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# *Innovation: Changing the MSME landscape*

*October 2011*

Confederation of Indian Industry

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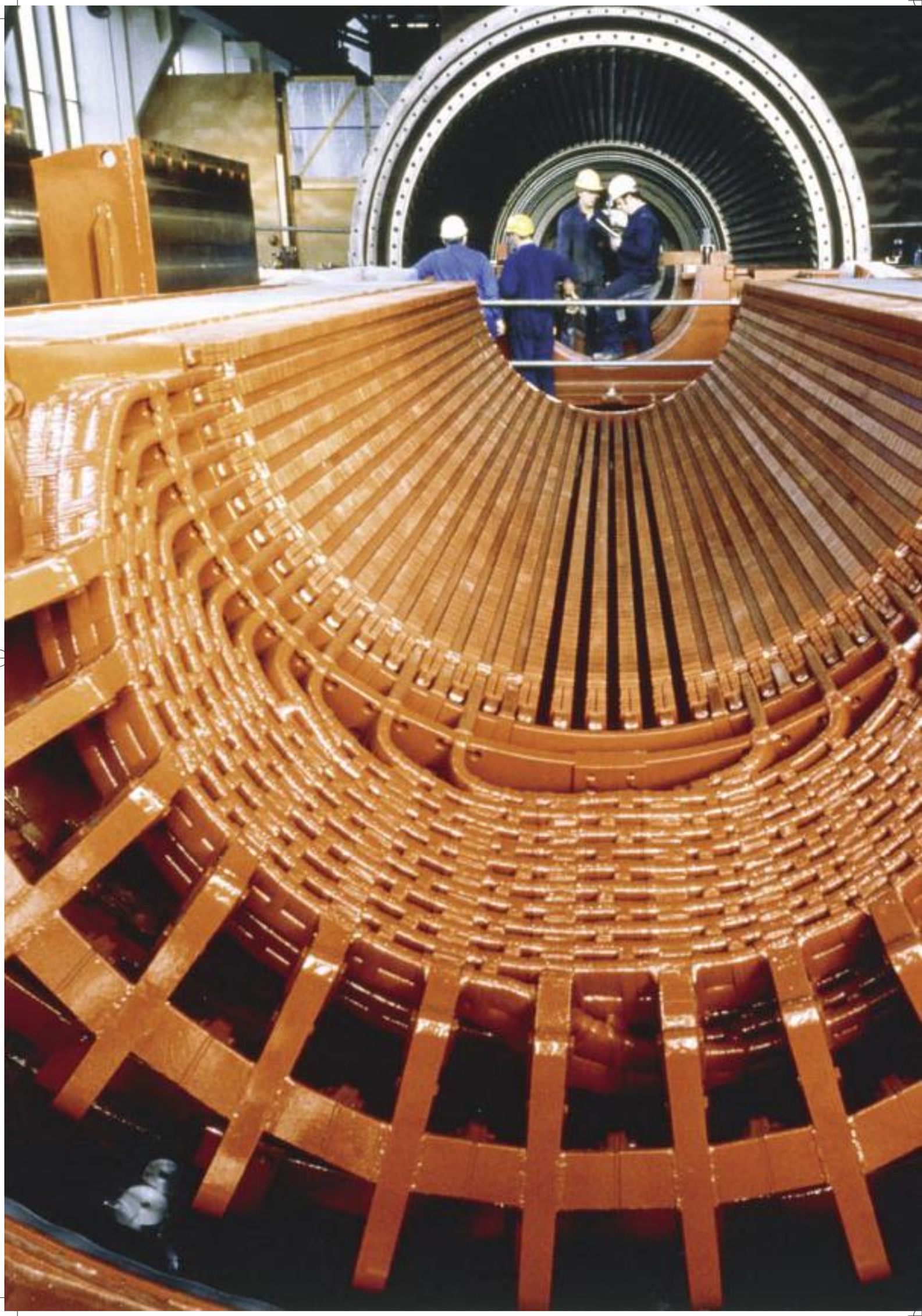
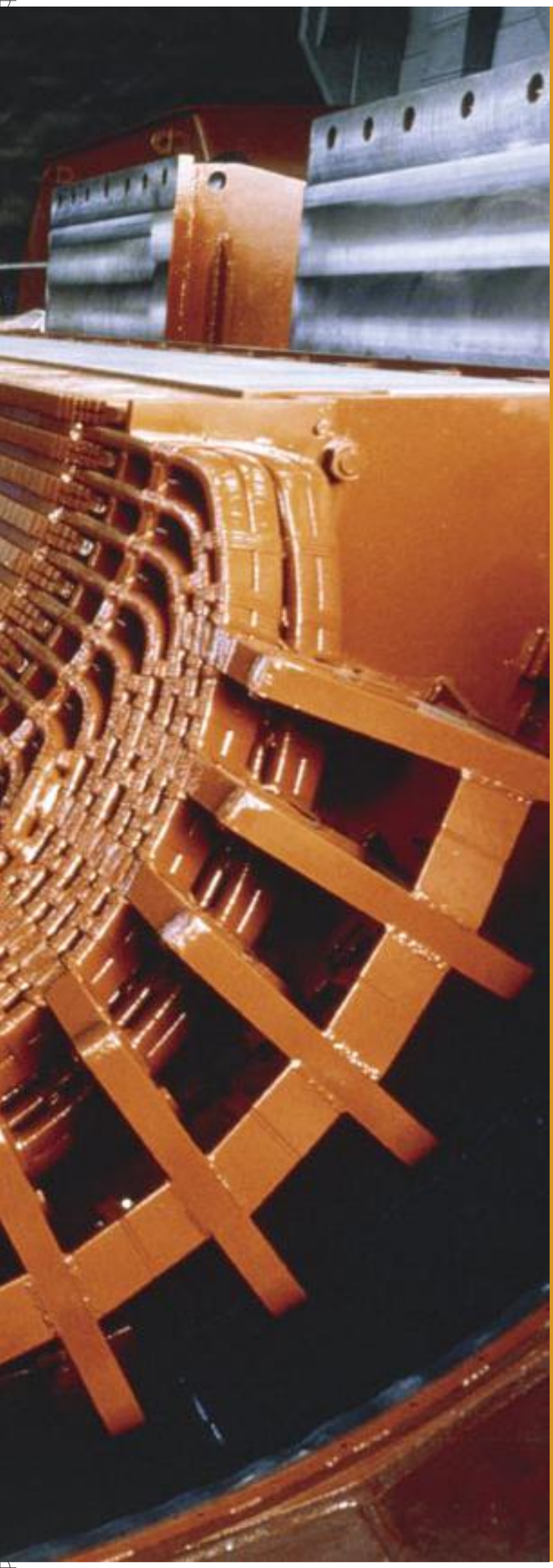




# Contents

# *Foreword*

In India, MSMEs have a pivotal role to play in the overall growth of industrial economy. In recent years, the MSME sector has consistently registered higher growth rate compared to the overall industrial sector. In India MSMEs contribute nearly 45% to manufacturing and about 40% to the Indian export sector. Their contribution to the Indian GDP is 8% and the sector has registered growth rate of 10.8%

Indian MSMEs have moved up the value chain from manufacture of simple goods to manufacture of sophisticated products. In line with the overall growth in Indian economy, SMEs have entered the services sector as well.

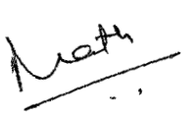
Associated with this high growth rates, MSMEs in India are also facing a number of problems like sub-optimal scale of operation, technological obsolescence, supply chain inefficiencies, increasing domestic and global competition, fund shortages, change in manufacturing strategies and turbulent and uncertain market scenario.

To survive with such issues and compete with large and global enterprises, MSMEs need to adopt innovative approaches in their working. Innovation could be on multiple parameters like business processes, product/ service development, technology, handling external environment to compete with large enterprises globally. With its agility and dynamism, the sector has shown admirable innovativeness and adaptability to survive the recent economic downturn and recession.

Clustering and networking approach adopted by Government of India and State Governments for development of MSMEs has helped these enterprises in boosting their competitiveness.

Indian SMEs are also implementing new and innovative information and communication technologies on a large scale like Software as a Service (SaaS) and Infrastructure as a Service (IaaS).

This publication focuses on changing landscape of MSME in India and the opportunity that the Indian landscape offers for the growth of MSME with the theme Innovation. CII in association with PwC as knowledge partner is proud to release this thought leadership publication “Innovation – changing the MSME landscape”.



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# *Overview*

With its growth rate of above 8%, India is expected to be the second largest economy in the world by 2013. Not only has its share in global merchandise exports increased from less than 0.6% in 2000 to 1.6% in 2010, it is also emerging as an important investor in other countries in the manufacturing as well as services sectors. For instance, more than 100 Indian firms have already marked their presence in Africa.

However, India's incredible growth story also contains certain confounding facts. With so much going for the country, it still ranks poorly on many global dimensions. For instance, on the Human Development Index, it ranks 132 out of 179 countries, on the Transparency Index it ranks 85 out of 180 countries, on the Prosperity Index it ranks 70 out of 104, on the Education Index 142 out of 176, and on the Global Hunger Index 66 out of 88.[1] With high GDP growth existing alongside poor performance in many metrics, India has graduated to a new problem--growing economic disparity.

The solution to India's challenges lies in providing answers to the question on poverty, from eliminating it to fostering the creation of wealth by many across the nation. A holistic and strategic approach to developing India's micro, small and medium enterprises (MSMEs) is the most effective approach to addressing disparity.

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In India, small business entities are next only to agriculture. With micro businesses traditionally known as village and cottage industries, Indian MSMEs boast of ancient heritage. Uniquely innovated through 'craft technology', products like 'muslin' enjoyed pride of place in ancient India and fame overseas, till the emergence of factory-made cloth (Agarwala 2001).

Today, India's small sector consists of (i) micro enterprises (village and cottage industrial units) (ii) small enterprises and (iii) medium enterprises. In accordance with the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 the micro, small and medium enterprises (MSMEs) have been classified:

***Manufacturing enterprises:***
These are the enterprises engaged in the manufacture or production of goods pertaining to any industry specified in the first schedule to the Industries (Development and Regulation) Act, 1951). Manufacturing enterprises are defined in terms of investment in plant and machinery.

***Service enterprises:***
These are the enterprises engaged in the provision of services and are defined in terms of investment in equipment. The limit for investment in plant and machinery, equipment for manufacturing, service enterprises, as notified, vide S.O. 1642(E) dtd.29-09-2006 are as under the following:

| Manufacturing sector | | Services sector | |
|---|---|---|---|
| **Enterprises** | Investment in plant and machinery | Enterprises | Investment in equipment |
| **Micro** | Does not exceed Rs 25 lakh | Micro | Does not exceed Rs 10 lakh |
| **Small** | More than Rs 25 lakh but does not exceed Rs 5 crore | Small | More than Rs 2 lakh but does not exceed Rs 2 crore |
| **Medium** | More than Rs 5 crore but does not exceed Rs 10 crore | Medium | More than Rs 2 crore but does not exceed Rs 5 crore |

1 Economist Intelligence Unit : Cover Story Winter 09-10 (Transformational Entrepreneurship: Krishna Tanuku)

*MSMEs the largest source of employment after the agriculture sector.*

Defined in this way, India's small businesses seem tiny both in terms of investment and the total number of employees which in a majority of tiny and small enterprises happen to be nine or less and in growth-oriented small and medium enterprises on an average, range between 10 and 40. However, current figures related to the aggregate performance (output, employment and exports) of India's MSMEs point to the contrary.

- There are more than 100 lakh MSME units in India with an investment of more than Rs 1 lakh crore.
- The sector has recorded double digit growth in the last four years.
- The contribution of the MSME sector to the entire output of the country is 40% and to the GDP 6%.
- Currently, there are over 11 million MSME units in India that produce more than 8000 products.
- Ninety per cent of the industrial units in India belong to the MSME sector.
- These MSMEs units contribute 35% to Indian industrial exports.

These bold statistics are seen at the top of the continuous incremental growth curve of India's small sector with MSMEs constituting the growth engine of the country's economy. Accounting for almost 45% of the manufacturing output, 95% of the number of industrial units, 40% of exports and providing employment to almost 60 million people make MSMEs the largest source of employment after the agriculture sector.

MSMEs lead to entrepreneurial development and the diversification of the industrial sector. They also provide depth to the industrial base of the economy. Employment opportunities are generated and the capital cost per employee is low. With the services sector dominating the MSME, and MNCs outsourcing their requirements to Indian service providers, the scope for MSME finance has increased.

There is also a more favourable environment now with the government committed to give impetus to this sector through infrastructure development, skill set development, entrepreneurship development, technology upgradation, etc.

Considering the importance of the sector in the overall growth of the economy, the Indian prime minister announced the task force on MSMEs in August 2009. Accordingly, it was set up in September 2009 under the chairmanship of the principal secretary to the prime minister to look into the issues and concerns of the sector in a holistic manner. The task force's recommendations are now being implemented in the approach to the 12th Five Year plan of India (see box). They address the critical issues that organisations in this sector face — credit, skill improvement, access to markets and raw materials, and coping with a multiplicity of regulations. High-level committees have also been set up to monitor the progress of these recommendations.

# *Summary of recommendations of the prime minister's task force on MSMEs*

***Measures that need immediate action***

- *Strict adherence to stipulated credit targets by commercial banks for the micro enterprises*
- *A separate fund with Small Industries Development Bank of India (SIDBI), using the shortfalls against the MSE credit targets set for commercial banks*
- *A public procurement policy for MSMEs as envisaged in the Micro, Small, and Medium Enterprises Development Act, 2006*
- *Of set policy of the government should give priority to MSMEs. This does not make sense. Rewrite please.*
- *Additional public spending to the tune of Rs 5,000 crore to 5,500 crore over the next three to five years to specifically target deficiencies in the existing infrastructure and institutional set-up*

***Medium-term institutional measures***

- *Improvement of the institutional set-up at the national level for the promotion and development of MSMEs*
- *A standing review committee to monitor the flow of credit to the MSME sector*
- *Micro-finance institutions (MFIs) to finance micro enterprises*
- *District industries centres (DICs) to be strengthened*

***Legal and regulatory structures***

- *The establishment of an SME exchange*
- *Legal options for the securitisation of trade credit receivables and the promotion of factoring services*
- *Wider adoption of new formats like limited liability partnerships and single-person companies*
- *Comprehensive review of the insolvency legislation*
- *Simplication of the labour laws, especially those applicable to the MSME sector*

*The inability of vocational training institutions to attract school drop-outs, tailor their courses in accordance with the changing needs of the industry and being able to scale quickly enough are other factors that have compounded the problem.*

Besides, different ministries have set up their R&D institutions to facilitate the technological and training requirements of SMEs. The Ministries of Textiles, Commerce, Agriculture and Rural Industries (ARI) and Chemicals and Petrochemicals are also encouraging and supporting SME innovations directly and indirectly. Private players viz. trusts and societies are also endeavouring to create and activate innovative culture and climate particularly in the SME sector.

The working group on science and technology for SMEs has prepared and delivered its report to the government of India[2]. This has already been implemented through the 11th Five Year Plan (2007 - 2012) of India. The working group recommended the existing schemes and programmes of 'technology business incubators' (TBIs) and technology innovation centres (TICs) to continue. It expects their total number to touch 170 and 50 respectively during the 11th Plan. The working group also recommended the role of polytechnics and industrial training institutes (ITIs) in serving the manpower requirements of SMEs in rural and mofussil areas.

However, a recent report by the National Skill Development Council of India forecasts that there could be an incremental shortfall of 240 million to 250 million people by 2022 in 20 high growth sectors of the Indian economy and in the unorganised segment. Over 13 million people are required every year in 90 skill categories. The inability of vocational training institutions to attract school drop-outs, tailor their courses in accordance with the changing needs of the industry and being able to scale quickly enough are other factors that have compounded the problem.

So, while 12.8 million youth enter the job market every year the annual current capacity for vocational training in India is just around 4.3 million. In fact, net enrolment in vocational training in India is about 3.5 million per year compared to 90 million in China and 11.3 million in the US. A mere 2% of Indian workers are formally skilled. In the current situation, MSMEs as the biggest generators of employment in the country, it is necessary to reduce skill gaps amongst MSMEs to promote the concept of inclusive growth.

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2 Details of the implementation and its outcomes has been covered in the chapter **Government initiatives and policies.**

# *What innovation means*

The sustainability of India's growth momentum as discussed n the previous section is under threat due to the dualistic development that has created the urban-rural divide as well as the looming environmental threats leading to water and energy shortages.

A holistic and integrated focus on building a nationwide entrepreneurial ecosystem can reshape India's socio-economic landscape in the next decade and enhance its socio-economic dimensions of growth. Nationwide entrepreneurship development with appropriate scale scope and innovation will make all the difference.

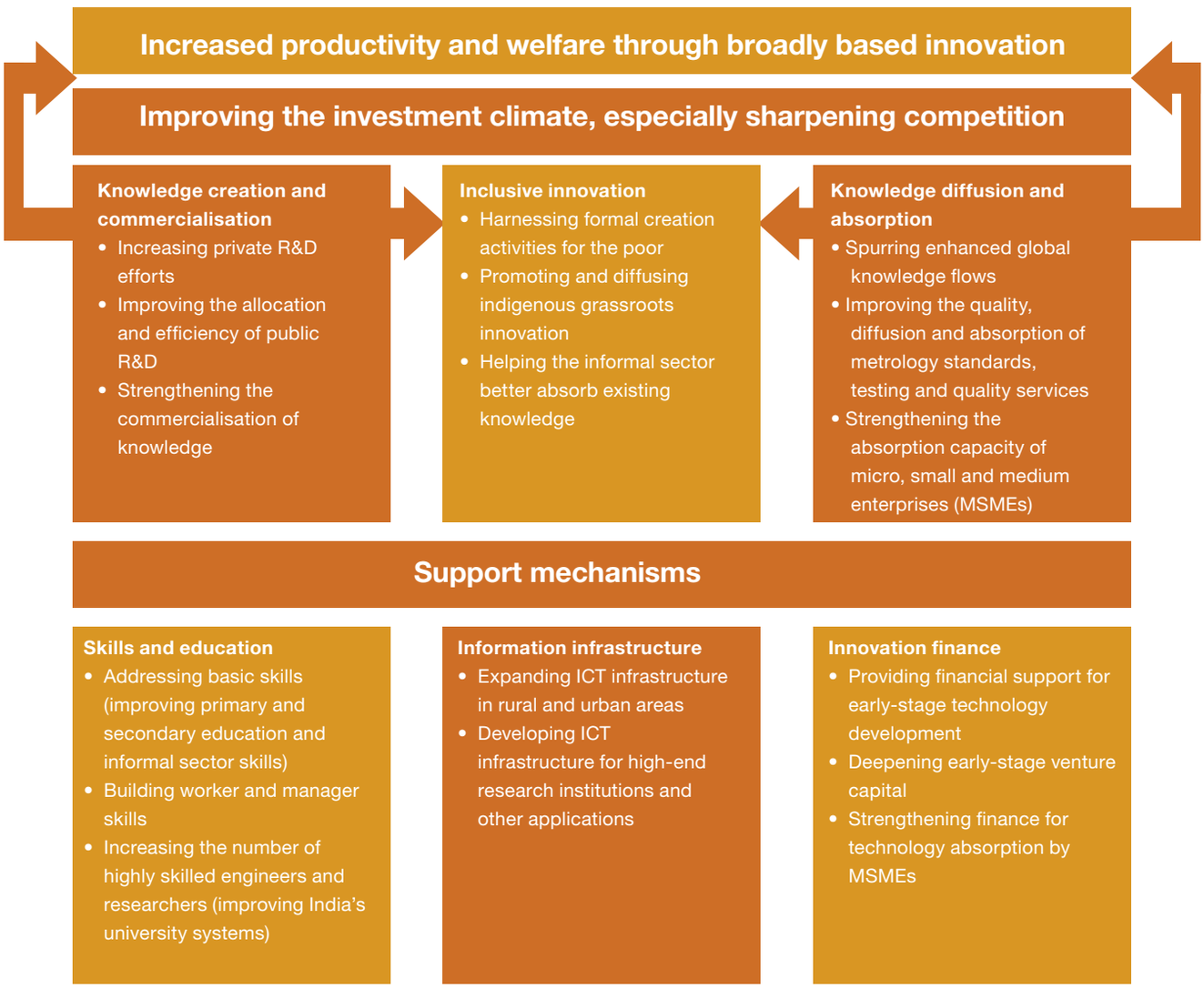
Statistics are already emerging on the increasing importance of innovation and it scale and scope among the country's firms today. A National Knowledge Commission of India study reveals that 42% of large firms and 17% of MSMEs have introduced 'new to the world' innovations during the course of their business. Seventeen per cent of the large companies rank innovation as the top strategic priority and 75% rank it among the top three priorities.

Irrespective of the dimensions of technological innovations, MSMEs intend to achieve cost-effective, improved versions of existing products to gain and maintain technological momentum. Studies of the innovation pattern of global MSMEs point to the fact that there is a relationship between innovation and the growth of MSMEs. So, while MSMEs of north-east England pursued radical innovation as a strategy of firm growth (Bala Subrahmanya 2001) Estonian MSMEs improved their performance in terms of market share and a diversified range of goods and services through innovation.

Empirical studies like those by Engel et al (2004) and Coad and Rao (2008) have found that there was a positive impact of innovation output on the sales turnover change in the craft-dominated industries of Germany as well as in the high-tech sectors in the US. However, all these findings are related to industrialised countries and therefore their relevance in the context of a developing country is questionable.

According to a recent World Bank report focused on enhancing the innovation capacities of India's enterprises to unleash its innovation potential, India needs to develop a strategy that does the following:

- Focuses on increasing competition as part of improving its investment climate, supported by stronger skills, better information infrastructure, and more finance–public and private.
- Strengthens its efforts to create and commercialise knowledge, as well as better diffuse existing global and local knowledge and increase the capacity of smaller enterprises to absorb it. If all enterprises could achieve national best practices based on knowledge already used in India, the output of the economy could increase more than five-fold.
- Fosters more inclusive innovation, by promoting formal R&D efforts for poor people and more creative grassroots efforts by them, and by improving the ability of informal enterprises to exploit existing knowledge.




Innovation under local conditions is a critical element to help MSMEs, both new and existing, to address India's mega challenges. First and foremost, any innovation must think about the concept of scale in the Indian context, the target customer size, reach, price points, and how to leverage local resources given all attendant cultural and regional insensitivities. To address this, the country should have its own indigenous pervasive models. To emulate established global models, India needs to re-assess the applicability of these models in the Indian context.

India has always seen abundant localised creativity, or jugaad. This literally means working around a lack of resources by making best use of available resources and coming up with a quick-fix solution.

The problem however, has always been the institutionalisation of this innovation. Many Indian MSMEs innovate and offer new products and services that address a multitude of problems. But this innovation fails to sustain. Few companies go beyond the one innovative product or service. So, even while new technology start-ups can embark on breakthrough innovations for building knowledge-intensive

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businesses, MSMEs should look at incremental innovation to ensure competitiveness.

Recognising the importance of generating, commercialising and absorbing R&D, in recent years, the government has created a number of support programmes, which could of course be more effective. Public programmes supporting innovation have achieved significant successes. Still, their outcomes have not been commensurate with the needs of the Indian economy or the resources invested in them.

### *Technology transfer*

In a knowledge society, technology innovation is regarded as an important factor that drives national and corporate competitiveness alike. While innovation is the key word for every economy, India's challenge is to make innovation work for the masses and create sustainable businesses. The principal sources of technological innovations are the academia, R&D organisations, individual innovators, etc. The key challenge, however, is technology transfer. Notably, a few laudable initiatives from various government agencies, e.g DSIR, DBT, etc, foster innovation, technology entrepreneurship and above all, opportunities to SMEs to attempt high-risk pre-proof-of-concept R&D.

Certain academic and technical institutions show that world-class innovation can take place in an environment where academia and business collaborate. A strong culture of communication between universities and industry helps bridge the gap between science and economy and becomes a critical component in unleashing a country's innovation potential. Some institutional set-ups of significance towards the management of knowledge for creating economic value include S&T parks, technology and business incubators and academic technology licensing offices.

Globally, many organisations are successfully linking academic institutions with the industry. In India, the Foundation for Innovation and technology Transfer (FITT) (est. 1992) has been a pioneering industry-interface organisation (modelled broadly on the pattern of SINTEF, Norway). Over the years, FITT has gained the confidence of both the academic community as well as the industry by providing a flexible and facilitating work ethos. Fortunately, in India, we are seeing an institutional policy shift towards attuning research establishments to market needs. This includes identifying areas of collaboration, bankable projects, addressing IPR issues and involving industry and financial experts in the process of economic value addition to the knowledge generated through research and development.

### *The cluster approach*

Applying the cluster approach has proven useful as the point of departure for the design of innovation policies to support SMEs in Asian countries. In contrast to other more atomistic approaches working with the same variables but in isolation, the cluster approach considers the links and dependencies of different institutions and organisations. Thinking 'systemic' allows selective interventions in the weakest as well as the most critical nodes in the system.

Selectivity is crucial for developing countries where financial resources are scarce. This in turn can help policymakers avoid policy interventions focusing on just one variable of the system leading to decreasing returns unless supported by complementary investments.

In India, the bio-technology industry is coalescing in several innovation clusters, combining research establishments and producers, the results of which are evident. Several other clusters of industries, engineering products, garments, pharmaceuticals, leather goods, etc., are operating around the country. NInC has outlined a partnership agreement with the Council for Scientific and Industrial Research (CSIR) to connect its resources with such clusters to promote innovation. NInC is also rolling out a 'cluster tool-kit' with guidelines and best practices to improve cluster performance. The Open Source Drug Discovery process, mentioned earlier, is a remarkable example of a virtual cluster formed by technology enabled 'crowd sourcing' of collaborators converging to respond to an innovation challenge. Such an Open Innovation Model, using an 'open source' and collaborative approach, can enable the creation of affordable solutions unlikely with a conventional, 'in-lab' approach[3].

3 Mid-term appraisal of the 11th Five Year Plan (Planning Commission Website)

# *Key challenges*

MSMEs face certain distinct challenges because of their very nature. One of the biggest is the stiff competition from two sources–bigger and established players in the market and imports. These make it necessary for MSMEs to innovate and either introduce a product or a service to fill the void created by bigger players, or reduce costs and streamline processes to enable them to be on a more level playing field against bigger players.[4]

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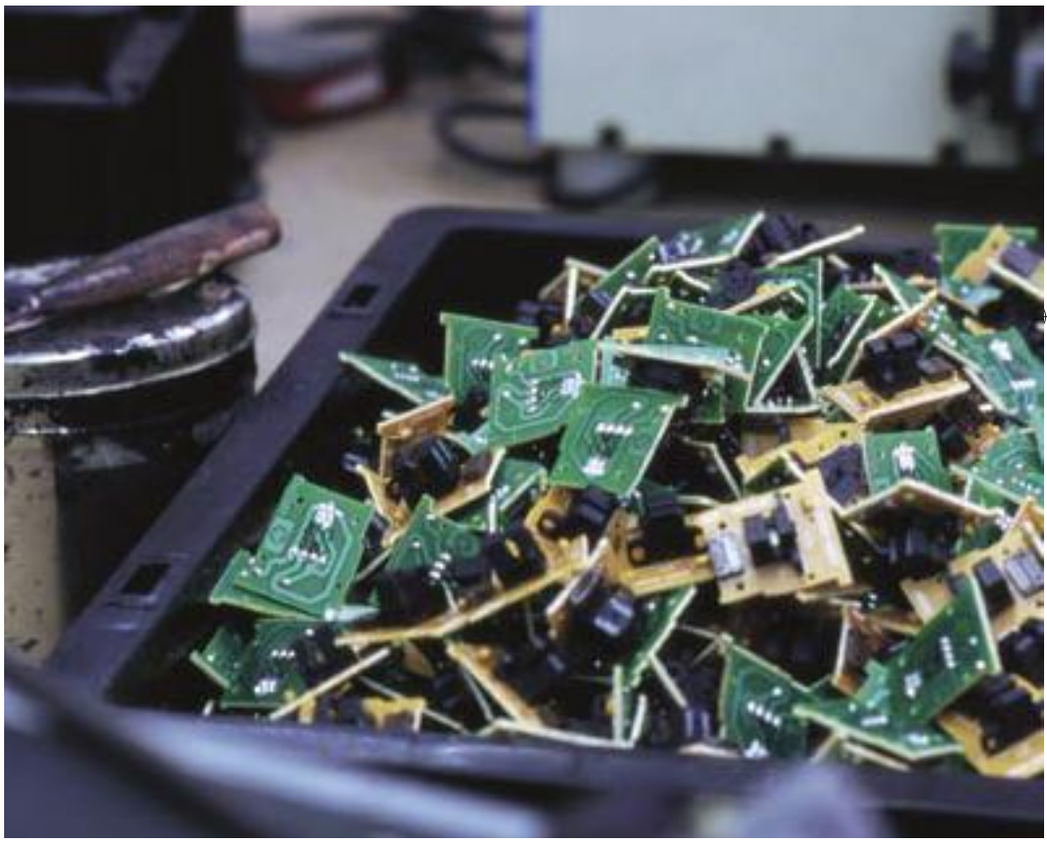
However, MSMEs' ability to innovate is usually restricted by two types of challenges–strategic and operational.

### *Strategic*

**Intellectual property rights (IPR)**
The effective implementation of IPRs in India has always remained a contentious issue. Weak implementation of legislation usually impacts micro and small scale industries, especially those that are innovation-driven. Their innovation helps them develop products and services before others.

However, ineffective legislation and implementation drastically (and illegally) cut down lead time, thereby negating the ability of MSMEs to effectively monetise their innovation.

**High cost of credit**
The fundamental basis of any enterprise that is innovation-driven is research. R&D needs a continuous flow of funds. In the current Indian economic scenario, cheap funds are difficult to come by. With the RBI reiterating that cost of funds will remain high for a while to curb inflation, this will continue to remain a challenge for the sector.



Another reason for the high cost of credit has been the high risk perception among banks about this sector and the high transaction costs for loan appraisal. While the quantum of advances from public sector banks to small and medium enterprises (SMEs) has increased over the years in absolute terms, from Rs 46,045 crore in March 2000 to Rs 1,85,208 crore in March 2009. For the same period, the share of the credit to the MSME sector in the net bank credit (NBC) has declined from 12.5% to 10.9%.

MSME sector players are unable to provide collateral to banks and are hence denied access to credit, making it harder to get loans.

4 CII Paper on Creating Competitive MSMEs October 2010

*Operational*

**Lower technology levels**
The MSME sector in India, with some exceptions, is characterised by low technology levels, a huge drawback in the emerging global market. As a result, the sustainability of a large number of MSMEs will be in jeopardy amidst competition from imports.

This hinders the growth of innovation-driven companies which do not belong to the IT sector, where effective technology will sort out most process road blocks and allow companies to concentrate on their core business of innovation.

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**Insufficient infrastructure**
To ensure MSME competitiveness, it is essential that the availability of infrastructure, technology and skilled manpower is in tune with global trends. MSMEs are located in decades-old industrial estates, are functioning within urban areas or have come up in an unorganised manner in rural areas. The state of infrastructure, including power, water, roads, etc. in such areas is poor and unreliable. While these act as threats to MSMEs, the biggest impact is felt by their research arms as they don't have the firepower to be able to innovate.

**Lack of skilled manpower**
Although India has a large pool of human resources, the industry continues to lack skilled manpower required for manufacturing, marketing, servicing, etc.

Also, there is a lack of a culture of research. Even premier technological institutes do not produce the quantity and quality of world-class research expected of them. This leads to a serious dearth of competent researchers in organisations.

**Problems of storage, designing, packaging and product display**
MSMEs face problems of storage, display and designs for their products. Non-availability of selling outlets for their products is a serious constraint. In addition, MSMEs also face the problem of inadequate infrastructure for marketing their products to remote parts of the country. So even if a company innovates, effective monetisation remains a key concern.

**Delays in settlement**
Large-scale buyers usually have long settlement lead times when they deal with MSMEs owing to their limited bargaining power in the market. This hurts the ability of MSMEs to divert funds to other capex requirements and to R&D.

In later sections of this paper, some of the ways adopted by the government and other organisations to mitigate a few these problems have been outlined.

# *Opportunities for MSMEs in India*

The MSME segment has been in the focus from several government institutions, corporate bodies and banks. Apart from the policy focus and the government's thrust on promoting this segment, globalisation and India's robust economic growth have opened several latent business opportunities for it. This section focuses on key sectors of strategic importance to India's economy. It also throws light on the growth and capacity-building opportunities they present to Indian MSMEs.

### *Food processing*

MSMEs bridge the gap between the agriculture and industrial segments in India. The Indian food processing industry is estimated to cross the $300 billion mark by 2015. MSMEs currently contribute 90% of the industrial units and 40% of the revenue to the sector. With the current policy of small-scale industries (SSI) reservations, this sector has seen the predominant growth of regional enterprises.

With their innovative concoctions and confections, MSMEs in the food processing industry are now moving away from low-income groups and catering to the export demands of the premium segment.

Innovation can also help the industry overcome storage and transport constraints which currently limit market access to MSMEs. With new technological developments in cold storage and increasing distribution networks through internet connectivity, MSMEs can further advance into geographical areas and new product markets.

### *Biotech and pharma*

The Indian pharmaceutical market is the fourth largest in the world in terms of volume and the 14th largest in terms of value. This market was US$ 12 billion in 2010 and is expected to grow at a CAGR of 17 to 20% over the next few years and reach around US$ 50 billion to 74 billion by 2020. India is expected to be one of the top 10 markets by 2020.

India's Patent Act of 1970 provided protection just for product patents and not processes. Indian pharmaceutical companies developed domain expertise in process innovation and have achieved significant successes in low-cost manufacturing. The country has also developed strong expertise in quality systems associated with pharma manufacturing like WHO Good Manufacturing Practices (GMP) and today, has over 150 plants certified by the US Food and Drug Administration (FDA), the largest number in any country outside the US. Many SME units set up in the 70s and 80s have become mid- or large-sized companies today.

India, however, did not invest in developing drug discovery capabilities till the early 21st century. The Indian Patents Act was re-drawn in 2005 to recognise product patents and encourage the development of new chemical entities (NCEs) in pharma. Indian pharma companies have also expressed an interest in moving up the value chain from low-cost manufacturing to higher order services like drug discovery and development. Investment in R&D is on the rise and Indian companies have licensed molecules to MNCs for further R&D and commercialisation. Given the investments required in infrastructure, high labour costs and the non-availability of early-stage risk (venture) capital, Indian SMEs are unable to participate in pharma innovations of the 21st century.

Recognising the need for venture capital to fuel drug discovery and innovation, the Department of Pharmaceuticals has launched the Indian Pharmaceutical Innovation Fund (IPIF) to finance early-stage discovery. Eight new National Institutes of Pharmacy Education and Research (NIPER) have been set up to train pharma teachers, researchers and managers. Also, the Department of Biotechnology has started the Small Business Innovation Research Institute (SBIRI). This public-private partnership initiative of the Department provides assistance to innovators and entrepreneurs with a science background as well as supports R&D efforts in SMEs. This funding has financed 48 companies in medical biotechnology. These companies are utilising the funds for drug discovery, phase I and phase II clinical trials for promising ideas which may lead to commercialisation. SBIRI also brings together innovators with possible users of developed technologies to boost the chances of commercialisation of innovations.

*The small and medium-scale industry sector in India has a very significant role to play in this arena as many critical parts of strategic weaponry are produced by them.*

In the area of medical devices too, the Department of Biotechnology, with assistance from medical technology companies, has funded an initiative called Stanford India Biodesign Forum. This collaborative initiative between the All India Institute of Medical Sciences and Stanford University aims to provide a forum for the development of new medical technologies to solve some of India's healthcare challenges.

### *Defence and homeland security*

Globally, MSMEs play a vital role in supporting public sector enterprises and bigger integrators within the supply chain of defence and aerospace. They benefit from having a lean structure, agility, lower cost of setting up business, highly skilled labour and cost competitiveness in terms of production of smaller systems and subsystems.

India's first defence production policy aimed to enhance the capabilities and growth trajectory of SMEs in the security domain. Also, the defence minister is looking to achieve 70% indigenisation and 30% imports in defence acquisition.[5] This accelerated growth of the domestic industry was essential to meet the requirements of the armed forces and the paramilitary.

Further, with over US$ 10 billion (Rs 450 billion) likely to accrue as defence offsets over the next few years, there is enormous opportunity for SMEs to be the primary catalyst for growth in the sector, especially if they collaborate with government defence organisations.

Overall, India is expected to spend US$ 100 billion over the next decade for defence and security related acquisitions.[6] This will provide the country with nearly US$ 30 billion as offsets. Under this, global firms obtaining a contract worth over Rs 3 billion will have to plough back 30% of the deal amount in the domestic industry.

The Defence Ministry, which introduced the offsets clause in global armed forces tenders in 2006 to energise the domestic defence sector had expanded the scope to the civil aviation, internal security and related training sectors in January 2011.

The defence industry in India has now been opened up for 100% Indian private sector participation, with FDI permissible upto 26%, both subject to licensing.[7] This will result in higher domestic output and consequently, a reduction in imports of defence equipment. It is expected that there will be no restrictions on the list of items that can be produced by the private sector. The Indian private sector is competitive enough to handle defence-related items, be it the high-tech aviation or the naval sectors or the other simple products for the defence industry.

The new policy of welcoming private participation in the defence sector is surely going to help transform India into a defence industrial base capable of producing world-class products at highly competitive prices. The small and medium-scale industry sector in India has a very significant role to play in this arena as many critical parts of strategic weaponry are produced by them. However, they have to identify appropriate and innovative ways of technological capacity-building in the sector. Technology partnership, as a new strategy of cooperation, is of particular interest to SMEs. The public-private partnership in the UK defence sector gives the government access to private sector capital to exploit its technologies and capabilities into wider markets for the benefit of the economy. Thus, agencies like the Defence Research and Development Organisation (DRDO) with their advanced R&D facilities can look for strategic subcontracting of production in various projects among SMEs.

5 Ministry of Defence Government of India Feb 2011
6 Qfinance (http://www.qfinance.com/sector-profiles/defense) : Defence Industry: Market Analysis & Trends
7 CII Website: Defence Division

*[8]One such successful MSME serving the Indian defence sector is the Bangalore-based Dynamatic Technologies. Whenever an Airbus A320 aircraft takes off, it has this small company to thank for its safety. The wing flap track beams, instrumental in controlling the speed, direction and balance of the aircraft, come from a small company based in India's IT capital.*

*Dynamatic, a mid-tier firm, manufactures these parts for every variant of Airbus' best-selling A320 family of planes through its partnership with aircraft parts-maker Spirit AeroSystems. The critical and complex aero structures it builds are the first by a non-European company. The company has now become the single source of supplies for these components.*

*Uday Malhotra started the aerospace division of Dynamatic from a garage in 1995 along with Ravish Malhotra, a former air commodore of the Indian Air Force. They initially built the aero-structures for India's unmanned air vehicles and jet trainers. Then, they moved up the value chain and made parts for multi-role combat aircraft Sukhoi Su-30MKI and Airbus.*

*Dynamatic is just one among several SMEs partnering with global players such as Airbus, Boeing and government agencies in a bid to pick up complex engineering projects being outsourced. From building aero structures for next-generation aircrafts to unmanned combat air vehicles (UAV) and robots, entrepreneurs seem to be betting on everything. India alone will spend US$ 100 billion on defence modernisation programmes by 2022, according to consulting firm Frost & Sullivan.*

*These entrepreneurs have enthusiasm and cutting-edge technologies. Additionally, they are willing to take risks.*

*Dynamatic, which also makes equipment for sectors ranging from automotive to construction, has a turnover of around Rs 600 crore. A significant portion of this comes from aerospace. Besides the Airbus deals, it has bagged another critical project from a large defence contractor, Northrop Grumman, to perform F-16 fighter jet radar sub-assemblies. It has also bagged contracts to supply cabinets to house critical power and mission equipment for the P-8I programme, a multi-mission maritime aircraft being customised by Boeing for the Indian Navy.*

*While Dynamatic targets global markets, Chennai-based Data Patterns, run by S Rangarajan, is focused on the Indian market. It has indigenously developed technologies for electronic warfare systems, radars, hardware and software for airborne vehicles.*

*The firm has made key systems that have enabled the launch of powerful missiles such as BrahMos, Akash, Nirbhay, Prithvi and rockets of Indian space research organisation (ISRO).*

### *Cleantech or green technology*

The area of clean energy production or cleantech, as the industry is now popularly known as, is at the forefront of innovation. The driver of innovation here is the high cost of traditional fuels like coal, petroleum and derived products. Most enterprises in this sector are also driven by the harmful environmental effects caused by traditional fossil fuels and strive to make an impact larger than the economics of their business. This has led to a surge in companies looking to tap into the easily available raw materials to produce energy.

The one innovation everybody in the cleantech business was chasing a decade ago was converting bio-diesel into a mass fuel. Jatropha-based fuels, which took off successfully then, are still being considered an alternative to traditional jet fuels worldwide. However, India did not benefit from it as, contrary to initial research, Jatropha did require irrigation and fertilisers to maintain good yields of oil. However, the basis of the cleantech industry is innovation. Small entrepreneurs with an idea have tried to make their mark on this industry. One such venture is Husk Power Systems Limited (HPS), started by Gyanesh Pandey and Ratnesh Yadav. They were passionate about uplifting the standard of living in the villages of Bihar. They believed that providing access to electricity was the first step in bringing to them other services like education and social security.

They chanced upon a method to produce electricity from rice husk–a commonly available 'waste' from the rice mills of India. The problem, however, was that rice husk was unclean and so, it used to produce gases when burnt. Thus, making a sustainable engine was a huge barrier.

To circumvent the issue, the duo created an innovative engine which cleaned the rice husk before the accumulated dirt clogged the machine. Electricity was then supplied to an entire village in the Dhanaha region of Bihar.

8 The Economic Times : 18th February 2011 " Indian SMEs are sought after for Defence programs"

# *Government initiatives and policies*

One of the key driving forces for industrial augmentation is the growth of MSMEs because it helps create employment. However, several factors like credit policies and innovation barriers restrain the profitability of this sector.

Poor infrastructure, especially power, is a major hindrance when it comes to being competitive, especially for SMEs who cannot afford to build their own infrastructure.

SMEs form the foundation of the manufacturing sector in all large manufacturing countries. They generate employment within the manufacturing sector, and contribute to the country's exports. India has abandoned the approach of reserving sectors for its SMEs and instead, has adopted the more sustainable approach of nurturing competitive SMEs. SMEs adopt newer technologies and improve their productivity most effectively within industrial clusters around larger enterprises preferably linked with technology institutes. To help the growth of innovative and competitive manufacturing enterprises, both small and large, India must stimulate the growth of dynamic clusters. Difficulties faced while acquiring land and poor infrastructure are major handicaps for Indian manufacturing enterprises. The clustering of enterprises, along transport corridors and adjacent to ports, also enables the provision of good infrastructure to them.

The Indian government realises the role played by MSMEs in the economic and social development of the country because employment potential and the overall growth in the MSME sector is much higher than in the large industries.

The government is also committed to preserve, protect and promote MSMEs to accelerate the expansion of productive employment in the country. The government seeks to fulfil its mission by formulating policies, designing and implementing support measures in the field of credit, technological upgradation, marketing, entrepreneurship development, etc. The thrust areas for increasing the competitiveness of MSMEs include technology (including quality), procurement, skills development and finance.

*The thrust areas for increasing the competitiveness of MSMEs include technology, procurement, skills development and finance.*

The Indian government has announced policy measures for easy and adequate availability of credit for the MSME sector. In addition to the policy packages, the Indian government has also introduced schemes like the credit guarantee scheme and the performance and credit rating scheme to ensure better availability of credit to MSMEs.

The role of government policies, technology interventions and financial measures for creating competitive MSMEs has been discussed in detail in the following sections.

***Finance***

In recent years, India has witnessed an increased flow of capital in the form of primary and secondary securities markets, venture capital, private equity, external commercial borrowings, factoring services and others.

The prime minister's task force set up in February 2010 has recommended steps to encourage many MSMEs.

- The task force has asked for a target of 6% for micro enterprises under priority sector lending. The panel also recommended that in case there is a shortfall by banks in lending to SMEs,

*Exporters of handicrafts, handlooms, carpets and SMEs will now be eligible for cheaper bank credit, subject to a minimum interest rate of 7% to be available*

the deficit should be put in a separate fund with SIDBI to ensure required assistance to MSEs in one way or the other.

- Interest subvention will help MSMEs avail the required credit at a better rate than what has been available till now.

- The SME exchange will allow MSMEs to acquire equity or risk capital. The sector has been relying heavily on debt capital so far.

- A uniform application form common to all banks simplifies the process of loan application of up to Rs 25 lakh. Banks should also open more MSME-focused branch offices at different MSME clusters which can also act as counselling centres for MSMEs. Banks may also be persuaded to adopt the banking code for MSMEs to bring about uniformity in operations.

The office of the development commissioner (MSME) has also done a lot for the fiscal betterment of the MSMEs through many of its schemes.

- The credit guarantee fund scheme for micro and small enterprises provides collateral-free loan of up to Rs 50 lakh.

- The micro finance programme contributes towards security deposits required from the micro finance institutions (MFIs) or NGOs to get loan from SIDBI. The scheme is being operated in underserved states. As on 31 March 2010, a cumulative loan amount of Rs 1299.68 crore has been provided to MFIs and NGOs under the scheme, benefiting around 20.21 lakh people. More than 80% of these are estimated to be women beneficiaries.

### *RBI initiatives*

The RBI has taken several measures to make credit available to the employment-intensive sector of MSMEs.

In June 2011, the RBI asked banks to ensure that lending to SMEs grows at a decent pace. According to the data provided by the RBI, bank credit to SMEs grew by 13% in May, as compared to 14.8% growth recorded in the same month last year. Banks were given instructions to step up credit to micro and small units to 55% of the total SME financing by 2012 and 60% by 2013. Also, the number of accounts needed to grow by 10% every year.

A 2% interest subsidy effective from 1 April 2011 on rupee export credit to the labour-oriented and SME sectors prevented them from slowing down in the major markets like the US and Europe. Exporters of handicrafts, handlooms, carpets and SMEs will now be eligible for cheaper bank credit, subject to a minimum interest rate of 7% to be available up to 31 March 2012.

In August 2011, the RBI cautioned banks saying that the risk increases as they move down the hierarchy. Thus, banks need to balance out risk with lending activity. The RBI has suggested stepping up the credit-lending policy at the same time developing an effective risk management mechanism.

### *Procurement*

The Micro, Small and Medium Enterprises Development Act, 2006, stipulates that for facilitating the promotion and development of this sector, the central and state governments should give preference to policies with respect to the procurement of goods and services produced and provided by MSMEs.

The proposed public procurement policy seeks a mandatory 20% share for

*The proposed public procurement policy seeks a mandatory 20% share for MSMEs in all government and public sector unit purchases over a period of three years.*

MSMEs in all government and public sector unit purchases over a period of three years.

The Department of Expenditure (DOE) and Chief Vigilance Commission (CVC) have replaced the procurement mode of all public sector units from paper-based to the electronic one. This has benefited MSMEs by reducing costs and enhancing efficiency.

### *Manpower*

The government has realised the importance of vocational education and skill upgradation of the existing workforce. So, it has taken initiatives to upgrade nearly 1,390 industrial training institutes (ITIs) in public private partnership mode across the nation.

The scheme support for entrepreneurial and managerial development of MSMEs through incubators aims to nurture innovative business ideas, which can be commercialised in a year. Under the scheme, various institutions like engineering colleges, research labs, etc. are provided with funds up to Rs 6.25 lakh for handholding each new idea or entrepreneur. The incubators provide technology guidance, workshops, lab support and linkages to other agencies for the successful launch of business. Further, they also guide the entrepreneur in establishing the enterprise. Under the scheme, 25 institutions have been approved for nurturing innovative business ideas near the commercialisation stage.

### *Intellectual property*

The scheme for building IPR awareness was launched to enable Indian MSMEs gain a global leadership position. It was to empower them to use the tools of IPR effectively for innovative projects.

The Ministry of MSME has set up an intellectual property cell which provides a range of IP related services such as prior art-search, validity search, patent landscape, studies on technology development, etc. The implementation of proper intellectual rights regime will help SMEs gain access to newer markets, avoid wasteful investment in R&D and marketing, negotiate licensing, franchising or other IP-based contractual agreements and increasing market value to lead to other potential benefits.

### *Information availability*

'Udyami helpline', the call centre of the Ministry of MSME, has been created as a single-point facility for a wide spectrum of information and accessibility to banks and other MSME-related organisations. Udyami provides information to first-generation entrepreneurs regarding project profiles available on the website of the ministry, the Khadi and Village Industries Commission (KVIC) and other ministries. It also gives information on the other formalities required in setting up an enterprise, for getting loans from banks, the availability of subsidy under various schemes of the ministry, etc.

### *Design clinic*

The design clinic scheme for design expertise to MSMEs is a unique and ambitious design intervention scheme by the ministry. The main objective of the scheme is to bring the MSME sector and design expertise onto a common platform and to provide expert advice and solutions on real-time design problems, resulting in continuous improvement and value addition for existing products. This model brings design exposure at the doorstep of industry clusters for design awareness, improvement, evaluation, analysis and design-related intervention.

*It will help MSMEs develop product, process and business expertise through design intervention at multiple levels of interaction.*

It aims to enhance industry competitiveness and productivity with the help of design intervention at various functional levels. It will help MSMEs develop product, process and business expertise through design intervention at multiple levels of interaction. The goal is to help MSME manufacturing industries move up the value chain by switching the production mode from original equipment manufacturing to original design manufacturing and hence original brand manufacturing.

The total scheme budget will be Rs 73.58 crore, out of which Rs 49.08 crore will be in the form of assistance from the Indian government at various stages. The balance amount will be contributed by the beneficiary MSMEs.

The scheme aims to reach out to about 200 MSME clusters over the next two and half years. This will be achieved by organising about 200 design sensitisation seminars, 200 design clinic workshops and 400 design projects including 100 student design projects.

### *National Manufacturing Competitiveness Programme (NMCP)*

The NMCP is the nodal programme of the government of India to develop global competitiveness among Indian MSMEs. There are 10 components under the NMCP targeted at enhancing the entire value chain of the MSME sector.[9] It includes programmes like establishment of new tool rooms, benchmarking of the global competitors, enhancing of product and process quality, cost reduction through lean manufacturing techniques, etc. The programme is to be implemented through the public-private partnership mode with close physical and financial participation of the MSME sector.

- The first component made operational was 'marketing assistance or support to MSMEs'. The objective is to popularise the bar code registration and motivate enterprises to adopt the bar code certification. This will enable them to sell their products worldwide and result in higher export price realisation. It will also enhance domestic wholesale and retail marketing.

- 'Enabling manufacturing sector to be competitive through quality management standards (QMS) and quality technology tools (QTT)' was launched in order to improve quality and productivity in the MSME sector.

- Lean manufacturing programme (LMP) for MSMEs will help them reduce their manufacturing cost through proper personnel management, better space utilisation, scientific inventory management, improved process flows, reduced engineering time, etc.

- The component on 'promotion of information and communication tools (ICT)' will identify some of those SME clusters which have quality production and export potential. It will also assist them in adopting ICT applications to achieve competitiveness in national and international markets.

- The objective of the design clinics scheme for MSMEs is to bring the sector and design expertise on to a common platform. It also aims at value-added cost effective solutions.

- The 'marketing assistance and technology upgradation' scheme for MSMEs aims to improve the marketing competitiveness of the MSME sector by improving their techniques and technology for promotion.

- The objective of 'technology and quality upgradation support to MSMEs' is to sensitise the manufacturing MSME sector to become globally competitive. This includes upgrading their technologies, usage of energy-efficient technologies, adoption of other technologies as per global standards, improvement of quality and reduction of cost of production, etc.

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### *Additional support mechanisms by the Indian government*

The government has taken various measures to support and ensure growth and development of Indian MSMEs, especially to enhance their competitiveness in the present global environment.

The development commissioner (MSME) is the focal point for all policy matters including the formulation of promotional and developmental schemes as well as channelising certain incentives and subsidies.

SIDBI is the principal financial institution for financing related promotional and development work.

National Small Industries Corporation Limited (NSIC) facilitates the procurement of raw material and in the marketing of products.

In addition, various ministries and departments of the government have promotional policies and developmental schemes for the MSMEs in their respective sectors.

The Indian government, via the Ministry of MSMEs, has enacted the Micro, Small and Medium Enterprises Development Act, 2006, effective 2 October 2006. It aims to facilitate promotion, development and competitiveness of MSMEs.

The government has also announced a comprehensive package for the promotion of micro and small enterprises which comprises proposals and schemes for requisite support to MSMEs in the areas of credit, fiscal, cluster-based development, infrastructure, technology and marketing. The package also provides thrust on capacity-building of MSME associations and to support women entrepreneurs.

A proposal has been submitted to the chairman of KVIC to link the 'charkhas' scheme of KVIC with the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). This will help small weavers and solve the issue of unemployment to a great extent.

*A task force was set up by the prime minister in August 2009 to reflect on the concerns and issues with respect to MSMEs and formulate an agenda for necessary action.*

### *Task force to identify issues*

A task force was set up by the prime minister in August 2009 to reflect on the concerns and issues with respect to MSMEs and formulate an agenda for necessary action.

The task force classified the common issues into six major thematic areas or sub-groups for detailed examination. These were credit, marketing, labour, rehabilitation and exit policy, infrastructure, technology and skill development and taxation. A separate sub-group was also constituted to look into the development of MSMEs in the north east and Jammu and Kashmir.

The recommendations of the task force were broadly categorised into those where the action needed to be completed within three months, six months to one year, and those where long-term measures involving longer time duration were required.

The recommendations of the task force that have already been acted upon cover credit and capital access, infrastructure development, market development and technology adoption.

### *Across the globe*

Many other countries around the world have also recognised the importance of MSMEs to their respective economies and have taken steps to bring them at par with other organisations.[10]

The Malaysian government has released the third industrial master plan for implementing technology programmes.

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This will be executed by the Small and Medium Industries Development Corporation, along with other technology-based institutions.

The Indonesian government has also launched a scheme called Credit for People's Business, which provides up to Rp 500 million per borrower at a maximum interest rate of 16% per annum.

In Singapore, the government has launched the technology innovation programme, which will provide one-stop centres offering consultancy on technology and practical, downstream platforms. The government has also launched the Local Enterprise Technical Assistance scheme. It will provide up to 50% funding support for hiring external experts to improve management and operations. Besides, Singapore already has an established Intellectual Property Management Programme which provides up to 50% funding support to manage it. This is effective for developing new products, processes, ideas and business models. Also, the micro loan programme provides loans of up to US$ 50,000 to fund daily business operations of firms, where the number of employees is less than 10.

The Mexican government has also established a committee for productivity and technological innovation programmes to help identify production bottlenecks for MSMEs.

South Africa has a technology programme which connects a number of incubators and technology support centres all over the country. The South Africa Micro Finance Apex Fund provides affordable finance to micro and small enterprises.

In Australia, the Victorian government has come up with the smart SMEs innovation commercialisation programme (ICP) which focusses on building commercial skills and capabilities. It also facilitates easy finance and boosts the adoption of technology.

It has been proposed in the UK to award 25% of public contracts to SMEs. This will be done along with the transparency agenda, according to which all government spending up to a specified limit is published online.

In Germany, the government has formulated a programme called 'EXIST-university-based start-ups' to provide support for innovative start-ups. It improves knowledge and technology transfer from universities. Another programme INSTI, a nationwide network, is aiming to increase the use of patent information and create an innovation-friendly climate.

The Italian government has announced a new national programme Startech to promote industrial research. Besides, an Italian developmental finance institution is dedicated in supporting and promoting Italian SMEs abroad. In Hungary, SMEs are provided with financial and support services through commercial banks and financial institutions.

The Japanese government provides affordable funding through institutions like Japan Finance Corporation for Small Business, National Life Finance Corporation and Shoko Chukin Bank.

In South Korea, there are insurance programmes like exchange rate fluctuation insurance and export credit guarantee by the Korea Export Insurance Corporation. The government has also set up a special agency, Small and Medium Business Administration, to boost the country's SME sector.

In Australia, the government is committed to FMA agencies sourcing at least 10% of their purchases from SMEs. The agencies ensure that SMEs have appropriate opportunities to compete for business. The Australian government recognises that the public sector is a key market for many information industry SMEs and a valuable means for demonstrating their credentials and experience. The ICT-specific procurement policy provides for SME participation for contracts over US$ 20 million. The policy provides for base SME levels of 10% of hardware and 20% of software and services.

The Brazilian government buys from SMEs and provides technical assistance to businesses in procurement. In fact, the state buys from the association of small manufacturers which helps procure better quality products.

In order to alleviate the tight credit environment and less robust operating climates in China, the Shanghai Municipal Government Purchasing and Procurement Centre and Pudong Development Bank have joined forces with the local government to create a more hospitable lending and procurement environment for SMEs. With this, SMEs will get more opportunities to participate in government procurement projects.

# *Financing options*

*In India, the preferred mode of finance is either self or other sources. This further complicates the situation.*

Finance is the lifeline of any enterprise. India has one of most extensive banking infrastructures in the world. Yet, even though there has been rapid expansion of the banking infrastructure in recent years, the provision of finance to grass-root level businesses, spread across the length and breadth of the country, still remains an enormous challenge. Also, Indian MSMEs have limited access to finance. A number of MSMEs run on the promoter's investment which severely limits their growth. The non-availability of institutional finance at affordable terms is also hindering innovation in the Indian MSMEs. In India, the preferred mode of finance is either self or other sources. This further complicates the situation. Faced with increased competition, on account of globalisation, MSMEs are beginning to opt for other specialised financial services and options.

Financial institutions, such as SIDBI, IDBI, ICICI and IFCI are providing financial assistance for supporting innovation and commercialisation of indigenously developed technologies. They also assist in the adoption of imported technologies for wider domestic applications through venture capital in the country. Some examples of innovation in MSME financing include the following:

**Factoring services:** Factoring combines sales-linked finance, bad debt protection, payment collection and transmission services that helps businesses compete with local suppliers on equal trading terms. It also provides finance for future growth. Some of the benefits include the following:

- Enables SMEs to accept new orders with confidence
- Provides greater buying power to suppliers
- Helps avoid the dangers of over-trading
- Helps funding keep pace with sales
- Reviews and sets up new limits quicker and easier
- Does not require additional fixed asset security based on sales invoices
- Protects profits and cash flow against bad debt (with pre-approved individual debtor limits)
- Helps release additional time and resources (from chasing and processing payments)
- Enables concentration on core business activities

**Risk-sharing facility:** The purpose of this facility is to accelerate lending by commercial banks to SMEs. It involves setting up commercially viable and self-sustaining facilities to provide partial credit risk cover to banks for their SME lending.

**Micro credit:** It is defined as the provision of thrift, credit and other financial services and products of a very small amount to the poor in rural, semi-urban and urban areas. This enables them to raise their income levels and improve the standard of living. Micro credit institutions (MCIs) are those which provide these facilities.

### *Financing through banks*

Traditionally, banks have been the largest source of finance for SMEs. Bankers in India who have been part of a conservative lending system, based on prudent norms designed to minimise non-performing assets (NPAs), have been averse to risk in their approach to lending. Credit is usually extended against collateral equivalent to 100% of the loan amount. Many of the SMEs, especially those in the start-up phase, are unable to provide sufficient assets as collateral for lending, making the banking system inaccessible, especially for first-generation entrepreneurs.

Banks also take lending decisions based on the financial ratios of the borrowing organisation. Most SMEs have rudimentary accounting processes which makes the task of generating clean financial statements quite difficult. This also applies to cases where the financial statements are clean, due to the nature of the business environment in which the SMEs operate. This means that the financial ratios are always under stress.

SMEs are part of the priority sector lending for banks along with agriculture, rural markets and microfinance. As per RBI guidelines, priority sector lending should be 40% of the total credit lending of banks. However, there are no sub-targets within the priority sector lending requirements. This has limited the quantum of credit which banks have extended to SMEs.

**A snapshot of the outstanding bank credit to MSMEs:**

| As on March | Public sector banks | Private sector banks | Foreign banks | All scheduled commercial banks | % of MSE credit to net bank credit |
|---|---|---|---|---|---|
| 2005 | 67,800 | 8,592 | 6,907 | 83,498 | 9 |
| 2006 | 82,434 (21.6) | 10,421 (21.3) | 8,430 (22.1) | 101285 (21.3) | 7.5 |
| 2007 | 102,550 (24.4) | 13,136 (26.1) | 11,637 (38) | 127,323 (25.7) | 7.2 |
| 2008 | 151,137 (47.4) | 46,912 (257.1) | 15,489 (33.1) | 213,538 (67.7) | 11.6 |
| 2009 | 191,408 (26.6) | 46,656 (-0.5) | 18,064 (16.6) | 156,128 (20) | 11.4 |
| 2010 (p) | 278,398 (45.4) | 64534 (38.3) | 21,069 (16.6) | 364,001 (42.1) | 13.4 |

(Source: RBI Annual Report 2009-10 and Report on Trends and Progress of Banking in India 2009-10)
Note: Figures in bracket indicate year-on-year growth

*In addition to providing capital, the venture capital and private equity firms also provide valuable advice on the growth strategies by being a member on the board.*

Realising that risk-averse lending practices of banks were hampering credit disbursal to SMEs, the RBI permitted collateral-free lending up to a limit of Rs 5 lakh for all enterprises covered under the definition of the MSMED Act 2006. In an effort to minimise the impact of default on loans, the government of India along with SIDBI launched the Credit Guarantee Trust for SMEs. The Credit Guarantee Scheme (CGS) seeks to reassure the lender that in the event an MSME unit (which availed collateral-free credit facilities) fails to discharge its liabilities to the lender, the Guarantee Trust will make good the loss by up to 75 to 85% of the credit availed.

***Venture capital and private equity***

For the SME sector, availability of risk capital in the form of venture capital and private equity presents new options. Capital is now more freely available albeit with loss of some control over the organisation. In addition to providing capital, the venture capital and private equity firms also provide valuable advice on the growth strategies by being a member on the board, increasing access to new markets through their network of contacts and assisting with running the operations in the most cost-effective manner through streamlining the supply chain.

The venture capital firms actively assist in the corporatisation of their investee companies and handhold them through their journey from niche SME players to fast-growing actively tracked companies. These firms also provide strategic direction to its investee companies and assist in their organic and inorganic growth in Indian and international markets by utilising their global network and management expertise.

In 1999, SIDBI set up a wholly-owned subsidiary SIDBI Venture Capital Ltd (SVCL). Currently, SVCL manages two funds, i.e. national venture fund for software and information technology (which is now in the divestment stage) and an eight year close-ended SME growth fund. This is in association with other leading commercial banks such as Punjab National Bank, State Bank of India, Bank of Baroda, Bank of India, Central Bank of India, Union Bank of India, Oriental Bank of Commerce and Corporation Bank with a corpus of Rs 500 crore.

Other private sector investors like IDFC and ICICI have also set up mutual funds to focus exclusively on SMEs.

Special forms of capital like mezzanine capital are also available in certain markets. The capital offers convertible loan or convertible bond financing, loans with equity options or warrants attached, loans with profit-sharing arrangements and high-yield loans, which charge higher interest rates than usual, offer borrower funds that are not otherwise available.

Indian private equity fund managers such as Avigo Capital Partners have been formed with a focus on private equity investments in the SME sector.

During the recent economic downturn, most PE firms invested in secular sectors like healthcare, pharma and agriculture to protect their corpus. However, investors are now increasingly looking at high-growth verticals such as technology and renewable energy.

### *Angel investors*

Angel investors usually invest their own funds, unlike venture capitalists who manage the pooled money of others in a professionally-managed fund. Although, typically reflecting the investment judgment of an individual, the actual entity that provides the funding can be a trust, a business, a limited liability company or an investment fund, etc. Indian Angel Network, founded in 2006, is one of the largest angel networks in the country with almost 90 individual members and institutional members like SIDBI, IBM, etc. Angel investors are also attuned to the start-up or venture they invest in, thus benefiting the venture not only financially but also by providing the intellectual (management) capital.

### *Risk capital*

As MSMEs grow, they feel the need for capital to fund their growth aspirations. Capital is typically needed for additional plant and machinery, physical infrastructure, investments in IT, infrastructure and applications as well as additional working capital for inventories, payroll, etc. It is under these circumstances that the availability of risk capital becomes important. Companies able to access risk capital at the inflection point in their growth curve are better equipped to make the transition to the next level. In recent years, many venture capital and private equity firms have specifically raised funds for India-specific funds to capitalise on the country's growth story. Many of these funds have invested in medium-scale enterprises which they believe have the potential to be the stars of tomorrow.

### *SME exchange*

Initial public offerings (IPOs) through listing on the stock market provide enterprises with additional funding options through risk capital. IPOs also provide an exit option for investors like private equity funds. A proposal to set up an SME-specific stock exchange or trading platform has been in circulation for quite some time. This is a positive development since the listing requirements of existing stock exchanges are too stringent for SMEs to participate. Recognising the need to have separate rules for SME exchanges and platforms, SEBI modified its Issue of Capital and Disclosure Requirements regulations by inserting a chapter XA on 'Issue of specified securities by small and medium enterprises', through notification dated 13 April 2010.

Besides, to facilitate listing of specified securities in the SME exchange, a model equity listing agreement is to be executed between the issuer and the stock exchange to list or migrate the specified securities on SME exchange. This was issued vide circular no. CFD/DIL/6/2010, dated 17 May 2010. Certain relaxations are also provided to issuers whose securities are listed on the SME exchange in comparison to the listing requirements in main board. These include the following:

- Companies listed on the SME exchange may send to their shareholders, a statement containing the salient features of all the documents, as prescribed in sub-clause (iv) of clause (b) of proviso to section 219 of the Companies Act, 1956, instead of a full annual report.
- Periodical financial results may be submitted on a half-yearly basis, instead of quarterly basis.
- SMEs need not publish their financial results, as required by the main board. They can also make it available on their website.
- SEBI has also advised all stock exchanges in India to disseminate the amended guidelines on their website for easy access to the issuers and investors. SEBI has also asked them to communicate the implementation status of the May 2010 circular in their monthly development report.

### *Export lines of credit*

SMEs in areas like leather, gems and jewellery, textiles, etc. are heavily dependent on exports. Several initiatives are available from Exim Bank for the benefit of such exporters. For example, export lines of credit to overseas financial institutions, regional development banks and foreign governments and their agencies and buyers credits (BC) to foreign corporates. Line of credits (LOCs) serve as a market-entry mechanism to Indian exporters and provide a safe mode of non-recourse financing option to Indian exporters. LOCs and BCs are particularly relevant for Indian SME exporters as the payment risk is borne by Exim Bank without the need for insurance from Export Credit Guarantee Corporation.

### *Hedging instruments*

Debt constitutes a significant part of the total capital of SMEs. The RBI has been revising key interest rates upwards in an effort to keep inflation under check. Significant increases in interest rates will impact SMEs as their debt servicing costs will also increase. Hedging in the form of interest rate derivatives helps SMEs guard themselves against increase in interest rate by converting floating rates loans pegged to prime lending rates and base lending rate to fixed interest rate securities.

A range of hedging options, including forward contracts, currency options, currency futures and currency swaps, are available for Indian SMEs against forex volatility. Judicious use of such instruments will help protect SME exporters from the effects of an appreciating INR.

### *Microfinance*

In the late 90s, the microfinance business was boosted by the innovative initiatives undertaken by microfinance institutions (MFIs), NGOs and banks. They offered micro-credit i.e. credit provided to poor people for financial and business services and for self-employed in rural areas. It fulfilled their basic needs and emergency requirements. The microfinance business had the ability to reach the most deserving people and also increase the repayment rates for banks, which were, at the time, burdened by mounting non-performing assets (NPAs) on the rural credit extended by them. Today, there exist a variety of microfinance organisations in government as well as non-government sectors.

Leading national financial institutions like the SIDBI, the NABARD and the Rashtriya Mahila Kosh (RMK) have played a significant role in making micro-credit an important movement. In India, the size and types of implementing organisations range from very small to moderately big, involved in savings and credit activities for individuals and groups. These groups also adopt a variety of approaches. However, most of these organisations tend to operate within a limited geographical range.

Exceptions like PRADAN, ICECD, MYRADA and SEWA, have been successful in replicating their experiences in other parts of the country and also act as resource organisations. Many organisations are involved with self-help groups (SHGs), not only for credit, but for other purposes like watershed, agriculture, etc. A SHG is a registered or unregistered group of micro-entrepreneurs with a homogenous social and economic background, who voluntarily come together to save small amounts regularly in a common fund. The funds are used to meet their emergency needs on a mutual basis. The group members use collective wisdom and peer pressure to ensure proper end-use of credit and timely repayment thereof. In fact, peer pressure has been recognised as an effective substitute for collateral. The approach is to make SHGs the main focal point to route all credit to its members.

### *NRI and 0ther international investments*

An increasing number of NRIs want a share in the Indian economic boom, as the main western, American and Asian markets have matured. Indians overseas have also been expressing strong interest in the country's growing businesses, citing higher rate of returns on their investment. Also, countries such as Canada have shown keen interests in investing in the Indian MSME sector. Currently, there are 250 Canadian SMEs in India and the Canadian government hopes to increase it to 750 SMEs through client acquisition. Canada has also shown interest in making large-scale investments in the sector of education, agriculture and mining in India.

# *ICT as an enabler*

*Process automation through an integrated IT set-up leads to considerable cost efficiencies in the organisation.*

Traditionally, ICT plays the role of enforcing cost and process efficiencies and enabling new business development. However, for MSMEs, they play an even more pivotal role. As outlined earlier, MSMEs face stiff competition from bigger players and imports in their areas of business. A strong technology-enabled sector levels the playing field, to a great extent, between MSMEs and their established counterparts.

The prime minister's task force on MSMEs, set up under the chairmanship of the principal secretary T K A Nair has suggested measures for Indian MSMEs to become technology-efficient. These include the need to refine the current FDI policy to increase capacity, capability and technology development. The group also agreed that there is a need to develop a symbiotic relationship between the MSME clusters and technical institutions. This will help solve the technical and design-related problems of the MSMEs. Besides, to meet modern-day challenges and to undertake technology upgradation, acquisition, adaptation and innovation, a technology development fund of Rs 1000 crore, has also been suggested. According to studies conducted, very few organisations or clusters under the MSME sector use ICT to their advantage. The reasons range from price affordability, availability of support systems to training issues. However, MSMEs need to understand that the benefits outweigh the costs of ICT adoption.

### *Process efficiency*

ICT adoption can help introduce greater process efficiency in MSMEs. Efficient processes quite often translate to greater cost savings. Also, process efficiency can allow senior management to concentrate on the core focus areas of innovation.

### *Cost reduction*

Numerous studies and surveys have highlighted the fact that process automation through an integrated IT set-up leads to considerable cost efficiencies in the organisation. Globally, the cost-cutting role of IT has become more prominent, given global economic uncertainties. While India has not been significantly hit, cost concerns remain. This is especially true of MSMEs.

### *Productivity improvement*

An integrated IT system taking care of non-core functions allows an organisation to concentrate on core areas. This increases employee productivity. For example, integrating the various functions within an organisation will limit the time taken to compile annual reports and eliminate duplicate data entries leading to inaccurate reports.

### *Information visibility*

ICT intervention can help MSMEs get better access to real-time market information and help them understand a variety of issues, both internal and external. These assist in the decision-making process and enable informed choices.

While these are traditional roles of ICT, one cannot trivialise their impact on the ability of a company to innovate. If an MSME can ensure that its non-core business processes are in place, it can concentrate on its core areas of innovation with renewed vigour.

Many a time, we see a small firm starting off with a big bang innovation and then declining in terms of market reach because ancillary functions like sales and marketing, finance and operations were not in place.

### *Knowledge management*

In the past, knowledge management has been a field where ICT has contributed immensely, enabling organisations to share cultivated knowledge within their ranks. This helps multiple divisions re-invent the wheel every time and they can take off from where the other divisions left off.

### *Business intelligence (BI)*

BI has enabled organisations to match their innovative focus with what the customer actually demands and buys. This brings a more market-focussed approach to their innovative endeavours and creates greater impact on consumers.

**Given below is an indicative list of IT-enabled functions across the value chain:**


## Firm infrastructure and planning

ICT has enabled better visibility and flow of information among the various departments leading to better financial management practices, accounting and reporting standards.

## Human resource management

Online training has been one of the key impacts of ICT in the human resource space. It has drastically reduced training costs, which have hindered the ability of MSMEs to effectively train their employees in the past.

## Technology Development

Enterprise application integration across the firm has led to transparent practices and establishment of best-in-class standard operating procedures.

### *Current levels of ICT in Indian MSMEs*

In spite of the benefits of adopting ICT, very few MSMEs are able to access efficient and affordable IT solutions that can work for them. Penetration of ICT in Indian MSMEs is still quite low. ICT adoption in the country can be divided into the following four stages:

**Stage I:** Companies in the nascent stages of IT adoption have only the basic IT infrastructure in place, such as the basic level computerisation, LAN, etc. These companies use IT only for basic communication and data processing.

**Stage II:** Companies that have certain computerised standalone functions without any cross-functional linkages can be categorised in this second stage of ICT adoption. Firms at this level have several point applications aimed at automating selective functions. There will also be islands of information with little or no integration between the applications.

**Stage III:** Companies that have automated their core business functions, achieved complete process automation and integration are considered to be in the third stage. These firms will be using an enterprise resource planning application (ERP) which integrates various business processes across functional departments.

**Stage IV:** Companies that have achieved computerisation in their networks and are using decision support systems, e-commerce, etc. to drive their businesses are considered to be in the fourth stage. Companies in this stage are the most matured in terms of ICT adoption. These companies use IT innovatively and are integrated across the industry value chain.

Surveys have shown that the ICT penetration within the more matured medium-sector enterprises is far more than in small-scale enterprises still using IT for communication and promotion. Medium-scale enterprises have started automating their business functions to increase efficiency and effectiveness.

One of the biggest barriers to the adoption of IT by MSMEs is the huge upfront cost associated with setting up a fully integrated application to support the processes of the firm. MSMEs find it difficult to justify spending money on ICT when their core businesses can do with improvement.

The CII has been pushing for IT-enablement by facilitating the use of cloud computing as a tool to enhance productivity and competitiveness in a cost effective way. 'Project Baadal', is a survey undertaken by the CII to gauge the expectations of MSMEs from cloud computing. The survey aims to provide cloud computing service providers with vital information on the services they need to provide to the MSME sector.

In partnership with the Ministry of MSMEs, CII has also launched a credit linked capital subsidy scheme for technology upgradation and modernisation. The programme aims to provide credit for MSMEs who wish to IT-enable their organisations and increase productivity.

### *Cloud computing: An emerging technology*

The challenges faced in IT adoption by MSME players have several dimensions including price affordability, availability of support systems, required skill sets and training issues. This has paved the way for IT solution providers to create products and services that are relevant, affordable and address the real-life challenges of the MSMEs.

Web-based companies like Google, Amazon and Salesforce.com are sharing web infrastructure to deal with internet data storage, scalability and computation to catering to small manufacturing players looking for more affordable IT solutions. These solutions are catered through cloud computing.

The National Institute of Standards and Technology (NIST) defines cloud computing as, "A model for on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service provider interaction."

Cloud computing is an online service model through which hardware and software services are delivered to customers depending on their requirements. Users can pay for the

services as an operating expense without incurring high cost. Basically, cloud computing is a set of services that provide software and infrastructure resources using internet media and data storage on a third-party server. It has three dimensions known as software level service, platform level service and infrastructure service. The main cloud computing attributes are pay-per-use, elastic self-provisioning through software, simple scalable services and virtualised physical resources.

Cloud computing platforms are based on a utility model that enhances reliability, scalability, performance and need-based configurability. All these capabilities are provided at relatively low costs as compared to dedicated infrastructures. Benefits provided by cloud computing ranges from cost savings to speed and flexibility to enhanced performance.

From a financial perspective, it is a less expensive capital investment to provide and host the application. The advantages are that the user pays a monthly fee for this service with no initial investment. There are no operational costs, i.e. maintenance of the system hardware, investment in servers, hardware maintenance and need to employ highly skilled IT staff.

Cloud computing offers a tempting alternative to the traditional on-premise ERP systems. In computing, the provider hosts the ERP on a server and the MSMEs can obtain licences for as many users as they require. Even an MSME with 10 business users will be able to afford a fully-integrated ERP system and reap the benefits of a fully technology-enabled organisation.

*MSMEs can now avail a wide variety of cost-effective solutions such as Software as a Service (SaaS), Infrastructure as a Service (IaaS) and Platform as a Service (PaaS).*

Cloud computing has revolutionised the way services are offered. MSMEs can now avail a wide variety of cost-effective solutions such as Software as a Service (SaaS), Infrastructure as a Service (IaaS) and Platform as a Service (PaaS). The provider essentially distributes the fixed costs across all licensees and transfers the cost reduction to the licensee.

Hence, cloud computing holds the potential to alter the Indian MSME sector's IT landscape by overcoming some of the key barriers in IT adoption.

# About CII

The Confederation of Indian Industry (CII) works to create and sustain an environment conducive to the growth of industry in India, partnering industry and government alike through advisory and consultative processes.

CII is a non-government, not-for-profit, industry led and industry managed organisation, playing a proactive role in India's development process. Founded over 116 years ago, it is India's premier business association, with a direct membership of over 8100 organisations from the private as well as public sectors, including SMEs and MNCs, and an indirect membership of over 90,000 companies from around 400 national and regional sectoral associations.

CII catalyses change by working closely with government on policy issues, enhancing efficiency, competitiveness and expanding business opportunities for industry through a range of specialised services and global linkages. It also provides a platform for sectoral consensus building and networking. Major emphasis is laid on projecting a positive image of business, assisting industry to identify and execute corporate citizenship programmes. Partnerships with over 120 NGOs across the country carry forward our initiatives in integrated and inclusive development, which include health, education, livelihood, diversity management, skill development and water, to name a few.

CII has taken up the agenda of "Business for Livelihood" for the year 2011-12. This converges the fundamental themes of spreading growth to disadvantaged sections of society, building skills for meeting emerging economic compulsions, and fostering a climate of good governance. In line with this, CII is placing increased focus on Affirmative Action, Skills Development and Governance during the year.

With 64 offices and 10 Centres of Excellence in India, and 7 overseas offices in Australia, China, France, Singapore, South Africa, UK, and USA, as well as institutional partnerships with 223 counterpart organisations in 90 countries, CII serves as a reference point for Indian industry and the international business community.

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Complementing our depth of industry expertise and breadth of skills is our sound knowledge of the local business environment in India. We are committed to working with our clients in India and beyond to deliver the solutions that help them take on the challenges of the ever-changing business environment.

PwC has offices in Ahmedabad, Bangalore, Bhubaneshwar, Chennai, Delhi NCR, Hyderabad, Kolkata, Mumbai and Pune.

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Designed by mindcube.com and printed by Paramount