Innovation readiness of Indian SMEs - Issues and challenges

February 2012

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We are pleased to release "Innovation readiness of Indian SMEs - Issues and challenges" on the occasion of the annual FICCI MSME Summit 2012. The publication highlights the importance of innovation in the growth of an economy and gives a sector-wise analysis of innovation in India. This report also suggests the cluster approach as a key strategy MSMEs should adopt to become globally competitive.

Approaches to innovation vary from nation to nation; some approaches have proved to be more successful than others. For the interest of readers we compare practices adopted in India against best practices in Thailand and Korea.

Innovation is universally accepted as a catalyst to growth and must be fostered by MSMEs; at the same time innovative ideas need the support of the government which can play a key role in facilitating linkages between MSME clusters and R&D institutions. The government can also take the bold step of subsidizing the cost of technology available in the international market.

The cluster concept needs to be strengthened because of its immense benefits in terms of reduced per unit cost, better information dissemination, and stronger market linkages.

In order to gain a thorough understanding of the issues faced by MSMEs, we conducted a survey on the different factors impeding the adoption of new technologies. The results of this survey are contained in this publication and it is our hope that they will provide fresh inputs to the government in the formulation of the Twelfth Five Year Plan.

The Federation of Indian Chambers of Commerce and Industry (FICCI) and the Indian Institute of Foreign Trade (IIFT) are confident that this publication will trigger fresh approaches and ideas amongst MSMEs, government and all other stakeholders associated with this sector.

Sincerely,

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Federation of Indian Chambers of Commerce & Industry

(Dr. K Rangarajan)
Prof & Head
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Kolkata and Centre for SME Studies, Delhi
## Content

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Backdrop of the study</td>
<td></td>
</tr>
<tr>
<td>2. Existing status of Innovation in India</td>
<td></td>
</tr>
<tr>
<td>3. India’s stand in Global Innovation Index</td>
<td></td>
</tr>
<tr>
<td>4. Evaluating Innovation readiness and capability of Indian MSME firms: case study of select sectors</td>
<td>8</td>
</tr>
<tr>
<td>5. Areas of innovations witnessed in India so far</td>
<td></td>
</tr>
<tr>
<td>6. Existing support system for promotion of Innovation in India</td>
<td></td>
</tr>
<tr>
<td>7. Inventory of success stories of innovation across globe: a sectoral analysis.</td>
<td></td>
</tr>
<tr>
<td>a. Innovations across the globe in Leather industry</td>
<td></td>
</tr>
<tr>
<td>Case exhibit 1: Clustering story of Wenzhou (China)</td>
<td>19</td>
</tr>
<tr>
<td>Case exhibit 2: Clustering at Sinos Valley (Brazil)</td>
<td>21</td>
</tr>
<tr>
<td>Case exhibit 3: Merkato Leather Footwear Cluster in Ethiopia</td>
<td>23</td>
</tr>
<tr>
<td>Case exhibit 4: Leather Cluster in the Dhaka Capital Region (DCR), Bangladesh</td>
<td>26</td>
</tr>
<tr>
<td>Case exhibit 5: Leather Clusters in Arzignano, Italy</td>
<td>30</td>
</tr>
<tr>
<td>b. Innovations across the globe in Information Technology</td>
<td></td>
</tr>
<tr>
<td>Case exhibit 6: The European e-Business Support Network for SMEs (eBSN)</td>
<td>33</td>
</tr>
<tr>
<td>Case exhibit 7: The ICT Policy Support Programme (ICT PSP) European Union</td>
<td>34</td>
</tr>
<tr>
<td>Case exhibit 8: The European Cluster Collaboration Platform</td>
<td>35</td>
</tr>
<tr>
<td>Case exhibit 9: The SBIR Program in the United States (US)</td>
<td>36</td>
</tr>
<tr>
<td>Case exhibit 10: The STTR Program in the United States (US)</td>
<td>38</td>
</tr>
<tr>
<td>Case exhibit 11: Ministry of Economy, Trade and Industry’s (METI): Research and Development</td>
<td>39</td>
</tr>
<tr>
<td>Consortium Project for Regional Revitalization from Japan</td>
<td></td>
</tr>
<tr>
<td>Case exhibit 12: Local government initiative: The ShoudanJouzu</td>
<td>39</td>
</tr>
<tr>
<td>Case exhibit 13: IT Coordinator Associations</td>
<td>40</td>
</tr>
<tr>
<td>Case exhibit 14: R&amp;D Assistance for the Creation of New Local Businesses</td>
<td>40</td>
</tr>
<tr>
<td>Case exhibit 15: Regional Industrial Agglomeration Project</td>
<td>41</td>
</tr>
</tbody>
</table>
c. Innovations across the globe in processed food .................................................. 42
   Case exhibit 16: European Union: Export Refunds Management .......................... 42
   Case exhibit 17: The Smart program in UK ...................................................... 44
   Case exhibit 18: Enterprise Finance Guarantee .................................................. 44
d. Innovations across the globe in Auto component ............................................. 46
   Case exhibit 19: Shindan System (Small and Medium Enterprise Management Consultant System), now referred to as Organization of Small and Medium Enterprises and Regional Innovation, Japan (SMJR) . 47
e. Innovations across the globe in Textile ............................................................ 49
   Case exhibit 20: United States of America ....................................................... 49
   Case exhibit 21: United States of China ............................................................ 49
   Case exhibit 22: United States of Brazil ............................................................ 49
   Case exhibit 23: United States of Pakistan ....................................................... 49
f. Innovations across the globe in Defence ......................................................... 51
   Case exhibit 24: Small business charter in UK ................................................. 51
   Case exhibit 25: Security directorate 53 .......................................................... 52
   Case exhibit 26: Russia ..................................................................................... 52
8. Innovative ways of financing schemes for MSMEs .............................................. 54
   Common issues of financing amongst MSMEs .................................................. 5
   Suggestion/Alternatives for SMEs ................................................................. 58
   Suggestions/Alternatives for Government, Banks and other Lending Bodies .......... 61
   Funding for SMEs-What are the options? ....................................................... 64
   Government schemes ..................................................................................... 65
   Routes of alternative finances ...................................................................... 66
The Micro, Small and Medium enterprises (MSMEs) play a pivotal role in the overall industrial economy of India. MSMEs constitute more than 80% of the total number of industrial enterprises and support industrial development. 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 from the manufacture of traditional goods including leather, gems and jewelry, agricultural goods to much more value addition in the manufacturing sector to its entry in the value added services 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.

With globalization, there is an urgent need of a dynamic and self-sustaining culture of innovation and cluster based approach for the development of MSMEs. Today’s world economy has been characterized as a “Knowledge-Based Economy” with knowledge being the most important resource and learning being the most important process. Competitive advantage is less derived from access to physical resources and more from the ability of organizations and societies to generate ideas and to translate them into economic and social value. In the fast moving global order, knowledge and intellectual skills are critical to create and improve products and services, develop more efficient distribution and marketing methods and ensure customer satisfaction. New ways of information management and application are used to improve competitiveness. A knowledge economy is not about accumulating information, but using knowledge to improve performance. And that performance can be enhanced with innovation. Innovation is thus regarded as one of the most important factor in the Knowledge-Based Economy. This has become the driving force behind expanding global commerce and the rise in living standards.

It is, therefore essential not only for developed but also developing countries including India to foster innovation, especially at the firm level, since firms, not countries, are the ones that have to compete internationally.
Innovation refers simply to the creation and application of a new idea to create value in a certain context. Some of these ideas and value creation applications may translate into incremental changes such as the introduction of additional features in a consumer product; while others may lead to radical or even revolutionary changes - such as the launch of the PC or the iPod. As global competition intensifies and information-based innovation becomes more important, the business sector has been internationalizing knowledge-intensive business functions, including R&D. At the same time, companies are increasingly opening their innovation processes and collaborating with external partners including suppliers, customers and universities. Creating effective collaborative innovation ecosystems is vital for enhancing access to knowledge from around the globe and speeding up the conversion of that knowledge into value adding products and services. This research takes a broad definition of innovation covering innovation in products, services, processes, business models and organizational structures.

The rise of India as a growing power not only in Asia but also at the global stage would require not only a macroeconomic uplift but also a thorough realization of innovation by the MSMEs. Nationwide entrepreneurship development with appropriate scale scope and innovation will make all the difference for Indian MSME segment. Considering the growing innovation in the competing countries including China, Japan, South Korea, Singapore etc. which are found high on Global Innovation index, this study conducted by FICCI - Centre for MSME Studies at IIFT aims towards understanding the “Innovation readiness of Indian SMEs” through evaluation of organization’s ability to innovate successfully. The survey conducted covers innovation in products, services, processes, business models and organizational structures. The results of this survey had tried to extend answers to certain pertinent issues which will act as an input towards developing MSME schemes in 12th FYP. The issues addressed through this study are as follows:

- Which SME sectors are the most innovative?
- What drives or hampers firms to undertake different innovative activities?
- What are the strategies of firms that undertake them?
- What is the impact of innovation on the firm’s performance?
- What is the firms’ perception of the policy environment?

This study dwells upon the significance of cluster based approach through series of success stories across the globe and ways and means to inculcate innovation amongst MSMEs along with the best practices being followed in various countries that can be replicated in the Indian framework. The study focuses on changing landscape of MSME in India and the opportunity that the Indian landscape offers for the growth of MSME for innovation. The study also deliberate on the role played by cluster management and business development service providers to enhance the success of clusters.
The Indian government realizes 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 has fulfilled its mission by formulating policies, designing and implementing support measures in the field of credit, technological upgradation, marketing, entrepreneurship development, etc. This has resulted into increasing rate of innovations within the MSME sector and most of the innovations in the MSME segment have been witnessed in these areas.

Nationwide entrepreneurship development with appropriate scale scope and innovation has made all the difference for Indian MSME segment. Statistics are already emerging on the increasing importance of innovation and its 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.

The thrust areas for increasing the competitiveness of MSMEs have included technology (including quality), procurement, skills development and finance. Innovation can manifest in several forms from operational efficiencies and business model optimizations to product- and service-related novelties. Innovation is as much about execution as it is about creativity. The Indian innovation ecosystem is acquiring greater granularity. Innovation in India is increasingly becoming local, with end-use conditions considered at the forefront of the process. This increase in local emphasis is reflected in the availability of an increasing array of products and services. Traditional strengths, such as affordable medicines, have been expanded to underserved markets beyond India. Several of the new innovations—such as the Nano car—have global potential. A growing number of these are affordable innovations across several sectors, namely, medicines and health care, drinking water purifiers, automobiles, IT services, cellular phone services, education, e-governance, and so on. The list is expanding to include education and skills. This section therefore describes the position of India in the Global Innovation Index and the existing status of innovations undertaken in these areas by MSMEs in India.
Innovation is still a blurry concept, despite the policy interest it now garners since less is known about how new products and processes come about in developing countries, how innovation diffuses, and what its impacts are. To enable countries to benchmark their policies, the Global Innovation Index (GII) provides an integrated metric based on carefully selected and weighted variables. The GII, therefore, aims at establishing the following key facets:

- It seeks to sharpen the eye of policy makers about the importance of innovation and related policies and puts a spotlight on a topic that is otherwise hard to grasp
- It helps to create an environment where innovation factors are under constant revaluation
- It is a tool to assess relative positions and to refine national innovation policies

The Global Innovation Index (GII) relies on two sub-indices, the (i) Innovation Input Sub-Index and (ii) Innovation Output Sub-Index.
Factors affecting innovation capabilities......

Five input pillars as stated above capture elements of the national economy that enable innovative activities

1. Institutions
2. Human capital and research
3. Infrastructure
4. Market sophistication
5. Business sophistication

Shown below is the table for each pillar that provides a list of its indicators

**Institutions pillar**

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Institutions</td>
</tr>
<tr>
<td>1.1 Political environment</td>
</tr>
<tr>
<td>1.1.1 Political stability</td>
</tr>
<tr>
<td>1.1.2 Government effectiveness</td>
</tr>
<tr>
<td>1.1.3 Press freedom</td>
</tr>
<tr>
<td>1.2 Regulatory environment</td>
</tr>
<tr>
<td>1.2.1 Regulatory quality</td>
</tr>
<tr>
<td>1.2.2 Rule of law</td>
</tr>
<tr>
<td>1.2.3 Rigidity of employment</td>
</tr>
<tr>
<td>1.3 Business environment</td>
</tr>
<tr>
<td>1.3.1 Time to start a business, days</td>
</tr>
<tr>
<td>1.3.2 Cost to start a business, % income/cap</td>
</tr>
<tr>
<td>1.3.3 Total tax rate, % profits</td>
</tr>
</tbody>
</table>

**Research and capital pillar**

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Human capital &amp; research</td>
</tr>
<tr>
<td>2.1 Education</td>
</tr>
<tr>
<td>2.1.1 Education expenditure, % GNI</td>
</tr>
<tr>
<td>2.1.2 Public expenditure/pupil, % GDP/cap</td>
</tr>
<tr>
<td>2.1.3 School life expectancy, years</td>
</tr>
<tr>
<td>2.1.4 PISA scales in reading, maths, &amp; science</td>
</tr>
<tr>
<td>2.1.5 Pupil-teacher ratio, secondary</td>
</tr>
<tr>
<td>2.2 Tertiary education</td>
</tr>
<tr>
<td>2.2.1 Tertiary enrolment, % gross</td>
</tr>
<tr>
<td>2.2.2 Graduates in science, %</td>
</tr>
<tr>
<td>2.2.3 Graduates in engineering, %</td>
</tr>
<tr>
<td>2.2.4 Tertiary inbound mobility, %</td>
</tr>
<tr>
<td>2.2.5 Tertiary outbound mobility, %</td>
</tr>
<tr>
<td>2.2.6 Gross tertiary outbound enrolment, %</td>
</tr>
<tr>
<td>2.3 Research &amp; development (R&amp;D)</td>
</tr>
<tr>
<td>2.3.1 Researchers headcount/million pop</td>
</tr>
<tr>
<td>2.3.2 Gross expenditure on R&amp;D, % GDP</td>
</tr>
<tr>
<td>2.3.3 Quality research institutions</td>
</tr>
</tbody>
</table>
Innovation Readiness of Indian MSMEs

**Infrastructure pillar**

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>3</strong> Infrastructure</td>
</tr>
<tr>
<td><strong>3.1</strong> Info &amp; comm. technologies (ICT)</td>
</tr>
<tr>
<td>3.1.1 ICT access</td>
</tr>
<tr>
<td>3.1.2 ICT use</td>
</tr>
<tr>
<td>3.1.3 Government’s Online Service</td>
</tr>
<tr>
<td>3.1.4 E-Participation</td>
</tr>
<tr>
<td><strong>3.2</strong> Energy</td>
</tr>
<tr>
<td>3.2.1 Electricity output, kWh/cap</td>
</tr>
<tr>
<td>3.2.2 Electricity consumption, kWh/capita</td>
</tr>
<tr>
<td>3.2.3 GDP/unit of energy use, PPPS/kg oil eq</td>
</tr>
<tr>
<td>3.2.4 Share of renewables in energy use, %</td>
</tr>
<tr>
<td><strong>3.3</strong> General infrastructure</td>
</tr>
<tr>
<td>3.3.1 Quality of trade &amp; transport infrastructure</td>
</tr>
<tr>
<td>3.3.2 Gross capital formation, % GDP</td>
</tr>
<tr>
<td>3.3.3 Ecological footprint &amp; biocapacity, ha/cap</td>
</tr>
</tbody>
</table>

**Market sophistication pillar**

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>4</strong> Market sophistication</td>
</tr>
<tr>
<td><strong>4.1</strong> Credit</td>
</tr>
<tr>
<td>4.1.1 Strength of legal rights for credit</td>
</tr>
<tr>
<td>4.1.2 Depth of credit information</td>
</tr>
<tr>
<td>4.1.3 Domestic credit to private sector, % GDP</td>
</tr>
<tr>
<td>4.1.4 Microfinance gross loans, % GDP</td>
</tr>
<tr>
<td><strong>4.2</strong> Investment</td>
</tr>
<tr>
<td>4.2.1 Strength of investor protection</td>
</tr>
<tr>
<td>4.2.2 Market capitalization, % GDP</td>
</tr>
<tr>
<td>4.2.3 Total value of stocks traded, % GDP</td>
</tr>
<tr>
<td>4.2.4 Venture capital deals/tr GDP PPPS</td>
</tr>
<tr>
<td><strong>4.3</strong> Trade &amp; competition</td>
</tr>
<tr>
<td>4.3.1 Applied tariff rate weighted mean, %</td>
</tr>
<tr>
<td>4.3.2 Market access trade restrictiveness*, %</td>
</tr>
<tr>
<td>4.3.3 Imports of goods &amp; services, % GDP</td>
</tr>
<tr>
<td>4.3.4 Exports of goods &amp; services, % GDP</td>
</tr>
<tr>
<td>4.3.5 Intensity of local competition</td>
</tr>
</tbody>
</table>

**Business sophistication pillar**

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5</strong> Business sophistication</td>
</tr>
<tr>
<td><strong>5.1</strong> Knowledge workers</td>
</tr>
<tr>
<td>5.1.1 Knowledge-intensive employment</td>
</tr>
<tr>
<td>5.1.2 Firms offering formal training, % firms</td>
</tr>
<tr>
<td>5.1.3 R&amp;D performed by business, %</td>
</tr>
<tr>
<td>5.1.4 R&amp;D financed by business, %</td>
</tr>
<tr>
<td><strong>5.2</strong> Innovation linkages</td>
</tr>
<tr>
<td>5.2.1 University/industry collaboration</td>
</tr>
<tr>
<td>5.2.2 State of cluster development</td>
</tr>
<tr>
<td>5.2.3 R&amp;D financed by abroad, %</td>
</tr>
<tr>
<td>5.2.4 JV/strategic alliance deals/trunk GDP PPPS</td>
</tr>
<tr>
<td>5.2.5 PCT patent filings with foreign inventors</td>
</tr>
<tr>
<td><strong>5.3</strong> Knowledge absorption</td>
</tr>
<tr>
<td>5.3.1 Royalty &amp; license fees payments, % GDP</td>
</tr>
<tr>
<td>5.3.2 High-tech imports less re-imports, %</td>
</tr>
<tr>
<td>5.3.3 Computer &amp; comm. service imports, %</td>
</tr>
<tr>
<td>5.3.4 FDI net inflows, % GDP</td>
</tr>
</tbody>
</table>

**Scientific outputs pillar**

<table>
<thead>
<tr>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6</strong> Scientific outputs</td>
</tr>
<tr>
<td><strong>6.1</strong> Knowledge creation</td>
</tr>
<tr>
<td>6.1.1 Domestic resident patent ap/bn GDP PPPS</td>
</tr>
<tr>
<td>6.1.2 PCT resident patent ap/bn GDP PPPS</td>
</tr>
<tr>
<td>6.1.3 Domestic res utility model ap/bn GDP PPPS</td>
</tr>
<tr>
<td>6.1.4 Scientific &amp; technical articles/bn GDP PPPS</td>
</tr>
<tr>
<td><strong>6.2</strong> Knowledge impact</td>
</tr>
<tr>
<td>6.2.1 Growth rate of GDP PPPS/worker, %</td>
</tr>
<tr>
<td>6.2.2 New businesses/1,000 pop. 15–64 yrs</td>
</tr>
<tr>
<td>6.2.3 Computer software spending, % GDP</td>
</tr>
<tr>
<td><strong>6.3</strong> Knowledge diffusion</td>
</tr>
<tr>
<td>6.3.1 Royalty &amp; license fees receipts, % GDP</td>
</tr>
<tr>
<td>6.3.2 High-tech exports less re-exports, %</td>
</tr>
<tr>
<td>6.3.3 Computer &amp; comm service exports, %</td>
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<tr>
<td>6.3.4 FDI net outflows, % GDP</td>
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Creative outputs pillar

So where does India stand on Global Innovation Index?

- India is ranked 62nd on the GII, 1st in its region, and 8th in its income group—after China, Moldova, Jordan, Thailand, Viet Nam, Ukraine, and Guyana.
- India is the second most densely populated country, with 1.2 billion inhabitants.
- It is eleventh in GDP, with US$1,310 billion.
- A lower-middle-income country, it comes second after Sri Lanka in GDP per capita in PPP dollars in the region.
- India comes in at 44th on the Output Sub-Index.
- Within the top 30 on labor productivity growth (21st with 4.5%) and computer and communications services exports (4th globally, with 70.0% of total commercial service exports).
- It also has positions within the top 40 on two knowledge diffusion indicators: high-tech exports (32nd, at 6.34% of GDP) and FDI net out-flows (38th, at 1.08% of GDP).
- On pillar 6, Creative outputs, it ranks 39th on national feature films produced, 22nd on daily newspapers, 9th on creative goods exports, and 29th on creative services exports.
- India’s position, however, is dragged down by its poor performance on the Input side (ranked 87th): India is in the last quintile on sub-pillars business environment, elementary education, tertiary education, and knowledge workers.
- But the country has high marks—within the top 40—on R&D (35th); general infrastructure (11th).
To assess the innovative capabilities and innovation characteristics of MSME firms in India, a pilot Innovation Survey was carried out considering the fact that this would play an important role in generating policy relevant information about innovation processes, innovation behavior and innovation performance. The main focus of the survey was private firms. Respondents were chosen from the sectors including leather, processed food, textiles, IT, defence, gems and jewelry, electronics, chemicals and ayurvedic products. 10 respondents on an average were chosen from each sector.

The survey focused on determining the characteristics of firms that carry out R&D and other innovation activities. It also covered the types of R&D and other innovation activities as well as factors, which influence firms’ abilities to carry out R&D and other innovation activities. The sampling methodology was developed in order to obtain unbiased estimates of the population R&D/Innovation parameters to be measured, expenditure on R&D/Innovation, and total R&D/Innovation personnel in manufacturing and service enterprises. Detailed questionnaire used for the survey may be referred as an annexure to this report. The survey, although carried at the micro level may be used to examine technological and innovative capabilities of SME firms in India in select sectors and their linkages to other actors in the national innovation system. To illustrate weaknesses and strengths, some parts of the analysis has been carried out by comparing with the results of Korea and Thailand Innovation Surveys although not conducted recently.

Main research findings:

From the innovation surveys, percentage of innovating firms in India was quite low. To illustrate this point, Indian situation was compared with that of a country being successful in technologically catching up Thailand and Korea. Comparison of innovation surveys, Thailand R&D/Innovation Survey 2001 and the Korean Innovation Survey 2002 with that of India showed the differences in terms of innovative capabilities of these three countries.
Table 1: Share of innovating companies (%): cross country analysis

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<thead>
<tr>
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<th>India</th>
<th>Thailand</th>
<th>Korea</th>
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<tbody>
<tr>
<td>Innovating</td>
<td>19</td>
<td>6.4</td>
<td>42.8</td>
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<tr>
<td>Product and process innovation</td>
<td>2.3</td>
<td>2.9</td>
<td>21</td>
</tr>
<tr>
<td>Only product innovation</td>
<td>9</td>
<td>4.1</td>
<td>17</td>
</tr>
<tr>
<td>Only process innovation</td>
<td>3.8</td>
<td>4.3</td>
<td>4.0</td>
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Table 1 shows clearly those companies in India lag far behind the companies in Korea in respect to innovation and R&D activities. It strikes that a relatively high share of companies in India carry out solely product innovations, while this is quite rare in Thailand. This could be an indication that Indian companies are at the stage where they rather use their resources to improve product than the production process itself. At the same time very few companies in Thailand do product as well as process innovations, which is very common in Korea. This reflects more mature innovation behavior of Korean companies which improve in a systemic manner.

Size of the company had a much greater influence on the capability of the firm towards investing in the activities pertaining to innovation. As can be seen from the table below, only 2.6% of the MSME firms interviewed were into some or the other kinds of the innovation, however the rate of involvement in these activities majorly into the product innovations were found high in the large companies. This was most prevalent in the sectors including IT, electronics and pharmaceuticals.

Table 2: Share of innovating companies in respect to firm size

<table>
<thead>
<tr>
<th></th>
<th>India</th>
<th>Thailand</th>
<th>Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>SME*</td>
<td>2.6</td>
<td>7.3</td>
<td>41</td>
</tr>
<tr>
<td>Large company</td>
<td>13.9</td>
<td>14.4</td>
<td>78</td>
</tr>
</tbody>
</table>

*The definition of SME is different in India, Korea and Thailand. In Korea, companies with less than 300 employees are defined as SMEs while in Thailand this number is less than 200 employees. However in case of India, SMEs are defied on the basis of investment in plant and machinery.

Subsidiaries of TNCs in Korea are also much more innovative than their counterparts in Thailand and India (see Table 3). Nevertheless, India, Thailand and Korea display some similar patterns: large companies are more likely to be innovative than SMEs (see Table 2). It was witnessed that like in case of Thailand, most Indian firms had grown without deepening their technological capabilities in the long run, and their technological learning has been very slow and passive. Only a small minority of large subsidiaries of Transnational Corporations (TNCs), large domestic firms and SMEs have capability in R&D, while the majorities are still struggling with increasing their design and engineering capability.
Table 3: Share of innovating companies with respect to ownership

<table>
<thead>
<tr>
<th>Ownership Type</th>
<th>India</th>
<th>Thailand</th>
<th>Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partly owned by TNC</td>
<td>16</td>
<td>12.2</td>
<td>52</td>
</tr>
<tr>
<td>Affiliates of foreign firm</td>
<td></td>
<td>Affiliates of Korean firm</td>
<td>59</td>
</tr>
<tr>
<td>100% Country ownership</td>
<td>Country</td>
<td>5</td>
<td>10.2</td>
</tr>
</tbody>
</table>

For a very large number of SMEs, the key issue was much more concerned with building up more basic operational capabilities, together with craft and technician capabilities for efficient acquisition, assimilation and incremental upgrading of fairly standard technology. The slow technological capability development of Indian firms is quite different from those of Japan, Korea and Taiwan. Firms in these countries moved rather rapidly from mere imitators to innovators. As early as 1960s, Japanese firms advanced technologically to the world-class level. They became more innovative, invested heavily in R&D and relied less on importation of foreign technologies.

In general, firms in Korea and Taiwan, where industrialization and technologically catching-up processes started much earlier as compared to that of India, are more successful in increasing absorptive capacity (of foreign technology) and deepening indigenous technological capabilities in several industries. In electronics industry, for instance, Korean and Taiwan firms were able to climb up technological ladders (from simple assembly to own design and R&D) by exploiting institutional mechanism like OEM and ODM to help latecomer firms in those countries to access to advanced technology and demanding foreign markets. Further, for most of the Indian companies, most of the R&D was conducted in-house.

Sectoral analysis of the extent of innovation indicated the highest number of firms which were science-based sectors of chemicals and machinery (including electronics). This was followed by electronic equipments, electrical machinery, and processed food. Gems and jewelry was the sector leading behind in any sort of innovations done as informed by the SME units situated in Surat and Jaipur cluster.

This could be an indication for Indian companies being more focused on production/assembly than Korean-firms that are also strong in developing new products and improving processes. It could be concluded that this reflects an international division of labour, Korea doing research, development and production, while India was confined to (rather simple) production/assembly.
Following factors were witnessed as major factors affecting firms capacity to innovate:

- The location of the firm within or close to a major urban area and thus in greater proximity to sources of new knowledge and ease in participating in knowledge flows.
- Educational level of the Owner/CEO/Manager, especially a degree from a technical university or engineering program that stimulates and facilitates problem solving.
- Global exposure through training, work or study abroad which opens opportunities for networking for knowledge flows and collaboration and creates an awareness of the utility to do so.
- Ownership structure of the firm, which influences the choice of products and processes as well as their subsequent modification or change.
- The firm’s sector, which provides a measure of the stimulus to innovation resulting from the higher R&D intensity of the sector and nature of competition within the sector.
- The size of the firm, which is related to its access to resources to and opportunities for knowledge scanning to support a process of innovation.
- Exports (as a percentage of sales) and whether this is rising as an indicator of the firm’s competitive interests and abilities.
- Habits and practices of innovation as reflected in having innovated previously.
Objectives for carrying out innovations

Innovating companies were asked about the objectives of their innovation activities. Likert scale analysis was carried out on 1 to 5 scale for the following listed objectives:

- Improve product quality
- Learn about new technology
- Reduce production cost
- Reduce labour costs
- Extend product range
- Improve cycle time
- Increase market share
- Improve production flexibility
- Open up new markets
- Reduce energy consumption
- Fulfill regulations& standard
- Comply with domestic regulation
- Reduce environment effects
- Improve work conditions for employees

Considering the fact that most of the firms which were interviewed were majorly into product innovations and not process innovation, their objective towards investing into innovation was primarily towards “improving product quality”, “extend product range”, “increase market share”, “open up new markets” and “reduce environment effects”. Some of these were similar to that of the responses from Thai and Korean SME firms for instance; ‘improve product quality’ and ‘extend product range’. However, two objectives were rated distinctively different: ‘Increase market share’ and ‘Replace products being phased out’ are clearly more important in Korea than in India.

Areas of innovations witnessed in India so far....

Innovations in business models

Innovations in India had been largely product centered. Not much thought has been applied to innovating business, marketing, and delivery processes that would give superior benefits to consumers. This focus is now changing. These days, world-class companies such as Microsoft, PepsiCo, IBM, Cisco, Nokia, GE, Xerox, and so on are using India as their research and development (R&D) base to pilot next-generation business models and organizational structures and to develop affordable and sustainable solutions that can then be marketed on a global scale. In doing so, these firms are synergistically integrating their India R&D operations into their global innovation networks. But that is only one part of the story: innovation in India is largely driven by Indian entrepreneurs.
Innovations enabled through IT interventions

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). Through the dimensions of technological innovations, MSMEs intend to achieve cost-effective, improved versions of existing products to gain and maintain technological advancements.

With 71% of India’s population (742 million people) living in rural areas, the majority of Indian ICT innovation efforts are focused on the countryside. There have been projects to boost the livelihood of rural communities, targeted offerings to allow rural enterprises and farmers to enrich their productivity through ICT-enabled techniques that provide useful information at the click of a button.

Tens of thousands of self-help groups—such as those comprising artisans in remote villages—are being enabled with mobile services so that they can market their offerings optimally and obtain an appropriate return on their time and effort. Project Shakti, co-created by Unilever and MART, and the e-Choupal initiative of the business conglomerate ITC are pioneering examples of innovative delivery and procurement models.

**Project Shakti, an innovation in the business model**

In Project Shakti, to effectively increase the reach of fast-moving consumer goods in rural areas, women from existing microfinance groups were hired as the last-mile distributors for Unilever household products and links were established for credit from banks via the microfinance mechanism. Unilever provided a guarantee against default, thus validating the viability of the business model.

**ITC’s e-Choupal** initiative is aimed at selling agri-products as well as sourcing raw materials. The company established an information technology (IT)-based exchange that provided information on agri-cultural prices, weather, and so on, gaining trust among farmers. Further, it persuaded the existing agricultural mandi (market) agents to be e-Choupal sanchalaks (operators), thus maintaining and working with existing rural relationships. Connecting the unconnected has been pushed globally by the GSM Association with programs such as the Emerging Market Handset development (ultra-low cost). Locally the Indian government has been playing a major role in uplifting the 600,000 villages with tools such as the *Universal Services Obligation Fund*. 
The National Innovation Foundation (NIF) is leading several initiatives for rural innovations. With the Society for Research and Initiatives for Sustainable Technologies and Institutions (SRISTI) and Grassroots Innovations Augmentation Network (GIAN) programs, NIF has taken grass-roots innovations to a new level.

The biggest IT-enabled innovation project in the world is the building of a unique identification (UID) for all Indian citizens. The unique identification project was initially conceived by the Planning Commission as an initiative that would provide identification for each resident across the country and would be used primarily as the basis for efficient delivery of welfare services. It would also act as a tool for effective monitoring of various programs and schemes of the Government. This is poised to bring about a revolution for Aam-Aadmi (ordinary people) in India, whose transformation into e-nagrik (e-citizens) will improve the quality of their lives and livelihoods by making services such as e-health, e-banking, and e-learning more accessible.

**Reverse innovation for development of MSMEs: an innovation in developmental process**

One mega-trend we observe in the re-invention of innovation is that of reverse innovation. ‘Reverse’ or ‘frugal innovation’ occurs when an innovation is developed and/or adopted first in the developing world then deployed in mature markets. It is an interesting trend that is bringing a whole new meaning and perspective to innovation, transforming traditional innovation into something new. Indian resourcefulness is embodied in the Hindi word jugaad—to find an effective solution, even if it is makeshift and short-term. This approach, although not innovation in the true sense but rather an inspired adaptation of existing solutions using low-cost technology, is a phenomena that emerging markets such as the BRIIC countries (Brazil, Russia, India, Indonesia, and China) are increasingly exhibiting. There is also a lot of potential for breakthrough innovations with this approach. Some examples of frugal innovations include GE’s US$1,500 hand-held electrocardiography (ECG) machine; its US$15,000 PC-based ultrasound machine; the Rs. 3,500 ChotuKool refrigerator from Godrej; Tata’s Nano (at US$2,500, the world’s cheapest car) and its Swach (one of the world’s most inexpensive and widely available water filtration systems); Ginger budget hotels; and a wide array of products in sectors ranging from the known automobiles, pharmaceuticals, and IT services to lesser-known sectors such as drinking water, consumer goods, health, education, utilities, public administration, and agricultural machinery. Building from the ground up with a deeply value-driven approach is an essential component of success in innovations in these areas.

When interviewed on the external information sources which provides them the information about the innovations happening worldwide, firms acknowledged the importance of universities and public research institutes, professional conferences and meetings, trade fairs and exhibitions, foreign owned suppliers. None of the companies which were interviewed had indicated keeping track of the patent disclosures in their respective sectors emphasizing the need of spreading awareness towards the same.
Special characteristic of the India R&D/Innovation Survey is questions regarding firms’ acknowledgement and effectiveness of some specific government supporting programs provided by certain government agencies such as tax incentive for R&D, subsidy, technical services, consulting services, and so on.

### Assessment of R&D and Innovation in India: 2012

<table>
<thead>
<tr>
<th>Business Environment</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness of customers to innovation</td>
<td>3.5</td>
</tr>
<tr>
<td>Attitude of people towards innovation</td>
<td>3.4</td>
</tr>
<tr>
<td>Openness of suppliers to innovation</td>
<td>3.4</td>
</tr>
<tr>
<td>Quality of telecommunications and IT services for enabling innovation</td>
<td>4.0</td>
</tr>
<tr>
<td>Availability of suitable manpower in business sector</td>
<td>2.6</td>
</tr>
<tr>
<td>Technological sophistication of local suppliers</td>
<td>2.0</td>
</tr>
<tr>
<td>Intellectual property protection</td>
<td>2.0</td>
</tr>
<tr>
<td>Availability of suitable manpower in scientific technical sector</td>
<td>1.2</td>
</tr>
<tr>
<td>Openness of government departments &amp; regulatory authorities to innovation</td>
<td>2.8</td>
</tr>
<tr>
<td>Consultancy support services</td>
<td>2.6</td>
</tr>
<tr>
<td>Local university for technical support and R&amp;D collaboration</td>
<td>2.8</td>
</tr>
<tr>
<td>R&amp;D institutions for technical support and R&amp;D collaboration</td>
<td>4.2</td>
</tr>
<tr>
<td>Acceptance of failure</td>
<td>3.0</td>
</tr>
<tr>
<td>Regulatory environment</td>
<td>1.0</td>
</tr>
<tr>
<td>Availability of finance for innovation</td>
<td>1.2</td>
</tr>
<tr>
<td>Availability of government incentives for innovation</td>
<td>1.8</td>
</tr>
<tr>
<td>Availability of other technical supporting services</td>
<td>2.0</td>
</tr>
</tbody>
</table>
There have been efforts from both public as well as private sectors to promote innovations in India. To aid ideation and promote grassroots, university, and industrial innovation, several initiatives have been proposed. These initiatives increasingly try to provide support through the later stages of the innovation process.

The DST has several schemes and funds to foster innovation in the ecosystem. One such project is the DST–Lockheed Martin India Innovation Growth Programme (IIGP) which is organized in collaboration with the Federation of Indian Chambers of Commerce and Industry (FICCI) and the IC2 Institute at the University of Texas at Austin. This programme supports the commercialization of selected innovative technologies. It has resulted in significant business development for Indian startups/entrepreneurs/SMEs. The program has provided strong platform for promoting innovative technologies in the marketplace. Several companies which got selected in the IIGPs received funds from government organizations such as Technology Development Board (TDB); Department of Science and Technology; Small Business Innovation Research Initiative (SBIRI); Technopreneur Promotion Program (TePP); and Department of Scientific & Industrial Research (DSIR) among others.

Defence Research and Development Organization (DRDO), the R&D arm of Ministry of Defence, GoI in partnership with FICCI, has initiated a “Technology Assessment and Commercialization (ATAC) Programme” for the Assessment and commercialization of DRDO developed technologies for commercial markets. The DRDO - FICCI ATAC programme aims to create a commercial pathway to deliver technologies developed by DRDO for appropriate commercial markets for use in civilian products and services.

India’s National Innovation Council (NInC) was set up in 2010 to focus exclusively on innovation in every sphere of economic activity. NInC—chaired by the Adviser to the Prime Minister on Public Information Infrastructure & Innovations and with members from the academia, research organizations, and the industry is devising mechanisms to tap grassroots/ industrial/ educational/ societal innovations and then take the promising ones through to commercialization and/or scale-up stages. For university and industrial innovation, the NInC’s favored approach is the development of new networks in the form of university innovation clusters and industry innovation clusters to use existing resources optimally. The purpose is to create cluster innovation centres (CICs) where all stakeholders and innovators are connected in symbiotic relationships based on cooperation and collaboration. The CICs would connect the universities with industry, institutions, and government
to share their ideas, develop them, create intellectual property rights, develop new business models, create new markets, and spawn demand-driven collaborative R&D activities and an overall ecosystem subject to organic growth. The CICs would be networked with each other so that ideas could be dynamically shared and resources optimally deployed in order to increase visibility and to spread the knowledge across the ecosystem. To facilitate the progress of innovations through the pilot stages for various initiatives, the NInC proposes setting up an Innovation Fund with buy-in from the government and private stakeholders such as key social venture capital funds, mentoring networks, and entrepreneurship groups.

The Innovation Fund would provide an overarching umbrella (a fund of funds), with-in which existing innovation players as well as networks would operate. This extension of the innovation infrastructure would expand the reach of innovative products and services as well as facilitate cooperation and collaboration among various clusters. Innovation now abounds in India, and it has had some stellar successes. The NInC’s attempt to create networks and foster an active exchange of information is a step towards addressing this issue.

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 endeavoring 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. This has already been implemented through the 11th Five Year Plan (2007 - 2012) of India. The working group recommended the existing schemes and programs of ‘technology business incubators’ (TBIs) and technology innovation centers (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 areas.

What more can be done?

Progress towards promoting innovation in India is significant in terms of ideation; development of solutions; proof of concept; and pilot, production, and commercial launch. However, India still needs to cultivate innovation as a habit (or attitude) so that every single individual is responsible for contributing his or her part. An open innovation concept is essential. India needs to prepare itself to work with an open concept in a close collaboration from seeding the idea to rapid prototyping and partnering with customers, research organizations, academic institutes, and so on. To genuinely innovate, companies should invest in an array of skunk-works projects, labs, learning centres, institutes, and other venues. These encourage collective experimentation by creative, innovative people. The interesting new term of ‘polycentric innovation’ has been conceptualized at Cambridge
Judge Business School as an emerging business paradigm. This type of innovation designates the global integration of specialized R&D capabilities across multiple regions to co-create novel solutions that no single region could have completely developed on its own.

The next level of innovation for India would be a greater deal of emphasis on sustainability and eco/clean tech–based solutions that will be pillars for the next wave of innovations in emerging markets. The need for sustainable solutions has been felt in developed nations, and such solutions will be more emphatically demanded in emerging markets.

A greater number of initiatives in green innovation are shifting to these fast-developing nations. Vendors in the wireless industry, for example, are working on numerous initiatives from eco-friendly power to base-stations to unified offerings similar to Ericsson’s Tower Tube design. With an increasing focus on reducing its carbon footprint, the market will open its doors to numerous innovative technologies. Collaboration among stakeholders will be a key to taking this forward, a key that is underscored in India where there is a need to form optimal alliances to build powerful propositions and find a win-win for all stakeholders.

Next section list down an inventory of the innovative schemes (sector-wise) extended to different sectors of importance for MSMEs in India elaborating certain success stories from across the globe which would act as an input to the policy makers towards developing the strategy for further promotion of innovations within the MSME segment in India.
a. INNOVATIONS ACROSS THE GLOBE IN LEATHER INDUSTRY

Case exhibit 1: Clustering story of Wenzhou (China)

Wenzhou used to be one of the poorest regions in eastern China. With limited arable land, poor road access to major cities, and little support from the upper level governments, this region seemed to lack all the conditions necessary for economic growth. However, over the past several decades Wenzhou has developed the most dynamic private sector in China, and has accordingly achieved one of the fastest growth rates. In particular, the footwear industry in Wenzhou has grown from a negligible market share to the largest in China. Clustering at Wenzhou deepens the division of labor in the production process and makes it possible for small entrepreneurial firms to enter the industry by focusing on a narrowly defined stage of production. Therefore, Wenzhou represents an example of how clustering plays a significant role in helping fledgling rural industries overcome the growth constraints of capital and technology in the incipient stage of industrialization.

Given that many developing countries and regions face similar pressures of land scarcity and poor infrastructure, the lessons and experiences drawn from the in-depth study in Wenzhou may contribute to the literature on rural industrialization in other developing countries or regions.
Learning's from the case:

Overcoming Technical Constraint by Diffusion: It involves clustering enabled to overcome technical barrier by making the integral production process to be divided into small steps, enabling various entrepreneur to start their business, primarily beneficial for newcomers and entrepreneurs. With the formation of clusters, the shoemaking industry has become increasingly specialized and the technology barrier has gradually weakened.

Division of labour: Clustering deepens the division of labor in the production process and makes it possible for small entrepreneurial firms to enter the industry by focusing on a narrowly defined stage of production. It benefits newcomers lacking expertise in the field, disabled, elderly people and women. Due to division of labour some auxiliary steps in the production process can even accommodate the elderly and disabled. It was even noted that some women used simple tools to assemble small metal components like shoe accessories and buckles during the slack farming season.
**Overcoming financial constraint:** Lack of access to adequate start-up capital has been recognized as an important deterrent to the growth of small and medium enterprises (SMEs) in developing countries as banks are reluctant to give loans. Clustering effectively decomposed the process into many small steps, which required much lower levels of fixed investments. Under this model, different entrepreneurs could choose different production types based on their financial resources and risk tolerance. It is primarily beneficial to marginalized entrepreneurs. As per findings the minimum, maximum and average amounts of start-up investment have increased over time. Although the threshold of start-up capital has risen on average, the minimum investment remains relatively low, indicating that many entrepreneurs should still be able to afford to enter the business.

**Avoiding Ownership Risk:** At the beginning of reform, China had no market economy system in place. As a result, private property rights were still constrained by ideology. Private economic activities in this period were often branded as “illegal market activities” and were suppressed by the government. In order to avoid direct conflicts with the legal system and ideology, and to reduce the high transaction costs caused by branding, many private enterprises resorted to some makeshift practices such as attaching themselves to a legal enterprise or organization to avoid ownership risk. This benefitted private enterprises. Through this, private enterprise not only managed to legalize their private enterprises, but also gained access to formal financing. The role of local governments was not negligible in this process, as their acquiescence and even support for these private innovations enabled Wenzhou shoemakers to break through the institutional constraints and circumvent the crucial ownership risk.

**Open Door Policy:** Escalating labor cost in Taiwan made major lather manufacturer of the region to shift to China, in turn China welcomed foreign investor with open door policy. This was helpful for local labor and leather cluster. Subsidies in form of tax-exemption and rebate were offered. Open door policy included incentives like two year exemption and 50% discount in income tax, one-window system for approvals, streamlining the government structure and procedures.

**Genuine Leather Mark Eco-leather:** It is certified trademark registered by China association of leather Industry. It benefits leather exporter. The board provide exporter to meet the international standard and it is internationally registered in 14 countries.

**Case exhibit 2: Clustering at Sinos Valley (Brazil)**

In 1992 Brazil was ranked as the world’s third biggest exporter of leather shoes. Its share of global trade in leather shoes rose from 0.5% in 1970 to 12.3% in 1990. Annual growth in export volumes of Brazilian made leather shoes during these two decades was 24.1%. In other words, export production doubled every three and a quarter years. Within Brazil the most dynamic export performance came from the state of Rio Grande de Sul which, although accounting for only 30% of Brazil’s total leather shoe production, manufactured 80% of its shoe exports. Within this state, the small towns of the Sinos Valley, located within a radius of 50 kilometers of Novo Hamburgo, constitute the centre of Brazil’s export oriented shoe industry.
This small region, described as a shoe producing “super cluster”, is almost wholly geared to various aspects of shoe making and leather related activities. The 1,800 odd firms, and 150,000 persons engaged in Sinos Valley’s shoe sector collectively export close to US$ 1billion a year (in 1995). In an economy blighted by years of economic crises and stagnation, the region stands out for its economic success and growth. Approximately 70% of the Sinos Valley cluster’s production is exported, largely to the United States.

**Learning’s from the case:**

**Sectoral clustering:** At the heart of this success lies an industrial organization system associated with sectoral clustering. This has not only generated location externalities but also led to forms of inter-firm collaboration that have raised the cluster’s collective competitiveness. Sinos Valley is distinguished from other shoe producing centers in Brazil by the wide range of local suppliers of inputs, raw materials, and new and second-hand machinery; specialized stage firms and shoe component producers; as well as specialist providers of managerial, financial technical and information services critical to the industry.

**Backward Linkage:** It includes linkages that shoe producers have with local suppliers of inputs, machinery and process subcontractor. The local competition encouraged some element of efficiency, which provided the predominantly small firms of the cluster with significant external economies. The presence of extensive backward linkages and well-developed product capacities were a key factor that encouraged US buyers seeking low-waged shoe suppliers to initiate purchasers from the cluster.

**Forward Linkage:** It refers to the linkage between producers and buyers, especially export agents. It benefits both buyer and producer. Wholesalers employed technical personnel to visit producers in order to check production quality at site and provide technical and organization advice. Foreign buyers also often extended technical and financial assistance.

**Strategic intervention of local support Institution:** Local support institutions act for facilitating the cluster’s ability to qualitatively shift in terms of technical and skill capacities as well as in breaking into export markets. The prime beneficiary is the local manufacturer. Local Institution have tried to promote inter-firm collaboration within the clusters, improving ties with backward suppliers, and facilitating the development of local financial, technical and producer service facilities.

**Meeting Environment obligation:** Under various agreements exporting country needs to meet the environmental requirement of domestic and importing country. The beneficiaries included leather manufacturer and local residents. Cheap loans and subsidy for funds were offered to develop these facilities. Government provides assistance to develop infrastructure to meet these constraints. To meet constraint the producer can undertake end-of-pipe treatment by erecting their own treatment plant or being connected to common effluent treatment plant (specifically in clusters).
Case exhibit 3: Merkato Leather Footwear Cluster in Ethiopia

Ethiopia is one of a number of countries in Africa beginning to organize its industrial development policies and activities around the concept of competitive clusters. For example, the country is in the second year of a very successful hides, skins and leather cluster initiative. This work is supported by U.S. Agency for International Development with added funding from the United Nations Industrial Development Organization.

A leather cluster working group of 60 private, public and academic leaders is actively engaged in the development and implementation of an array of cluster initiatives whose focus is on quality improvements, marketing initiatives, and capacity building in high value leather garment manufacturing.

Ministry of trade and Industry (MOTI) has a special department dedicated for the support of the leather and the leather industry as a sector. The strategy proposed by the Government of Ethiopia is to model a “Top-down (Pull)” Approach (TDA). According to this approach the leather products, mainly, footwear, selected as the priority sector, followed by leather garments and leather goods, should be developed in a way that they would “pull” the tanning sector to produce better quality and increased quantity of finished leather; subsequently the quantity and quality of raw material. In the master plan, the Kolkata & West-Bengal and Vietnam Footwear industries are taken as benchmarks.

Learning’s from the case:

Income Tax Holiday: Under the Income Tax holiday scheme, Any income derived from an approved new manufacturing and agro-industry investment or investment made in agriculture shall be exempted from the payment of income tax for the periods depicted in the following table, depending upon the area of investment, the volume of export, and the location in which the investment is undertaken.

Profit tax exemption: An investor engaged in a new manufacturing or agro-industry activity:

- If he exports at least 50% of its products-5yrs
- If he supplies at least 75% of its products, to an investor, as an input for the production of export items-6yrs
- If it exports less than 50% of its products-5yrs
- If the project is evaluated under a special circumstance by the BOI-6yrs
- If the production is for the local market-2yrs
- If the production mentioned above in (c) is considered by the BOI to be a special one-3yrs
- If the expansion or upgrading increases the existing production by 25%, in value and 50% of the production is to be exported-2yrs
Profit Tax exemption for investments made in underdeveloped regions

- If he exports at least 50% of its products - 7yrs
- If he supplies at least 75% of its products, to an investor, as an input for the production of export items - 8yrs
- If it exports less than 50% of its products - 2yrs
- If the project is evaluated under a special circumstance by the BOI - 3yrs
- If the production is for the local market - 5yrs
- If the production mentioned above in (c) is considered by the BOI to be a special one - 6yrs
- If the expansion or upgrading increases the existing production by 25%, in value and 50% of the production is to be exported - 3yrs.

Conditions for Profit Tax Eligibility

An investor engaged in a new manufacturing or agro-industry activity:

- If he exports at least 50% of its products
- If he supplies at least 75% of its products, to an investor, as an input for the production of export items
- If it exports less than 50% of its products
- If the project is evaluated under a special circumstance by the BOI
- If the production is for the local market
- If the production mentioned above in (c) is considered by the BOI to be a special one

**Customs Import Duty:** Under this scheme, One hundred per cent exemption from the payment of import customs duties and other taxes levied on imports is granted to an investor to import all investment capital goods, such as plant machinery and equipment, construction materials, as well as spare parts worth up to 15% of the value of the imported investment capital goods, provided that the goods are not produced locally in comparable quantity, quality and price.

Exemptions from customs duties or other taxes levied on imports are granted for raw materials necessary for the production of export goods.

**Customs Export Duty:** Ethiopian products and services destined for export are exempted from the payment of any export tax and other taxes levied on exports.

**The Leather sector support office of MOTI - Development of Infrastructure:** The aim of this scheme is to provide better infrastructure (specially working premise) to MSMEs working in the Merkato cluster in order to improve their efficiency, productivity and their working condition, prime beneficiary being footwear SME cluster of Merkato. MOTI has taken initiative of building a new common working facility that is to be used by the Merkato MSMEs. This cluster facility (found in Yeka sub-city) will provide more than 11,000 meter-square of working area for the MSME footwear producers.
The Leather sector support office of MOTI – Assistance in Marketing: This scheme includes marketing promotion to widen the local market and most importantly to reach out to the export market in a sustainable approach.

The Leather sector support office of MOTI – Technical assistance: The objective is to facilitate conditions for strengthening the local capacities in the area of product development using LLPTI as active support body.

Federal Micro & Small Enterprises Development Agency (FeMSEDA): FeMSEDA is currently highly active in supporting SMEs throughout the country in market linkage and export promotion. Furthermore, the organization has recently embarked up on advisory and promotional activities with a view mentoring cluster development activities throughout Ethiopia. The beneficiaries of the efforts of FeMSEDA include Micro & Small Enterprises in the country.

Regional Micro and Small Scale Enterprises Development Agency - ReMSEDA (Regional and Sub-city offices): In the footwear area, the Addis Ketema MSE development office and its offices in the Kebele have been the prime leaders in sensitizing and initiating SMEs to form cooperatives. The four cooperatives and one large-member association (Ethio – Leather Association) in the Sebategna and Mesalemia areas are the results of the persistent effort of MSE development officers of the Addis Ketema Sub city.

Addis Credit and Saving Institute (ACSI): ACSI is a governmental micro-finance institute established in 2000, and it works in close collaboration with the regional and sub-city ReMSEDA offices and gives preferential attention to SME sectors that are given priority by the ReMSEDA. ACSI gives loans to SMEs at the interest rate of 10-12% depending on the type of loan agreement. A 3% service charge is also imposed on all loan services. ACSI has been very active in the Merkato locality particularly. A large number of MSE have benefited from the loan and saving service. One of the beneficiaries of the ACSI service in the Merkato area is the Ethio-Leather Association (Which is practically a credit association at present). But, almost no individual MSE footwear producers are clients of ACSI because of following reasons:

- Informal and Unlicensed MSE operators
- Small Enterprises not having fixed address
- Loan provided by ACSI deemed insufficient
- Poor Entrepreneurial behavior

Leather and Leather Products Technology Institute (LLPTI): LLPTI was established in the year 2002 with the main objective of the Institute are developing skilled and trained manpower, providing essential technical and consultancy services, serve as center of technological information center and promote quality development in the Leather and Leather product industry. It provides various short term courses and diploma related to leather and footwear technology. The trainees, designers, technologists from mechanized shoe factories and MSE operators are main beneficiaries. The subsidy is offered because of which regular students received through the Addis Ababa Education Bureau do not pay for the courses as the government sponsors them.
Ethiopian Chamber of Commerce (ECC): ECC is mainly engaged advocacy, capacity building and networking of the city chambers. ECC also takes the prime role of facilitating marketing linkages within the country as well as to the export market by information exchange and organization of trade events /trade fairs, exhibitions and bazaar. This has not been very effective because at present, most of the members in the Merka to Leather Footwear Cluster are not members of the chambers and the sectoral association.

Case exhibit 4: Leather Cluster in the Dhaka Capital Region (DCR), Bangladesh

The manufacture of leather plays a small but noteworthy role in the export economy of Bangladesh. The country produces some of the world’s finest goatskin for smooth-grain leather products. In recent years the industry has diversified its products by combining the latest advances in leather technology with an increasing supply of fine-quality local hides and skins. Bangladesh has also entered the field of leather fashion garments with distinction and prestige. Leather and leather products represent about 11% of the export earnings of Bangladesh. Leather and leather products are currently exported to 53 countries including Brazil, the PRC, France, Germany, Italy, Japan, the
Innovation Readiness of Indian MSMEs


Unlike the textile and RMG industry, the leather goods industry is highly concentrated in the DCR, specifically near the center of Dhaka. According to the Bangladesh Bureau of Statistics (BBS) economic census data for 2003, the DCR accounted for nearly 72% of all leather industry establishments in the country (3,520 out of 4,914), and 80% of all leather industry employees nationwide (34,846 out of 43,633).

Government has introduced policies to develop leather exports and boost local value addition. Overall, while manufactured products have increased, compared with raw leather exports, competitiveness is still low and still requires government support in taxation, administrative streamlining, regulatory enforcement, and R&D. The industry also receives very little support from the private sector for R&D. A particularly challenging area for government is environmental regulation, which the industry sector sees as adding to costs.

**Learning’s from the case:**

**Leather goods& Footwear Manufacturers & Exporters Association of Bangladesh (LFMEAB)**

Established in August 2003, LFMEAB is the recognized trade body that represents most of the major export oriented manufacturers & exporters of leather goods& footwear in Bangladesh.

It has been established with the aim and object of uniting all the leather goods& footwear manufacturing companies by encouraging co-operation amongst the members and provides them with a platform to have local and international exposure, creating awareness amongst international buyers and making representations to the government and concerned public bodies on behalf of the members for resolving their regulatory problems.
Cash incentive for leather goods exports

Cash incentive for leather goods exports for the current fiscal 2011-12 would continue to remain at 15 percent.

Bangladesh college of Leather Technology and different district level polytechnic institutes

These institutes provide technical education related to leather industry, assistance for industrialization by providing training on management and quality control of goods, safeguarding consumers' interests, producing and repairing import-substitute spare-parts used in industries, manufacturing new tools necessary for the production of industrial goods that are in demand, and by improving efficiency and overall productivity.

Export Policy 2009 – 2012 –Footwear and leather products as highest priority sector

The main features include project loans at reduced interest rates on a priority basis; Income Tax exemptions; possible financial benefits or subsidies consistent with WTO Agreement on Agriculture, and Agreement on Subsidies and Countervailing Measures, including concessionary rates for utility services such as electricity, water and gas; export loans with soft terms and at reduced interest rates;
Air transport facilities at concessionary rates; Duty draw-back/bond facilities; Facilities for setting up of backward linkage industries including infrastructural development so as to reduce cost of production; Expansion of institutional and technical facilities to improve and control quality of products; Assistance in production and marketing; Assistance in searching for foreign market; Necessary initiatives to attract foreign investments.

**Product-Specific Export Facilities - Leather Industry**

The main features are:

- Sick leather industries will be allowed credit rescheduling facilities through policy support
- Initiatives will be taken to increase export through enhancing competitiveness of leather and leather products in the international market by taking measures for improving productivity and development of products
- Local production of import-substitute chemicals for leather processing, components for footwear and accessories for leather industry will be encouraged. Foreign or joint venture investment in this regard will be welcomed
- To reduce losses at collection, preservation and processing levels, awareness building initiatives and publicity will be strengthened regarding skinning of animals, preservation, transportation of hides etc. In this case, arrangements for separate initiatives and publicity will be strengthened regarding skinning of animals, transportation of hides etc.
- Initiatives will be taken through the Leather Sector Business Promotion Council involving the industrial entrepreneurs and exporters for the overall development of this sector
- Foreign and joint venture investments will be encouraged in leather products and footwear industry
- Existing bond facilities will be further simplified and updated for 100% export-oriented leather industries
- Existing duty and tax draw-back procedures will be simplified
- An integrated “plan of action” will be taken for development and diversification of leather products to enhance the productivity of the leather industry by strengthening research activities and undertaking certain activities such as BMRE for sick leather industries
- Assistance will be provided to the entrepreneurs for participation in international fairs and exhibitions to promote markets
- Initiatives will be taken to establish slaughter houses in the major cities of the country with the help of municipalities
- All possible cooperation will be extended for transferring the factories to the Tannery Village being developed in Savar
Initiatives will be taken to establish a centralized waste management plant in the Tannery Village in Savar, and installation of clean technology will be encouraged; Modern chemical laboratories and service centers will be set up to ensure the quality of leather and leather products. Steps will be taken to impart local and foreign trainings to overcome the management crisis in the leather industry. Cattle farming and import of raw hide during lean season will be encouraged to ensure easy availability of raw hide. Less use of nitrogen and sodium chlorate in the leather industry will be encouraged. Co-operation will be extended to improve the business relations between tannery owners and agents to enhance the capacity of the sales negotiation and marketing. Tannery owners will be assisted in preparing plans to produce finished leather from crust leather while transferring factory units from Hajaribag to Savar Tannery Village. Initiatives will be taken to make the design development center more effective to bring diversity to footwear and leather products. Steps will be taken to modernize the Leather Technology College including establishment of design and fashion institutes for development and improvement of export-oriented leather products. Necessary arrangements will be taken to establish backward/forward linkage industries for production of spare parts used in manufacturing leather products including footwear; and Necessary measures will be taken to ensure easy availability of chemicals and other materials for the leather industry.

**Case exhibit 5: Leather Clusters in Arzignano, Italy**

In Italy, a number of sectors where small firms predominated, groups of firms clustered together in specific regions seemed to be able to grow rapidly, develop niches in export markets and offer new employment opportunities. In-depth evidence is available for selected SME clusters operating in the following industrial sectors:

- Textile (Carpi, Prato)
- Leather (Arzignano)
- Ceramic tiles (Sassuolo)
- Furniture (Manzano)

The "leather triangle" is located in the Chiampo Valley near Vicenza (north-east Italy) around the towns of San Pietro, Chiampo, Arzignano, Trissino, Montorso, Zermeghedo e Montebello. In an area inhabited by nearly 90,000 people, leather manufacturing absorbs some 8,500 workers and contributes disproportionately to the local economy. The district is composed of some 750 enterprises, over a third of which are handicraft workshops. The district also houses a great deal of
metalworking and chemical enterprises that supply the machinery and the chemicals which are required in leather production. Recently, the machinery producers have established themselves as exporters within the European market, competing against the traditionally leading German and French producers. In 1996, the leather triangle manufactured some 900 square meters of leather with a total turnover in excess of 6,000 Lit. billion. Nearly one third of the leather manufactured within the district is exported (Germany, USA and the Far East being the key markets). Arzignano accounts for nearly 40% of the Italian leather production.

**Learning’s from the case:**

**Establishment of training institutes:** Two training institutes are also located within the district: one which trains technicians to be employed within the tanning industry and one which trains expert in waste management. As a result, Leather Exports grew from $18.8 million in 2006 to $22.2 million in 2008. In 2010, leather exports were reported to be worth $19.5 million.

**Establishment of waste treatment facility:** A waste treatment facility has been established in Arzignano by the local administrations of the area.

**Sabatini Law:** The Sabatini Law is applied to the seller who offers an extended payment plan for a maximum of 5 years at a low interest rate; the seller presents the bills of exchange to an authorized Mediocredito Banking Institute and receives the entire amount. The bank then asks Mediocredito Centrale for a contribution to cover the difference between the amount received at lower interest and the amount the bank would have received at current market interest rates. The beneficiaries are the SMEs that correspond to Community parameters and the subsidy is not more than 3 billion lire.

Its efficiency, however, is demonstrated by the numbers: a comparison of the subsidies granted and the investments made from 1987 to 1995, shows that for every lira provided by the State, 10 lira were spent for new machines. However, even the champions of the Sabatini Law admit that if these financial incentives had been accompanied by a supply of non-financial services to the firms including investment assistance, planning, innovation management, the results would have undoubtedly multiplied.

**Principal Articles of Law 317, 1991**

Following are the relevant articles:

**Art. 2:** provides for the creation of public financial institutes for innovation and development eligible for subsidies under Article 9 (in the form of tax credits) and Article 12 (capital account contributions).

**Art. 7:** tax credits for the acquisition of “real services” (structural services to firms).

**Art. 8:** tax credits for research expenditures.

**Art. 14:** special fund at Mediocredito Centrale that provides interest account contributions for export under Law 394, 1981.
Art. 17: identifies consortia eligible for subsidies under Article 20 (capital account contributions) and Article 24 (subsidies).

Art. 27: contributions for mixed public/private consortia that provide technological innovation, management and organizational services to SMEs.

Art. 29: identifies collective credit guarantee consortia eligible for subsidies according to Article 31. The losses suffered by these guarantee funds are financed up to 30% only in the case of consortia or cooperatives that guarantee finance to SMEs.

Art. 34: capital account contributions for business innovation centers (BIC) promoted by the European Community and for organizations for business creation, including those with mixed (public/private) capital.

Art. 35: participatory loans: long-term credit institutes and public financial institutes for innovation and development may grant participatory loans for the realization of innovation or development programs directed at SMEs.

Art. 36: provides financing on the part of Regional governments for innovative projects regarding groups of firms located in industrial districts.

The beneficiaries are defined as per following articles:

Art. 17: Consortia must be comprised of small industrial firms, or small industrial firms and small service providing firms. They may take the form of cooperatives and must have the goal of furnishing services aimed at promoting development (including technological development) and the rationalization of production, marketing and management of member firms.

Art. 27: Mixed capital (public/private) consortia whose goal is to furnish services for technological innovation, managerial innovation and organizational innovation to artisan firms and SMEs. These consortia must be comprised of firms and institutions, no fewer than 5, having subscribed capital of no less that 20 million lire.

Art. 29: collective credit guarantee consortia: It is not possible to accurately evaluate the efficacy of these measures since bureaucratic snags have slowed the realization of the provisions.

Law 83, 1989

It provides financing for SME export consortia. In order to be eligible for these subsidies, the consortia must

- include at least 8 firms
- conduct business activity
- have subscribed capital of at least 2,500,000 lire
b. INNOVATION ACROSS THE GLOBE IN INFORMATION TECHNOLOGY

Case exhibit 6: The European e-Business Support Network for SMEs (eBSN)

The European e-Business Support Network for SMEs (eBSN) was established in response to high-level political focus on the important role of ICT in boosting the competitiveness of the overall EU economy. Its ultimate goal is to improve the effectiveness of public SME policies in fostering competitiveness by promoting the innovative use of ICT. eBSN is an eBusiness policy coordination platform, bringing together decision makers and public policy experts in the field of eBusiness, to share information and to discuss strategic policy direction.

The eBSN builds upon the results of the "Go Digital" initiative, an umbrella policy covering many activities to support SMEs in using ICT for doing business. The eBSN worked towards improving the co-operation and using synergies within the European e-business policy community. Activities of the eBSN focus on networking and the exchange of good policy practice. More specifically, the objectives are:

- To bring together decision makers in the fields of eBusiness, with a view to sharing policy experiences, deciding strategic policy orientation, and, where possible, coordinating actions
- To provide a platform for policy coordination among Member States
- To provide a "one-stop shop" for information about regional, national and European initiatives and funding possibilities for SMEs
- To organise special meetings of governmental eBusiness experts as a platform for sharing practical experience and identifying future challenges

The eBSN is open to all relevant policy initiatives in support of e-business for SMEs in the Member States, the Candidate Countries and the EEA EFTA States which are willing to share experience and information, as well as to eBusiness experts and representatives of the business community. A standing invitation for expression of interest to join the eBSN is available. The eBSN has become a success story. It has grown to involve more than 200 public policies or private-public partnerships from 30 countries in Europe. It supports policy analysis and benchmarking, shapes policy trends, generates synergies between national policies and inspires new e-Business policies, by exchange of good practice.

With its activities, the eBSN is an important pillar of the ICT and eBusiness related policies of DG Enterprise and Industry, in combination with other policy pillars (for example the Sectoral e-Business Watch Function, the European e-Skills Forum, ICT standardisation and interoperability and policies in support of a favourable legal environment for e-business).
Case exhibit 7: The ICT Policy Support Programme (ICT PSP) European Union

The ICT Policy Support Program (or ICT PSP) aims at stimulating innovation and competitiveness through the wider uptake and best use of ICT by citizens, governments and businesses. The draft work program 2011 for the ‘ICT Policy Support Program’ (ICT PSP) provided EU funding to support the realization of the Digital agenda for Europe. The program addressed obstacles hindering further and better use of ICT based products and services and barriers for the development of high growth businesses, notably SMEs, in this field. In addition to illustrating and validating the high value of digital technologies for the economy and society, it fostered the development of EU-wide markets for innovations enabling every company in Europe to benefit from the largest internal market in the world.

Particular emphasis had been put on areas of public interest given their weight in the European economy and the unique solutions that ICT can bring to the societal challenges that lie ahead such as health and ageing, inclusion, energy efficiency, sustainable mobility, culture preservation and learning as well as efficient public administrations. The main challenges include the relatively slow uptake of ICT innovations in the public sector and the high fragmentation of relevant markets due notably to a lack of interoperability between ICT solutions deployed across the Member States and Associated Countries.

The ICT PSP covers technological and non-technological innovation that has moved beyond the final research demonstration phase. The ICT PSP does not support research activities; it may cover, when needed, technical adaptation and integration work in order to achieve the objectives.

ICT-PSP funding Instruments:
Pilot A Projects
Type A pilot projects are expected to demonstrate service interoperability across the Member-States or associated countries participating in the pilot and to achieve a sufficient critical mass to realize significant and meaningful impact.

Pilot B Projects
Type B pilot projects are expected to share experience and promote the outcomes of the pilot through any relevant dissemination and networking activities.

Thematic Networks
Thematic networks address a common theme by bringing together relevant stakeholders, expertise and facilities with the objective of exploring new ways of implementing ICT based solutions.
Best Practice Network (BPN)
The objective of BPN is to promote the adoption of standards and specifications for making European digital libraries more accessible and usable. Funding: 80% of direct costs. No overheads may be claimed.

Eligible Participants for ICT-PSP
The CIP ICT Policy Support program is open to all entities established in the EU Member States and associated countries to the ICT Policy Support program (these are: Iceland, Lichtenstein, Norway, Croatia, Turkey, and Serbia).

Case exhibit 8: The European Cluster Collaboration Platform
Europe felt the need to better mobilize the innovative potential of its companies, especially its SMEs. At its core, the European Cluster Excellence Initiative provided the access to a European Cluster Collaboration Platform (ECCP) rich in information and services that enabled better and more targeted interaction between cluster organizations and their members. The objective was to improve their performance and increase their competitiveness through stimulation of European and international cluster cooperation.

The European Cluster Collaboration Platform provides high-quality, on-line information and networking support for clusters. It assists clusters to improve their performance and increase their competitiveness through the development of transnational and international cooperation. A new online portal has been established that aims to build bridges between cluster players from the same or a different sector. The ultimate goal is to facilitate cluster cooperation, both between cluster organisations and cluster members.

The European Cluster Collaboration Platform is user-driven. The basis of its development lies in the results of the largest European survey of cluster organisations and cluster policy makers. Some 420 individuals provided detailed responses that outlined their expectations of such an on-line portal and these were all taken into account as the portal was being created. But the platform must keep up with changes in the needs of its users if it is to be useful over a longer period of time and ideas for improvement from users will continue to be considered and the necessary adaptations made.

Learning’s from the case:

Mapping: The new platform aims to offer an overview of the real European cluster landscape by countries/regions and/or sectors. It not only maps the cluster organisations but also shows their internal structure and their members, which enables internationalisation and collaboration processes to be initialised.
**Information:** The new platform attempts to offer centralised information about European and international projects and programmes exclusively related to clusters and of course, this contains modules on news and events related to cluster activities.

**Marketplace:** It is a virtual forum where cluster organisations can post their offers of, and requests for, cooperation, expertise and support.

**Library:** The library contains a collection of documents on cluster issues and also media-related support for videos and photos.

**Benchmarking:** The platform offers an on-line anonymous benchmarking facility to support the process of profiling.

**Social Networking:** Cluster managers, facilitators, and administrators and other the people working in clusters need to be excellent networkers. Blogging, creating and maintaining a personal network by inviting ‘friends’ to join, instant messaging, monitoring the activities of your friends are today now familiar ways of exchanging information or keeping in contact. On the new platform, these functions are intended be the ‘technical seeds’ that will germinate a genuine spirit of a European Cluster Community.

The European Cluster Collaboration Platform was launched during the "European Cluster Conference 2010” on September 29, 2010 in Brussels in the presence of representatives of the European Commission, cluster managers and cluster experts. The European Cluster Collaboration Platform is also described as a “LinkedIn” for cluster organizations – supports European cluster managers to cooperate and collaborate with each other. Up to now 463 cluster managers have registered to become a part of this new cluster community. They have access to over 150 cluster organization profiles, becoming more each day.

**Case exhibit 9: The SBIR Program in the United States (US)**

The Small Business Innovation Research (SBIR) program is a highly competitive program that encourages domestic small businesses to engage in Federal Research/Research and Development (R/R&D) that has the potential for commercialization. Through a competitive awards-based program, SBIR enables small businesses to explore their technological potential and provides the incentive to profit from its commercialization. By including qualified small businesses in the nation’s R&D arena, high-tech innovation is stimulated and the United States gains entrepreneurial spirit as it meets its specific research and development needs.
SBIR Mission and Program Goals

The mission of the SBIR program is to support scientific excellence and technological innovation through the investment of Federal research funds in critical American priorities to build a strong national economy. The program’s goals are four-fold:

1. Stimulate technological innovation
2. Meet Federal research and development needs
3. Foster and encourage participation in innovation and entrepreneurship by socially and economically disadvantaged persons
4. Increase private-sector commercialization of innovations derived from Federal research and development funding

Three-Phase Program

The SBIR Program is structured in three phases:

Phase I. The objective of Phase I is to establish the technical merit, feasibility, and commercial potential of the proposed R/R&D efforts and to determine the quality of performance of the small business awardee organization prior to providing further Federal support in Phase II. SBIR Phase I awards normally do not exceed $150,000 total costs for 6 months.

Phase II. The objective of Phase II is to continue the R/R&D efforts initiated in Phase I. Funding is based on the results achieved in Phase I and the scientific and technical merit and commercial potential of the project proposed in Phase II. Only Phase I awardees are eligible for a Phase II award. SBIR Phase II awards normally do not exceed $1,000,000 total costs for 2 years.

Phase III. The objective of Phase III, where appropriate, is for the small business to pursue commercialization objectives resulting from the Phase I/II R/R&D activities. The SBIR program does not fund Phase III. Some Federal agencies, Phase III may involve follow-on non-SBIR funded R&D or production contracts for products, processes or services intended for use by the U.S. Government.

SBIR Program Eligibility

- Only United States small businesses are eligible to participate in the SBIR program. Business must meet all of the following criteria at the time of Phase I and II awards:
- Organized for profit, with a place of business located in the United States
- At least 51 percent owned and controlled by one or more individuals who are citizens of, or permanent resident aliens in, the United States
**Case exhibit 10: The STTR Program in the United States (US)**

Small Business Technology Transfer (STTR) is another program that expands funding opportunities in the federal innovation research and development (R&D) arena. Central to the program is expansion of the public/private sector partnership to include the joint venture opportunities for small businesses and non-profit research institutions. The unique feature of the STTR program is the requirement for the small business to formally collaborate with a research institution in Phase I and Phase II. STTR’s most important role is to bridge the gap between performance of basic science and commercialization of resulting innovations.

**STTR Mission and Program Goals**

The mission of the STTR program is to support scientific excellence and technological innovation through the investment of Federal research funds in critical American priorities to build a strong national economy.

The programs’ goals are to:

- Stimulate technological innovation
- Foster technology transfer through cooperative R&D between small businesses and research institutions; 
- Increase private sector commercialization of innovations derived from federal R&D

**Three-Phase Program**

The STTR Program is structured in three phases:

**Phase I:** The objective of Phase I is to establish the technical merit, feasibility, and commercial potential of the proposed R/R&D efforts and to determine the quality of performance of the small businesses prior to providing further Federal support in Phase II. STTR Phase I awards normally do not exceed $100,000 total costs for 1 year

**Phase II:** The objective of Phase II is to continue the R/R&D efforts initiated in Phase I. Funding is based on the results achieved in Phase I and the scientific and technical merit and commercial potential of the Phase II project proposed. Only Phase I awardees are eligible for a Phase II award. STTR Phase II awards normally do not exceed $750,000 total costs for 2 years.
**Phase III**: The objective of Phase III, where appropriate, is for the small business to pursue commercialization objectives resulting from the Phase I/II R/R&D activities. The STTR program does not fund Phase III. In some Federal agencies, Phase III may involve follow-on non-STTR funded R&D or production contracts for products, processes or services intended for use by the U.S. Government.

**Case exhibit 11: Ministry of Economy, Trade and Industry’s (METI): Research and Development Consortium Project for Regional Revitalization from Japan**

The Consortium R&D Project for Regional Revitalization is the main R&D support program for industrial clusters. The aim of this program is to promote local collaboration between industry and university. There were approximately 1,130 R&D consortia by 2004 and approximately 60% of them involve the participants of METI’s cluster project.

R&D support is one of the most important ICP support measures. R&D Consortia and the other R&D subsidies are the two major types of R&D support. The Consortium R&D Project for Regional Revitalization is one of the direct R&D support programs for industrial clusters. This program aims to promote local collaboration between industry and university. Approximately 60% of 1,130 R&D consortia formed by 2004 involve the participants of the ICP. Every direct R&D support measure is based on the selective schemes. In addition, an incubation service is involved in R&D support; this service includes the access to research facilities that is provided through a competitive process. METI clusters emphasize the creation of links between companies and the local education and research base to carry out cooperative R&D, while providing expertise and finance for supporting innovation, entrepreneurship and venture businesses. A primary focus is to help regional SMEs and venture companies take advantage of research seeds from universities and research institutes, and to increase regional innovation through inter-firm collaboration networks. Priorities can be seen from FY2005’s budget of ¥56.8Billion which was allocated to:
- Industry-academic network formation (¥10.3B);
- Technical Development (¥41.3B);
- Incubator and related facilities for entrepreneurs (¥5.2B);
- Market development and collaboration with financial institutions.

**Case exhibit 12: Local government initiative: The ShoudanJouzu**

The ShoudanJouzu (“Better Matching”) website is sponsored by iMedia, an Osaka-based organization established in October 2001. One example of local government initiatives are websites created to bring sellers and purchasers together. Numerous local governments, related organizations and chambers of commerce have built websites to put SMEs in their regions in contact with buyers throughout Japan or even abroad. Some illustrative examples are the Tokyo Metropolitan SME Promotion Corporation, the Mie Industry Supporting Centre (a system which is known as “Trade Matching Information”), the Siga Industry Support Plaza, the Kyoto Industry 21 Foundation (BP
Net), the Hyogo SME Valorisation Centre (Hyogo Trade Matching System), the Hiroshima Industrial Promotion Organization, the Ehime Industry Promotion Foundation (known as the “Ehime Firm Search System”), the Ohita Industrial Creation Organization and the Miyazaki Industrial Support Foundation (which is referred to as “i-matching”).

The ShoudanJouzu (“Better Matching”) website is sponsored by iMedia, an Osaka-based organization established in October 2001. The purpose of the site is to match buyers and sellers of IT products so as to promote IT venture businesses. Approximately 3,500 SMEs have registered with this system. SMEs are automatically furnished with information on business transactions that potentially meet their needs. Buyers can receive quick replies to their purchase orders. The web page of each registered SME gives a history of its past matches and the relevant prices, which helps ensure the reliability of participating SMEs. Information is transmitted over the Internet in real time, which speeds up searches for matches. To make the site more useful, success stories of participating SMEs are posted, SMEs not familiar with computers and the Internet are given assistance with registration and free IT consultancy is offered.

**Case exhibit 13: IT Coordinator Associations**

Although the construction of regional networks and websites requires technology, IT vendors are often unfamiliar with clients’ managerial processes. Moreover, SMEs are often unfamiliar with relevant technologies and systems. The combination of these factors can lead SMEs to make misguided investments. Hence, there is a need for professionals with sufficient knowledge of and experience with both clients and IT vendors to help SME management make decisions related to IT investments. These professionals are referred to as “IT Coordinators”, a title approved by the IT Coordinator Association, an NPO. METI collaborates with IT coordinators in the following ways: by helping SMEs apply for low-interest loans from IT coordinators who belong to government financial institutions; by hiring IT coordinators for seminars and other training activities; and by hiring IT coordinators to provide consultancy to SMEs in accordance with arrangements made by regional SME support centres.

**Case exhibit 14: R&D Assistance for the Creation of New Local Businesses**

This project supports R&D activities aimed at exploring the possibility of entering new lines of business and creating new companies; such activities are undertaken by SMEs and venture companies that are essential to rekindle regional economies. In order to break out of the present recession in the economy and secure more employment opportunities, creating new business must be seen as a prime policy task. This should be achieved through comprehensive policy packages, including budget measures, taxation measures, and deregulation, as well as appropriate management of the macro-economy. In line with the Industrial Rehabilitation Plan initiated by the Prime Minister, Ministry of International Trade and Industry has enacted all-embracing legislation to support new business (Law for the Promotion of New Business Creation), in addition to the budget measures in the Emergency Special Framework for Economic Countermeasures.
Case exhibit 15: Regional Industrial Agglomeration Project

The regions considered “SME clusters” include the “castle towns” of large firms as well as industrial and technological clusters of general and specialized parts makers that supply Japanese manufacturers. SMEs in these regions are eligible for assistance such as low-interest loans, tax breaks and direct subsidies to allow them to conduct R&D on new products and to explore new marketing channels. Kyoto Shisaku Net (Kyoto Prototype Network), established in 2001, is a virtual group of ten Kyoto-based SMEs in the machine processing and metal sector. The group has built a B2B network and specializes in producing prototypes. By using the Internet, they have greatly reduced the time needed to comply with customer requests. In addition, this now allows customers to accept prototypes in the R&D stage.
c. INNOVATION ACROSS THE GLOBE IN PROCESSED FOOD

Agro-food industry in the EU Market

The food industry sector is one of the largest and most important manufacturing sectors in Europe. It is the second largest (after metal) in the manufacturing industry, with 14.5% of total manufacturing turnover (€917bn for the EU-27). The employment in the food industry represents about 14% of the total manufacturing sector.

However, the food industry is characterized by fragmentation. There are few European multinational companies competing worldwide with a wide variety of products but 99% of all enterprises in the food sector are small and medium sized enterprises (SMEs).

Case exhibit 16: European Union: Export Refunds Management

1. Certificates management

The refund certificate system for Non Annex I* goods entered into force from 1 March 2000. From that date the granting of export refunds on Non Annex I goods became conditional, other than in the case of small exporters, on the production of a valid covering refund certificate. The aim of the refund certificate system is to ensure that the EU complies with its obligations under international agreements to limit the payment of export refunds in respect of Non Annex I goods.

The refund certificate system enables exporters of Non Annex I goods to know in advance if their exports are eligible for a refund compatible with the Community's commitments, or where this can no longer be the case to be informed thereof sufficiently in advance. The issue of a refund certificate makes it possible to monitor refund applications and to guarantee that refunds can be paid to certificate holders up to the amount stated on the certificate, provided that the certificate holder complies with the other conditions for refunds laid down in the Community rules. The issue of a refund certificate obliges the holder to apply for refunds to the amount for which the refund certificate has been issued on goods exported during the validity period of the refund certificate. To ensure compliance with this obligation applicant for refund certificates are required to lodge a security equal to 15% of the amount applied for.

Refund certificates issued for a single budget period may be applied for separately in six tranches. Applications for certificates may be submitted at the latest on:

a) 7 September for certificates for use from 1 October
b) 7 November for certificates for use from 1 December
c) 7 January for certificates for use from 1 February

d) 7 March for certificates for use from 1 April

e) 7 May for certificates for use from 1 June

f) 7 July for certificates for use from 1 August

Operators may submit an application for a refund certificate only for the tranche corresponding to the first closing date, as set out under points (a) to (f), following the date of submission. Where applications to a tranche exceed the amounts available under that tranche a reduction coefficient is applied to applications.

Exporters of industrial agricultural products can submit applications for refund certificates, during the period defined in Article 33 of Commission Regulation 1043/2005. In accordance with Article 34 of Commission Regulation 1043/2005, Member States must notify the Commission of the total amounts of refunds applied for. Based on this information, the Commission is able to set a reduction coefficient in order to honor the international agreements in relation to the available budget.

If no reduction coefficient is applied, applications for refund certificates for any amount remained available for that tranche may be lodged on a weekly basis up to the closing date of the next period.

**Main product-groups of the NA I sector**

- processed dairy products (CN-Codes 0403)
- frozen fruit and vegetables (CN-Codes 0710)
- confectionery industry products (CN-Codes 1704, 1806, 1905)
- Various prepared foods and sauces (CN-Codes 1901, 1902, 1904, 2103) including pasta, ice-creams, soups…
- non-alcoholic beverages, alcoholic beverages and spirit drinks (CN-chapter 22)
- tobacco-products (CN-Codes 2402, 2403),
- Processed starch products (CN-Codes 2905, 3501, 3809)

**2. Small exports**

An annual reserve of € 40 million has been set aside for "small exporters".

This was initially set up for "small exporters" who did not hold a refund certificate since the beginning of the budget period in question and on the date of export. However, since the middle of 2008, each exporter is exempt from the requirement to be in possession of a valid covering refund certificate on the date of export in order to claim export refunds if the applications for export refunds in the budget year in question do not exceed €100,000. If an exporter exceeds the €100,000 threshold in a budget period he will not be paid refunds on the excess, except under cover of a refund certificate.
**United Kingdom: Innovation, research and development grants**

**Case exhibit 17: The Smart program in UK**

If you operate a small to medium-sized enterprise in any sector in the UK, you could apply for funding from the Technology Strategy Board’s Smart programme (previously known as the Grant for Research and Development).

In order to qualify, the research and development (R&D) project you want to fund must be in the area of science, technology or engineering, and you must be able to show that the project is likely to produce significant returns. Funding is only open to single companies.

One can apply for one of three types of grant:

- **Proof of Market** - funding market research and testing, competitor analysis, intellectual property issues and planning costs associated with taking the product or service to market. A grant of up to £25,000 is available as long as this accounts for no more than 60 per cent of the total project cost. The project must last no longer than nine months.

- **Proof of Concept** - funding feasibility studies, prototyping, testing, and protection of intellectual property and analysis of likely production techniques. A grant of up to £100,000 is available as long as this accounts for no more than 60 per cent of the total project cost. The project must last no longer than 18 months.

- **Development of Prototype** - funding demonstration models, protection of intellectual property, any trials or testing (including market testing) required. A grant of up to £250,000 is available as long as this accounts for no more than 35 per cent of the total project cost for medium-sized businesses, and no more than 45 per cent for small businesses. The project must last no longer than two years.

**Case exhibit 18: Enterprise Finance Guarantee**

The Enterprise Finance Guarantee (EFG) is a government guarantee scheme which enables participating lenders to provide additional lending for the working capital and investment funding needs of small and medium sized businesses (SMEs) in the UK. The scheme may also be used to provide additional security where concern over the value of existing security may lead to a lender requiring early repayment of an existing loan. Subject to all eligibility criteria being met, the EFG will provides a 75% government guarantee to the lender, thus giving them the confidence to lend to the business in one of the following ways, providing between £1,000 and £1 million over a term of between three months and ten years unless otherwise specified.

The following types of lending may be guaranteed for terms of between three months and ten years (except where indicated):
New term loans, (unsecured and partially secured) for working capital or investment purposes
Refinancing of existing term loans, where the value of available security is insufficient for the lender to consider refinancing under its normal terms placing the loan at risk, or where for cash flow reasons the borrower is struggling to meet existing loan repayments
Conversion of part or all of an existing utilized overdraft into a term loan in order to release capacity in the overdraft to meet working capital requirements
Invoice Finance Guarantee providing a guarantee on invoice finance facilities, supporting an agreed additional advance on a Small and Medium Enterprise’s (SMEs) debtor book, to supplement the invoice finance facility already in place. (Maximum term of three years)
Overdraft Guarantee providing a guarantee on new or increased overdraft borrowing where the SME is viable but has inadequate security to meet a lender’s normal requirements for the level of overdraft requested. (Maximum term of two years)

The delivery of EFG, including the decision on whether or not it is appropriate to use it in connection with any specific lending transaction, is fully delegated to the participating lenders. There is no automatic entitlement to receive a guaranteed loan even if a business believes it satisfies the basic eligibility criteria.

**Basic eligibility criteria for EFG**

- **Term of EFG Backed Loan**: An EFG backed loan may be for any term of between three months and ten years (except for the Invoice Finance Guarantee and Overdraft Guarantee Facilities which operate over maximum terms of three years and two years respectively).
- **Amount**: £1,000 through to £1 million.
- **Maximum turnover of Borrower**: £25m per annum (where the borrower is part of a group, then the turnover limit applies to aggregated group turnover)
The Indian auto component industry has been navigating through a period of rapid changes with great élan. Driven by global competition and the recent shift in focus of global automobile manufacturers, business rules are changing and liberalisation has had sweeping ramifications for the industry. The global auto components industry is estimated at US$1.2 trillion. The Indian auto component sector has been growing at 20% per annum since 2000 and is projected to maintain the high-growth phase of 15-20% till 2015. According to a study by UK-based global financial advisory firm-Rothschild, India would become the third largest auto industry by volumes after China and the US by 2015. This would give immense support to the growth of ancillary sector as well. However, as part of the project, this report provides some of the innovations that have been carried out in this sector and which could be implemented in the SME Clusters of India.

Some of the schemes are as follows:

- **Blue Link Technology:** It provides a significant number of automated services aimed at making the driver’s life easier. The mirror’s bezel houses three buttons that, when pressed, allow the driver to use voice commands to operate a wide range of navigation, vehicle assistance, entertainment and emergency services -- hands free.

- **Polypropylene (PP):** Thin film Interior Surface Technology: PP Thin Film is used to make automotive door panels, instrument panels, seat back panels, seat valances, map pockets, pillars and other components. The process provides auto manufacturers with superior durability due to high scratch and mark resistance, perceived quality and reduced environmental impact of more costly filmed coatings at a competitive price. It consists of a composite foil made primarily of several polypropylene layers that are manufactured in a direct mold-behind process.

- **Citroen DS5:** It includes the head-up display, instrument cluster, and seating solutions. The head-up display projects key driver information from the instrument panel onto a transparent screen located in the driver's primary field of vision. The ergonomics of the display enables the driver to perceive and process the relevant information, such as speed, traffic sign recognition or turn-by-turn navigation, much faster than standard displays positioned outside the primary field of vision. For the CITROEN DS5 instrument cluster, Johnson Controls has developed an elegant combination of analog gauges within a digital cluster built with three displays. High illumination and aesthetic elements of the cluster include: satin chrome rings; “floating” pointer with high illumination quality and homogenous brightness due to an innovative stepper motor as well as the integration of a reconfigurable color display. The cluster also features high-contrast monochrome and color
liquid crystal displays which can fade out all displays using a black panel function, and the ability to configure information by the pointer or the display.

**Pre Safe Brake:** It automatically brakes the car before an impending rear-end collision. As a result, it is able to prevent the collision or significantly reduce the severity of the accident. The new system complements Brake Assist PLUS (BAS PLUS), which was introduced last year. BAS PLUS provides visual and audible warnings if it detects that the vehicle is about to run into the vehicle in front and automatically calculates the brake force required in order to prevent the crash. This brake boosting force is available the moment the driver steps on the brake pedal. The PRE-SAFE® brake goes a step further. If the driver does not react to the BAS PLUS warnings from the cockpit and there is a severe danger of an accident, the system triggers automatic partial braking and decelerates the S-Class at up to 0.4 g (approx. four m/s²). This is equivalent to around 40 percent of the maximum braking performance. Autonomous partial braking provides the driver with a further clear prompt to take action, on top of the visual and audible warnings.

**Environmental Friendly ACS 751 Air Conditioning Service Device:** It ensures that every air-conditioning system is replenished with the exact quantities of refrigerant and oil specified by the vehicle manufacturer. The ACS 751 is equipped with precision balances that measure the levels of refrigerant, UV additive, used and new oil in the fluid containers. Furthermore, other device components containing refrigerant are mounted on a balance to enable highly accurate quantity measurements. The long-term measuring accuracy of the ACS 751 is also facilitated by an integrated line filter that retains even the finest of particles, thereby protecting the device from damage.

Shifting focus from the specific domain of the auto components, there are certain programs that are carried out in the developed countries for the development of SMEs. Some of them have been hugely successful and a brief about them is provided as below.

**Case exhibit 19: Shindan System (Small and Medium Enterprise Management Consultant System), now referred to as Organization of Small and Medium Enterprises and Regional Innovation, Japan (SMJR)**

It is a system, where in the government certify consultants for the development of SME programs. The consultants referred to as Shindanshi, needs to clear a set of exams and then undergo a training program before he/she is officially certified as a Consultant. The Government certified excellent consultants institutionalize the system by providing laws, budget, official curriculum and exams, renewal procedure. By now, about 20,000 registered Shindanshi work in the public and private sectors. Many of the JICA (Japan International Cooperation Agency) industrial experts are also Shindanshi. Shindanshi pursue public purposes by improving SMEs, in comparison with MBA-holders who usually practice consultancy with big companies for commercial profit.
Beneficiary: All kinds of Small and Medium Enterprises

Total Subsidy: The government of Japan support SMRJ through; salaries of officials, exam and registration costs and subsidy for education and training / 30 to 40 million yen annually for the two activities from the treasury and approximately 3 million one-time subsidy to MSRJ to train 2002 Shindanshi. The training in the Shindan system have included; Business start-ups, venture business, Management innovation, Corporate rehabilitation, etc

Efficacy: The Japan Finance Corporation (JFC) plays a vital role in extending financial support to SMEs (which includes individual proprietors and micro enterprises). Reports submitted by Shindanshi on expected profitability of business plans are an important consideration for JFC when making loans to SMEs and individual proprietors. These reports also function as a credit guarantee for the loans provided by JFC or other financial institutions.

Spread to other parts: The Japanese Shindan System has been adopted by other ASEAN countries in the recent past. A brief summary of it is as follows:

In 1999, when the Asian Financial Crisis ended, the Japanese government offered to implement a five-year program to introduce a Shindan system in Thailand and eventually produced about 450 Thai Shindanshi. Since then, the Thai private sector has taken over to continue to provide various training programs for Shindanshi. In Indonesia, the industrial support program of the Japanese government was initiated in 2003 which included an introduction of a Shindan system to that country. With the aid of Japan, consultants were trained and a study was conducted in preparation for institutionalizing a training program and a state certification scheme, and responsible offices at local levels were also founded. The Indonesian Shindan System was officially inaugurated in 2006 and about 300 Shindanshi have been certified.

In Malaysia, as part of technical cooperation following the Japan-Malaysia Economic Partnership Agreement signed in December 2005, Japanese experts conducted a series of training courses for SME policy officials for two-and-half years from 2006 and produced 68 “SME counselors.” Meanwhile, when the Japan-Philippines Economic Partnership Agreement was signed in September 2006, Japan promised to help the Philippines to develop a Shindan system and pilot projects were launched in five of the country’s provinces.

Vietnam, a latecomer in industrialization in comparison with the above-mentioned ASEAN countries, has also been working with Japan to draw up an “Action Plan for Supporting Industry Development” since the spring of 2008. Under this bilateral effort, an examination of Japan’s Shindan System and similar systems adopted in the neighboring countries has begun in order to evaluate the feasibility of transplanting the system to Vietnam.

All in all, the introduction of the Japanese Shindan Model to ASEAN is a recent phenomenon.
**e. INNOVATION ACROSS THE GLOBE IN TEXTILE**

**Case exhibit 20: United States of America**

- Direct Payments, Counter Cyclical Payments, Marketing Assistance Loans and Loan Deficiency Payments with the objective of providing income support to farmers
- Commodity certificates with an objective to speed up the process of obtaining commodity loans
- Average crop revenue election program to reduce market risks by allowing farmers to lock in revenue guarantee
- Recourse loans for seed cotton to enhance support to farmers of cotton farming
- Special upland cotton marketing loan provisions to temporarily increase cotton supplies into the country
- Upland cotton economic adjustment assistance to increase domestic consumption
- Special competitive provisions for extra-long staple cotton to increase exports and maintain competitiveness in world markets
- Cotton price forecasting for better information dissemination and evaluation of the Industry

**Case exhibit 21: China**

- Cotton Quality, Classification, system reform plan to align China’s classification with international standards and to create a system of scientific testing process
- Multi Year Seed Subsidy program to stabilize the cotton planted area
- Transportation subsidy and targeted loans to financially assist domestic marketing;
- State Cotton Reserve Management Policy to support domestic cotton prices and facilitate marketing of domestic cotton
- Quality credit assessment measures to strengthen inspection and quarantine supervision of imported cotton
- Tariff rate quota to regulate the market and protect the interests of both farmers and industry.

**Case exhibit 22: Brazil**

- Premium to commercial buyers to supplement the supply of commodities in the areas of the country considered to be deficient in agricultural production
- Equalization Premium to Farmers to compensate the farmers for currency fluctuations
- Premium Commercial buyers under a private sell option contract to signal future price for the market and guarantee future income to the farmers;
- Federal Government Acquisition to ensure purchase of product at a minimum price determined by the Government with an aim to support the farmers and commodity prices
Case exhibit 23: Pakistan

- Cotton Standardization system to earn better price in the international market
- Clean cotton program to enable production of standardized and clean cotton
- Cotton fiber testing to encourage instrumental classification of cotton fiber
- Infrastructure and technological development to develop clusters with amenities for testing product development and research and promotion of ginning factories
- Focus in value addition to introduce BT cotton and production of long staple cotton on priority basis
- Marketing insurance schemes and zero rating of exports to foster the export of cotton fiber

Textiles Investment Support Fund  Government will invest part of the required $8 billion to bolster the capacities of the textiles sector largely by way of providing incentives for future private investment, provision of infrastructural facilities and expanding the skills pool in the industry. The policy has been designed to initiate well targeted interventions for addressing cross-cutting issues which impact the whole value chain. For this purpose, a Textiles Investment Support Fund (TISF) will be established to which annual budgetary allocations will be made. The specific areas that would receive government support from the Fund will include modernization of machinery and technology, removing infrastructural bottlenecks, enhancing skills, better marketing and use of Information and Communication Technology (ICT). The policy will also provide a framework to address weaknesses in these areas along with consolidation of the fragmented sub-sectors and create an environment for value addition, employment generation, enhancing productivity and competitiveness.
f. INNOVATION ACROSS THE GLOBE IN DEFENCE

**United Kingdom**

Approximately 90% of defense exports are won by the 20 largest UK companies. In order for the UK to remain at the competitive edge of defense requirements and security technology, it depends not only on its prime contractors but also on second-tier suppliers and niche product manufacturers. These smaller businesses are widely recognized as being the powerhouse of the UK’s defense and security community, driving through change by being innovative and developing new technologies. UKTI DSO’s remit is to help maximize overseas sales of UK defense and security equipment and services, employing both military and civilian staff based in the UK and overseas and providing a range of services from regional marketing advice, analyses and reports through to equipment evaluation, promotion, demonstration and training provided by the British Armed Forces. Companies that UKTI DSO has helped in the defense and security sectors include Lifesaver (water filtration bottles), Concrete Canvas (rapidly deployable hardened shelters), Forensic Telecommunications (digital forensic services) and Minimal Risk Consultancy (security consultancy and project management).

**Case exhibit 24: Small business charter**

One of the most vital and successful services previously offered by DESO and transferred to UKTI last year is the Small Business Charter, administered by UKTI DSO’s Small Business Unit (SBU). The Charter scheme was launched in March 2004 and offers a range of advice, information and assistance to small firms selling products and services to overseas defense and security customers.

- Charter membership is offered to UK small and medium-sized enterprises (SMEs) with the desire and potential for defense and security exporting.
- The Charter allows the SBU to gain greater understanding of their business and to develop a close, two-way relationship with them. In turn, this allows the SBU to ensure that Charter members are made aware of, and is ready to take advantage of, the most appropriate UKTI, MoD and wider government support available in pursuit of defense and security export sales.
- To be eligible for Charter membership a company must be an SME whose products or services originate from within the UK.
- Members can treat the SBU as a ‘one stop shop’ for all defense and security export-related matters, and each Charter member is allocated an SBU account manager, whose job it is to assess the company and provide and facilitate appropriate support.
- The SBU also collaborates with UK defense trade associations and regional industrial groups to co-host higher-profile events and activities. Costs are kept to a minimum, with discounts
negotiated wherever possible, and Charter members will often receive advance notification, putting them at the head of the queue.

The Charter Members Centre has a site that contains a wealth of information ranging from important announcements about future policy and forthcoming events and activities to Charter membership-related guidance and links to other important government and trade websites. The site also contains downloadable versions of key policy and promotional material.

The Charter Members Centre is supplemented by ‘Small Talk’, a free newsletter highlighting the key points of interest currently online.

Charter membership and the services of the SBU are entirely free of charge, as is the vast majority of the advice and support on offer.

**Case exhibit 25: Security directorate**

UKTI DSO’s Security Directorate, newly established as a result of the Prime Minister’s review, is increasingly supporting SMEs in the security sector, both individually and collectively, through security trade associations and bodies such as the Security and Resilience Industry Suppliers Community (RISC), the Association of Police and Public Security Suppliers (APPSS), the British Security Industry Association (BSIA) and the Security Innovation and Technology Consortium (SITC). There are estimated to be some 5000 companies – the majority of whom are SMEs – producing innovative solutions and cutting-edge technologies and services across the full spectrum of security, covering the protection of people, assets and critical national infrastructure.

UKTI DSO has joined forces with the Home Office Scientific Development Branch (HOSDB) in the organization of HOSDB’s annual exhibition at Farnborough. This makes it bigger and better with more exhibitors; the exhibition becomes the UK’s only secure event for displaying the latest security equipment.

**Case exhibit 26: Russia**

Three basic types of Russian SME organizations constituted the innovation system: scientific institutes, design bureaus, and in-house industrial research units. Scientific institutes were the main source of new ideas for products and processes in the Russia. Those scientific institutes that engaged in largely applied research did so by working on generally narrow (by Western standards) specific technical issues under the auspices of the industrial ministry of their specialization. Design bureaus were differentiated as those that designed structures or designed new products and processes. The latter began their work after receiving the initial research and development phase from scientific institutes. Design bureaus specified the ideas in the form of working drawings and other technical documents that were then sent either to an experimental factory for prototype testing or directly to the end-user production facility. Research was also carried out in the small in-house research division of Russia enterprises. These were always the smallest, most incrementally-oriented organizational sector of the R&D establishment.
Consolidation of former defense enterprises along the same production chain is clearly supported by certain groups of Russian policy-makers as well. The efficiencies of vertical integration were a large part of the rationale given by the Ministry of Defense for its official program supporting the creation of so-called “financial-investment groups”. In April 1995, a special decree on state support for the development of science announced that future civilian R&D investment would be increased to at least 3 percent of the federal budget in 1999.
In any economy, small and medium enterprises play a very big and important role in creating employment, building resilience in the economy to counter macroeconomic events, producing goods and services, and serving much larger populations. Their roles become important in case of countries like India which are economies in transition from low-income countries to middle-income ones. However, when it comes to financing their businesses, most of the SMEs face a roadblock. The financial world is lopsided against the SMEs. It’s easier for big businesses to get loan from banks and funding from public; it’s easier for employees to get loan from banks; but it is extremely difficult for SME’s to get loans from Banks. Even when other forms and institutions for funding are available, SMEs do not have information and hence they lose out.

The dire need for funding

It will not be an exaggeration to say, Indian SME’s are in dire need for funding. The situation is extremely grim. Look at the contribution of SMEs in the GDP of countries like USA and UK. They contribute 40-60% of the GDP and provide employment to 50%+ of the workforce. Even in developing countries like China and Vietnam, the ratios are very similar. However, in case of India, The contribution to GDP is just 20%. This shows huge untapped potential for SMEs. The major cause is lack of financing for SMEs’.

Arranging finance for innovation has always been a critical area of concern for the SMEs across developing countries. Countries have tried to find and employ all possible avenues of financing options. This section aims to present and discuss certain pertinent issues which are a major roadblock towards promotion of innovation in most of the countries including India.

Innovative financing refers to a range of non-traditional mechanisms to raise additional funds for development aid through “innovative” projects such as micro contributions, taxes, public-private partnerships and market-based financial transactions. Innovative financing initiatives generate diverse resources and unleash the full potential of the emerging market, the financial community & private business. Innovative financing provides the opportunity to leverage the formidable pool of global capital & new asset classes for development. As of the beginning of 2010, most of the existing innovative financing mechanisms were allocated for the health care sector in developing countries. Innovative financing mechanisms have already raised $2 billion over the past 3 years.
Common issues of financing amongst MSMEs

- **Asymmetry of information**: This term is used to explain the unevenness of information and knowledge between the entrepreneur seeking loan and the lending agency (bank, NBFC, angel etc.) due to the type of industry or product/service and the insufficient exposure of the administrative officer handling the loan application. This is a bigger issue in case of innovative enterprises compared to standard businesses which have more prevalence and thus significantly more common insight and process knowledge. This works against a loan request.

- **Capacity**: A continuation to the above point is the problem of capacity which shrouds the functioning of SMEs. It is a common perception that many areas of a SME business are not clear to evaluate its true potential and rightly judge its health.

- **Disclosure of financial information is often insufficient**: Thus, even a loan extended to SME is considered an ‘opaque’ asset which definitely is undesirable for the lending agencies.

- **Lack of Client’s Equity (Debt equity-ratio)**: All lending agencies look for the equity share in a business which is the capital brought into the business by the owner which is either his (her) money or borrowed from family and relatives. In many instances when the equity participation is less, it is construed as lower risk undertaken by the entrepreneur and the lending agency has more exposure.

- **Measurement of organization’s health**: Organization health displays the direction in which the investments are going. Prior to obtaining any funds, if the health is robust, it works in favor. Post access to loans, it exhibits the reliability of repayment. There are various factors which influence organization health. It is a serious perception issue which actually underlies many quantitative data backed decisions.

- **Type of industry/Sector**: The type of industry or sector in which the entrepreneur deals in seriously impacts the probability of obtaining a loan. The problem of the dot com businesses in the end 90s created a negative about the industry. Today IT and ITES businesses are again booming and getting some serious debt funding to grow. Generic industries like say auto, pharmaceuticals, textiles, electrical items etc. are extremely common and lot of knowledge is available in the public domain. There are ample cases of lending to these businesses and benchmarks for evaluating applications and measuring repayment health has been established. Hence, the opacity or information asymmetry factor is low which works in favour of loan applicants. The same does not hold true for
innovations and industries which are emerging and such businesses are considered to be high-risk and undesirable for disbursement of loans or any financing.

**Stage of the enterprise:** Enterprises at the initial stages need maximum funding to survive the growth curve and the burden of huge capital investment for setting up the venture. The revenue is yet to pour in and retained earnings that of the owner is possibly limited. As the firms start moving to the growth phase, there is some internal fund that is created and a track record of sorts established partially to allow lending bodies to evaluate the state of the firm. Hence, the problem is at the very beginning of the firm’s life. Lack of funds at this stage is also a cause of the downfall of many enterprises.

**Ownership Pattern:** SMEs are usually single or multi-promoter (from the same family) or a 2-3 partner venture. In many instances, multiple promoters include wife, children or their spouse as co-owners or partners who have no say in the decisions. They are around to sign on papers as directed by the figurehead. He is the main decision making body. The direction of the firm’s growth and security of the invested funds depend on the decisions made by the owners and their wisdom. This again depends on their experience and education. The issue here is that nothing much can be done about this in SMEs.

**Organization Structure:** The human resource aspect of SMEs is very simple. There is one (or two) owner and selected few core people working under them co-handling main functions like accounts, production and sales. There is no clear process of functioning, workflow, and information or instruction flow. Everything is random. This ticks off the lenders because the same randomness affects the handling of funds.

**Business Plan:** Good projects and business ideas need the backing of an equally in-depth business plan. Entrepreneurs in the zeal of setting up their venture, quite often overlook many details of the project. Superficial business plans do nothing to gain the trust of the investors.

**Low technology adoption:** Technology has become the cornerstone of all businesses today. It has invaded the smallest parts of our lives. The same does not hold true for SMEs especially the micro and small businesses who do not use lot of automation in their operation as well as administration and data management. This again contributes to the opacity factor. It also affects productivity and output which means that it hurts the bottom-line.

**Low profit margins:** SME businesses are often considered to be insufficiently managed. Cost of production is also comparatively higher as technology adoption is low. The smaller size of operation means that the bargaining power with suppliers is limited. Quite often, SMEs are into sectors where there are too many players hence it is not a suppliers market. They cannot demand a specific price. Due to weaker control over their clients, receipt of payment
is irregular. All these factors add up to low profit margins.

**Handling Qualitative Information:** The employees (administrative or loan officers) banks and lending bodies usually work on a very straight path without any imagination or creativity. They are not at all equipped (or maybe authorized) to vet qualitative data like future business prospects, owners intention and objectives, team capabilities and clients views into the qualification criteria for loan applications. They are also incapable of handling the qualitative information, measuring it and incorporating the same while making recommendations for loan applications to the head office. Everything is not about clear figures, numbers and ratio.

**Lack of sufficient collateral:** When businesses commence, there is hardly any collateral to present for obtaining financial aid. Lending without collateral to SMEs is extremely risky from the lender’s viewpoint. Where will SMEs get their collateral from when the loan is to obtain those plant and machinery which form part of collateral.

**Availability of lending bodies:** In many areas the problem is not only about getting financial aid or loans but even the presence or reach of lending bodies. Many MSMEs dot the rural landscape of India and need funds there. Credit Rating system All banks have their own credit rating system. There are credit rating agencies which claim that their evaluation is accepted by banks. The trouble is how SMEs, already burdened do with basic survival, figure their way out through these serpentine processes and come out with a good rating. And they will still manage to get the loan? The parameters and process of rating is also covered under a shroud of pointless secrecy. SMEs in most cases are unclear what they are up against or what will help gain better ratings.

**Subtle Cartel of Lending Bodies:** Most banks and lending bodies have more or less similar rates of lending finance or higher. The lending agencies create a façade of being a cartel in the minds of the borrowers. There is no competition between lenders to snatch borrowers unless they are large robust companies where every bank wants to park a pie of their funds and gain through returns.

**High Interest Rates:** Interest rates for non-collateral as well as collateral backed loans to SMEs are often very high and at times prohibitive. The reason is attributed to the high risk of lending to SMEs.

**High Administrative and Transaction cost:** Due to low level of technology adoption and poor record keeping-keeping and lack of efficient systems and processes, the whole process of evaluation of loan application is extremely resource intensive for the lending agencies. The poor efficiency of loan officers is also to blame.
**Diversion of funds for Repayment**: Repayment of expensive loans by SMEs also unleashes a vicious cycle. Quite often funds are cut from various functions of the business to ensure timely repayment. This affects operation and if not checked starts hurting the business in a bad way.

**Bureaucracy**: This is a no-brainer point. Most SMEs suffer from the setup stage due to systematic problems of bureaucracy at most government agencies/bodies like taxes to labor. The ease of setting up a business index measured for various countries considers this as a major make or break parameter.

**Lack of Ground Policy Decisions and Problem Resolution**: The problems faced by the sector are nothing new. Sadly, the government bodies and think-tanks have not done enough to help in resolving the problems of finance for SMEs. The policies are contradicting and insufficient. One arm of administration is unaware of what the other is doing. There is no synergy. Legal system in India is also a huge factor. Simple cases of cheque bouncing also get dragged in the courts for years. The amount of time and money spent of it is also a waste. Bankruptcy laws are also weak and do not cover the interest of lenders whose money is stuck.

**Economic Health and Country-specific Risks**: Last but not the least, economic health of the country and its global exposure as well as internal strengths as add to the problems for SMEs. They impact the interest rates, spending, taxation and investments therefore growth.

**Suggestion/Alternatives for SMEs**

**Establishment of Strong Accounting System**: Investing a strong accounting and reporting system from the day of incorporation or before. Use good and genuine accounting software to manage data. Hire a suitable accountant. Accept the fact that some functions need dedicated personnel for handling on a daily basis. Helps reduce opacity

**Detailed Business Plan**: Develop a comprehensive business plan. There are many free resources on the internet to help you with an overall template. The more detailed plan the better chance of a loan getting sanctioned. It also shows your understanding and analysis as well as depth of knowledge in vetting various aspects of the business. This works in resolving certain amount of information asymmetry

**Mandatory Disclosure of Information**: Proactively disclose financial and company information. It works in a positive frame with creation of a notion that the business is clean and everything is on the table with no hidden surprises. Lenders get assurance that they will
be kept in the loop about the functioning of the business. Strategic Local or Foreign Partners

Having a strategic partner in business is always desirable provided both can work in unison. The other partner often brings his/her specialty which adds to the strength of the enterprise. Sometimes investors would like to become partners not to run the business on a day to day basis but to have enough control to question larger decisions and the way funds are being utilized. It can be a win-win option. In case of exports one should look for partners who might have presence in more than one country so that multiple markets can be tapped at the same cost. For e.g. a partner having access to Kenya, Uganda and Tanzanian market might be a better fit compared to someone who has presence in only one.

- **Sell/ Outsource Part Process like Distribution, Post sales (Franchisee Model):** Business has many functions. In order to manage costs, enterprises should also lookout for partners or companies who can share or out rightly manage part of the functions like distribution or post sales service. It is the sharing of strengths and spreading the cost to multiple companies. Suzuki was working with Maruti for four wheelers in India and TVS for two wheelers.

- **Strong Organization Structure and Chain of Command:** Create a clear organization structure with clear chain of command for information flow as well as financial decisions. This will help the lenders understand who and how decisions will be made in the firm. It also helps in executing the growth plan of the firm.

- **Succession Planning:** SMEs are often one man show. What happens if the man is ill or expires? What happens to the business and investments? It is like keeping all the eggs in the same basket. Succession planning is the solution. There should always be a second rung of personnel to take over key functions in case of any disaster or unforeseen circumstances. The same should be conveyed to the lenders.

- **Strong Cash Flows and Receivables:** Enterprises are sometimes consumed with sales that they lose track of receivables. A clear well defined system of debtor management should be established and communicated. There should be a process of identifying possible risky parties and issuing internal red flags. Analysis of outstanding while processing purchase orders should be internally set in stone in the business. Lenders look at cash flow and not just pure sales. Thus having a strong cash flow is a plus.

- **Use of ICT:** Information and communication technology helps in establishing a process and transaction trail. Be proactive in adopting technology solution to bring transparency in business. It helps in sharing of information and letting lenders sift through data and do their own analysis.
Co-Create Product, Market and Technology Transfer: Co-Creation of products and marketing them can help in sharing cost. For example and IT company can work with an engineering company and develops software to track all information. This software once it passes the rigors of testing and proves its usefulness can shave been developed this way. Technology transfer by companies is also an effective way of circumventing the financial requirements of enterprise.

Demonstrate Good Corporate Governance: There is nothing better than demonstrating honesty and openness in business. It can be done through certifications like ISO, HAZOP and other specific certifications pertaining to the business. Many diamond companies go for the Forever mark to indicate that they are not using blood diamonds. Proper filing of financial records and making it available in public domain, timely payments and deliveries to suppliers and buyers go a long way in creating good image of the company.

Use of Retained Earnings: Whatever is said and done, businesses “bank” on retained earnings. They help in a well-balanced debt equity ratio. When equity is considerable, lenders get the message that the owners are equally serious, committed and have high stakes which would motivate them to perform well and pay off their loans.

All Clean and Clear Transactions through Bank: Till recent times, cash was often used in transactions by SMEs. This should be replaced with a system of all transactions through banks, cheques and electronic transfers of funds so that it leaves a clear trail and the lenders are assured of their money that they gave for financing. Government has issued directives to pay workers through banks to their bank accounts. Complying with it will definitely strengthen the case of SMEs.

Asset backed Securities: The true story if that collateral is the only way of maximizing the chances of getting a loan sanctioned.

Lean Manufacturing: Companies involved in production and sales of products should spend some serious time in checking each part of the procurement, production and distribution process to cut out any waste that is visible. Implementation of Kaizen, TQM and Six Sigma etc. would really help in proper utilization of resources. The Japanese system of production and productivity improvement would work in any other culture provided they are carefully and diligently implemented. Any activity that does not add any value to the end product is unnecessary and be immediately isolated.

What-if Analysis: There are a lot of financing options. Each has its own peculiarity. SMEs need some sound financial brain to do what if analysis of each option and decide that for a given circumstance and requirement what would be the most judicious one. If it is dire
need, then it makes sense to borrow at a high rate from the grey market to overcome the situation. If the SME survives then there is a chance of making money and remaining in business.

**Education:** Entrepreneurs must invest in education. It is common in certain business communities to ensure one of the son or daughter goes ahead to do commerce and possible chartered accountancy course and enter in to business. Even with consultants, it always makes sense to have your own internal strengths.

**Tapping Microcredit:** Micro-businesses should look towards micro-credit finance. They are especially useful in the rural areas where the magnitude of business if limited but significant.

**Understanding applicable Laws and Acts:** SME owners and key employees must invest time in understanding the applicable laws and Acts. Much of the business and financial woes can be tackled if you are aware of the implication of your act or lack of it.

**Tap Trade Credit:** Everyone has a credit period. Work towards building a relationship with your suppliers to get a good credit period. Even an additional 10 day scan make huge difference to the working capital needs.

**Show good health and persistent growth in the company:** It is not possible to show good growth if there is none. SMEs are therefore required to work from growth so that it shows on the balance sheets and ways the decision of the lenders on favor of the enterprise. All lenders seek companies with good health and steady growth of not exponential in nature to feel secure about their finance.

**Suggestions/Alternatives for Government, Banks and other Lending Bodies**

**Long Term Relationship Building:** Businesses are there as on people have jobs. They are the reason why banks have the job of managing money and government has the role of managing the nation. Hence it is necessary for the government, banks and lending bodies to understand the necessity of building long term relationship with SMEs. They will be privy to the information of the enterprises and secure the prospect of the loans extended by them. It is the best way of combating opacity and information asymmetry. Everyone can be on the same page. They must spend time on periodic health assessment and suggest measures for improvement.
**Clarity of Credit Rating System and Communication:** Credit rating agencies and banks’ systems should be transparent. They should clearly state what they are looking for, how they will be convinced, what information SMEs can provide to ensure that the rating is favorable. Rejection of a loan application should not be the end.

Lenders should also strive to explain what the shortcomings were and allow SMEs to provide further information to ensure compliance. Lenders and government must invest in networking and mentoring of SMEs. Banks must create separate cells to provide consultancy to SMEs to teach them how to function and manage data such that their performance can be analyzed easily and thus expediting the loan sanctioning process. Lenders should also share instances of companies who have got the loan to show what one can do to get the right points.

**Credit Bureau:** Presence of government and Bank approved credit bureau like CIBIL will help SMEs proactively share information and create a good track record for themselves thus increasing their chances of getting loans.

**Competition:** Government through legislation and policies must enforce competition in the banking and NBFC segment. There should be a scramble to woo SMEs and their investments. The entire risk of investment and hard work cannot be solely on the enterprise and all benefits to the lenders.

**SME Database and Regular Maintenance:** Certain countries are building a strong SME database and maintaining it regularly to trap information about their finances, performance and problems faced by them in accessing loans etc. Malaysia is one such country. It can be very useful repository of information for banks and governments to evaluate their effectiveness.

**Development of System for Analyzing Companies:** There should be a well-defined system of analyzing companies for their credit worthiness. It must take into account both quantitative and qualitative data as well as other miscellaneous additional information to strengthen the loan application and its favorable disbursement. This checklist must be available to SMEs too so that they align their business in the same way. Planters’ bank Philippines-looked at SME financing as business opportunity, made fine use of government schemes, international funding opportunities etc. and remained profit oriented. They created methods and processes to build financial information of firms and a process to do it. The loan officers were trained to do it properly by reconstructing financial information through system of internal procedures and checklists. They created a diversified loan portfolio since all borrowers do not default and they are bankable. Planters’ bank hand-led new SMEs to work through the initial phases. They built a “Know your customer” culture, interaction forums and sharing of information. The loan officers became financial adviser.
**Strengthening Institutional Capabilities of SME Credit Evaluation, Training of Internal Bank/Lending staff to handle SMEs:** There is a dire need of quantitative and emotional training of loan officers, administrative staff with an ingrained philosophy of sanctioning loans instead of finding the first cause of rejecting it. The previous two points work in conjunction with this one. Credit evaluation system development and training will improve the institutional capabilities of lenders. There should be vigilance to check that there is no bias for particular parties, companies at the cost of neglecting others.

**Percentage of Corporate Deposits and Loans:** Banks should routinely present their level of corporate deposits and the amount of loan that they have sanctioned. This should be seen in light with overall credit guarantee schemes and government objectives and finally assesses based on actual impact on SMEs. Banks must continuously maintain clear data on share of high and low risk loans.

**SME Exchange:** The creation of a SME exchange would be a good move though we must be prepared for its slow acceptance and role in alleviating the finance issues of SMEs.

**Enforcement of MSMED Act (Especially 45 days payment):** This is one of the best solutions for reducing the finance needs of average SMEs if they get their dues on time. Government instead of coming out with Credit Guarantee Schemes and tweaking with other finance tools should make the MSMED act vicious like FERA, FEMA or COFEPOSA. Majority of the credit problems crops up from delayed payments. SMEs might still need funding for capital investment but they can manage much of their day to day function with their internal reserves and earnings.

**Strengthening Legal System:** India needs an extremely strong and swift legal system where both investors and loan recipients are aware of their legal recourse and obligation and the knowledge that there will be fast justice and solution to any possible default or problems.

**Soundness of Credit Guarantee schemes and level of utilisation and reach and benefits to SMEs:** Credit guarantee schemes should be assessed for their usefulness and actual impact on SME financing issues. How many enterprises have truly benefitted and in what way? Why have others not gained? What should be changed in the schemes to bring more people under the umbrella of financial aid?

**Separate Lending Mechanism for Collateral and Non- Collateral Lending:** SMEs with or without collateral must be given option to obtain finance. Banks and other lenders can
have lending mechanism to suit the needs to the SMEs. A high rate loan from a bank is still acceptable that no loan at all.

- **Simplified Government Policies and Acts so SMEs can understand and comply**: SMEs need simple and clear policies and acts to understand them and utilize as well as implement them in the business for compliance and secure benefits. There are many schemes out there but most SMEs do not understand how they can take benefit of them.

- **Basel III Norms**: These norms regulate banks to a certain extent. The norms must have stronger and stricter provisions to help address the credit requirement of SMEs.

- **Modify Labour Laws to bring efficiency in SMEs**: India needs new age labour laws which are contemporary and relevant in the present globalized scenario. We cannot make incessant progress in one direction and leave the other.

- **Ease of setting up business**: This is a common refrain. It means fast clearance and fewer licenses and requirements of compliance, tax subsidies in the set up stage.

- **Investment readiness of SMEs for smooth sailing**: Government should have agencies which help SMEs prepare themselves for getting investment by preparing their business plans and developing systems to definitely pass the requirements of lenders.

- **Joint bodies with international funding, Government and Local banks to create special funds for SMEs in EU**: European Union gives due consideration to the needs for SMEs and their sustainability including impact on the economy. They have used international funding bodies their own resources and pooled in the banking system of EU to create funds to help SMEs, their R&D activities as well as floated specialized innovation funds for high risk projects.

- **Information dissemination**: Government agencies through their websites should list the current programs, schemes and their actual reach and benefit to SMEs.

**Funding for SMEs–What are the options?**

The lack of financing is not only because of lack of interest of banking institutions but also because of ignorance among SMEs on the financial available.

**World Institutions**

There is strong emphasis on sustainable development by the development institutions around the world. These can be a good source of funding. For example, Asian Development Bank has been
funding SMEs in Sri Lanka China, ASEAN, and many other countries.

Funding gets much easier when they are for the sustainable and environment friendly projects. The funding could be in the form of credit facility through the commercial banks in these countries. In June 2011 Madhya Pradesh government signed a credit facility deal with the ADB for $300 million. World Bank is also playing its part in reducing financial constraints the SMEs face in India. It regularly provides loan to Government institutions or the SMEs organizations directly.

**Government schemes**

This is the most viable ways to finance your business. The assistance comes in the following ways.

- Capital Subsidy
- Tax Exemptions
- Tax deferral
- Other help such as free services (for example, centre has agreed to help companies file patents. The services will be given free of cost)

For example, Credit Linked Capital Subsidy scheme (CLCSSS) by Government of India helps SMEs in technology upgrade in selected sectors. This can benefit SMEs immensely. It will make them more efficient at much lesser cost. This could be of great help to SMEs. The usual fear about Government notwithstanding, SMEs should try to get these loans. Most of the SMEs assume that they will not get it all never even try.

**National institutions**

The national institutions play the major part in finding the businesses of small and medium enterprises all over the world. However, this is yet not strong in India. Public sector banks (PSBs) in India have goals to meet for the funding of SMEs and hence there are efforts from PSBs to meet the target. There are other institutions such as SIDBI, formed to promote and assist SMEs in raising requisite funds for operation, administration, and business expansion. SIDBI has set up two funds to help SMEs.

- A corpus of 100-500 crore for growth industry such as biotechnology.

- A corpus of 10,000 crores for giving interest rate subsidy and capital infusion for all types of SME sectors.
These funds can provide much needed financing SMEs. Similarly National Small Industries Corporation (NSIC) is in discussion with SBI to provide easy and cheaper credit to SMEs. They already have pacts with Central Bank, Axis such and Yes Bank. These institutions are doing their part in making required funding available to SMEs.

**Local and Regional Institutions**

These are states which are more proactive in helping SMEs in various ways such as funding, helping in filing patents, building intellectual property, getting them rated for better prospect, raising funds from various other sources and many more. For example, Maharashtra has Industrial Promotion Subsidy under which the state provides capital subsidy. The quantum capital investment in capital expenses can claim the subsidy tax.

**Conclusion**

Finally there are many consulting companies that have come up in recent years specifically focused on SMEs. They provide consulting services to them by advising the cheapest way to raise funds, liaising with government to avail the schemes, and consult on over all operational and technical issues to improve efficiency reduce bottlenecks and optimize costs.

It is good idea to speak with such consulting companies for advice. Though SMEs may not need help in many cases if they have right people to interact with financial institutions. However in case of any uncertainty, the right way is to avail the services of these consulting firms.

**Routes of alternative finances**

Improving access to community/cooperative finance for SMEs, especially in their initial investment and the infusion of equity among its stakeholders could be a healthy way for SMEs to tap in to its growth and innovative potential. However, a large number of SME may face an equity gap. When their initial funds will be exhausted, entrepreneurs have to obtain external finance to develop their project. Financing SME is, often considered a risky investment on account of the low rates of return; specifically during the seed phase. In India, lack of serious business analysis another dampening factor which otherwise could invest in young innovative SMEs. The inability to obtain early stage investment narrows down many SMEs reaching a size; where they can attract expansion capital, this restraint their growth. Despite these serious odds, SMEs as sources of innovation and employment generation can be the catalyst of India’s growth. So giving them the opportunity to start up, develop and accomplish their potential outcome will make a vital contribution to the quest of Indian economy.
**Theists with Innovation:** In last few years, obsessions for giant monolith businesses have lowered in India, which is encouraging for economy size businesses. Overreaching effects of this transcendence is visible in many crucial areas, so naturally financing also poising for twists with innovations. Complexities of institutional finances, particularly flawed handling of priority sector lending (PSL) by most of the Indian banks except Regional Rural banks, necessitate for SMEs to also look on alternative sources of finance. On existing networks of cooperative institutions, a sizable number of farming based small and medium businesses have been thriving, here a think for more professionalization in these activities can let an unprecedented opportunities to the aspiring SMEs. First of all, there is need for overhauling of regulatory structure in Cooperative institutions, besides increasing focus on improving the governance inside its functional ambit.

**Community Participation:** In its working mechanism, cooperative action relies on community participation. An individual considered here a constituent of community and a stakeholder of collective action directed for productive enterprises. It’s true, cooperative movements have never touched its true potential in India because of inside malfunctioning and political interference in its administration albeit this will be still unthinkable to denounce its intrinsic qualities. Stable and inclusive motives of its action simply endow cooperative action to broaden the community based businesses. In more than hundred years of its history in India, Co-operative businesses have performed very well in the states of Gujarat, Maharashtra and also once in states of U.P. and Bihar. After all, who can forget that AMUL had started as SME in Anand/Gujarat, under the abled leadership of Varghese Curion and all credit of this success goes to this man who trusted and dared for an out of box thinking by relying upon the local communities for production/financing under the umbrella of co-operative. Today AMUL is the most profound assertion of community lead business in a lover the world; time is ripe now to move forward with the similar replications. SMEs have golden opportunities to revive a symbiotic working relation with Co-operative institutions to tap its real potential.

**Proven Routes:** At initial level, concentration of capital would be in fact low or near about the optimum level which will need a frugal management practices for SMEs to make their way forward in limited resources. But the positive factor will be the member/stakeholders very close entitlement with the venture. That means, sharing of common interest will be a unique characteristic of this model and will smoothly allow a sustainable business. Such business model on social/community action is not unheard of in India, only it needs a new pattern of execution and diversity in its expansion from primary sector businesses to secondary and tertiary as well.

Beyond the formal mode of financing, community business seems the most appropriate option for SMEs in India. As we can’t expect SMEs being funded with endowments like the Ivy League institutions of U.S. or the public funding of BBC in U.K., so equity based community model will be the best suitable route for Small and Medium Businesses (SMB) to
Innovation Readiness of Indian MSMEs
to attain their genuine goal. In India, community lead businesses have striking similarities with the Co-operative enterprises that obviously accord reliable and proven routes for SMEs to get financed and dwell with a stable model capable of giving long term feasibility in business. A business with sound prospects must be given a fair chance. Adequate remodeling of the existing Co-operative laws and improving professional governance will allow SMEs a sound alternative of financing and will also give a much needed lease to the dwindling co-operative institutions. Excessive idealism or extreme hardening of profit motives is equally bad for a business. SMEs are increasingly doing well in India but their real potential will be realized once they will get the multiple channel of financing. Government and industry bodies must have to come forward in this very crucial issue.