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TEXTILE TIMES

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FUTURE OF TECHNICAL TEXTILES

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Chairman's Word

At the outset, I am happy to inform you that CITI and TEXPROCIL under the leadership of Hon'ble Minister of Textiles, Information & Broadcasting, Smt. Smriti Zubin Irani had the opportunity to meet the Hon'ble Minister of Commerce & Industry, Shri Suresh Prabhu and discuss the consistent decline in exports and increase in imports of textiles and clothing, especially from Bangladesh. The imports of textile (filament, yarn, fabric and others) and apparel products has increased from US$ 2,775 mn. in July 2016-Feb 2017 to US$ 3,441 mn.in the same period this year, indicating an increase of 24%. This is creating a big issue for the industry, as post GST the effective import duties have come down steeply, thus, making imports cheaper for the domestic industry by 15-20%. It is, therefore, recommended to increase import duty on MMF Spun Yarn, Garments, Cotton Yarn and Cotton Fabrics by 15% to give ample protection to the local yarn, fabric and garment producers from the cheap import threats especially from FTA nations like Bangladesh and Sri Lanka. It is also suggested that Government impose safeguard measures such as Rules of Origin, Yarn Forward and Fabric Forward Rules on the countries that have FTAs with India to prevent cheaper fabrics produced from countries like China routed through these countries.

This week, Textile and Clothing Industry further got an opportunity to discuss with Hon'ble Minister of Textiles, Information & Broadcasting, Smt. Smriti Zubin Irani and other Senior officials of Ministry of Textiles, the issues and concerns of the textiles and clothing industry. The industry expressed its concern on the consistent decline in exports of textiles and clothing, especially post GST. Industry addressed that it needs the policy support from the government as our export competitiveness is completely getting eroded by the embedded taxes that an exporter pays to the state governments and central government in the form electricity cess, fuel surcharge, Krishi Kalyan cess, etc. Hence, there is a greater need that Centre gives a special package in the form of ROSL to all the sectors. Industry suggested to Hon'ble Minister to consider reimbursement of central taxes not being reimbursed through GST credits, to suggest Drawback Committee to re-examine ROSL scheme for 2018, to extend ROSL for yarn and fabric also, to extend the period of MEIS to March 2019 and to include cotton yarn also under MEIS.

Meanwhile, few weeks before, the national level textile industry associations and trade bodies under the initiative of CITI convened a joint meeting to discuss the issues and concerns of the textiles and clothing industry and suggest measures to overcome it. The meeting was convened at the behest of all the industry bodies to devise strategies to expedite the issues and concerns of the textile and clothing sector and tap its full potential, so that it can contribute much to GDP and provide livelihoods to millions of people at the bottom of the pyramid. As the industry is facing innumerable problems post GST like consistent decline in exports, increase in imports, accumulation of input tax credit at fabric stage, etc and since growth of textiles and clothing industry can lead to the inclusive growth of the economy, it was felt that all the national level textile industry associations and trade bodies to jointly take up issues and suggest innovative solutions to policy makers to address it.

The meeting was attended by the Textile Committee heads of AEPC, ASSOCHAM, CITI, CMAI, FICCI, SRTEPC, SIMA and TEXOROCIL and supported by CII, CAI, ICF, ITTA, PDEXCIL, TEA, TMMA, etc.

The industry associations and trade bodies unanimously agreed in the meeting to form a consortium of industry associations and trade bodies to highlight major issues and concerns affecting textiles and clothing jointly in a single voice to the policy makers and government officials. Industry associations and trade bodies collectively agreed to form National Committee on Textiles & Clothing (NCTC) with the following objectives:

Sanjay K. Jain

- To address the common issues faced by the textiles and clothing sector.
- To add value to each other by sharing data, analysis, representations and thoughts.
- To endeavour to create consensus as much as possible on industry related matters and represent on the same thread.
- To stay in constant touch with each other by email group, whatsapp, conference calls and joint meetings and share information on textiles and clothing
- To send representations jointly to Government and policy makers on common issues.

NCTC is planning to jointly meet the Minister of Commerce & Industry, Shri Suresh Prabhu and Minister of Textiles, Information & Broadcasting, Smt. Smriti Zubin Irani to represent their issues.

Recently, I could also attend the meetings of Inter-Ministerial Steering Committee (IMSC) under Amended Technology Up-gradation Fund Scheme (ATUFS) setup by Ministry of Textiles, Government of India and the subsequent Task Force Meeting to review NABCONS evaluation. The major points emerged out of the Task Force meeting are as follows:-

- The loan accounts which are completely repaid and closed, and no subsidy claims are pending, such accounts need not be verified by NABARD Consultancy Services (P) Ltd. (NABCONS).
- NABCONS has to submit authenticated document/ letter of term loan sanctioned, duly signed by the concerned Bank Officer of TUFS Cell/ Branch and counter signed by NABCONS along with the verification report to the Textile Commissioner.
- Also, NABCONS has to submit a subsidy calculation sheet duly certified by TUFS Cell of concerned Bank and counter signed by NABCONS along with the verification report to Textile Commissioner.
- Members who are having pending Subsidy claims under MTUFS (List 1 and 2) and RTUFS are requested to approach their Banks/ Lending Agencies for submission of the above said authenticated documents to NABCONS and pursue the matter.

CITI recently also had a series of discussions with NITI Aayog officials and submitted the issues and concerns of the textile and clothing industry with all relevant data and analysis. Also suggested various innovative measures to address the issues post GST to make Indian textile and clothing industry globally competitive. CITI also submitted a representation to Shri Yogendra Garg of GST Council to immediately address the pending GST issues of the textiles and clothing industry.

Last but not least, CITI is completing 60 years this year. We are pleased to announce that Diamond Jubilee Celebrations are being planned in a grand way in the month of November, 2018. Looking forward to your support and cooperation for the special year.

Sanjay K. Jain

The Indian Textiles and Clothing Industry to unlock its full potential and address the prevailing myriad problems, requires exploration of new avenues, opportunities and processes. Owing to rising cost of production, high cost of modernization, power & fast technological obsolescence, Indian textiles need to go beyond the conventional textiles and explore various non-conventional arenas for growth. Technological advancements have facilitated development of varied innovative textiles categorized as 'Technical Textiles'. Also, as value-addition in textiles is gaining momentum, the innovative industrial textiles or technical textiles as we call it, seems to be just a perfect solution, which has immense scope offering augmented growth and a new direction to the Indian Textiles.

Technical Textiles are value added textile products that are manufactured primarily for technical performance and multi-functional properties with less intent on aesthetics & design. The global demand for technical textiles has been continuously increasing owing to the rising base of applications of such textiles across different industries like automotive, construction, healthcare, protective clothing, agriculture, sportswear, environmental protection, etc.

The Technical Textiles Industry is characterized by range and diversity of raw materials, processes, products and applications. World over, a lot of focus has been put towards developing high value-added technical textiles products characterized by huge R&D investments, strict standards and systems that eventually results in innovations and novel products. Europe and China are the giants of technical textiles manufacturing, taking up more than 75% share of global production, while India accounts for only around 4% of the global technical textiles production and exports. Also, the per capita consumption of technical textiles in India is 1.7 per kg vis-à-vis 10-12 kg in developed countries. However, technical textiles industry in India has grown rapidly at a CAGR of 12% over the last five years. It was projected to reach to Rs. 1,16,217 crores by 2017-18.

The demand for this sector is rising due to many factors including rapid urbanization, advances in medical technology, expansion in construction sectors, awareness on safety and environmentalism and increased spending on healthcare. The diverse range of technical textiles in India can be broadly grouped into 12 categories, such as Agrotech, Meditech, Packtech, Clothtech, Indutech, Hometech, Geotech, Oekotech, Protech, Sportstech, Buildtech and Mobitech. Out of which, Packtech occupies the largest share of the market accounting for 43% share of the total Indian technical textiles market, followed by Mobiltech, Indutech, Hometech and Clothetech with shares ranging between 8% to 10%. Sportech, Meditech, and Buildtech are also gaining momentum as important categories within the broad spectrum of technical textiles.

India still has a long way to go as it currently lacks the ability to domestically fulfil the rising demand and to be globally competitive in this sector. Similarly, there is untapped potential both in exports and domestic market of technical textiles.

Being an import intensive sector, India is producing technical textiles products that are not very R&D intensive. Lack of awareness of the benefits of technical textiles, R&D deficit leading to globally uncompetitive products, dependence on imports for raw materials, lack of skilled workforce, lack of standardization & certification of the products, etc. are some of the major challenges restricting the Indian technical textiles industry from tapping its true potential.

India too, with focused attention, may drive Technical Textiles Industry into a vibrant indigenous sector. There is immense scope for India to reduce technical textiles imports by strengthening domestic manufacturing. On these lines, both Central and State Governments are promoting technical textiles through various schemes and projects. So far, the Government has established eight Centres of Excellence (CoE) on technical textiles and has authorized the construction of integrated Textile Parks. Recently, Tamil Nadu Government has allocated a fund of Rs 25 lakhs to Sir Vallabbhai Patel International School of Textiles and Management in Coimbatore, focussing on entrepreneurial development in technical textiles.

To make Indian technical textiles Industry globally competitive, dual policy needs to be adopted for exports as well as domestic markets. A proactive approach from Government as well as industry stakeholders will be the key for Indian technical textiles to realize its full potential. One of the key steps that may be taken by the Government is to establish regulatory norms for mandatory usage of technical textile items in specific industries to increase consumption. Apart from that, focus on bringing foreign direct investment in order to get the requisite technical know-how and expertise would be crucial. Also, Government may carry out a comprehensive study and suggest exclusive HSN codes for various technical textile products which, then can be incorporated by Ministry of Finance in the Indian HSN codes for better analysis of India's technical textiles product trade and promotion of specific products.

Dr S Sunanda
Secretary General - CITI

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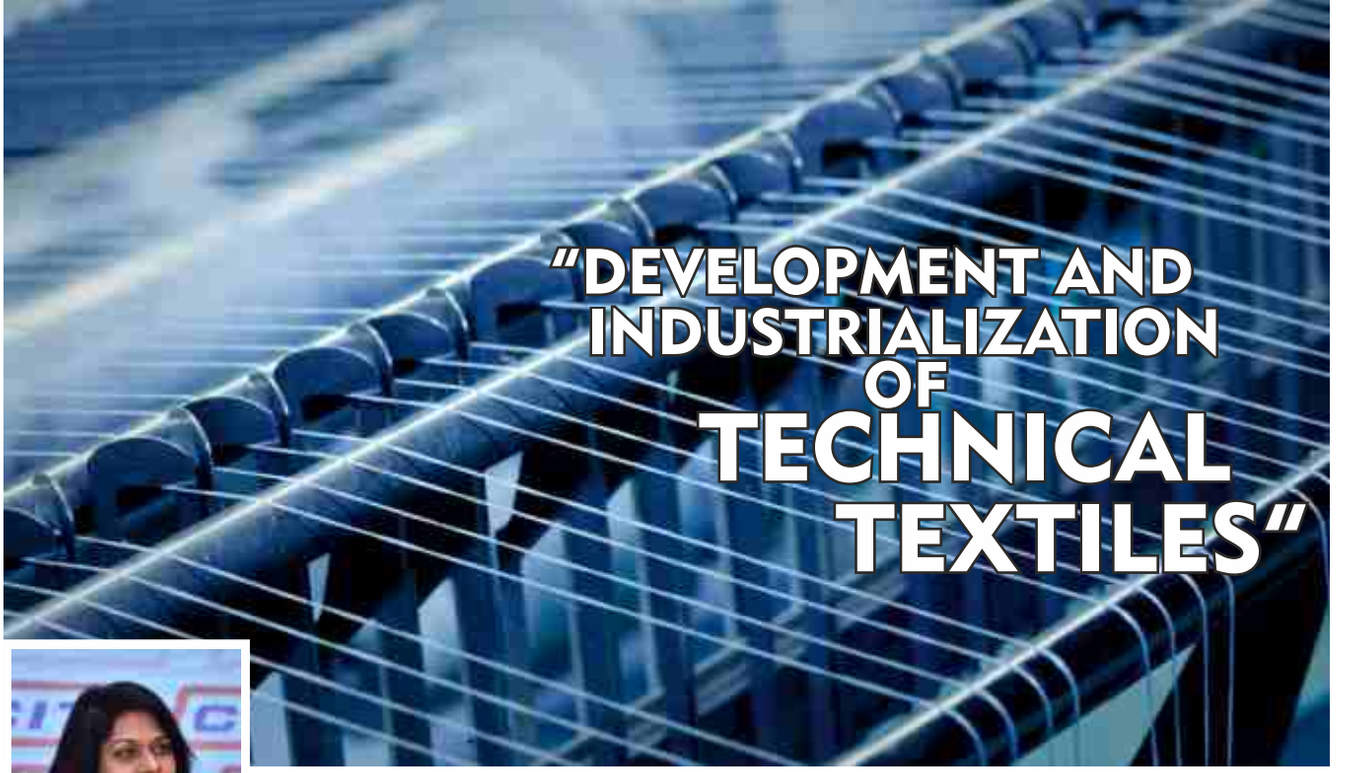


"DEVELOPMENT AND INDUSTRIALIZATION OF TECHNICAL TEXTILES"

Dr. Kavita Gupta, I.A.S.
Textile Commissioner
Ministry of Textiles, Government of India

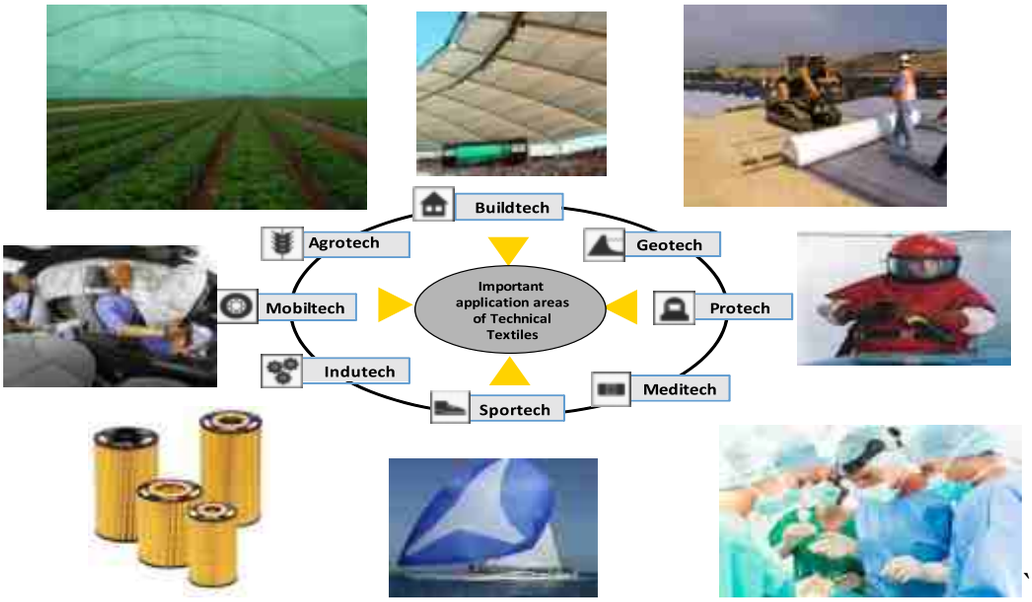
1. Technical textiles is a research oriented, multi-disciplinary, broad based industry which has penetrated all areas of economic activity from aerospace to railways, from cars to medical, from civil engineering to construction, from electronics to automotives, from agriculture to sports and has even entered human body in terms of medical implants like artificial heart valves, muscular grafts, artificial kidney, artificial joints etc. An outstanding feature of the technical textile industry is the range and diversity of raw materials, processes, products and applications that it encompasses.

2. Typically, as the country's GDP grows, the use of Technical Textiles in the country increases in all fields, including in building the infrastructure (roads, construction, landfills, port development etc), agriculture, health, defence, automotive industry, aerospace industry, sports, protective clothings, packaging etc. India is at the backstage of growth trajectory wherein it is expected that the demand for technical textile products will increase exponentially. It is therefore necessary that at this stage, serious investors could plan to invest in the technical textile sector, not only because it is a promising sun-rise sector but also because the margins of profit in this segment of textiles is one of the highest due to the high value addition which takes place.

3. Based on their functional requirements and end-use applications, the diverse range of technical textiles can be broadly grouped into 12 categories, as listed below:

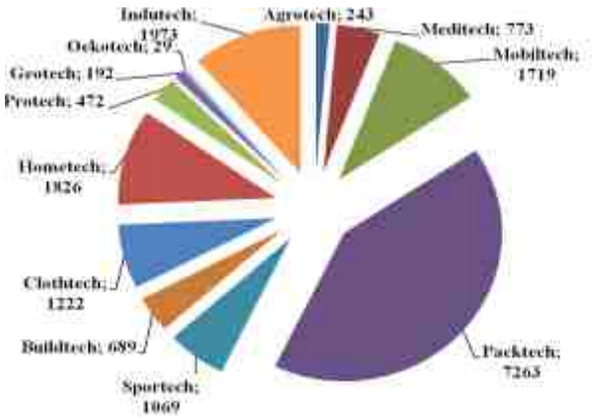
Geotextiles (Geotech)	Agricultural Textiles (Agrotech)
Industrial Textiles (Indutech)	Sports Textiles (Sportech)
Automotive Textiles (Mobiltech)	Ecological Protection Textiles (Oekotech)
Medical Textiles (Meditech)	Protective Textiles (Protech)
Clothing Textiles (Clothtech)	Construction and Building Textiles (Buildtech)
Packaging and Containment Textiles (Packtech)	Home Textiles (Hometech)

Technical Textiles



4. Unlike the conventional textile industry in India which is export intensive, the technical textile industry is an import intensive industry. Many products like Speciality fibres/yarns, medical implants, sanitary products, protective textiles, webbings for seat belts, etc. are imported to a very large extent. None-the-less, in India the Technical Textile sector has registered compounded annual rate of growth of 11% during 11th Five Year Plan. As per the Baseline Survey of Technical Textile Industry carried out by Ministry of Textiles, the Technical Textiles industry in India is estimated to grow to Rs. 1,16,217 crore by 2017-18 at 12% CAGR. It is estimated that the domestic market is likely to reach at Rs. 2,00,823 crore by 2020-21 with CAGR of 20%. Technical Textiles provides new opportunity to the Indian textile industry to have long term sustainable future.

5. **Market Size of Technical Textiles-Indian Scenario, (2017-18) in USD Million**



Source: Baseline survey of Technical Textile Industry in India, IMaCS analysis

Despite achieving high growth rate the per capita consumption of technical textiles in India is 1.7 per kg vis –a vis 10-12 kg in developed countries. Globally, technical textiles contribute to about 27 percent of textile industry, in some of the western countries its share is even 50 percent while in India it is a meagre 11 percent.

6. In India, the production of technical textiles is predominantly of commodity products and production of high end technical textile is limited to about 1/3rdof total production, the reason being, negligible R&D and product innovation. With appropriate support mechanism, technical textile offers unlimited opportunities for growth in production, domestic consumption and exports

The growth enablers for this sector include:

(i) **Growth of Industry Sectors:** A large number of technical textile products are consumed by different industries, like automotive, healthcare, infrastructure, oil & petroleum, etc. With increase in investments in industry sectors, higher consumption and growing exports, the industrial sector is poised for considerable growth.

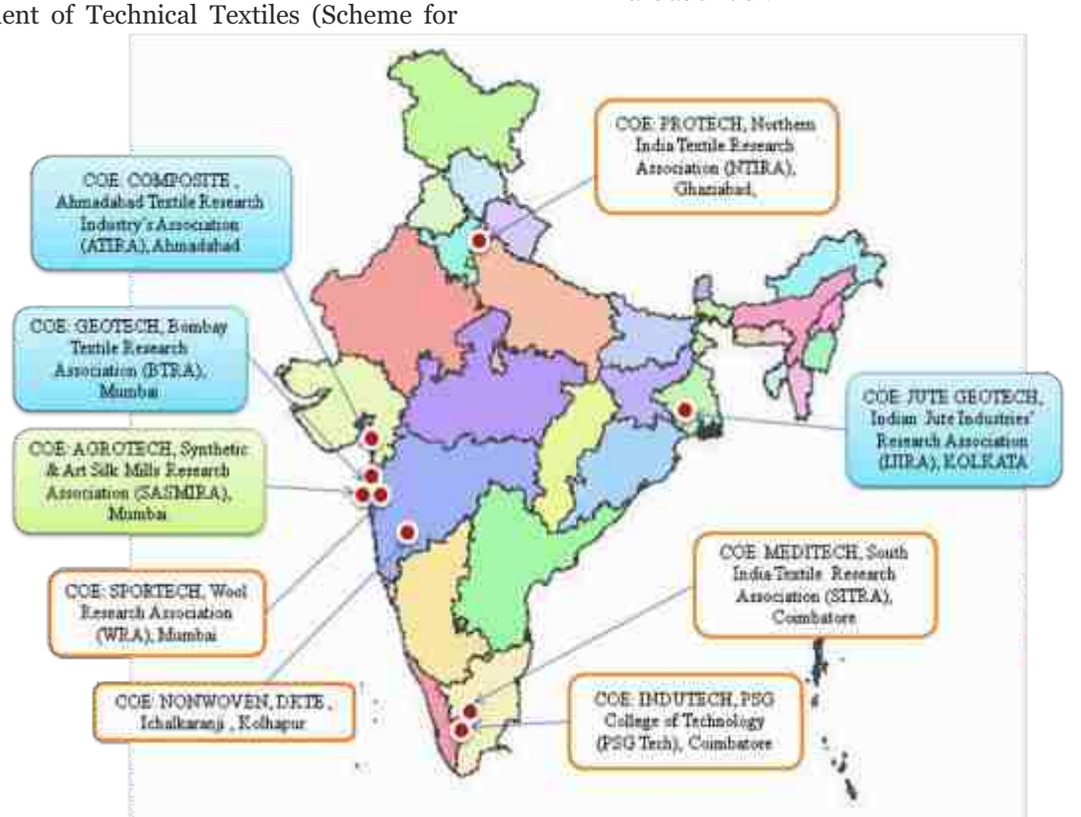
(ii) **Increasing Per Capita Income of Consumer:** Per capita income increase from US$ 450 in 2000 to US$ 1,570 in 2014 which has led to growth in expenditure on new technologies and innovations

(iii) **Increasing adaptability and acceptance of products:** Growing awareness about the superior functionality of technical textiles will encourage higher consumption of these products.

(iv) Government's FDI promotion initiatives: To facilitate higher integration of technology into manufacturing processes and end-products, Government of India has allowed up to 100% FDI under automatic route for the technical textiles segment. Leading global manufacturers of technical textiles products will thus be able to establish manufacturing units in India, either alone or through partnerships with Indian industries. Several Central and State government agencies are working towards providing the necessary information to potential investors. Ministry of Textiles, Government of India has also proactively promoted India's technical textiles sector through several international road shows. These efforts have borne fruit, as several international technical textile manufacturers, like Ahlstrom, Johnson & Johnson, Du Pont, Procter & Gamble, 3M, SKAPS, Kimberly Clark, Terram, Maccaferri, Strata Geosystems, have initiated operations in India.

(v) Investment promotion schemes by Government of India: Government of India has taken important initiatives in promoting the Technical Textiles in India both in order to build up demand and create market of usage of Technical Textiles as well as to develop capacities including R&D facilities to develop technical textile products. These interventions included the inception of the scheme for growth and development of Technical Textiles (Scheme for Growth and Development of Technical Textiles (SGDTT), Technology Mission on Technical Textiles (TMT), Scheme for promoting usage of Agrotextiles in North Eastern Region, Scheme for promoting usage of Geotechnical Textiles in North Eastern Region). Further, Investors establishing technical textile unit in India can avail several benefits from central government schemes:

- Under the "Amended Technology Upgradation Fund Scheme (A-TUFS)", 15% capital investment subsidy is provided to the textiles units, subject to a ceiling of Rs. 30 crore, for eligible machineries under Technical Textiles.
- Scheme for promoting usage of Agro-textiles in North East Region
- Scheme for promoting usage of Geo-textiles in North East Region
- In order to help the technical textile industry, Eight Centres of Excellence (CoEs) have been established/upgraded in the area of Indutech, Sportech, Non -wovens, Agrotech, Meditech, Protech, Geotech and Composites under Technology Mission on Technical Textiles (TMTT) Scheme to provide testing facilities, training, incubation center facilities, information center and prototype development facilities to investors of their respective segment. The details of eight CoEs are as under:-



The Role of Centres of Excellence are actively serving the cause of Technical Textiles by providing Technical Consultancy, conducting training programs for the industry, developing proto-types, providing testing services, undertaking research projects, providing Incubation services etc.,

ROLE OF COEs

Further, 11 FICs are also being set up in Technical Textiles on plug and play model namely Ahmedabad Textile Industry's Research Association (ATIRA), DKTE Society's Textile and Engineering Institute (DKTE), Northern India Textile Research Association (NITRA), PSG College of Technology, The South India Textile Research Association (SITRA), IIT Mumbai (Two FICs), IIT Kharagpur (Two FICs), IIT Kanpur and IIT Delhi. Out of which 2 FICs at DKTE Society's Textile and Engineering Institute, Ichalkaranji, Kolhapur, Maharashtra and Ahmedabad Textile Industry's Research Association (ATIRA), Ahmedabad, Gujarat has been become operational in FY 2017-18.

Inauguration of FIC at DKTE, Ichalkaranji, Maharashtra

- In order to find market for Technical Textiles within India and outside India Ministry of Textiles, Government of India has provided Market Development Assistance under TMTT Scheme for participating in international exhibitions and organizing Buyers Sellers Meets in the Indian Market.

The Scheme details are given hereunder:

- **Scheme for Growth and Development of Technical Textiles (SGDTT)**

SGDTT was launched during the XIth Five Year Plan in 2007-08 with a fund outlay of INR 46.60 Crores. The scheme comprised of three main components; Baseline Survey, Awareness Campaigns and Creation of Centres of Excellence (CoE). The scheme completed its tenure in 2010-11.

- **Technology Mission on Technical Textiles (TMTT)**

In 2010-11, Ministry of Textiles launched the Technology Mission on Technical Textiles (TMTT) with two mini- missions for a period of five years from 2010-11 to 2014-15 with a fund outlay of Rs. 200 Crore. The objective of the mission is to remove the impediments hampering the production of technical textiles in the country to meet growing demand in the domestic and export market. TMTT has been extended for another twoA years (FY 2015-16 & FY 2016-17). The TMTT scheme has completed its tenure on 31.03.2017.

- **Scheme for promoting usage of Agrotextiles in North-Eastern Region:**

The Ministry of Textiles, Government of India has approved the scheme with a total fund outlay of Rs.55 crore. The aim of the scheme is to encourage utilization of Agrotextiles in improving the agriculture, horticulture, floricultural & sericulture produce of the N-E states through awareness programmes, development of Agrotextile products suitably customized for use in the North-Eastern region, creating demonstration set-up depicting the benefit of usage of Agrotextile products suitable for the region, distribution of Agrotextile kits to farmers in the local communities etc. With increasing acceptability of Agrotextiles, entrepreneurship in the area of agrotextiles production in the country will get an impetus. The growth of usage of Agrotextile products in the country will thus benefit both agriculturists as well as textile entrepreneurs in the country. The scheme was launched in December 2012 for a period of 5 years from 2012-13 to 2016-17. The Scheme has been extended for another two years (2017-18 & 2018-19).

So far, a total of 44 Demonstration centres have been established and become operational. Further, 959 Agrotextile Kits has been distributed to the farmers.

Textile Commissioner visited Agro-Demo Centre at KVK, Mamit, Mizoram

- **Scheme for Promoting Usage of Geotechnical Textiles in North-Eastern Region:-**

  The Ministry of Textiles, Government of India has approved the scheme with a total fund outlay of Rs.427 crore for a period of 5 years from 2014-15 to 2018-19. The objective of the Scheme is to promote and utilize Geo textiles in development of the infrastructure in the NE states by providing technological and financial support for meeting incremental costs, if any, due to the usage of Geo textiles in existing/ new projects in road, hill/ slope protection & water reservoirs. The Projects would be identified in consultation with the State-Governments & concerned Stakeholder Agencies. So far 34 projects have been approved in 8 NER States with a cost of Rs. 98.19 Crore. Out of which one road project i.e. Imphal Airport Road in Manipur State is completed.

Application of Geotextile in Road Construction

(vi) Scope for import substitution: While India imports technical textile products, the country demonstrates significant consumption capacity and demand for this technology-intense product segment, and hence lucrative market opportunities for new entrants into the Indian technical textile industry.

(vii) Scope for introduction of regulatory norms: Ministry of Textiles is working to institute regulatory norms for technical textile products that align with those of developed nations. Successful implementation of these norms can lead to exponential increase in demand and consumption of technical textiles products in India.

7. **Way Forward:**

   The Ministry of Textiles is systematically:

- Creating an Institutional Mechanism for Encouraging utilization of identified/selective technical textile products among the institutional users e.g: Ministry of Road Transport and Highways, Ministry of Health & Family Welfare, Ministry of Defence and Ministry of Agriculture.
- Setting Regulatory mechanisms to mandate use of technical textiles for Environmental protection and Human safety.
- Promoting the development of High end technical textile products through R&D.
- Assisting BIS in creating standards for technical textile products, enabling use of technical textiles with benchmark standards.
- Enabling availability of specialty fibres at competitive price for making technical textile products.

  With these, interventions, the sector is slated to move forward.

8. Therefore, the eco system which is being created through policy interventions of the Government should be concretely utilised by the industry to propel the Technical Textile sector forward. I urge, the industry to invest increasingly in this sector which would define the future course of textiles trajectory in India. Investments in this sector will give huge margins of profit and would also provide the first mover advantage which will position the industries which invest now in an advantageous position.

Textile INNOVATIONS

.....NEXT BIG THINGS AHEAD.....

ATHLETIC APPAREL THAT LIGHT UP

As an answer to the concern of runners, cyclists and pedestrians on the streets at night and not being visible to oncoming traffic, Luna Wear, a Miami-based fashion technology startup, launched an athletic apparel line that illuminated in the dark. This was the world's first machine washable and dryable lighted apparel, powered by a USB-rechargeable lithium battery. The Luna Wear gear was also lightweight and trendy. Founder and CEO Richie Luna who had experienced a near-tragic encounter, the apparel was a much needed one. He said that he had started his nightly run late that evening. He reached a stretch of road that was completely dark and very lonely. While running, he noticed a car coming at high speed. At first he thought that the driver saw him through his headlights, but he was wrong. He was about to get hit but was lucky enough to be able to jump out of the way. That was the moment when the Luna Wear was born.

As of now, the company just had a limited-edition collection of tops, including crops for women, and tanks, short- and long-sleeve shirts for both women and men. Each top was custom-made according to consumers' specifications. The products were available for preorder at Luna Wear's online store. According to the company, its vision was for Luna Wear to light up the entire world, one person at a time. The ultimate dream would be to see Luna lights glittering one by one after sunset as people start turning on their Luna Wear gear, across every street in every city of the world. Luna Wear was expected to hit retail stores in the near future.

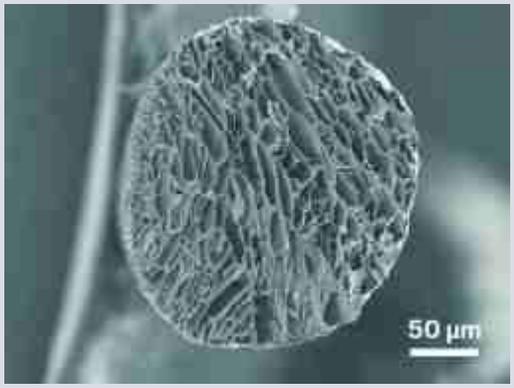
PRESSURE-CONTROLLED COOLING FAN JACKET

Teijin, together with Makita Corporation, a leading Japanese manufacturer of electric power tools developed a new fan-cooled jacket incorporating a two-layer pressure-controlled cooling structure. The fan jacket had a unique cooling structure that allowed air to enter through the jacket's outer shell and inner lining in both the front and back of the jacket. The design prevented fabric from bundling up inside the jacket to allow the user to work unencumbered. The air was discharged on a pressure-regulated basis through openings mainly in the neck, underarms and chest, where blood circulation was particularly active, for enhanced cooling effect. The zippered arms and neck were removable, enabling the fan jacket to be used as a fan-cooled vest. Different combinations of Teijin high-performance fibres were available to make the jacket waterproof, stretchable and antistatic, as per customer needs. The fan unit designed by Makita measured just 39.5mm thickness, 5.5mm, thinner than conventional units. The battery was rechargeable with the same charging device available for other Makita cordless electric-power tools.

Since the revision of Japan's Industrial Safety and Health Law in December 2015, Japanese companies were working to upgrade their work environments for employees. Factors including global warming and La Nina had intensified the need for urgent solutions to ease conditions for people working in intense heat. Reflecting this intensifying need, the market demand for fan jackets had been on the rise since the last few years. So far, conventional fan jackets had involved fastening collar, cuffs and underwaist to let the air taken from outside circulate in jackets. This resulted in fabric bundling, and hence less freedom of movement. The new pressure-controlled fan jacket was developed by combining Teijin's expertise in high-performance materials that featured superior cooling and absorption properties and Makita's expertise in specialty fans and battery systems.

Sales of the new fan jacket would start from mid-April 2018 through Makita's existing marketing channels and then be expanded by developing new channels with Teijin's group companies and marketing partners.

POLAR BEAR FUR-INSPIRED THERMAL TEXTILE



According to a Global Times Report, Chinese scientists at the Zhejiang University developed a thermally insulating textile inspired by polar bear fur, which could possibly be used in producing military clothing. According to Bai Hao, a research fellow at Zhejiang University's College of Chemical and Biological Engineering and the leader of the team which developed the textile, the advanced material had very low thermal conductivity and hence could prevent heat loss. Bai said that the average thermal conductivity of the material was even lower than polar bears' hair. Polar bear fur had another advantage. It had the capacity to conceal the bear from thermal imaging cameras used in many night-vision devices. The fur also had a hollow core, which helped keep the bear warm. It reflected back infrared radiation emissions from the animal's body. To imitate the structure, the team mixed silk with water, and slowly squeezed the mixture through a syringe into a device at a low temperature where a frozen fibre containing ice crystals was formed. According to the developers, the material was expected to be used in producing garments with better heat restoration capabilities and would cost less than down jackets. It could also be used as military clothing as it could conceal soldiers.

SANDLER TO EXHIBIT LATEST INSULATION SOLUTIONS IN ATLANTA

German exhibitors Sandler, a leading nonwovens manufacturer, was exhibiting at this year's Techtextil North America, in Atlanta, GA, in May. The company would be showcasing new developments for transportation, filtration, construction, and interior acoustics. Visitors would have an opportunity to experience the acoustic efficiency of the company's materials at the Plaza area of the High-Tex from Germany forum. Here, a flexible partition and elegant seating cubes made from 100% Sandler nonwovens would serve as examples of the many opportunities for nonwovens to be used in visible applications. High-performance absorber nonwovens of the sawasorb series were designed to dampen engine and road noise. Even at low product thickness, these absorbers efficiently insulated sound and were therefore suitable for narrow installation spaces.

Nonwovens for exterior applications were hydrophobic and oleophobic throughout their entire operating life, making them resistant to fluids used in the engine compartment. They also withstood high temperatures. Sandwich structures for LWRT-parts (lightweight reinforced thermoplastics) fostered lightweight designs and demonstrated how a high degree of stability could be achieved with extremely light materials.

Sandler fibercomfort, available in different thicknesses and densities, were soft and voluminous or compacted and self-supporting; with an open-pore surface or specially smoothed. Through further processing, these textiles could be enhanced with print motifs; lamination; flocking, for instance to create a roughcast look; or a coating made of natural materials.

NEW MICROBAN TECHNOLOGY THAT SAVE WATER

Microban International, a leader in textile odour control and prevention, introduced its new patent-pending odour control technology for the textiles industry called Scentry Revive at the Performance Days exhibition. Scentry Revive was a new, patent-pending technology by Microban, which neutralized odour and maintained freshness without the need for frequent laundering. It extended the length of time an item could be worn between washings – up to five wears. According to Microban, the company wanted to lead the way by providing innovative and consumer-friendly technologies, allowing the wearer to "live more, wash less".

The average shirt that was laundered 50 times per year consuming upwards of 454 litres of water per shirt, required only 10 washings per year, consuming only 25 litres water per year via laundry with the new Scentry Revive technology built into the textile.

US NONWOVENS INDUSTRY STRONG & GROWING

Dave Rousse
President of INDA,
the Association of the Nonwoven
Fabrics Industry in North America

INDA is delighted to contribute to this edition of Textile Times and interact with our friends in India and the region. We are celebrating our 50th year anniversary this year and next, an continue to represent all elements of the nonwoven supply chain, from raw materials to roll good producers to converters to brand owners by providing training, market data, conference events, product standards, and government affairs management.

The nonwovens industry is global, high-tech, high growth, and produces engineered products that make lives better, safer, and healthier. It is also the only industry I know that defines itself by what it is not. However, this is being addressed through a new definition moving through the International Standards Organization (ISO) that will now define nonwovens by what they are: an engineered fibrous assembly, primarily planar, which has been given a designed level of structural integrity by physical and/or chemical means. This definition is important as it will form the basis for tariffs, and enable nonwovens to be treated separately from traditional textiles in international trade and tariff actions where currently nonwovens can be tariffed by countries that have no nonwoven industry to protect their textile industry.

In North America, the nonwovens industry is doing very well with high levels of production, continued new investments in plants and equipment, and greater interest in the sector from the financial community and from nearby industry sectors like paper. I'd like to discuss here some reasons behind this currently healthy environment in the U.S., which accounts for the majority of the demand in North America.

The strong and improving drivers of the U.S. economy are supporting increased demand for nonwoven products in almost every sector. The newly enacted federal tax cuts and a more favorable regulatory environment have delivered an improving economy by encouraging both consumer and business confidence, which encourages investment. And since nonwovens can be engineered to meet specific performance attributes for a specific end use, the gaining of share

from other materials in existing end uses, and the ability to enter entirely new end uses will continue to be catalysts for nonwovens growth.

The availability of low cost and reliable sources of energy also support confidence in investing in the U.S. We have also seen this favorable economic environment draw back into the workforce many people who had "given up" looking for work during the recent recession years. These key factors, along with the availability of low cost capital and confidence in the legal protection of intellectual property, are also strengths. Our industry thrives on innovation to meet ever-evolving needs, and all of these factors play a role in attracting new investment to support innovation.

The high level of innovation in nonwovens is primarily because a) the technology platforms are so versatile, and b) there are always new needs to be met. The versatility starts with the wide variety of fibers and resins available, with many still being developed. Then there are a variety of web forming processes to establish the fibrous assembly. The fibers of this assembly need to be bonded, and there are several processes to do this, each delivering their own distinct properties and attributes, be they softness, loft, strength, porosity, and a number of other properties that can be engineered and controlled. Finally, there are a growing number of processes to add functionality to the nonwoven through surface treatments or mechanical adjustments. The tailoring of a nonwoven material to meet the specific needs of a particular use is a key strength of this platform. Moreover, there are an infinite number of new needs that continuously emerge for which a nonwoven solution can be engineered.

We are seeing strong nonwoven demand in several sectors in North America. In the last few years, the transportation sector (cars, trucks, buses, planes, etc.) has had the highest level of growth as lightweight, high strength nonwoven materials are displacing other materials in the constant quest for more energy efficient, quiet and comfortable vehicles. Nonwoven materials are displacing blown plastic and metals in the areas of automobile acoustic control, thermal control, vibration control, voltage control (battery separators) and structural support. This sector of nonwovens in North America has been the fastest growing sector from 2011 to 2016 at a 19.6% average annual rate in tonnes, and is expected to grow 8.2% per year through 2021. In the last three years, 21 new nonwoven lines have been added in North America that intend to provide material to the transportation sector.

Filtration media has also been strong as public awareness of health issues drives demand for cleaner air, water, food and household goods. There have recently been published several studies from highly credible universities and institutions that quantify and correlate Indoor Air Quality (IAQ) with wellness, workplace productivity, and employer health costs. This, plus increasing consumer awareness and concern about purity of water and food, have driven nonwoven filter media sales up 5.0% per year from 2011 to 2016, and are expected to accelerate to 5.8% annual growth out to 2021.

Disposable wipes also continues to grow due to the Americans' continuous pursuit of (and ability to afford) convenience items. Disposable products like wipes and disposable incontinence products require a relatively high level of disposable income before countries adopt these products. The first nonwovens to be adopted are wound care products, followed by feminine hygiene products and then baby care as per capita disposable income rises, so wipes and incontinence products are strong sellers in the U.S. with lower market penetration (and greater opportunities) in other countries.

The largest sector for nonwoven usage, absorbent hygiene, sees slower growth but a lot of innovation as end-product makers seek competitive advantage, and as the fast growing incontinence segment, driven by aging Baby Boomers, offsets the slower growing Baby Diaper segment. We see units of baby diapers having some growth, but due to "light weighting" of modern product designs, the move to thinner diapers and fewer diaper changes due to improved diapers, the tons of nonwoven material going to this area is slightly down. Incontinence products, however, are looking at 8% growth over the next few years as the stigma of

incontinence has been reduced and the consumer desire for an active, full life in middle and senior age groups is very strong.

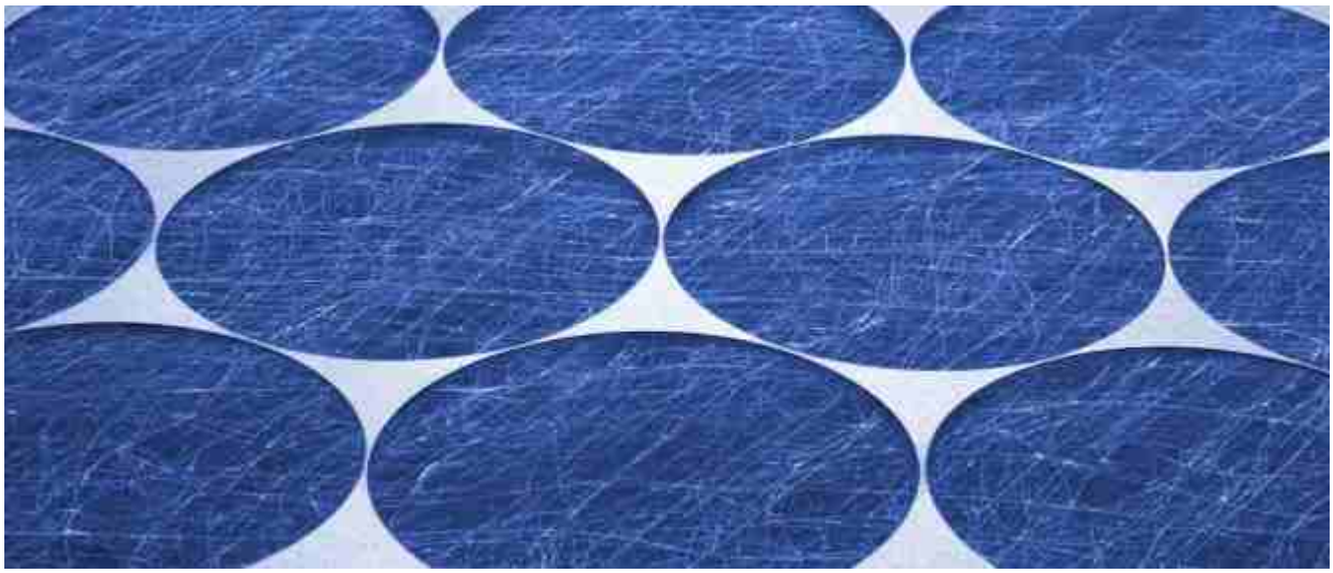
Nonwoven materials are engineered materials that provide solutions to real needs, and the needs are ever evolving. This is a healthy situation for companies that have their heads up and looking for new opportunities. Material science advancements in materials that dissolve in the human body have helped the wound care sector and will continue. Introducing improved haptics to incontinence products will expand the growth of that sector. Increased knowledge of the health benefits of clean indoor air will provide opportunities for the filtration sector, along with sensors/monitors to track IAQ quality and signal for a filter change. And the transportation sector will continue to utilize the high strength to weight ratio of nonwovens to replace blown plastics and compressed materials in vehicles. So with a favorable economic environment at the time, the road is open for opportunities in nonwovens and related industries.

One area we are keeping an eye on is the end-of-life issue of nonwoven disposable products, primarily the large volume hygiene products. With growing awareness and interest in the long term environmental impacts of landfilling solid waste, and with disposable hygiene products being an important contributor to landfills, our industry will experience more pressure to address the true end-of-life considerations. Some of this has started with preconsumer recycling of manufacturing waste, but more needs to be done on post-consumer solutions. Perhaps the solution will be in biobased polymer precursors, or other material science solutions, but this is an area where our industry will experience some pressure to advance.

Investments in the nonwoven sector in North America have been very strong over the last few years with 51 new lines being added. We have seen investments by existing North American nonwoven companies, investments by global nonwoven companies adding a North American footprint, and entirely new companies entering the nonwovens industry. The North American industry has also experienced a significant amount of mergers and acquisitions with acquisition activity by nonwoven industry players resulting in consolidation, adjacent companies acquiring nonwoven and nonwoven-related companies, the entry into the sector by companies traditionally based in the paper industry, and investments by financial firms attracted by the growth history and future prospects.

Overall, the North American nonwovens industry is experiencing a robust period with strong prospects for continuation. As long as there is continued innovation driven by market needs, there will be a good market for nonwoven engineered materials to meet these needs.

PRESENT STATUS AND FUTURE PROSPECTS OF TECHNICAL TEXTILES



CITI Economist Desk

Technical textiles are the high performance textile products which are used for their functional properties. Technical textiles are divided into 12 segments viz. Agrotech (Agro-textiles), Buildtech (Construction Textiles), Clothtech (Clothing Textiles), Geotech (Geo-textiles), Hometech (Domestic Textiles), Indutech (Industrial Textiles), Mobiltech (Textiles used in transport; automotive and aerospace; Oekotech (Ecological Protection Textile), Packtech (Packaging textiles), Protech (protective textiles) and Sportech (Sports textiles) and Meditech (Medical textiles). Europe and China together account for more than 50% of global technical textile production while India accounts for approx. 5% of the global technical textile production.

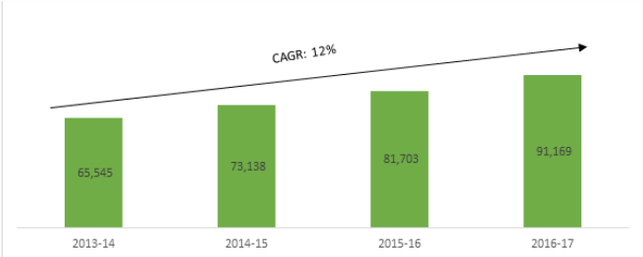
This knowledge based, research oriented industry is steadily gaining ground in India. Looking at the unlimited potential in this sector, it is identified as a sunrise sector of the industry. This article further explores the present status of Technical textiles, potential for growth in India and way forward for the industry.

Indian Technical Textiles Market Overview

Domestic Market

The Indian technical textiles domestic market was estimated at Rs.91,169 crores in 2016-17 which has grown from Rs. 65,545 crores in 2013-14 at a CAGR of 12%.

Figure 1: Domestic Market of Technical Textiles (in Rs Crores.)



Source: Wazir Estimates based on Technical Textile Baseline Survey 2015

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Full Page (Colour)	US$ 250 ☐	US$ 700 ☐	US$ 1300 ☐	US$ 2300 ☐

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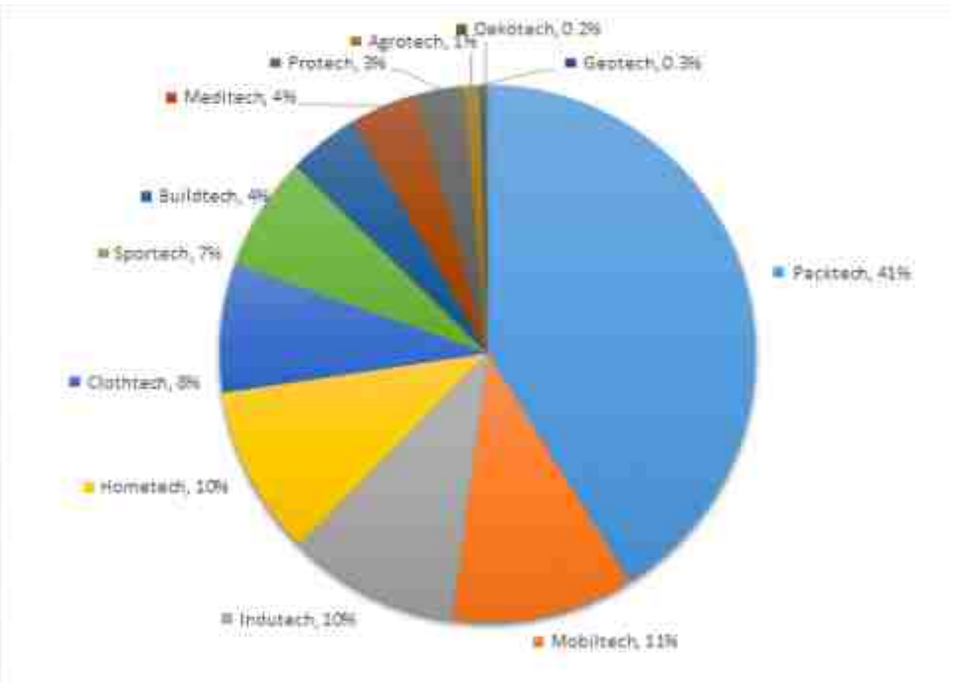
In 2016-17, Packtech remained the largest segment with 41% share of the market, followed by Mobiltech, Indutech, Hometech and with a share of 11%, 10% and 10%, respectively.

Figure 2: Break-up of Indian Technical Textiles Market (2016-17) (P)



Source: Technical Textile Baseline Survey 2015

Figure 3: Segmentation of Indian Technical Textiles Market (2016-17)

Exports

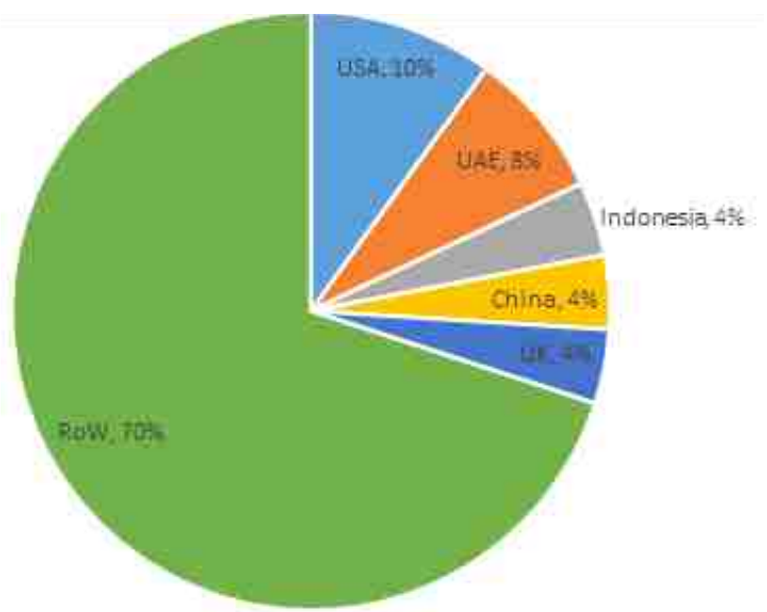
Exports of Technical Textile from India was estimated at around US$ 1.7 billion in 2016-17 which has grown from US$ 1.2 billion in 2012-13 at a CAGR of 15%. Packtech, Indutech and Hometech accounted for almost about 80% of the total technical textile exports from India.

Figure 4: Exports of Technical Textiles from India (in US$ bn.)

Source: Technical Textile Baseline Survey 2015

India exports its technical textile products primarily to USA, UAE, Indonesia, China and UK. Share of India's export to various markets is shown below:

Figure5: Major export markets for India (2016-17)



Source: Technical textile baseline survey and Wazir analysis

Key Factors Driving Growth of Indian Technical Textile Industry

The technical textiles segment presents gamut of prospects that need to be tapped to maximize the profit. Following are the key factors that will drive the growth of technical textiles industry and help the industry achieve its potential:

1. **Better Consumer Awareness**

   - *Rising Importance of Health and Hygiene:* Hygiene has become one of the prime concerns of the consumer today. This concern has led to increased consumption of products such as facial wipes, masks, dental floss, sanitary napkins, etc. These Meditech products have become bare necessities. Further, healthcare industry too consumes technical textile products like medical gowns, masks, disposable bedsheets, sutures, etc. The healthcare industry has grown at a double digit annual growth rate of 11% from 2008 to 2016. This growth has driven growth in technical textile industry and the trend is expected to continue further.
   - *Increasing Focus on Sports:* With the growing importance of spots and increasing consciousness towards fitness, more and more people have adopted healthy lifestyle and regularly hit the gym. This change in sense of living has enabled development in products such as various sports equipment, activewear, athleisure, sports footwear, etc. Consumes of Sportech components has increased also due to surge in various sports leagues such as IPL, ISL, Pro Kabaddi, etc.
   - *Escalating Expenditure on Defence and Security:* As India is on the way to become a global

power, it is increasing its focus on upgrading its defence and security measures. These has led to increasing demand of bullet proof jackets gloves, shoes, high altitude clothing, etc. Government's increasing focus in this sector is also pushing growth in technical textiles industry.

2. **Scope of Import Substitution:** Although India at present imports a significant amount of technical textiles products, further investments in technology intense product segment can help in substituting imported products by the domestic product.

3. **Product and Process Innovation:** With enabled technologies of today, innovations in various sectors enables usage technical textiles. These innovations can be in both products and processes. Evolving manufacturing processes has led to creation of fabrics with interesting physical properties which can be used in various technical textile applications. 2D and 3D geometries of products using tetraxial weaving and 3D Hydro-entangling produces various smart fabrics. These smart fabrics further lead to production of new products and also improvement of existing ones. For example, solar panels can be made flexible by use of photoactive technical textiles. Spacer and Auxetic Fabrics are used in home textiles, automotive textiles, medical, security, aviation etc.

4. **Growing Manufacturing Industry:** As the consumer requirement of various technical textile products has grown, manufacturing sector including automobiles, construction, etc. has also developed. Technical textile products finds it end use in these various sectors especially automobiles. It is expected that the sector will grow at 12% CAGR in the next decade to produce over 75 million vehicles in 2025. Components such as tyre cord, seat belts, insulation felts, etc. are all part of Mobiltech and hence, the growth of automotive industry would also enable the Mobiltech industry.

5. ***Government Support:*** Support from central and state governments in form of textile parks, research centers, international collaboration with foreign institutes and laboratories, training facilities etc. is also playing a significant role in the sector's progress. Various State Governments have also announced their textile policies aimed at attracting investments in their states. Moreover attractive FDI policies for the investor can also attract more investments in technical textile sector.

Futuristic View of the Industry

The Indian technical textile industry is expected to grow at CAGR of 16% to reach Rs. xx crores from present size of Rs 91,169 crores in 2024-25

Sector	2016-17 Domestic Market Size (In Rs. crores)	Key Trends	Projected Growth Rate	2024-25 Projected Market Size (In Rs. crores)
Packtech	37,519	Stiff competition from packaging material from chemical industry Negative growth in jute sector	12%	90,000
Mobiltech	10,025	Increase in the number of vehicles based on AMP Increased usage of technical textiles in automobiles like seat belts, airbags and automotive carpets	19%	41,500
Indutech	9,393	Increased penetration in composites Growth of end use industry	16%	31,690
Hometech	9,315	Usage in household textiles items, hence, growth of this segment is linked with growth of household consumption of textiles in India	15%	27,920
Clothtech	7,088	Usage in apparel, hence, growth of this segment is linked with growth of apparel industry in India	14%	19,570
Sportech	6,260	Increasing inclination towards sports and fitness Entry of international sports brands Improving sports infrastructure in the country	14%	18,470
Buildtech	3,992	Increasing spending on infrastructure Increasing awareness and usage of products like architectural membrane, scaffolding nets	13%	10,260
Meditech	3,727	Increasing awareness about health and hygiene Government support High growth of healthcare sector	22%	18,180
Protech	2,582	Increasing usage in armed forces and other security forces Mandatory use in hospitality, healthcare, transportation and public venues Increase in compliances	13%	7,070
Agrotech	876	Increasing awareness about agro Government support Reducing land under cultivation	12%	2,230
Geotech	245	Increasing use of geotextiles in infrastructure Government thrust for promoting use of geo textiles	12%	630
Oekotech	176	Component of geo textiles	13%	480
Total	**91,169**		**14%**	**268,000**

Source: Wazir Analysis

Challenges Currently Faced by the Industry

While the industry is envisaged to have a positive growth, it still faces few challenges that need to be addressed.

1. **Lack of Awareness:** The demand for technical textile products is still at a nascent stage in India. Benefits of technical textiles are still unknown to many and people need to be educated to propagate the information.

2. **Lack of Research & Development:** Though various innovations have driven growth in this Industry, but only few have been developed in India. The industry is R&D intensive and has a lot of potential however conventional products such as jute hessians, jute sacks, fiberfill, tyre-cord constitute the majority share in the market. This makes Indian technical textile manufacturers uncompetitive as compared to their global counterparts who manufacture highly advanced products.

3. **Threat of Imports:** Various specialty fibres such as carbon, nylon 6.6, Polyacrylic fibres, Kevlar, Aramid required to manufacture technical textiles products are not being produced indigenously. Due to this, Indian technical textile manufacturers are completely dependent on imports of such raw materials from countries such as US and Europe.

4. **Dearth of Skilled Workforce for Technical Textiles:** Adequately qualified technical man power is not readily available in the technical textile industry. A very few colleges/universities/ institutes have comprehensive technical textile syllabus at undergraduate and postgraduate level. This is leading to restricted availability of adequately qualified technical man power in the sector.

5. **Lack of Standardization & Certification of Technical Textile Products:** Various regulatory mechanisms like usage of fire retardant fabric at public places, usage of protective work wear by workers, installation of airbags in automobiles, usage of geosynthetics in infrastructure projects etc. are not in place in India whereas in several countries, usage of technical textile products are mandatory for personal and property safety. This restricts the regular demand of these products in the market. Globally, stringent performance parameters are required to be met by the technical textiles products. While in India, no process exists to standardize and certify technical textile products at par with global standards. In given circumstances, technical textile sector is unable to realize its true potential.

Steps required to build Global Competitiveness of Indian Technical Textiles Industry

Indian technical textiles markets is poised for high growth with increase in investment in industry sectors like automotive, healthcare, infrastructure, etc.; growing awareness about the superior functionality of technical textiles and increasing affordability of the consumer. Also, the proactive approach of Government of India towards boosting this sector through various schemes will have a great positive impact on this sector in the future. Following are some of the key measures that may be taken to facilitate overall growth of India's technical textile industry and in turn facilitate growth of India as a global manufacturing hub for technical textiles:

1. **Attracting Investments:** To achieve scale in the manufacturing sector, the most important thing that Indian technical textile industry needs is large scale domestic as well foreign investment in India on a regular basis. To drive investments in the sector, industry should be projected as an attractive destination for investors:

   - To make India as a major investment destination by enhancing the ease of doing business
   - Lending rates to be made more competitive for the sector
   - Majority consumption in technical textiles products is of man-made fibres. However due to differential tax treatment of man-made fibres in India, industry loses competitive advantage with global competition as they have to pay higher price. Establishing a fibre neutral duty structure is a must to align industry with the global demand

2. **Forming International Partnership:** Establishing partnership with international players would not only enhance financial investments but also enable knowledge and technology partnership into the country. The

partnership can be in the form of a JV for Greenfield project, marketing tie-up, technology tie-up, buyback arrangement, etc. With India being an attractive destination for international investments, the time is appropriate to take a step forward and showcase the benefits that international partners will gain in terms of access to a growing domestic market by involving a local partner.

3. **Focusing on R&D:** The technical textiles are impart functional aspects to the end product. It becomes imperative to focus on research and development so that the emerging technology can be imbibed in the industry to achieve breakthrough inventions. Government is taking appreciable measures to promote R&D initiatives by setting up Center of Excellences for different technical textiles segments. Industry needs to take advantage of these initiatives by the government by collaborating with them and creating an atmosphere for research & development in the country

4. **Regulatory mechnanism to increase consumption of techncial textiles:** World over, the usage of many items of technical textiles is mandatory, as it is in the interest of society at large and leads to social and economic benefit. In India also such regulations may be implemented for:
   - Fire retardant fabrics at public places where mass movement happens, i.e. Cinema halls, malls, railways, airports, hotels, hospitals etc.
   - Protective work wear for industrial workers.
   - Installation of air bags in the automobile
   - Usage of geo synthetics for erosion control
   - Usage of jute agro textile for sand dune stabilization in cold desert, etc.

5. **Focus on training and education:** Indian technical textile industry needs requisite technical knowhow and the skilled manpower required for manufacturing of high end technical textile products. Hence skilling initiatives need to be taken to develop manpower at both technical and managerial levels**.** Steps should be taken for the inclusion of technical textiles in curriculum of various universities/institutions at graduate and post graduate levels e.g. Medical/civil engineering/agricultural/Textile Engineering etc. This will result in the formation of an efficient & innovative workforce which will lead the industry to greater heights.

6. **Implementation of standards:** The stakeholders of technical textiles sector should come forward and implement the Indian Standards in their area of activity and adopt the BIS certification scheme in promoting the quality of their product, till any further developments in standards are made. Establishing standards will help in developing products of global standards and better outreach to global buyers.

Overall India is poised for growth in technical textile consumption along with overall growth of the economy and modernization of the country. India's manufacturing competitiveness is also improving and the technical textile manufacturing industry needs to further gear up for tapping the huge domestic and global opportunities. With the appropriate measures, the industry has potential to emerge as global hub for technical textile manufacturing in the coming years.

RUPEE HEADING TOWARDS THE ELUSIVE 70 MARK?

MACROS AND TECHNICALS SUGGEST IT COULD.

Abhishek Goenka
Founder & CEO (IFA Global)

USDINR @ 70 - a new normal can be seen in early 2019. This could sound a little far fetched at this point, but in continuation of our previous report dated April 24, 2018- where we had underscored the possibility of steep depreciation towards 67.50 & 68.00 levels, we now highlight the key fundamental & technical factors in this report that could trigger the next leg of up move.

After a protracted period of carry dominated low volatility, USD/INR sprang to life in the last fortnight, breaking through the crucial resistance of 65.35. The depreciation since has been steep, making Rupee one of the worst performing currencies amongst EMs. Much of this up move was on the back of domestic factors. With broad based USD turnaround also looking likely, macros and technicals are stacked against the Rupee. Now is the right time for treasuries to restratagize and reconsider their hedging options. It is important to be agile to the regime change due to changing macros and avoid getting into the trap of anchoring bias.

The current bout of Rupee weakness does not just seem like a passing phase. The inflation dynamics have changed. India is vulnerable to rising crude prices. The OPEC members have complied with their respective production quotas and inventories have shown marked drawdown. Our exports have not picked up in line with the strength in the global economy. The recent trade deficit on a seasonally adjusted basis was higher than

FUND FLOWS IN 2018
April Outflows Highest Since December 2016 (Rs Crore)

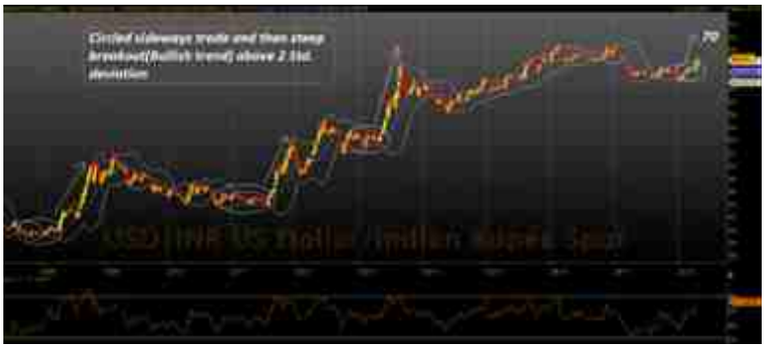
	Equity	Debt	Total
January	13,718	8,523	22,272
February	-11,423	-254	-11,674
March	11,654	-9,044	2,662
April (MTD)	-4,563	-7,891	-11,642

USD 15Bn. At this rate, the current account deficit for FY19 is likely to be around USD 80-90Bn. While this is significantly higher than USD 20-30Bn seen in recent years, there are concerns over whether the capital inflows would continue that could fund this CAD. FDI inflows too seem to be waning. Lack of confidence in the RBI policy due to recent flip-flops has seen FPIs withdraw USD 2Bn from the debt markets in just a few sessions. With US rates too heading higher, the capital account flows in FY19 are not expected to be anywhere close to what we have seen in recent times. The last time we saw our BoP in this situation, was in 2013 when Rupee had depreciated from 58 to 68 levels within a very short span of time.

Though the RBI has accumulated significant reserves since then, in terms of coverage of our external debt, the ratio continues to remain the same, which is why any escalation in capital flight from EMs can spook the Rupee. There is no reason why we cannot see a repeat of 2008, 2013 kind of a situation.

In a scenario of rising US rates and rising domestic inflation, the RBI is expected to hike rates later this year. Current OIS prices are factoring in 2 hikes by end of FY19. Domestic core inflation has been sticky and if inflation surprises further on the up side, the real rate differential between US and India could narrow, resulting in capital flight. The RBI may have to hike rates in order to combat this.

Technically, the DXY has broken through the key resistance at 90.60 and has broken a weekly trend line. This is pointing towards a reversal in the USD Dollar against majors. On the Rupee, break of 65.35 was a significant break out. The first major resistance that the market was seeing was 66.65-70 (from where the Rupee had gapped down post the UP election results). With that break, there is almost no technical level in sight till the previous high of 68.90. Further higher degree wave will finish its final leg around 70.00 mark.



USDINR Weekly chart: (Mid 2007 - Till Date)

It has been observed USDINR consolidate before sharp, trending upmove

1M Onshore-Offshore spread and Rupee Chart (Source: Bloomberg).

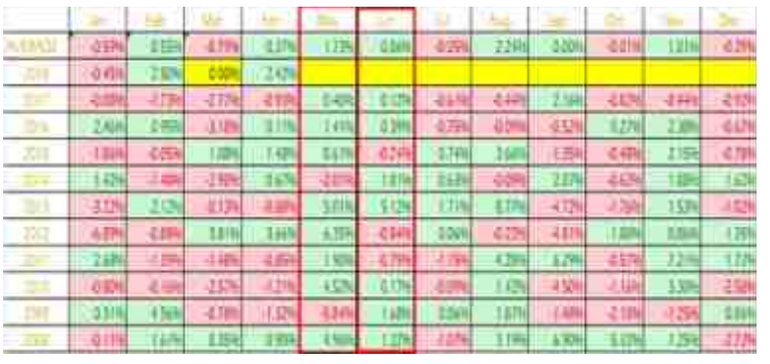
Offshore panic usually results in big moves in USD/INR. Dips below the horizontal white line indicate offshore points higher than onshore.

1M-3M ATMF vols spread and Rupee: (Source: Bloomberg)

The same spread discussed earlier superimposed with Rupee movement.

1M-3M ATMF implied vol spread: (Source: Bloomberg).
Vol curve inversion has resulted in panic like situation in the past and one needs to track this closely. Green zones denote vol curve inversion

White line: 3M carry to Vol ratio; Yellow Line: USD/INR (Source: Bloomberg)
This spread indicates the comfort of FPIs to sell USD/INR for carry. Past dips in the ratio suggest, the worst is not yet behind us.



USDINR Seasonality chart: Green color suggests Rupee depreciation and Red color suggests Rupee appreciation

The spread between offshore and onshore forward points was at its widest in recent times (8-9p) indicating massive unwinding of offshore carry positions. Three-month carry to vol ratio has declined significantly but not as much as is usually seen in times of panic which indicates there could be further strain on the Rupee. The difference between one month and three month ATMF vols has also declined. Flattening of the vol curve has resulted in steep depreciation in the Rupee in the past of the order of 5-6%.

Seasonality chart of Rupee also validate the quote: "Sell in May and Go Away". Out of past 10 years, Rupee was seen depreciating for 8 times at an average rate of 1.73%. June too has historically been a weak month for Rupee and a rewarding month for USD bulls.

It is important to note the above macroeconomic shifts and recalibrate hedging strategy accordingly. Exporters are advised to tread cautiously while availing USD funding as large MTM (in case of steep Rupee depreciation) can result in LER limits being blocked.

In a situation where US interest rates are heading higher and USD/INR too, it is important to manage the risks associated with long-term USD borrowings as well. For receivables/payables, hedging through options can give better flexibility and an opportunity to participate in case Rupee depreciates steeply. Exporters can consider buying plain vanilla ATMS puts. Though expensive, it can be richly rewarding if Rupee depreciates steeply from here on. Importers are advised to buy Risk reversals i.e. buy ATMS calls and sell OTMS puts or can even consider hedging outright through forwards with a trailing stop loss strategy.

The threat of known unknowns in the form of trade wars and geopolitical risks cannot be overlooked. The imposition of sanctions

on Iran by the US could result in a further rally in crude prices. Escalation of trade tensions between US and China could possibly be a big negative for the global economy. On the domestic front, the results of the Karnataka state elections and BJP's performance in the same will be closely tracked. Therefore, the triggers are in place for an extended move up in USD/INR from current levels and it is important to position appropriately to get the most out of this up move.

Conclusion:

In a nutshell, fundamental factors described exclusively in above report suggest that there is further room for rupee to depreciate against the US dollar. After breakout above 65.35 levels, we have seen that the USDINR pair is convincingly trading above 2 std. deviation on a weekly basis. There are triggers for the volatility to remain elevated for an extended period of time. The pair can be seen moving further towards its all time high of 68.90 by the end of this year and extension of the bullish leg beyond this level could take the pair higher towards 70 mark by 1st quarter of 2019.

Man Made Fibre and Yarn Price in India (Rs. Per kg)

Month / Year	Poly/Visc	Poly/Cott	VSF	PSF	VFY	NFY	PFY	Texturized Yarn
Apr-16	182.3	174.0	163.7	91.0	385.8	285.7	91.7	96.2
May-16	183.7	174.0	163.7	89.6	400.5	279.4	90.5	96.2
Jun-16	183.5	174.0	163.7	88.6	400.5	274.0	89.9	96.2
Jul-16	185.3	161.0	163.7	88.9	400.5	276.6	90.5	96.2
Aug-16	187.3	160.0	163.7	88.8	400.5	267.7	90.5	96.2
Sep-16	202.0	160.0	174.9	89.2	400.5	267.7	90.5	96.2
Oct-16	200.0	160.0	174.9	88.1	400.5	272.0	90.5	96.2
Nov-16	199.5	160.0	174.9	88.1	400.5	262.5	90.5	96.2
Dec-16	198.8	160.0	174.9	88.1	400.5	262.5	90.5	96.2
Jan-17	201.0	161.0	174.9	95.9	400.5	273.9	94.2	100.2
Feb-17	213.0	164.0	174.9	100.8	400.5	280.9	106.2	108.6
Mar-17	208.3	163.0	180.6	101.9	400.5	282.6	107.4	108.6
Apr-17	203.8	159.0	180.6	94.1	400.5	277.3	104.0	108.6
May-17	203.8	158.0	180.6	91.9	400.5	267.7	105.7	108.6
Jun-17	201.5	158.0	180.6	90.8	400.5	267.7	105.7	108.6
Jul-17	203.8	152.0	189.4	92.5	369.7	266.5	90.3	108.6
Aug-17	204.5	153.0	189.4	95.3	369.7	269.7	93.3	106.2
Sep-17	205.0	159.0	189.7	100.2	369.7	269.7	96.5	99.8
Oct-17	202.0	159.0	189.7	106.1	369.7	283.1	94.8	99.8
Nov-17	203.8	161.0	189.7	106.1	369.7	283.1	94.8	100.8
Dec-17	204.5	161.0	189.7	110.8	369.7	263.8	98.2	100.8
Jan-18	207.8	162	189	110.8	369.7	263.8	100.7	100.8
Feb-18	211.3	164	193	110.8	369.7	257.5	100.7	100.8
Mar-18	212.5	165	193	112.6	369.7	257.5	106.6	100.8

Change Over Previous Year

Month / Year	Poly/Visc	Poly/Cott	VSF	PSF	VFY	NFY	PFY	Texturized Yarn
Apr-16	-11.0	-16.0	7.31	-4.89	0.1	-26.0	-7.1	-9.23
May-16	-9.0	-18.5	7.31	-10.8	14.76	-36.7	-17.9	-13.4
Jun-16	-6.3	-8.5	3.37	-12.3	14.76	-44.6	-16.1	-11.4
Jul-16	-2.8	-6.0	3.37	-10.4	14.76	-39.0	-15.6	-11.4
Aug-16	8.8	0.0	3.37	-10.5	14.76	-46.4	-15.6	-11.4
Sep-16	16.3	-13.0	14.62	-1.19	14.76	-31.0	-3.0	-0.63
Oct-16	20.7	-14.0	14.62	-3.43	14.76	-24.9	-3.0	-0.63
Nov-16	20.5	-14.0	14.62	-3.43	14.76	-31.8	-3.0	-0.63
Dec-16	19.9	-14.0	14.62	-3.15	14.76	-30.8	3.3	3.37
Jan-17	22.7	-13.0	14.62	7.13	14.8	-19.4	7.0	7.37
Feb-17	34.0	-10.0	14.62	13.64	14.8	-2.45	19.1	15.8
Mar-17	27.6	-11.0	20.25	13.09	14.8	-0.74	19.1	12.43
Apr-17	21.4	-15.0	16.88	3.17	14.8	-8.39	12.3	12.43
May-17	20.1	-16.0	16.88	2.36	0.0	-11.7	15.2	12.43
Jun-17	18.0	-16.0	16.88	2.2	0.0	-6.37	15.8	12.43
Jul-17	18.4	-22.0	25.7	3.61	-30.8	-10.1	-0.1	12.43
Aug-17	17.2	-21.0	25.7	6.51	-30.8	1.99	2.8	10.03
Sep-17	3.0	-2.0	14.76	10.98	-30.8	1.99	6.0	3.58
Oct-17	2.0	-1.0	14.76	17.99	-30.8	11.08	4.3	3.58
Nov-17	4.3	1.0	14.76	17.99	-30.8	20.62	4.3	4.58
Dec-17	5.7	1.0	14.8	22.7	-30.8	-1.3	7.7	4.6
Jan-18	6.8	1.0	14.0	14.9	-30.8	-10.1	6.5	0.6
Feb-18	-1.8	0.0	18.1	10.0	-30.8	-23.4	-5.6	-7.8
Mar-18	4.3	2.0	12.4	10.7	-30.8	-25.1	-0.8	-7.8

Source: Office of Textile Commissioner, Mumbai

Cotton Fibre and Yarn Price in India (Rs. Per kg)														
Month / Year	Raw Cotton		Medium Staple		Long Staple		Extra Long Staple		Hank Yarn		Cone Yarn		Hosiery Yarn	
Apr-16		91.1		75.5		98.5		122.9		228.1		186.2		197.0
May-16		95.8		79.9		103.6		127.8		228.1		186.2		197.0
Jun-16		105.4		87.5		115.6		137.2		233.2		186.9		204.3
Jul-16		117.0		96.4		130.1		149.9		237.6		192.4		221.8
Aug-16		113.6		92.4		127.6		145.8		248.3		192.4		224.5
Sep-16		112.5		89.4		126.6		151.2		245.6		195.0		217.5
Oct-16		99.3		84.6		106.2		129.9		245.6		187.0		209.0
Nov-16		101.8		86.7		108.8		133.3		243.9		185.0		200.8
Dec-16		105.2		91.6		111.6		132.9		243.9		185.0		205.8
Jan-17		111.6		97.2		119.2		139.1		243.7		193.1		205.8
Feb-17		113.2		96.3		123.2		141.9		248.6		196.1		215.0
Mar-17		114.1		96.3		124.2		146.1		252.6		206.0		225.8
Apr-17		111.8		93.6		120.1		145.5		250.0		204.0		225.8
May-17		112.6		95.3		122.7		142.7		250.0		202.0		225.8
Jun-17		111.6		95.0		120.7		142.4		250.0		202.0		225.8
Jul-17		111.1		94.8		119.9		141.0		257.7		197.0		225.8
Aug-17		110.1		93.2		119.9		139.6		264.2		185.8		216.5
Sep-17		103.1		90.9		107.4		132.7		261.6		182.6		204.5
Oct-17		103.0		94.0		104.8		128.4		261.6		185.6		204.5
Nov-17		103.7		95.7		104.4		128.7		261.6		187.6		204.5
Dec-17		112.4		101.6		114.9		141.6		261.6		195.4		204.5
Jan-18		111.52		99.47		115.65		140.74		267.36		193.37		217.75
Feb-18		109.63		99.26		112.27		137.37		267.36		191.37		217.75
Mar-18		108.2		95.68		113.4		135.96		267.36		192.37		217.75
Change Over Previous Year														
Month / Year	Raw Cotton		Medium Staple		Long Staple		Extra Long Staple		Hank Yarn		Cone Yarn		Hosiery Yarn	
Apr-16	↓	1.6	↓	-4.07	→	0.8	→	5.9	↓	5.5	↓	-2.5	↓	-7.5
May-16	→	11.2	↓	-2.58	→	4.3	→	12.4	↓	5.7	↓	-2.3	↓	-10.0
Jun-16	↑	21.8	→	6.97	↑	18.4	↑	25.3	↓	7.4	→	0.4	↓	-2.8
Jul-16	↑	29.9	↑	15.2	↑	34.8	↑	38.5	↓	11.8	→	6.8	→	14.8
Aug-16	↑	21.7	→	11.45	↑	31.7	↑	36.7	↑	23.5	→	7.8	↑	17.5
Sep-16	↑	18.9	→	11.32	↑	32.9	↑	40.1	↑	20.9	↑	12.6	→	13.5
Oct-16	→	7.9	→	8.45	→	15.3	→	20.0	↑	20.9	→	6.0	→	5.0
Nov-16	→	11.0	→	8.78	↑	17.9	↑	23.5	→	19.2	→	7.1	↓	0.8
Dec-16	→	14.5	→	12.79	↑	17.4	→	20.67	→	19.2	→	7.1	→	5.8
Jan-17	↑	21.7	↑	19.85	↑	24.9	→	19.1	→	19.0	→	9.3	→	8.8
Feb-17	↑	24.5	↑	21.3	↑	29.5	↑	21.2	↑	23.9	↑	12.3	↑	18.0
Mar-17	↑	28.2	↑	24.46	↑	32.8	↑	28.0	↑	27.2	↑	22.1	↑	28.8
Apr-17	↑	20.7	↑	18.14	↑	21.6	↑	22.6	↑	21.8	↑	17.9	↑	28.8
May-17	→	16.7	↑	15.33	↑	19.1	→	14.9	↑	21.8	↑	15.8	↑	28.8
Jun-17	→	6.2	→	7.46	→	5.1	→	5.2	→	14.8	↑	15.1	↑	21.5
Jul-17	↓	-5.9	↓	-1.54	↓	-10.1	↓	-8.9	↑	20.1	→	4.7	→	4.0
Aug-17	↓	-3.5	↓	0.78	↓	-7.7	↓	-6.2	→	15.9	↓	-6.6	↓	-8.0
Sep-17	↓	-9.4	↓	1.48	↓	-19.3	↓	-18.4	→	16.0	↑	-12.4	↓	-13.0
Oct-17	→	3.7	→	9.41	→	-1.4	↓	-1.5	→	16.0	↑	-1.4	↓	-4.5
Nov-17	↓	1.8	→	8.94	↓	-4.4	↓	-4.6	→	17.7	↑	2.6	→	3.8
Dec-17	→	7.2	→	10	→	3.3	→	9.4	→	17.7	↑	10.4	↓	-1.3
Jan-18	↓	-0.1	↑	2.3	↓	-3.5	→	1.7	↑	23.6	→	0.3	→	12.0
Feb-18	↓	-3.5	↑	3.0	↓	-11.0	↓	-4.5	→	18.8	↓	-4.7	→	2.8
Mar-18	↓	-5.9	↓	-0.6	↓	-10.8	↓	-10.1	→	14.8	↓	-13.6	↓	-8.0

Source: Office of Textile Commissioner, Mumbai

India's Textile and Apparel Imports (in US$ Million)								
Description	Mar'17	Mar' 18	% change	Apr16-Mar'17	Apr'17 - Mar18	% change	% share of total Apr16- Mar'17	% share of total Apr17- Mar '18
Textiles and Made-ups								
Cotton								
COTTON RAW INCLD. WASTE	56	53	-4%	947	979	3%	15%	13%
COTTON YARN	2	2	-21%	52	32	-39%	1%	0.4%
COTTON FABRICS, MADEUPS ETC.	24	35	46%	373	472	27%	6%	6%
	82	**90**	**10%**	**1,372**	**1,483**	**8%**	**22%**	**20%**
Jute								
JUTE, RAW	4	6	72%	105	45	-57%	2%	1%
JUTE YARN	4	4	14%	75	48	-36%	1%	1%
JUTE HESSIAN	2	2	-16%	9	19	121%	0%	0%
OTHER JUTE MANUFACTURES	5	8	51%	55	68	25%	1%	1%
FLOOR CVRNG OF JUTE	0	0	175%	1	1	20%	0%	0%
	15	**20**	**38%**	**244**	**181**	**-26%**	**4%**	**2%**
Silk								
SILK,RAW	16	10	-37%	163	189	16%	3%	3%
SILK WASTE	0	0	-12%	2	2	-17%	0%	0%
NATRL SILK YARN,FABRICS,MADEUP	3	4	14%	45	60	34%	1%	1%
SILK CARPET	-	-		0	0	123%	0%	0%
	20	**14**	**-28%**	**210**	**251**	**19%**	**3%**	**3%**
Wool								
WOOL, RAW	26	24	-9%	282	292	4%	4%	4%
WOLLEN YARN,FABRICS,MADEUPSETC	2	7	224%	44	79	80%	1%	1%
	28	**31**	**10%**	**327**	**372**	**14%**	**5%**	**5%**
Manmade								
MANMADE STAPLE FIBRE	32	37	15%	366	369	1%	6%	5%
MANMADE YARN,FABRICS,MADEUPS	130	173	33%	1,607	1,897	18%	26%	26%
	162	**209**	**29%**	**1,973**	**2,265**	**15%**	**31%**	**31%**
Others								
CARPET(EXCL. SILK) HANDMADE	7	10	48%	71	94	31%	1%	1%
COIR AND COIR MANUFACTURES	1	0	-41%	7	8	4%	0%	0%
HANDCRFS(EXCL.HANDMADE CRPTS)	60	65	8%	784	923	18%	12%	13%
HANDLOOM PRODUCTS	2	2	2%	5	11	104%	0%	0%
OTH TXTL YRN, FBRIC MDUP ARTCL	57	70	24%	712	964	35%	11%	13%
	125	**147**	**17%**	**1,579**	**2,000**	**27%**	25%	27%
Total Textiles and Made-ups	**433**	**512**	**18%**	**5,704**	**6,552**	**15%**	**91%**	**89%**
Apparel								
RMG COTTON INCL ACCESSORIES	26	42	66%	289	351	22%	5%	5%
RMG MANMADE FIBRES	14	21	55%	176	234	33%	3%	3%
RMG OF OTHR TEXTLE MATRL	9	16	75%	116	170	46%	2%	2%
RMG SILK	0	1	116%	4	5	32%	0%	0%
RMG WOOL	1	1	-28%	11	13	16%	0%	0%
Total Apparel	**49**	**81**	**63%**	**596**	**773**	**30%**	**9%**	**11%**
Grand Total	**482**	**593**	**23%**	**6,300**	**7,325**	**16%**	**100%**	**100%**
Data Source: CITI Analyis based on DGCI&S								

India's Textile and Apparel Exports (in US$ Million)								
Description	**Mar'17**	**Mar'18**	**% change**	**Apr16-Mar'17**	**Apr17-Mar'18**	**% change**	**% share of total Apr16-Mar'17**	**% share of total Apr17- Mar '18**
Textiles and Made-ups								
Cotton								
COTTON RAW INCLD. WASTE	228	288	26%	1,621	1,887	16%	4.3%	5.0%
COTTON YARN	282	378	34%	3,337	3,425	3%	8.9%	9.0%
COTTON FABRICS, MADEUPS ETC.	493	523	6%	5,213	5,477	5%	13.8%	14.5%
	1,004	**1,189**	**18.4%**	**10,171**	**10,788**	**6.1%**	**27.0%**	**28.5%**
Jute								
JUTE, RAW	1	0	-73%	11	12	3%	0.0%	0.0%
JUTE YARN	2	2	-4%	11	20	90%	0.0%	0.1%
JUTE HESSIAN	12	9	-21%	138	141	2%	0.4%	0.4%
OTHER JUTE MANUFACTURES	10	9	-3%	123	127	3%	0.3%	0.3%
FLOOR CVRNG OF JUTE	3	4	27%	38	46	23%	0.1%	0.1%
	28	**25**	**-10%**	**321**	**347**	**8%**	**0.9%**	**0.9%**
Silk								
SILK,RAW				0	-		0.0%	0.0%
SILK WASTE	2	2	46%	15	16	8%	0.0%	0.0%
NATRL SILK YARN,FABRICS,MADEUP	5	4	-11%	62	53	-15%	0.2%	0.1%
SILK CARPET	0	1	173%	9	3	-72%	0.0%	0.0%
	7	**7.1**	**7%**	**86**	**71**	**-17%**	**0.2%**	**0.2%**
Wool								
WOOL, RAW	0	0	2145%	0	1	242%	0.0%	0.0%
WOLLEN YARN,FABRICS,MADEUPSETC	17	20	16%	175	186	6%	0.5%	0.5%
	17	*20*	**17%**	175	187	**7%**	**0.5%**	**0.5%**
Manmade								
MANMADE STAPLE FIBRE	52	53	2%	594	587	-1%	1.6%	1.6%
MANMADE YARN,FABRICS,MADEUPS	439	469	7%	4,557	4,826	6%	12.1%	12.7%
	491	**522**	**6%**	**5,151**	**5,413**	**5%**	**13.7%**	**14.3%**
Others								
CARPET(EXCL. SILK) HANDMADE	139	125	-10%	1,481	1,427	-4%	3.9%	3.8%
COIR AND COIR MANUFACTURES	31	33	4%	295	326	10%	0.8%	0.9%
HANDCRFS(EXCL.HANDMADE CRPTS)	173	186	8%	1,927	1,823	-5%	5.1%	4.8%
HANDLOOM PRODUCTS	34	26	-23%	360	356	-1%	1.0%	0.9%
OTH TXTL YRN, FBRIC MDUP ARTCL	32	41	29%	358	410	14%	1.0%	1.1%
	409	**411**	**1%**	**4,420**	**4,341**	**-2%**	11.7%	11.5%
Total Textiles and Made-ups	**1,955**	**2,174**	**11%**	**20,325**	**21,146**	**4%**	**53.9%**	**55.9%**
Apparel								
RMG COTTON INCL ACCESSORIES	854	815	-5%	8,513	8,510	0%	22.6%	22.5%
RMG MANMADE FIBRES	574	376	-35%	5,036	4,747	-6%	13.4%	12.5%
RMG OF OTHR TEXTLE MATRL	357	264	-26%	3,463	3,122	-10%	9.2%	8.2%
RMG SILK	14	23	68%	142	158	12%	0.4%	0.4%
RMG WOOL	14	13	-6%	214	169	-21%	0.6%	0.4%
Total Apparel	**1,813**	**1,492**	**-18%**	**17,368**	**16,706**	**-4%**	**46.1%**	**44.1%**
Grand Total	**3,768**	**3,665**	**-3%**	**37,693**	**37,852**	**0%**	**100.0%**	**100.0%**
Data Source: CITI Analyis based on DGCI&S, As extracted on 19th April 2018								

MONTHLY EXPORT UPDATE ON TEXTILE AND CLOTHING : MARCH 2018

- India's textile and clothing exports declined by 5% from US$ 3,484 mn. in March 2017 to US$ 3,317 mn. in March 2018. However, all commodity exports of India were up by 10 % in March 2018 over the same month of previous year. Also, the share of textile and clothing in India's total exports has declined from 12% to 11% in the same period.
- Cumulative textile and clothing exports during April'17-March 2018 was to the tune of USD 35,362 mn. as against USD 35,514 mn. in April'16 – March 2017 indicating a decrease of 0.4%. During the April'17 - March 2018 textile exports were up by 3 % while clothing (excluding textiles) declined by 4%.
- During April'17 – March 2018, the exports of three T&A subsectors have registered negative growth as compared to April'16–March 2017:
  - Carpets by -4%
  - Handicrafts excl. handmade carpet by -5 %
  - Apparel by - 4%
- While export of other subsectors have increased:
  - Cotton Yarn/fabric/made-ups, Handloom Products etc by 4%
  - Man-made Yarn/fabric/made-ups etc. by 6%
  - Jute products by 7%

Monthly Export Updates of Textile and Clothing (Value in USD Mn.)

Export catagory	Mar-17	Mar-18	% Change	Cumulative (Apr'16-Mar 2017)	Cumulative (Apr'17-Mar 2018)	% Change
Cotton Yarn/Fabs./made-ups, Handloom Products etc.	893	1,021	14%	9,862	10,233	4%
Man-made Yarn/Fabs./made-ups etc.	439	469	7%	4,557	4,823	6%
Jute Mfg. including Floor Covering	27	25	-7%	310	333	7%
Carpet	139	126	-9%	1,490	1,432	-4%
Handicrafts excl. handmade carpet	173	186	8%	1,927	1,828	-5%
Sub-Total Textiles	**1,671**	**1,826**	**9%**	**18,146**	**18,650**	**3%**
Apparel	**1,813**	**1,491**	**-18%**	**17,368**	**16,712**	**-4%**
Textile and Clothing	**3,484**	**3,317**	**-5%**	**35,514**	**35,362**	**-0.4%**
All Commodity	**29,302**	**29,109**	**-1%**	**275,851**	**302,840**	**10%**
% of T&C in Total Exports	**12%**	**11%**		**13%**	**12%**	

Source: DGCI&S

UPCOMING EVENTS

Homtex Plus

28. - 30. June 2018

Bangalore, India

India mattresstech expo

12. - 14. July 2018

Chennai, India

Garment Show Of India

17 - 19 June 2018

New Delhi, India

Heimtextil India

27 - 29 June 2018

New Delhi, India

India International Garment Fair (IIGF)

16 - 18 July 2018

New Delhi, India

F&A Show

16 - 18 Jul 2018

New Delhi, India

Yarnex

16 - 18 Jul 2018

New Delhi, India

National Garment Fair Mumbai

16 - 21, July 2018

Mumbai, India

Knit Show (KnitShow)

05 - 07 Aug, 2018

Tiruppur, India

QUICK ESTIMATES OF IIP FOR TEXTILE AND CLOTHING SECTOR (T&C): FEBRUARY 2018

T&C in Index of Industrial Production (IIP): Growth Rates (%, Y-o-Y)

Sector	February-17	February-18	April-February 2018
Textiles	-3.6	2.2	-0.2
Wearing apparel	4.6	-4.7	-9.9
*T&C Sector**	1.0	-1.8	-5.6

Source: Ministry of Statistics Planning & Implementation

- The General Index for the month of February 2018 is 7.1 percent higher as compared to the level in the month of February 2016. The cumulative growth for the period April- February 2018 over the corresponding period of the previous year stands at 4.3 percent.
- Textiles (excluding apparels) were up by 2.2 percent, wearing apparel was down by (-) 4.7 percent and T&C together were also down by (-) 1.8 percent in February 2018 over the same month of previous year.
- The cumulative textile and clothing production growth were down by (-) 5.6 percent for April-February 2017-18 compared to the same period of previous year. Cumulative change for April-February 2017-18 for textiles was down by (-) 0.2 percent and wearing apparel was down by (-) 9.9 percent over the same period of previous year.

Our Khadi story continues to draw inspirations from the east & the west.
Living true to the heritage and exemplifying discreet we present luxury through beautiful and considered details.

.THE STORY RE-SPUN.

खादी

--- Raymond ---

RAYMOND KHADI AVAILABLE ACROSS SELECT 'THE RAYMOND SHOPS'