $3, stimulating oil stuck in underground rocks or heating tar sands to liquefy them are extremely costly processes that consume a lot of resources and energy. For this reason, a sharp and sustained decline in oil prices could drive these oil types out of the market and lead to the collapse of a large number of energy companies, which usually fund their operations through loans on the basis of a price of over a $100 per barrel.

According to McKinsey and Company, an energy consulting firm, the majority of shale oil producers in America require a price of over $75 per barrel to maintain their profitability. Sources in the energy industry say that investments would be scaled back, in addition to shutting down wells with low production, as soon as prices drop below the $85 mark. The first to feel the effects of the crisis would be Canadian heavy oil, before the United States. The problem of non-conventional Canadian oil does not just lie in its high production costs, but also in the cost of its production: while the cost of transporting oil from the Arabian Gulf does not exceed $3 per barrel, moving oil from western Canada costs between $12 and $15.

The reason is that production takes place in inland areas far from the coast and export terminals, and also to the fact that Canadian oil extracted from tars and asphalt is heavy and dense, requiring large pumping power to move it through thousands of miles of pipelines to the Gulf of Mexico or the US east coast. Finally, this oil is already sold at a discount – because of its poor quality – which increases greatly whenever the market weakens and supplies increase.

The unprecedented surge in the spot price of crude oil during 2003-08 and 2010-2011 sparked a heated public debate about the determinants of the price of oil. The popular view was that the surge in the price of oil during 2003-08 and 2010-2011 could not be explained by economic fundamentals. Instead, it was caused by what has been called the "financialization" of oil futures markets, with speculators becoming a major determinant of prices. This interpretation led to calls from politicians to regulate oil futures markets.

In theory, prices on futures markets could raise prices on spot markets, where real oil is bought and sold. Some studies (Kaufmann and Ullman, 2009) indicate (or give indication or provide evidence) that the change in the relationship between spot and futures markets, observed over a number of years, and the long-term uptrend in prices triggered by fundamental market developments have been exacerbated by speculation. Triulzi, D'Ecclesia, and Bencivenga, (2010) confirm the worries expressed by consumers about the extreme volatility of the oil price induced by speculation and by the erratic trend of the dollar/euro exchange rate. Moreover, Stevans and Sessions (2008) and Acharya et al. (2009) provide evidence that, crude oil inventory holdings and futures prices do show a positive correlation and thus, also influence prices on the spot market. Büyüksahin et al. (2011) stated that "fundamental data as well as the increased activity of hedge funds and other financial market participants are responsible for the stronger cointegration of futures contracts with near and far terms."

However, most studies do not support that speculation as cause of the increase in oil prices, Alquist and Gervais (2011) explain that oil-price fluctuations in terms of large and persistent demand shocks are related to growth in global real activity in the presence of supply constraints. Reports on a survey by economists Lutz Kilian, Bassam Fattouh and Lavan Mahadeva (2012), emphasize that, futures and spot prices reflect "common economic fundamentals." There is strong evidence that the co-movement between spot and futures prices reflects common economic fundamentals rather than the financialization of oil futures markets. Not only was the surge in the real price of oil well under way by 2005, but also the ability of economic fundamentals such as unexpectedly strong demand for crude oil from emerging Asia. The important determinants of oil prices i.e., demand shocks, supply shocks, futures prices, exchange rate and speculation are not necessarily separate from each other but can go together or complement one another.

The changes in the price of crude oil between 1997 and 2011 have been difficult to explain with only fundamentals related to the supply/demand balance. This analysis investigates additional factors that might have contributed to the oil price increase. The analysis to date does not support the proposition that speculative activity has effected changes in oil prices. Speculators play a significant role as they provide liquidity and assist in the price discovery; however, there is little-to-no evidence that the increased role of speculators drives prices. The changes in oil prices between January 1997 and December 2011 are largely due to fundamental supply and demand factors.

In India, the oil price movement is in line with global prices due to competitive market mechanism followed for oil sector in India now a days. So all the above factors found relevant in international market also cause oil price movement in India. However, the supply side factors are more relevant in determining oil price in India, since we have to find new supplier in case of any disruption from one supplier. The other important factors viz. Government policy and international political relations are also major contributory factors in oil price movements in India. Recent oil espionage from the petroleum ministry shows the functioning of speculative tendencies in Indian market to influence price. Therefore, the expectation from the Union Budget 2015-16 for the oil sector is that Government must adopt a sustainable policy for oil price mechanism, keeping in mind the enormous need of oil for overall growth and progress of the Indian economy, since oil is an essential input for sustenance and growth.

The main findings of this analysis show that the oil market in the outlined period is not as efficient as predicted by the efficient market hypothesis. Furthermore, several market occurrences such as speculation, excessive trading and increasing price volatility indicated that the market exhibited the signs of a speculative bubble. The basic drivers of the observed behaviour were discussed by applying the insights of the behavioural theory. Not surprisingly, the explanatory power of these theories was substantial and contributed to the understanding of the reasons behind investor's behaviour as well as the reason for prolonged state of mispricing. ❑

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YE-359/2014

Indigenous Vaccine for Rotavirus

The first indigenously developed and and manufactured Rotavirus vaccine 'Rotavic' was launched recently by the Prime Minister. This vaccine is expected to boost efforts to combat diarrhoea related infant mortality. It was developed under an innovative public-private partnership model among Ministry of Science and Technology, institutions of the US government like National Institute of Health, various government institutions like Bharat Biotech India Ltd, NGOs in India and supported by the Bill and Melinda Gates Foundation. The Gates Foundation and Bharat Biotech India Ltd contributed towards product development and testing and the successful launch has been the result of an extraordinary effort spread over the last 25 years. The PM lauded this initiatve as an example of India's capabilities for high-end research and development; manufacture of sophisticated pharmaceutical products in India as also effect PPP model of finding affordable solutions to societal challenges. The PM also highlighted the fact that this vaccine was a successful example of Indo-US collaboration in the area of medical research for the benefit of ordinary citizens.

Pharma-Literacy Initiave launched

'Pharma Jan Samadhan' - a web enabled system for redressal of consumers' grievances relating to pricing and availability of medicines was launched recently. Created by the National Pharmaceutical Pricing Authority(NPPA), the scheme seeks to put in place a speedy and effective complaint redressal system with respect to availability and pricing of medicines. It would serve as a robust e-governance tool for protection of consumers' interests through effective implementation of the Drugs(Price Control) Order 2013. 'Pharma Jan Samadhan' would provide consumers and others with an on-line facility to redress their complaints relating to over-pricing of medicines, non-availability or shortage of medicines, sale of new medicines without prior price approval of NPPA, and refusal of supply for sale of any medicine without good and sufficient reason. NPPA would initiate action on any complaint within 48 hours of its reciept. This pharma-literacy initiative would be more of a facilitator than a regulator and is expected to create awareness among people. It would also act as a deterrent against black marketing, spurious medicines, and inflated cost of drugs.

Digital Gender Atlas for Girls' Education in India

The Digital Gender Atlas for Advancing Girls' education was launched recently by the Dept of School Education and Literacy, Ministry of HRD. The tool, developed with the support of UNICEF, will help identify low performing geographic pockets for girls, particularly marginalised groups such as scheduled castes, scheduled tribes and muslim minorities, on specific gender related education indicators.

The purpose of the Gender Atlas is to help identify and ensure equitable education with a focus on vulnerable girls, including girls with disabilities. To ensure this is feasible, the Gender Atlas has been developed as a hands-on mangement tool to enable critical decisions and actions in pockets where gaps are to be met.

The Atlas provides comparative analysis of individual gender related indicators over three years and that enables a visual assessment of the change and an understanding of whether some interventions introduced in a geography at a particular point in time has worked or not. It is constructed on an open source platform with an inbuilt scope of updating data by authorised persons to retain its dynamic character. Using available data such as the Unified District Information System for Eduction(UDISE) data (2011-2014), Census 2011 data and District Level Health Survey(DLHS) 2007-08, the Gender Atlas enables the user to navigate between geographical representation and numeric data at state, district and block levels and gives information on key indicators for girls' education at primary, upper primary and secondary level.

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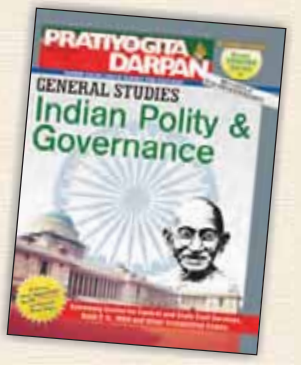

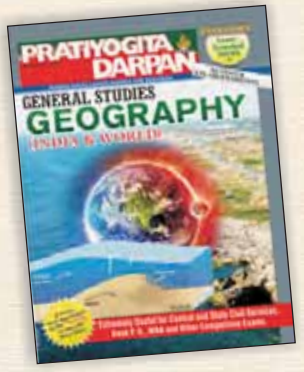

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