Textiles & Garments - Executive Summary

The Textiles & Garments industry holds a prominent place in the Indian economy because it is the second biggest employment generator in the economy, after agriculture providing direct employment to over 35 million people, which includes a substantial number of SC/ST, and women[1]. It provides an additional employment of 60 million in allied sector, making total employment figures of 105 million.[2]. Currently, the sector contributes about 14% to industrial production, and 4% to the GDP. India's total textile and garments industry size is estimated at US$ 115 billion in 2011-12 and is projected to grow at a CAGR of 9.5 per cent to reach USD 223 billion by 2021[3].

Textiles & Garments sector consists of four major segments viz. Cotton; Man-made filament & fibre; Wool; Silk; and vegetable textile fibres. 'Cotton and 'Man-made fibres' segments have been the engines of growth of the global textiles & garments industry. In terms of global exports, Cotton and man-made filament & fibres led the pack with global exports of US$ 132 billion in 2010 (US$ 58 billion & US$ 74 billion respectively). This was followed by Wool with global exports of US$ 12.6 billion in 2010. Other segments viz. vegetable fibres and silk had very little contribution in global trade with exports of US$ 3.6 billion and US$ 3.2 billion in 2010 respectively. Same trend has been witnessed in Indian textiles & garments industry. India's total exports for the textiles & garments sector stood at US$ 27.12 billion in 2010[4], out of which cotton textiles and man-made fibre textiles contributed to more than 90% of the total exports. Given the current and expected future contribution of these segments, improvements in these two segments are expected to have far reaching and large impact on overall competitiveness of the Indian textiles & garments industry.

Cotton textiles and Man-made fibre textiles have four core manufacturing processes viz. Spinning/Reeling, Weaving/Knitting, Processing, and Garmenting. India is relatively strong in spinning process because that segment has been strengthened before independence period itself. India is also relatively strong in garmenting. It is imperative that focus should be given onweaving/knitting and processing to increase the overall competitiveness of the Indian textiles industry.

The world cotton textiles exports market is dominated by China. China contributed around 23% to global cotton textiles exports of US$ 58 billion in 2010 and witnessed exports CAGR of almost 12% for the period 2005-10. However, Vietnam showed tremendous growth in period 2005-2010 with export CAGR of 67% for the five year period.

The world man-made fibre textiles exports market is also dominated by China. China contributed around 24% to man-made fibre textiles exports of US$ 74 billion in 2010. Japan and Taiwan are the other competing countries each contributing around 1% to global man-made fibre textiles in 2010.

China's textile & garments industry has largely benefited from the economic reforms. During the late 1990s, Chinese textile industry underwent a major restructuring program funded by the Chinese government in anticipation of the end of textile quotas and for reforming the unprofitable and debt-ridden State Owned Enterprises (SOEs). The trade and investment policy of the Chinese government has also been critical in the success of Chinese textile industry as it has encouraged huge inflows of

[1] Ministry of Textiles Annual Report 2011-12, D&B Analysis
[2]Textiles Compendium - Technopak
[3] XII plan working group document
[4] International Trade Centre Trade Statistics, D&B Analysis

FDI in the country. Major policy measures taken over the last decade include development of Special Economic Zones freed from import and export restrictions; and provision of better than national treatment in its taxation policies to foreign invested enterprises (FIEs). While the enterprise income tax rate has been 33%, FIEs have enjoyed rates of 15% or 24% depending on where they invested. In addition, FIEs have enjoyed tax holidays for varying lengths of time depending on their activities. These special incentives for FIEs have attracted huge foreign direct investment (FDI) in manufactured export processing including textiles, and provided China with access to imported technology and overseas marketing networks.

Vietnam has also emerged as a strong textiles exporter in the world, especially in trade of cotton textiles. The reason lies in economic reforms including market liberalization, trade and investment liberalization and benefits of textile quota regime under Multi-Fibre Arrangement (MFA). Vietnam emerged as a major beneficiary of textile quotas under the Multi-Fibre Arrangement (MFA). The quota markets for Vietnam's textiles and garments were EU, Norway, Canada and Turkey. Since then, Vietnam's garment and textile exports have grown strongly even after the end of MFA in 2005. One of the important elements of the government strategy leading to this was to attract all forms of investments in the industry, especially FDI.

A comparative assessment of Indian textiles & garments industry vis-à-vis that of competing countries point out to the following key points:

1. Industrial structure lays the foundation for industry's competitiveness

Over the last two decades, Indian government has introduced various policies and measures for the development of the textiles and garment sector but these have not generated astounding results as in case of China and to an extent Vietnam. The key reasons for India's lagging behind and performing below expectations lie in the traditionally distorted industrial structure. The textiles industry in India has historically been characterised by a large number of small sized units due to erstwhile restrictions on capacity expansions and SME reservation of the garment sector. Although these restrictions have been done away since 2000, but the policy change was too late in comparison to the industry reforms in China and Vietnam, which occurred in early 1990s to timely exploit the opportunities post MFA. As a result, China's textile industry currently boasts of huge plants capable of undertaking mass production and enjoying huge economies of scale, while Indian industry's total production capacity is very low in comparison (barring a few integrated enterprises, most textile companies are small and medium scale,

Man-made fibres industry, especially synthetic fibres industry is predominantly dominated by a few enterprises worldwide, due to requirement of heavy capital investments. India, like China, has presence of a few large enterprises in the manufacturing of man-made fibre, however the value-added component of MMF i.e. yarns and fabrics is largely concentrated in the decentralised sector as against China where the MMF yarn/ fabric manufacturers have huge capacities. . A major issue with the Indian textile industry, especially MMF is that various segments (namely fibre/yarn, fabrics and garment) are often at loggerheads with each other and due to the absence of a coherent policy framework that develops and promotes an integrated approach in the industry segments, the industry (especially at the intermediate product level) has been rendered weak. In contrast, Taiwan's textile industry has a complete upstream, midstream, and downstream production and supply chain system from raw materials to the final production and has developed a strong synthetic fibres industry over time, due to which its textile industry has developed successfully with synthetic fibres as the main raw materials.

2. *FDI: A key determinant of international competitiveness*

The textile industry in China has been able to attract substantial FDI on account of liberalized investment policies with the introduction of Law on Foreign Investment in 1987; foreign investors have been provided several tax and other incentives like : tax exemption for maximum of 9 years from the day enterprise starts making profits depending on their export ratio or area of investment; import tax exemption for raw materials, for 5 years, with respect to projects operating in highland and remote areas etc. At the same time, the FDI inflows in India have not been as buoyant as in the competing countries, primarily due to two reasons. Foremost, China and Vietnam have followed a proactive investment policy for a long time – attracting foreign enterprises by providing additional sops and at times offering better than national treatment, whereas in India there are no special incentives for foreign enterprises. Secondly, India is not the most preferred choice for major global textile players due to rigid labour laws (making it difficult to hire and fire workers) and relatively poor infrastructure.

3. *Most competitive nations provide heavy incentives to the industry*

Tax and non-tax incentives have been popular instruments for promoting the growth of the textile and garment sector in India as well as China, Taiwan and Vietnam. However, the level of concessions and incentives offered by these countries vary in dimensions. China follows a highly export oriented policy, wherein substantial thrust is provided to the exporters by way of full rebate of excise duties, high rebate rates for VAT, exemption of import tariffs and refund of local income tax, amongst several other incentives. Taiwan government provides various tax incentives such as tax credit for R&D, tax credits for personnel trainings, tax holidays for investments in strategic industries, and preferential measures for overseas Chinese investments. Vietnam too provides several incentives to foreign and domestic enterprises such as tax holidays, lower income tax, refund of import duties, duty free import of machinery, etc. In contrast, export incentives provided in India are mainly in the form of duty drawback, duty credit for exports to focused markets and duty free imports of inputs.

Furthermore, Indian exporters do not benefit from any direct subsidies as their counterparts in China, Taiwan and Vietnam. The main subsidy available to Indian textile players is that of interest subvention on loans under TUFS, while textile companies in China receive variety of subsidies such as interest subsidies on loans, subsidies for land and manufacturing facilities, subsidy for initial establishment, subsidy for establishment of distribution channels in overseas markets and monetary rewards from local governments. Taiwanese government provides substantial subsidy for encouraging R&D by the enterprises, such as provision of half of the cost of development to eligible enterprises. Other subsidies enjoyed by Taiwan companies include low interest rate loans and government participation in investment projects of private enterprises (up to 49%). Similarly, exporters in Vietnam also enjoy subsidies like export rewards, full or partial reimbursement of interest on loans, direct financial support to new exporters and expenses subsidy for trade promotion activities.

4. *Trade agreements have provided easy market access*

Trade agreements have also been a source of competitive advantage for many developing countries. For instance Vietnam's bilateral trade agreement with the USA has given it market access advantage at the expense of other major suppliers like India. Vietnam and India have enjoyed GSP benefits in the EU market in the past but these benefits have been phased out for both the countries under the new

GSP rules. China does not have any FTA with the US or the Europe but it enjoys trade advantage in the Asian market partly due to its agreements with the ASEAN countries.

5. ***Costs and availability of critical input material- raw material, manpower and technology***

The biggest problem faced by Indian firms is that of rising yarn rates (both for cotton and man-made fibre yarn). Costs for both cotton yarn and man-made fibre yarn have gone up by almost 50% in the last 3 years which has adversely impacted the margins of fabric manufacturers. Further, cotton yarn rates are very volatile and exhibit high fluctuation. This is primarily because of inconsistent policy on export of cotton yarn which leads to lots of speculations in the cotton market leading to price fluctuations. There are instances when price at which cotton yarn is sold in India is higher than the export price for the same which leads to cost disadvantage for India vis-à-vis competing countries who are importing cotton yarn from India like China, Vietnam etc. Other critical inputs like chemical mixes used in dyeing, knitting machinery, etc. have very limited availability in India due to which weavers and processing units have to rely on imports of these inputs. This further adds to the cost burden of the Indian textile SMEs.

6. Lower total process time

The average time taken for custom clearances for exports of finished goods and imports of raw materials in India is much higher as compared to China & Vietnam. Indian stands at a point of disadvantage in terms of average time to production as well as average time to market as compared to the competing countries. It is higher in India because of several reasons like: less working hours in India, inconsistency in raw material availability, lower labour productivity, and inconsistent power supply. Average time to market in India is higher because of delay in customer clearance of exports and documents preparation. Further, land locked areas have to ship the materials to port which is then further sent for exports, which adds few extra days. The overall time to market is further more in man-made fibre segment, because there are issues with raw material availability time and again. Dependence on high quality viscose and other specialized yarns from countries like Japan further adds to the overall process time and in turn the time to market for Indian enterprises.

7. Technological processes and innovation

On comparing India's performance in R&D, technology and innovation, it has been observed that Chinese and Vietnamese firms are very active in developing & incorporating new types of machinery and technologies. In India most of the cotton textile mills are working with old and obso-lete machinery. According to one estimate in India over 60% of the spindles are more than 25 years old. Obsolete machinery leads to low output and poor quality of goods as a result of which Indian textile goods are not able to face competition in the international market. Modernization in looms is less and Indian industry still lags significantly behind US, China, Europe, Taiwan etc. Most of the looms we have currently in country are traditional shuttle looms. There were around 18,000 modern shuttle-less looms in 2010 as compared to 52,000 shuttle looms in India. China had 527,000 shuttle-less looms and 690,000 shuttle looms in the same period, while Taiwan had 28000 shuttle less looms and only 479 shuttle looms. The ratio of modern shuttle-less looms to traditional shuttle looms is lowest in India (.4) among the top competing countries viz. China (.8), Taiwan (58) and Japan (.9)[5]. Shuttle-less weaving looms are up to three times more efficient than shuttle looms, hence Indian firms are lagging far behind the counter-parts in efficiency. Further, competing countries like China have lots of CFC's (Common Facility Centres) for processing the grey fabric which enables in value addition at a large level. Same is in very nascent stage in India as of now. Another critical area of improvement for

[5] International Textile Manufacturers Federation (ITMF), D&B Analysis

Indian enterprises is technical textiles. Technical textiles are high-tech textiles which represent a multi-disciplinary field with numerous end use applications. The manufacture of technical textiles is a major activity in industrialized countries like Italy, China, and Japan etc. In India, technical textiles are still at a nascent industry, but with huge potential for growth. So far, the contribution of Indian textile industry towards technical textiles has restricted to a few low technologies and less sophisticated items like tarpaulin, industrial filter cloth, bolting cloth, textiles for luggage, decatatising fabrics, tyre cords, belting etc.

Based on analysis of the current status and international norms & standards, the gaps & issues in the Indian textiles & garments industry can be summarised as following:

S.No.	Areas	Issues
1	Scalability	Fragmented industrial structure of Indian Textiles & Garments industry and government's late response in reforming the same. Further, in man-made fibre sector, the near monopoly status at the fibre level (presence of a few firms occupying majority of domestic production) and a fragmented structure at the intermediate products level exhibits the distorted organization of the Indian MMF industry and impacts scalability.
		Lack of FDI as compared to competing countries which have a proactive investment policy over a period of time as opposed to India which has no special incentives for foreign enterprises
		Inadequate export incentives provided in India. These are mainly in the form of duty drawback, duty credit for exports to focused markets and duty free imports of inputs. Therefore traditional Indian firms are not encouraged enough to increase the scale and engage in exports.
		Lack of uninterrupted supply of both the critical raw-materials, i.e. cotton yarn and man-made fibre yarn impacts the scalability of Indian textiles & garments industry
2	Cost Efficiency	Inconsistent policy on export of cotton yarn leading to fluctuation in prices and impacts cost structures of Indian firms in a big way
		Higher duty on MMF and MMF textiles as against cotton, which is exempt from excise duty makes man-made fibre textiles industry less competitive. (Currently MMF attracts excise duty of 10 %.)
		Underdeveloped domestic textile machinery industry forces Indian firms to rely on import of textile machinery. This imported machinery is expensive and increases the overall cost of production.
		Increased cost of dyeing & processing as hundreds of units have closed owing to environmental concerns. Left over units have to set up effluent treatment plants which increases their overall costs.
		Land locked regions like Ludhiana; Delhi/NCR etc. which contribute heavily in Indian textiles trade incur higher costs of transportation in the form of additional cost burden to transfer goods to the ports.
3	Productivity Optimization	Ageing machinery being employed in most of the enterprises, thus compromising on productivity.
		Lack of availability of technical manpower for running machines. Support skills like electricians, pneumatic & hydraulic technicians are also lacking in the industry.
		Non-acceptance of goods by the buyer because of quality issues, or unfair trade practices leading to blocking of working capital of Indian firms
4	Quality Excellence	Skill gaps for programmers who are able to produce various stripes patterns, full jacquard designs, letter typing etc. on the grey fabric.
		Lack of globally accepted certifications in India.
		Lack of availability of high quality viscose yarn and specialized yarn like

		Cupro yarn.
		Lack of awareness of quality norms and standards
		Lack of awareness on how to make finished or converted technical textile products of global standards.
5	Sustainability	Major dependence of Indian exports on European & US markets leading to huge fall in exports owing to the recession witnessed in these geographies.
		Inadequate Common Effluent Treatment Plants for dyeing units

The analysis of various facets of the global and the Indian textiles & garments industry clearly shows that India needs to look at multiple interventions including in the areas of Regulatory framework, Investment policies, Trade policies, Fiscal policies, Infrastructure, R&D, Skill, Financing, Process, Collaboration and Technology. These interventions have been detailed in the main report.

However, recommendations only related to technology and research & development have been detailed which could form part of several schemes undertaken by Department of Science & Industrial Research in this section.

Intervention 1 : Increase raw-material competitiveness	
S.No.	**Tasks**
1	Launch a scheme for: Planning, implementing and monitoring the program for increasing raw-material competitiveness of man-made fiber textiles and technical textiles. The tasks that may be performed are: • Invite proposals from individual innovators/incubates having innovative proposals for research/manufacturing high grade man-made yarn, or specialized types of yarns/fibres that form raw-material to man-made fibre textiles and technical textiles. • Extend support for construction of pilot line for new types of man-made fibres and yarns. • Provide incentives to domestic firms for commercialization of these newer technologies.
Intervention 2 : Increase competitiveness of fabric dyeing & processing industry in Indian weaving & processing clusters	
S.No.	**Tasks**
2	Launch a scheme for: Planning, implementing and monitoring the program for increasing the competitiveness of the fabric dyeing & processing industry in India. The tasks that may be performed are: • Prepare a comprehensive information database on technologies pertaining to cleaner technologies, wastewater treatment etc. • Demonstration at Pilot scale on selected technologies at different dyeing clusters. • Set up committees including experts from countries like Germany, Italy etc. to organize training programs to comply with necessary standards like REACH.
Intervention 3 : Support for establishing common facilities to enhance collaboration among SMEs	
S.No.	**Tasks**
3	Launch a scheme to support common facilities in the key clusters to enhance collaboration among Indian SMEs. The cost can be shared between government and the industry. Some of the facilities that need to be provided are: • Shared Marketing & Business Development agency to take large export orders

	which can be undertaken by number of SMEs. • Common facility for mass-level dyeing & processing of fabric complying with all the international standards like REACH. Common effluent treatment plant also needs to be installed in such facility. • Common testing & certification centre for accurate and relevant evaluation of textile products in India to satisfy the stringent and critical requirements of performance related products parameters in the global market.
Intervention 4 : Sponsored R&D Programs for research in emerging technologies	
S.No.	**Tasks**
4	Announce fully sponsored projects for various TRA's for conducting research in emerging technologies. Some of them can be : • Developing practical recycling technologies that can take existing Synthetic fibres back into the textile supply chain. • Textile production technologies with reduced carbon foot print and adopting cleaner technologies etc.
Intervention 5 : Scheme for technology up-gradation	
S.No.	**Tasks**
5	Provide incentive to domestic firms for technology up-gradation in the following areas: • Replacing shuttle looms with shuttle-less looms • Purchase of waste reduction equipment or devices • Purchase of modern rapiers and air-jet looms etc.
Intervention 6 : Provide database & technology support to SMEs	
S.No.	**Tasks**
6	Provide database & technology support to domestic firms in the following areas: • Make a database of various certificates/standards along with their mandatory requirements. Some of the certifications that may be considered are: – OEKOTEX 100 for certification of a product to be environmental friendly. – SA8000, WRAP and ILO certifications for social accountability at the work place – ISO 14000 for certification of environmental management systems at the work place • Technology- and innovation-related international journals from major publishers. • Country-wise SOPs for certifying/testing the products. • Details of testing infrastructure available in India and globally. The details need to include testing labs availability and tests conducted by them, machinery employed for testing, fees for conducting the tests etc.

The interventions mentioned above are further prioritized on the basis of their role in fulfilling various objectives* of the Government of India for the growth of the manufacturing sector. Each intervention is tagged with the objective that it may help achieve. The intervention impacting maximum number of objectives has been prioritized for implementation.

*These objectives have been picked up from "PM's Group Report on Measures for Ensuring Sustained Growth of The Manufacturing Sector", "National Manufacturing Policy 2006" and "National Manufacturing Policy 2011".

Intervention	Government Objectives				
	Employment	Technology Adoption	Skill development	Local Value Addition	Building Strong Capacity & Scale
Increase raw-material competitiveness	✔	✔	✔	✔	✔
Support for establishing common facilities to enhance collaboration among SMEs		✔	✔		✔
Database & technology support to SMEs		✔	✔	✔	
Scheme for technology up-gradation		✔	✔		✔
Sponsored R&D Programs for research in emerging technologies		✔	✔	✔	
Increase competitiveness of fabric dyeing & processing industry in key clusters		✔	✔		

Decide with Confidence

Textiles & Garments: Innovation Framework

Knowledge Creation & Commercialization

- Policy support from government to resolve raw-material issues faced by Indian Textiles & Garments sector.
- Set up an agency to operate a yarn bank in all textile knitting & weaving clusters in India.
- Create an implementing agency to conduct and oversee Pan-India 'Textile machinery restructuring program'
- Program to accelerate textile machinery manufacturing in India.
- Set up mechanism for treating the treated affluent from the dyeing units with domestic sewage & plan for commercializing the same.
- Launch a scheme for: Planning, implementing and monitoring the program for increasing raw-material competitiveness of man-made fibre textiles and technical textiles

Inclusive Innovation

- Set up a mechanism so as to enable NSDC to work in tandem with Ministry of Rural development so that NREGA scheme is utilized to fill the skill gaps in the industry.
- Set up an implementing agency for identifying and enabling various standard/certifications to be adopted by small & medium scale firms operating in Indian textiles & garments sector.
- Set up Cluster Innovation Centres and Common Research Facilities for SMEs

Knowledge Diffusion & Absorption

- Set up a government aided consultancy for technical segment with focus on end-to-end development of technical textiles.
- Set up a National Implementing Agency that shall be entrusted with the responsibility of Planning, implementing and monitoring the program for increasing the competitiveness of the fabric dyeing & processing industry.
- Set up testing and designing facilities on Public Private Partnership (PPP) basis with the objective of deepening the testing and design culture on a wider scale in the industry
- Set up secondary training centers on a PPP model in the existing as well as developing textiles clusters to cover skill up-gradation training of those already involved in shop-floor operations.
- Create an 'Indian Textile Mark' that will standardize Indian Products making them competitive in the domestic as well as global Markets.
- Database creation for standards, certifications and testing procedures

Support Mechanisms

Skills

- Developing training mechanism for existing work-force in the industry
- Addressing skill gaps in areas such as : Tailoring, Dyeing, CNC programming etc.

Policy

- Consistent policy on export of cotton yarn so as to put an end to speculative cotton market
- Fibre-neutral excise policy
- Policy for enforcing the usage of technical textiles

R&D

- Research in the area of recycling technologies that can take existing synthetic fibers back into the textile supply chain.
- Research in cleaner technologies with reduced carbon footprint etc.

Infrastructure

- Common Effluent Treatment plants
- Infrastructure updation in existing ITIs & Polytechnics
- Testing and designing facilities on Public Private Partnership (PPP) basis
- Common Research Facilities

Collaboration

- Collaboration for technical textiles
- Collaboration for domestic textile machinery