



SILK

Textile sector in India & scope for international technology transfer and cooperation”.



COTTON

POLYESTER



WOOL



Harvinder Rathee
Arvind Limited (India)

28th September 2016

ARVIND

Contents

- 1: Introduction to Indian Textile Sector
 - 2: Indian Textile Sector Categorization
 - 3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector
 - 4: Textile and Apparel market
 - 5: Status of Technology in Indian Textile Sector
 - 6: The need for technology interventions
 - 7: Indian Government Initiative
 - 8: Expectation from UK Technology
-

Contents

- 1: Introduction to Indian Textile Sector
 - 2: Indian Textile Sector Categorization
 - 3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector
 - 4: Textile and Apparel market
 - 5: Status of Technology in Indian Textile Sector
 - 6: The need for technology interventions
 - 7: Indian Government Initiative
 - 8: Expectation from UK Technology
-

Globally

Largest cotton producer in the world

First in global jute production

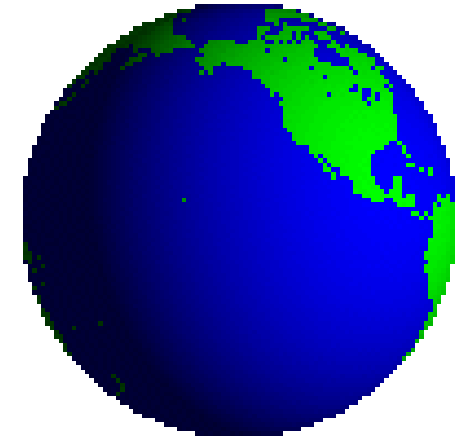
Second largest textile fibre producer

12 % of Worlds Spindles capacity

6 % of Worlds Rotors capacity

9 Million Tons of fibre production in 2015-16

Second largest textile manufacturing capacity

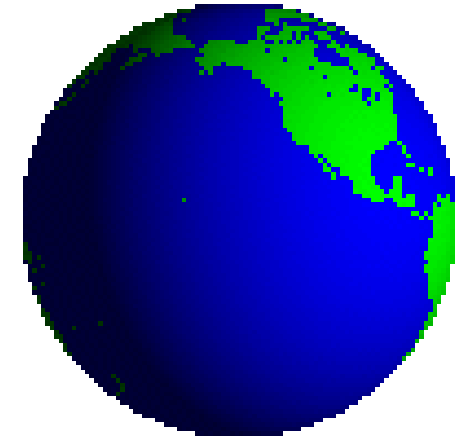


Globally

Highest Looms capacity – 61% share

Successfully placed its Innovative range of MMF textiles in almost all the countries

largest exporter of yarn in the international market and has a share of 25% in world cotton yarn exports



Indian textiles sector has witnessed a spurt in investment during the last five years. The industry (including dyed and printed) attracted foreign direct investment (FDI) worth **Rs 6,711crore (US\$ 1.11 billion)** during **2000 - 2014**.

Nationally

| | |
|--|--|
| Contribution to Indian GDP | 4 % |
| Contribution to Indian Industrial Production | 14 % |
| Contribution in India's Export Earning | 11 % |
| Contribution in Employment | 2 nd largest after Agriculture |



India Planning Commission's 12th Five Year Plan (2012-17) envisages India's Exports of Textiles and Clothing at **USD 64.11 billion** by the end of **March 2017**

Contents

1: Introduction to Indian Textile Sector

2: Indian Textile Sector Categorization

3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector

4: Textile and Apparel market

5: Status of Technology in Indian Textile Sector

6: The need for technology interventions

7: Indian Government Initiative

8: Expectation from UK Technology

Categorization

The Indian Textile industry is highly fragmented sector

Fully vertically integrated

across the whole value chain and interconnected with various operations

small-scale, medium-scale, large-scale, non-integrated

spinning, weaving, finishing, and apparel-making firms and enterprises.

Unorganized sector

Includes Handlooms, Power loom, Hosiery, Knitting, Readymade Garments, Khadi, Carpet and Handicrafts manufacturing units

Organized Mill Sector

comprises of spinning Mills, and Composite Mills where spinning, weaving, and processing activities are done.

Categorization

The Indian Textile industry is highly fragmented sector

The Fibre and Yarn Sector of the textile industry

Includes Textile Fibers, Natural Fibers such as Cotton, Jute, Silk and Wool; Synthetic / Man-Made fibers such as Polyester, Viscose, Nylon, Acrylic and Polypropylene

The Man-Made Textile Sector

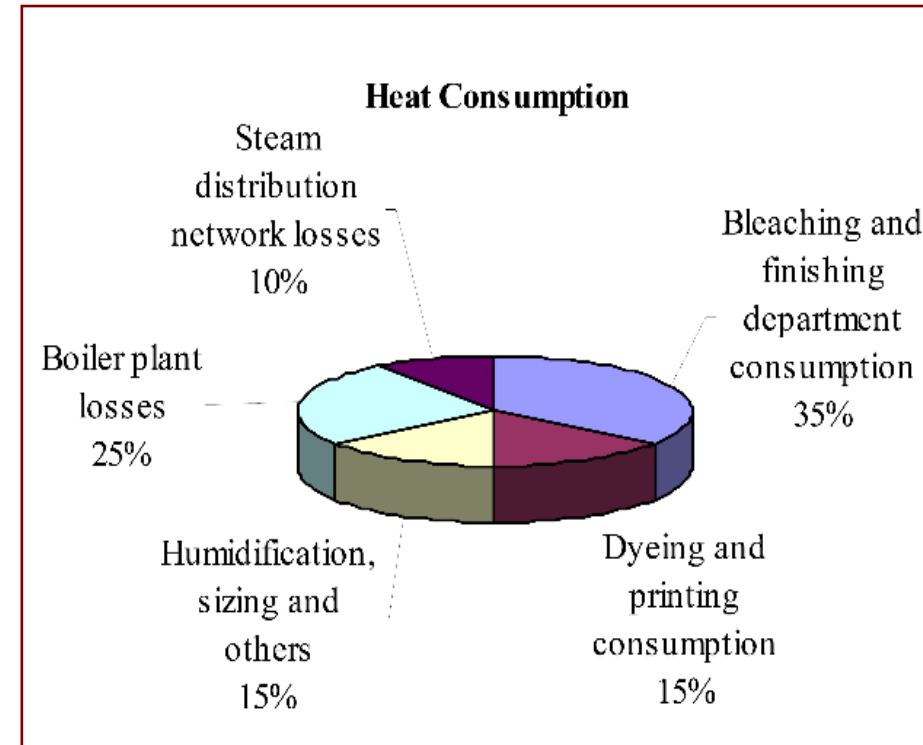
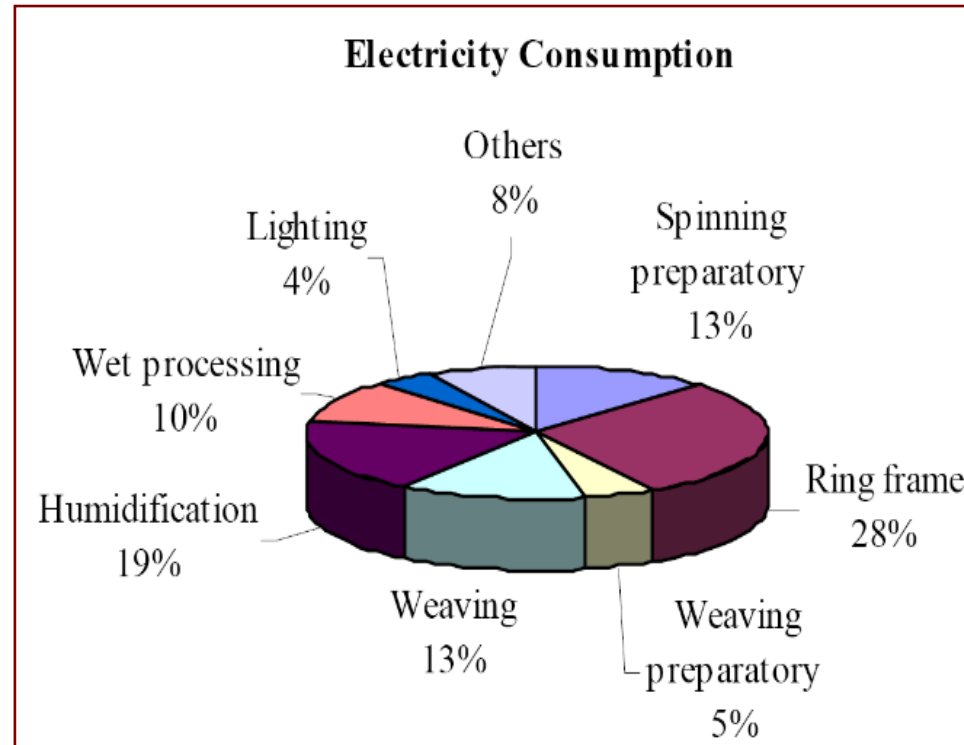
Includes Fibre and Filament Yarn manufacturing units of Cellulosic and Non-Cellulosic origin. The Cellulosic Fibre/yarn Industry is controlled by the Ministry of Textiles, and the Non-Cellulosic Industry is controlled by the Ministry of Chemicals and Fertilizers.

Contents

- 1: Introduction to Indian Textile Sector
 - 2: Indian Textile Sector Categorization
 - 3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector
 - 4: Textile and Apparel market
 - 5: Status of Technology in Indian Textile Sector
 - 6: The need for technology interventions
 - 7: Indian Government Initiative
 - 8: Expectation from UK Technology
-

Energy

Energy consumed in textile industry is mainly thermal and electrical energy



Need to reduce energy consumption of this industry have assumed huge importance with the growth of **energy prices, environmental constraints and legal obligations.**

PAT Cycle – I (Year 2009-10 to Year 2014-15)

| Sector | Notified DCs | Energy Consumption (MTOE) | Reduction Target (MTOE) | Achieved (MTOE) |
|---------|--------------|---------------------------|-------------------------|-----------------------|
| Textile | 90 | 1.2 | 0.066 | Higher by approx 100% |

Reduction target for sub-group of textile sector-PAT Cycle 1

| S. No. | Sub Group | No. of Textile units | Target Range |
|--------|-----------------|----------------------|----------------|
| 1 | Processing unit | 20 | 1.63% to 7.31% |
| 2 | Spinning unit | 37 | 2.07% to 9.93% |
| 3 | Composite unit | 27 | 1.62% to 9.8% |
| 4 | Fibre unit | 6 | 5.72% |

PAT Cycle – II (Year 2016 - 19)

India's commitment during COP21

33-35% reduction in emissions intensity by 2030, compared to 2005 levels

40% of cumulative electricity installed capacity from non-fossil fuel based resources by 2030

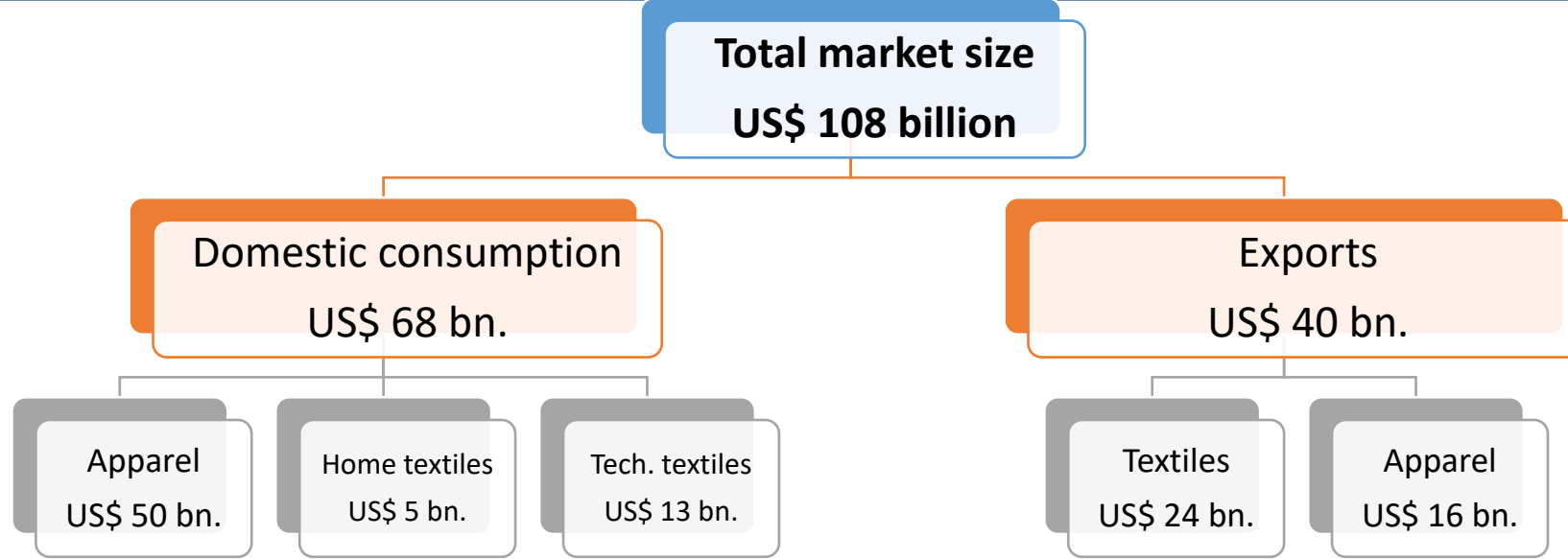
Increase tree cover, creating an additional carbon sink of 2.5 to 3 billion tonnes of CO2 equivalent by 2030

| Sector | Notified DCs | Energy Consumption (MTOE) | Reduction Target (MTOE) | |
|---------|--------------|---------------------------|-------------------------|--|
| Textile | 99 | 1.48 | 0.087 | |

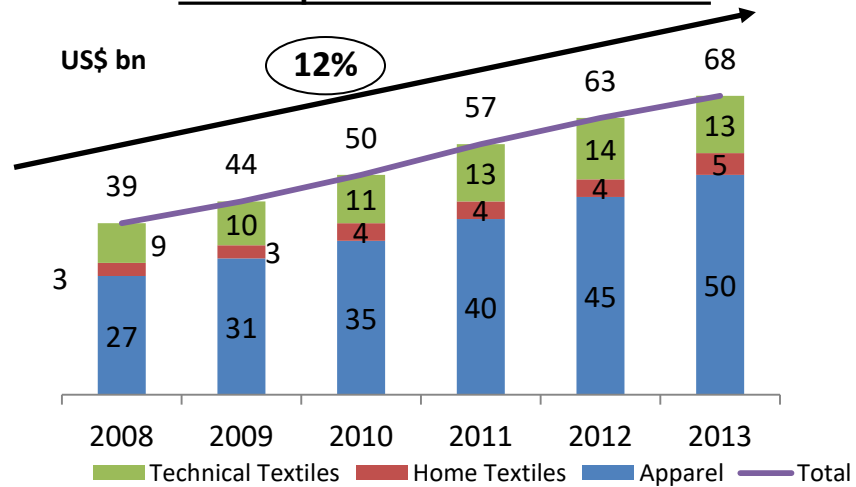
Contents

- 1: Introduction to Indian Textile Sector
 - 2: Indian Textile Sector Categorization
 - 3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector
 - 4: Textile and Apparel market**
 - 5: Status of Technology in Indian Textile Sector
 - 6: The need for technology interventions
 - 7: Indian Government Initiative
 - 8: Expectation from UK Technology
-

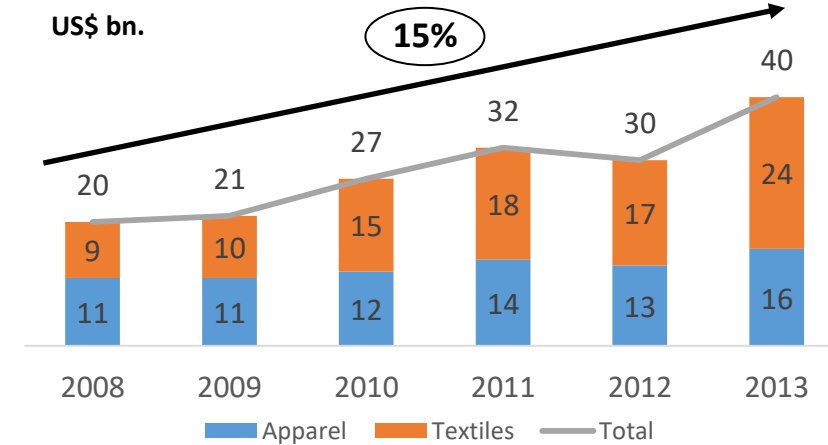
Indian Textile and Apparel market



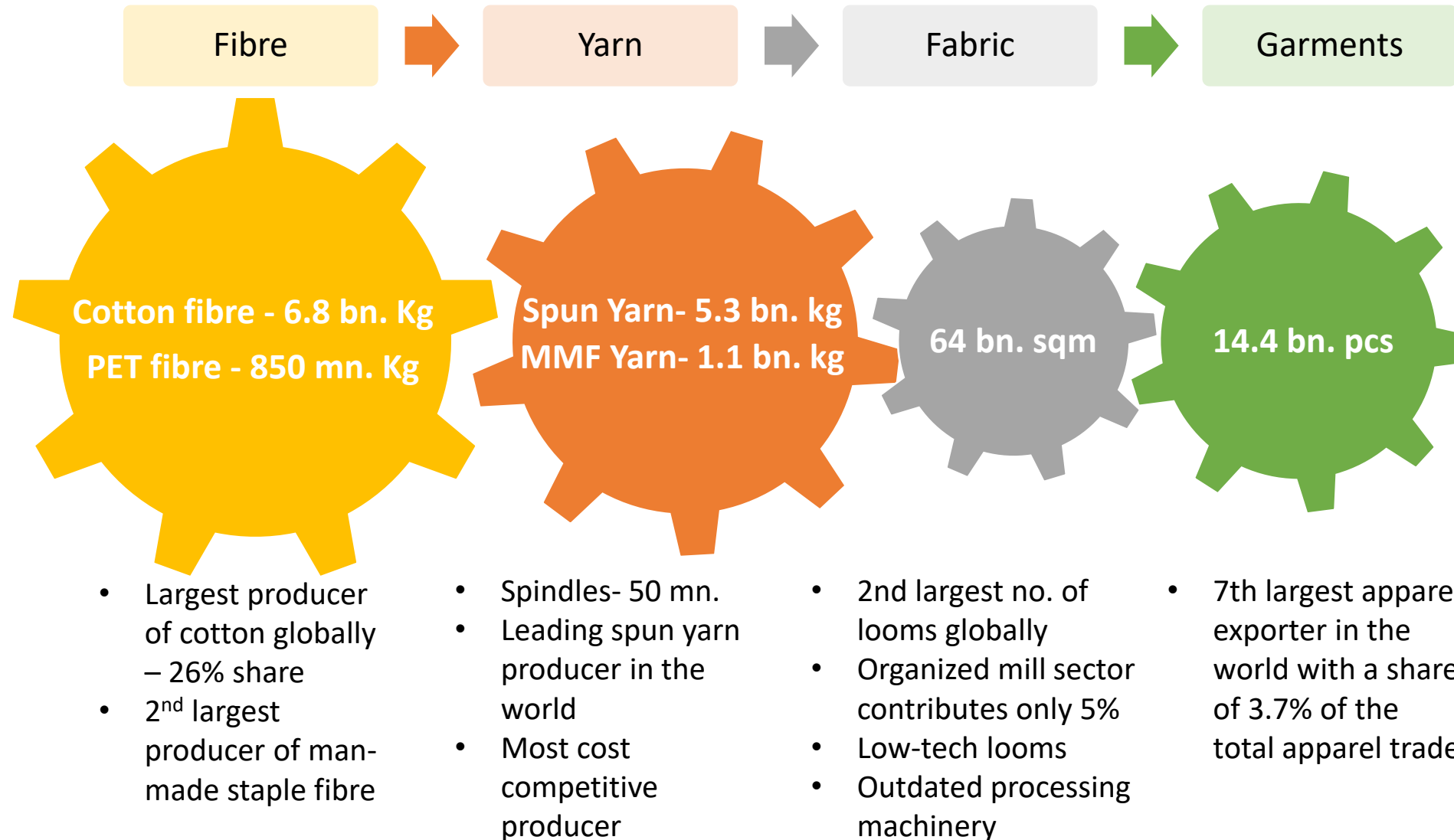
Growth pattern of domestic market



Growth pattern of Indian T&A exports



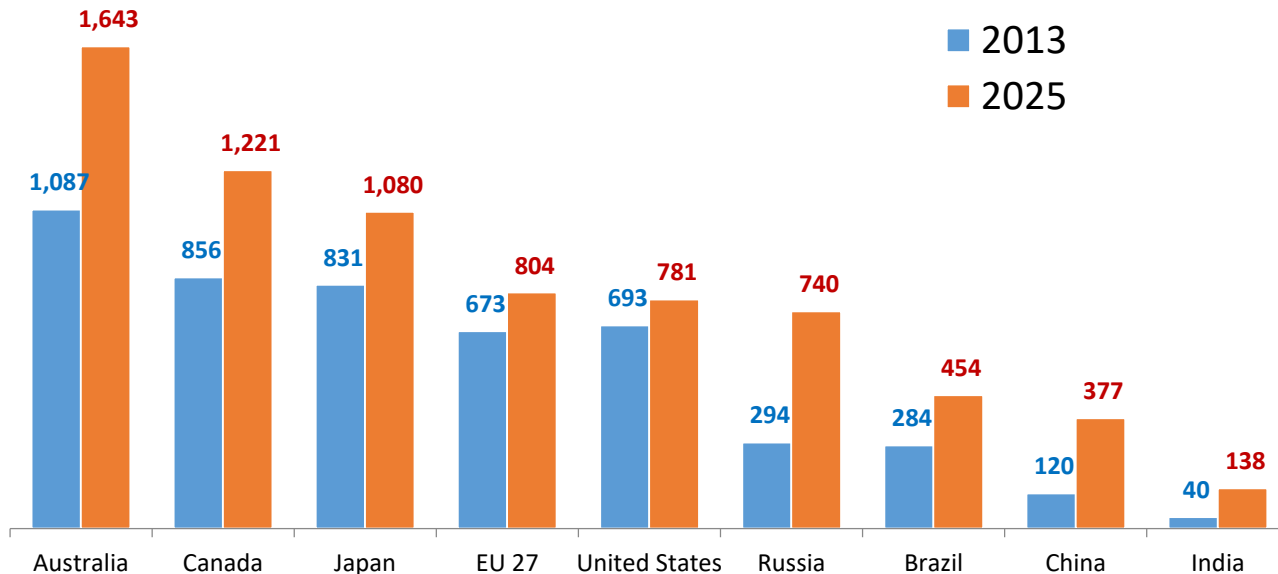
But the Manufacturing Value Chain is unbalanced



Global apparel consumption will cross US\$ 2 trillion mark in 2025

Currently USA & EU are the largest apparel markets but it is expected that per capita apparel spend will grow at a faster rate in developing countries of BRIC, than their respective economies, whereas in developed countries it will be slower.

Projected change in per Capita spend on Apparel



Apparel market size projections

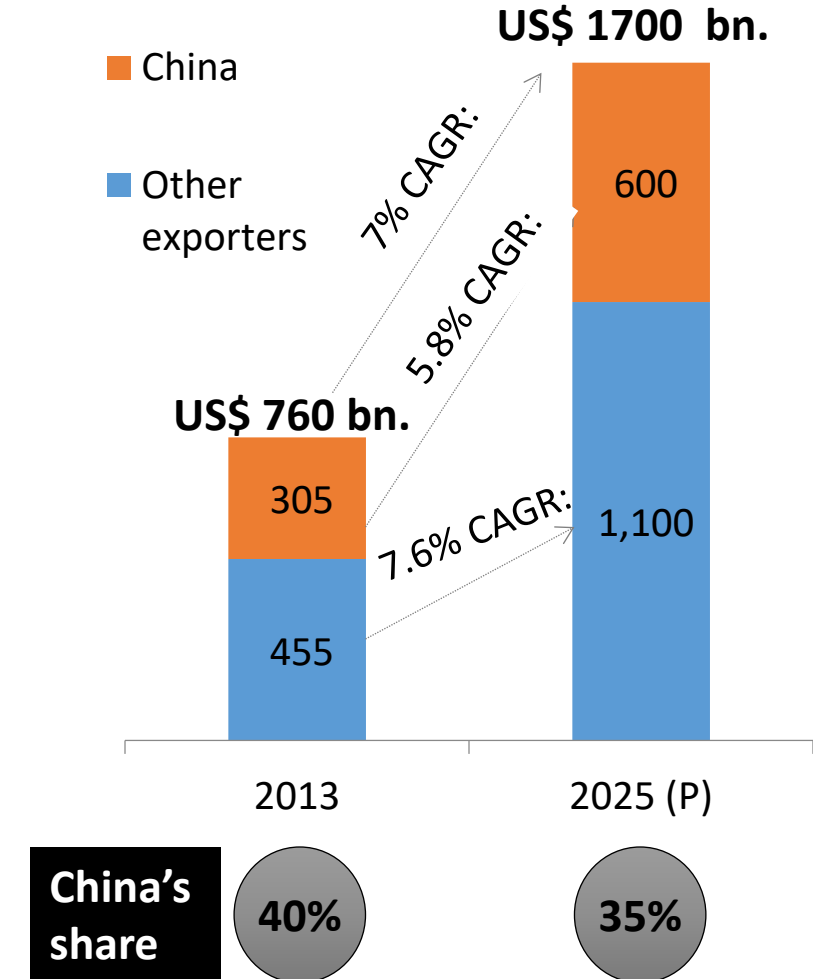
In US\$ billion

| Region | 2013 | 2025 | CAGR |
|---------------|--------------|--------------|-----------|
| EU 27 | 355 | 450 | 2% |
| China | 165 | 643 | 12% |
| USA | 230 | 413 | 5% |
| Japan | 110 | 140 | 2% |
| India | 46 | 179 | 12% |
| Russia | 45 | 141 | 10% |
| Brazil | 60 | 86 | 3% |
| Canada | 30 | 38 | 2% |
| Australia | 25 | 36 | 3% |
| RoW | 80 | 114 | 3% |
| Global | 1,146 | 2,058 | 5% |

Low Growth of China's Exports will Create a Huge Trade Gap

- China today is the world's 2nd largest economy with a GDP of ~USD 7 trillion. Projections indicate continuation of high growth over next few decades.
- Basic textiles and apparel industry will no longer be the prime focus of Government as it used to be since 1990's for enhancing exports and generating employment.
- In addition, China's domestic apparel requirement will also become very high further putting pressure on the exports.
- The share of Chinese exports in global trade is expected to reduce from 40% at present to around 35% by 2025.

Global textile and apparel trade projections



Contents

- 1: Introduction to Indian Textile Sector
 - 2: Indian Textile Sector Categorization
 - 3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector
 - 4: Textile and Apparel market
 - 5: Status of Technology in Indian Textile Sector**
 - 6: The need for technology interventions
 - 7: Indian Government Initiative
 - 8: Expectation from UK Technology
-

Technology in Indian Textile Industry

Indian textile industry lagged behind other industrial sectors in terms of modernization.

Indian manufacturer of textile industry is able to provide modern spinning machineries which do not have any technological gap

Weaving and Processing sectors wide technological gaps exists.

Gaps in technology as stated above have forced organized textile industry to go for high import of modern equipment enabling them to compete in export market.

Contents

- 1: Introduction to Indian Textile Sector
 - 2: Indian Textile Sector Categorization
 - 3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector
 - 4: Textile and Apparel market
 - 5: Status of Technology in Indian Textile Sector
 - 6: The need for technology interventions**
 - 7: Indian Government Initiative
 - 8: Expectation from UK Technology
-

Technology intervention

Technology and process up gradation needs attention to achieve further energy efficiency.

Modern machinery with high productivity and less specific energy consumption

Dyeing machines with less liquor to material ratio

Heat recovery through hot effluent drain/ hot air exhaust

Stenters with exhaust humidity controller, VFD and exhaust heat recovery

Use of shuttle less looms

Use of knotting machine, beat gaiting trolley, auto drawing machines in Weaving

Technology intervention

Aerofoil design fans for Humidification Plants

High efficiency compressors with IE4 high efficiency motors with VFDs

Use of non-conventional energy like solar and biomass

Use of Diffused aeration in ETPs

Contents

- 1: Introduction to Indian Textile Sector
 - 2: Indian Textile Sector Categorization
 - 3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector
 - 4: Textile and Apparel market
 - 5: Status of Technology in Indian Textile Sector
 - 6: The need for technology interventions
 - 7: Indian Government Initiative
 - 8: Expectation from UK Technology
-

Indian Government Initiative

The Cabinet Committee on Economic Affairs, chaired by the Prime Minister of India, has approved the introduction of "**Amended Technology Upgradation Fund Scheme (ATUFS)**" - A budget provision of Rs.17,822 crore has been approved

- Employment generation and export by encouraging apparel and garment industry, which will provide employment to women in particular and increase India's share in global exports.
 - Promotion of Technical Textiles, a sunrise sector, for export and employment
 - Encouraging better quality in processing industry and checking need for import of fabrics by the garment sector.
 - Promoting conversion of existing looms to better technology looms for improvement in quality and productivity
-

Contents

- 1: Introduction to Indian Textile Sector
 - 2: Indian Textile Sector Categorization
 - 3: Government of India's Perform Achieve and Trade (PAT) Scheme: Textile Sector
 - 4: Textile and Apparel market
 - 5: Status of Technology in Indian Textile Sector
 - 6: The need for technology interventions
 - 7: Indian Government Initiative
 - 8: Expectation from UK Technology
-

Expectations from UK Technology

It is proposed that UK based technologies and process equipment for Indian textile sector should be

Focusing on the requirement of the large segment of the users

The technological solutions should be suitable to enhance energy efficiency

Enhance the Productivity

Enhance the Quality of Product

Technology with Environmental Compliance

improve the competitiveness of industry through acquisition of state-of-art technologies from UK.