FICCI

Knowledge Paper on

Building a New Age Textile Industry

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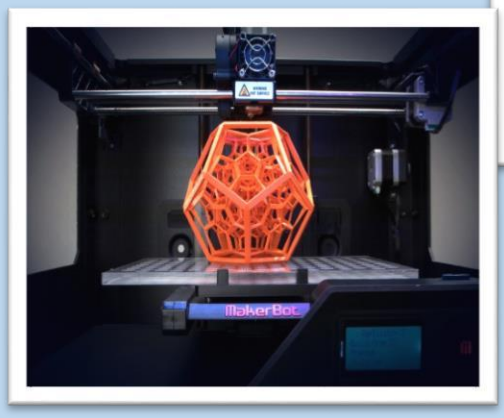

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1.1 Global industry overview

Global Apparel Market

The global apparel consumption in 2017 is estimated to be US$1.8 trillion, which formed around 2% of the world GDP of US$79.3 trillion. EU-28 was the largest apparel consumer market worth US$400 billion, which was followed by markets of the USA, China, and Japan. These top four markets together constituted approximately 59% of the global apparel consumption. The next four largest markets were India, Brazil, Russia, and Canada, accounting for an additional 11% share while the rest of the world held a 30% share.

Table 1: Global Apparel Market (US$ Bn.)

Country/region	Value 2017	Share 2017	Value 2025 (P)	Share 2025 (P)	CAGR
EU-28	417	23%	435	17%	1%
USA	341	19%	389	15%	2%
China	210	12%	500	20%	11%
Japan	99	5%	109	4%	1%
India	67	4%	160	6%	11%
Brazil	61	3%	94	4%	6%
Russia	41	2%	39	2%	-1%
Canada	32	2%	37	1%	2%
RoW	550	30%	794	31%	5%
Total	**1,816**		**2,557**		**4%**

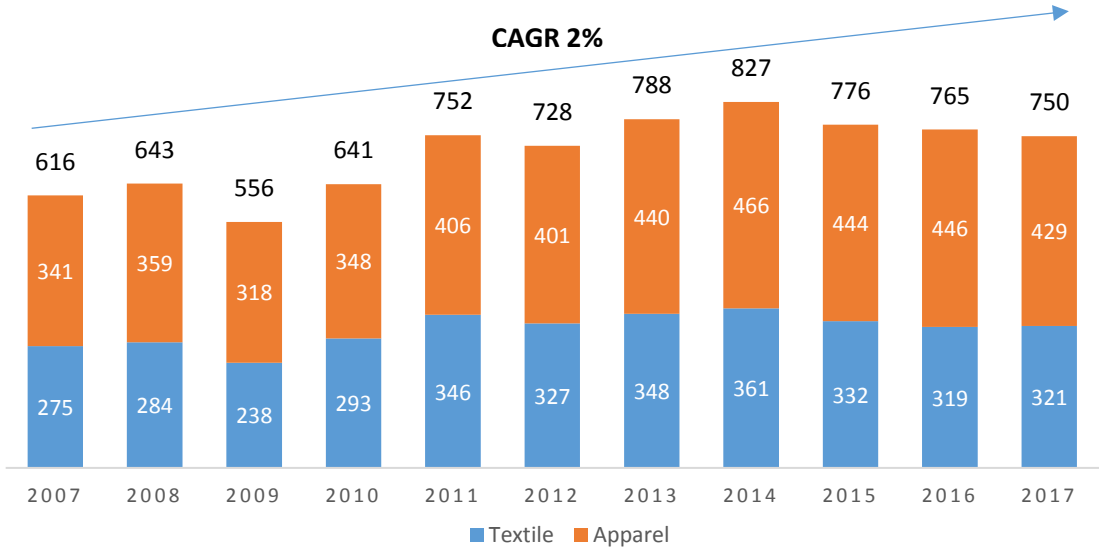
Data Source: Wazir Analysis

The apparel consumption is forecast to grow at a CAGR of 4% and reach US$2.6 trillion by 2025. It is expected that the market growth rate of developed countries will slow down whereas large emerging economies will be the key drivers of growth. China and India, with a large population base, will be the fastest growing markets in the segment.

Global textile and apparel trade

Global textile and apparel trade in 2017 was US$750 bn, which has been increased overall at a CAGR of 2% since 2007, despite year wise fluctuations in demand.

Figure 1: Historical Growth of Global Textile and Apparel Exports (Values in US$ Bn.)



Data Source: UN Comtrade

1.2 Trends impacting the global textile sector

Growing Domestic Market of India and China

It is expected that over the next decade, domestic apparel market of India & China will attain high growth rates of 11% each, to add a cumulative market size of US$ 393 bn. by 2025.

Table 2: Market Size Growth of India & China (US$ Bn.)

Markets	2017 Market Size	Expected Growth Rate (2017 -2025)	2025 Market Size	Market Addition by 2025
India	67	11%	160	93
China	210	11%	500	290
India & China	**277**		**660**	**393**

Data Source: Wazir Analysis

High economic growth will be a major factor behind increasing apparel market size in both these countries.

Other trends facilitating the growth in India are increasing youth population and high purchasing power, shift from need- based purchase to aspiration- based purchase, growing urbanization increasing the market demand, increased penetration of technology and greater access to internet resulting in significant growth in online retail sales.

Trends which will catalyze growth in Chinese market demand are boosting demand of outdoor wear and fast fashion categories, end of the one- child policy fostering demand of kid's wear segment, gradual increase in spending of Chinese customer from offline to online retail channel.

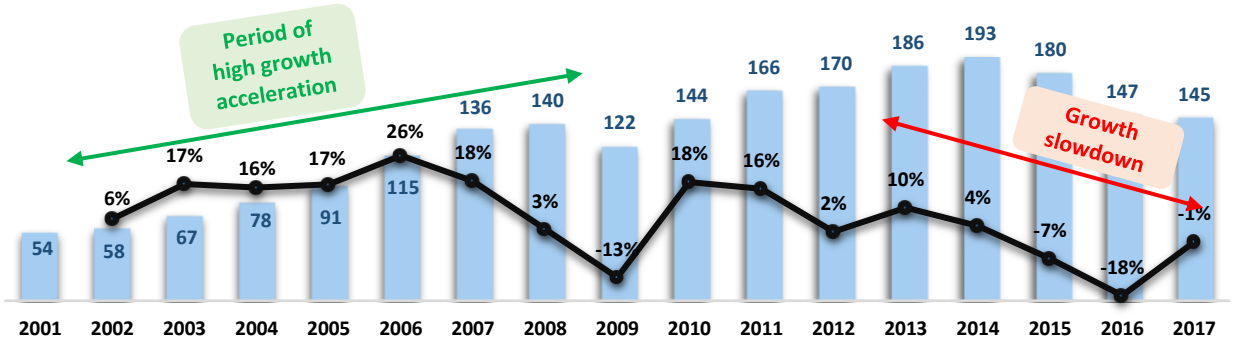
Growth in retail front will lead to a trickle- down effect in the local manufacturing value chain benefitting national manufacturers the most. Huge growth will make domestic market more attractive than exports in many cases for manufacturers.

Slower Expected Export Growth of China

China dominates the global apparel trade with a share of approximately 34%. However in the recent years, a continuous decline in China's textile and apparel exports has been observed. Between 2014 and 2017, apparel exports from China reduced by ~33% to reach a level of US$ 145 bn (2017). Also, the overall share of China in global textile and apparel has fallen from ~39% share in 2013 to a current ~34%.

In future, China's share is expected to further reduce because of gradual shift of global buyers from China due to rising manufacturing costs in China and availability of other lower cost destinations in the region. Apart from this, China is also shifting from a cost driven to innovation driven manufacturing destination. Also the focus of Chinese manufacturers is expected to increase towards their fast growing domestic market. While China's exports will continue to grow, its global share is likely to reduce and this is expected to create export market vacuum of around US$ 50 bn by 2025.

Figure 2: Slowdown in China's Export Growth (Export values in US$ Bn.)



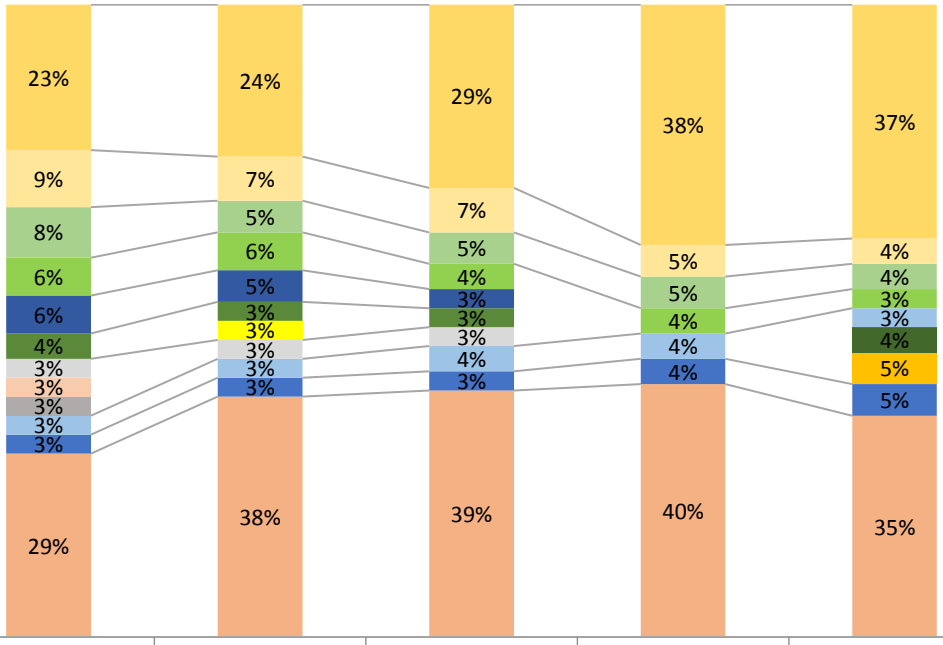
Data Source: UN Comtrade

China's loss of share in global apparel trade will throw up opportunities for emerging exporters including Vietnam, Ethiopia, Kenya, Myanmar, Bangladesh and India.

Increasing Consolidation of Global Sourcing

From 1995 to 2016, there are only fewer countries left, which are having some significant share in total trade. This implies that buyer is now seeking for long term arrangement with fewer suppliers.

Figure 3: Increasing Consolidation of Global Sourcing



	1995	2000	2005	2010	2016
China HK	23%	24%	29%	38%	37%
Italy	9%	7%	7%	5%	4%
Germany	8%	5%	5%	5%	4%
USA	6%	6%	4%	4%	3%
S. Korea	6%	5%	3%		
France	4%	3%	3%		
Mexico		3%			
Belgium	3%	3%	3%		
UK	3%				
Japan	3%				
Turkey	3%	3%	4%	4%	3%
Vietnam					4%
B'desh					5%
India	3%	3%	3%	4%	5%
Others	29%	38%	39%	40%	35%

Data Source: UN Comtrade

These trends favor India as a textile and apparel manufacturing and sourcing destination for global markets and hence provide good opportunity for Indian textile and apparel companies to take advantage of the huge opportunity.

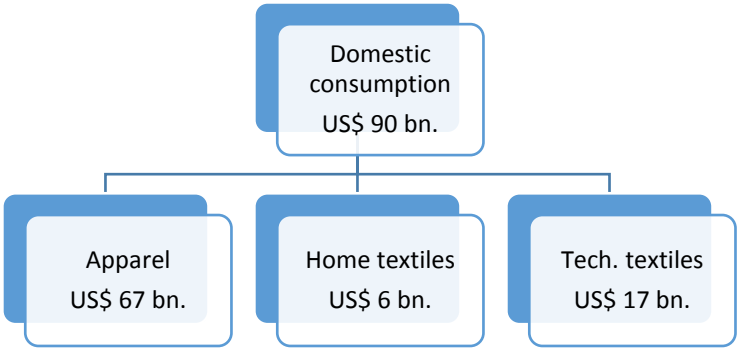
1.3 Indian industry overview

Domestic Textile and Apparel Market

Indian textile and apparel market is estimated at US$ 127 Bn., 70% of which is domestic consumption while exports constitute the rest 30%.

The overall domestic market of India stood at US$ 90 bn. in 2017. Within this, apparel retail contributes US$ 67 bn., technical textiles contribute US$ 17 bn. and home textiles contribute US$ 6 bn.

Figure 4: Indian Domestic Textile and Apparel Consumption (2017)

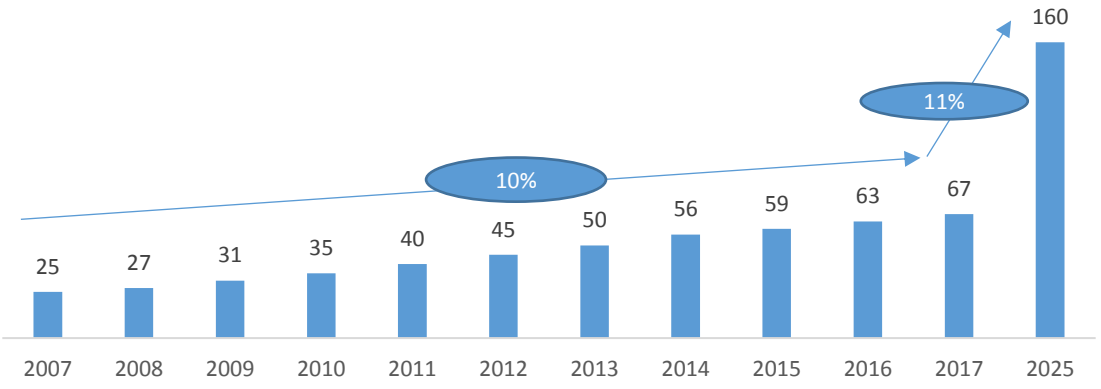


Data Source: Wazir Analysis

Domestic Apparel Market: In recent times, Indian domestic market has performed better than the largest textile consumption regions like US, EU and Japan, registering a healthy CAGR of 10% between 2007 & 2017.

Domestic apparel market size of India is expected to maintain this growth & reach a level US$ 160 bn. in 2025 by growing at a CAGR of 11%.

Figure 5: Domestic Apparel Market Size (US$ Bn.)

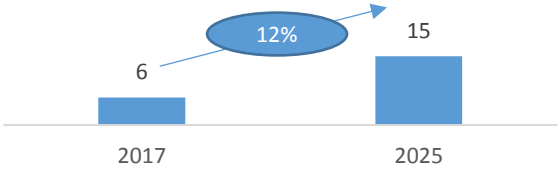


Data Source: Wazir Analysis

Home Textiles & Technical Textiles: Domestic home textiles & technical textiles market stood at US$ 6 bn. & US$ 17 bn. in 2017. Domestic home textiles market will also grow at 12% CAGR to reach a level of

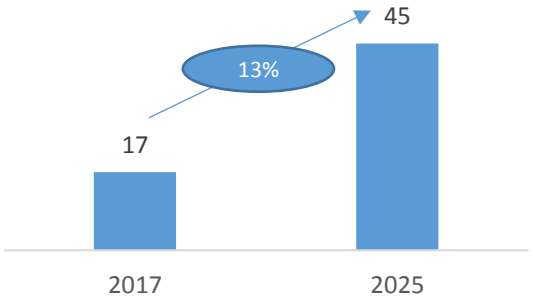
US$ 15 bn. in 2025. While, the technical textiles market is expected to grow by 13% CAGR over the same period to reach a level of US$ 45 bn.

Figure 6: Domestic Home Textiles Market (US$ Bn.)



Data Source: Wazir Analysis

Figure 7: Domestic Technical Textiles Market (US$ Bn.)

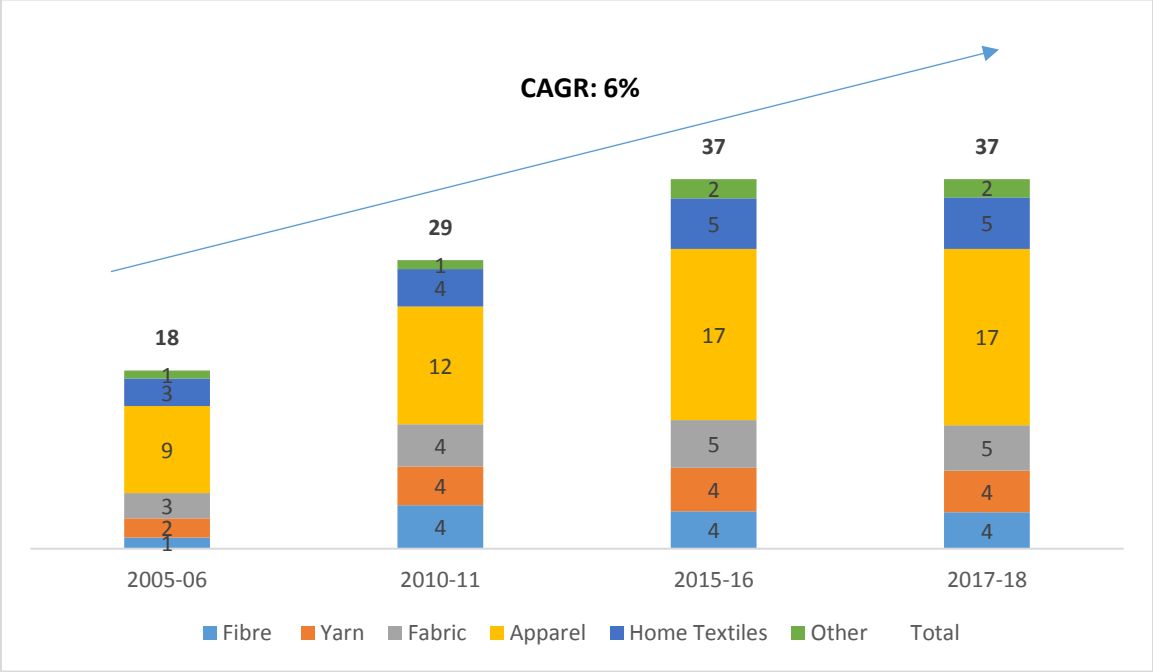


Data Source: Wazir Analysis

India is the second largest exporter of textiles & apparel in world

In terms of global ranking, India is ranked 2nd in textile export with 6% share and 5th in apparel export with 4% share. Overall, India holds second position with 5% share of global exports. India's textile and apparel exports were US$ 37 billion in 2017-18 and have grown at 6% CAGR since 2005. Availability of raw material, skilled manpower and favorable central & state govt. schemes would further help Indian exporters increase their market share and global competitiveness.

Figure 8: India's Textile and Apparel Exports (US$ Bn.)



Data Source: DGCIS, Ministry of Commerce

Apparel is the largest exported category in India's exports with a dominant share of 48%. It is followed by the exports of "others" category which includes home textile products, made- ups etc. with a share of 14%. Fibre/Filament category has registered the highest growth in India's export of textile and apparel with a CAGR of 11% over the last decade. EU and USA are the largest markets for Indian textile and apparel exports with shares of 19% & 18% respectively. The other major export markets for India are UAE, China & Bangladesh which have a share of 9%, 8% and 5% respectively.

1.4 Growth trends for Indian textile sector

As mentioned in the previous section, domestic textile and apparel market of India is large and it has grown at a robust pace over the last decade. This market is expected to grow at an even higher pace in the coming years owing to the following growth drivers:

- **Changing Demographic Dividend**

India has the largest youth population in the world and as this population joins the workforce, gets more money in their hands, their spending power will increase. Apparel category will be the prime beneficiary of this increase in purchasing power. Also, since 2000s, India has witnessed a demographic shift in terms of increase in the urban population. Urban areas are expanding and large number of people are moving from villages to cities. This increasing uurbanization in turn will have a major growth impact on apparel consumption.

- **Increasing Consumer Prosperity**

Over the last decade, India's per capita income has grown from US$ 749 in 2005 to US$ 1,723 in 2016[1]. The growing income of people in the country has reflected in the increase of aspirational buying. Nowadays people are becoming more fashion conscious and are spending more on clothing. Judging by the GDP growth of the country, this trend is expected to rise in the coming years.

- **Emerging Categories for Consumption**

Increasing spending power of people along with the changing social scenario of the country has led to the emergence of certain new consumption categories in India such as active wear, sportswear, women's wear, protective wear etc. These categories have emerged substantially only in the last five to six years and they are expected to attain high growth in the coming years

- **Increasing Penetration of Organized Retail**

India has become a very attractive and large market for international brands owing to the above mentioned features. Many top international fashion brands such as H&M, Zara, and Aeropostale etc. have entered in the Indian market in the recent years. The presence of top brands in the country will lead to higher consumption of fashion apparel.

[1] GDP per Capita at Current Prices – World Economic Outlook Database, 2017 (IMF)

- **Growth of Technical Textiles**

Technical textiles is one of the most promising segments of the industry. Technical textile is expected to become of the fastest growing segments in the industry based on the following factors:

a. Growth of end use industries such as medical industry, automobile industry, protective wear industry, construction industry etc.
b. Increasing consciousness of health, hygiene & safety amongst consumers
c. Introduction of regulatory norms such as mandatory usage of seatbelts & airbags in automobiles, flame retardant fabrics in commercial places, use of geotextiles for construction etc.

On the export front also, there are several trends which indicate a bright future for Indian textile and apparel industry which are given below:

- **Slowdown in China's exports**

In the recent years, China's growth in the global textile and apparel trade has slowed down. Chinese exports of textile and apparel have shown de-growth continuously for the last two years. This slowdown in growth is expected to remain over the next decade which will result in reduction of China's share in the global textile and apparel trade in the coming years. This reduction in China's share will serve as an opportunity for the competing nations to increase their share in the global trade by filling it. Textile manufacturing nations like Vietnam, Ethiopia, Kenya, Myanmar, Bangladesh and India etc. have an opportunity to fill this gap. As compared to all the nations mentioned above, India is the largest and more resourceful country which has the capability to take maximum advantage because of its huge textile base, manpower availability and infrastructure.

- **Increasing exports to USA**

USA is the biggest market for India's export of textile & apparel products. In 2016, 21% of the textile and apparel products exported from India were shipped to USA. Apparel and home textiles occupied almost 88% share of the US$ 7.5 Bn exports to USA. Fibre and other categories have shown an impressive growth of 16% & 14% respectively in the last five years.

Table 3: T&A Exports from India to USA (US$ Mn.)

	2012	2013	2014	2015	2016	CAGR
Fibre	65	98	79	84	118	16%
Yarn	87	101	96	98	84	-1%
Fabric	277	311	307	320	321	4%
Apparel	3,051	3,661	3,586	3,774	3,820	6%
Made Ups	2,270	2,719	2,631	2,821	2,786	5%
Others	240	339	333	338	411	14%
Total	**5,990**	**7,228**	**7,033**	**7,437**	**7,540**	**6%**

Data Source: UN Comtrade

The top 5 categories exported to USA in 2016 comprise of apparel and home textiles. These categories occupied 88% share of the total exports to USA in 2016.

- **Implications of GST on Indian Textile & Apparel Industry**

As per its defined objectives, GST will have a positive influence on the textile industry in terms of eliminating distortions in the tax system, reducing compliance for industry, facilitation of input tax credit etc. However, GST has failed to resolve the issue of differential duty structure in the industry as well as the issue of fibre neutrality. Duty accumulation was an issue for the MMF industry earlier also, however, with the increase in the duty rates, it will become more prominent and it will lead to a likely increase in the prices of finished goods. The exact nature of impact of GST on the industry still remains to be seen and will be evident in the near future.

2 Adopting Innovation & Technology in Indian Manufacturing

Innovation is the new buzzword in the industrial and manufacturing sector, globally. It is now becoming a requisite for every industry to do new things for being a part of this competitive race. New products, new features & characteristics, new methods, and processes have become the tool to fulfill the ever changing customer demand. Textile & apparel industry is no different. In fact, innovative industries are more successful and retain more customers than the industries that are reluctant to embrace these technological advancements. Every day new designs being launched in the global apparel market; has left no way other than adopting rigorous innovation in design and manufacturing in the textile & apparel industries. Productivity, resource management, quality management, and environmental issues have become undeniable factors in terms of innovation as doing business is becoming expensive. As a result, it is mandatory for industries to research, identify, adapt and control the appropriate product, process, technology and market to make the business sustainable and profitable. The Indian textile & apparel manufacturing industry seems to be emerging from an almost static state in the past and heading towards a path growth. Textile and apparel are the major industrial sector in India. So future success of the country's economy highly depends on the innovativeness of the textile and apparel industries.

2.1 Innovation led growth in global textile industry

All through history, the manufacturing industry has been conquered by technological disruptions dating far back in the 18th century. The first industrial revolution when steam engines, water & steam power, machine tools, and factory system took the center stage. The entire manufacturing industry was led to an incipient phase of transitions. New manufacturing processes were coming in, the most dominant being modern production methods and final output for the textile industry. Mass production of yarn and cloth became a mainstream industry. The first inventions in the modern textile industry occurred in 1734 in Bury, Lancashire, when John Kay invented the flying shuttle which increased the width of cotton cloth and speed of production, thus increasing the productivity. The second industrial revolution widely known as the technological revolution in the late 19th century brought mass production lines and invention of electric energy as its main features. It is said that the second revolution was a rough draft of the industry today. By the time, the third revolution came into focus, globalization was already on its way catalyzed by the invention of the first computer and subsequent discovery of the World Wide Web. Other major shifts during the third revolution were rapid digitalization and automation in the manufacturing industry with the convergence of new technologies such as intelligent software, novel materials, and a wide range of web-based services.

Fast forward to today, the industry is going through another paradigm shift, popularly referred to as the "Fourth Industrial Revolution" or "Industry 4.0". The ultimate goal of the fourth revolution is to build a parallel virtual world that will control and run the physical world. Everything that can be digitalized will be digitalized throughout the course of Industry 4.0.

The future of the manufacturing industry lies with big data analytics, robots, automatons, and the internet of things. Manual labor will be replaced with digital factories containing advanced materials and artificially intelligent machines that run entire factories on its own. Not only that, cognitive manufacturing will enable manufacturers to forecast demand, carry out predictive maintenance, estimate problems that

might occur and trigger solutions to those problems without any human interference. The manufacturing industry is all set to witness another global renaissance using principles of Industry 4.0.

2.1.1 Growth through product innovation – Global models

Companies can innovate in the way products are developed or manufactured, either within the firm or across the supply chain which is termed as "Process Innovation". It is typically aimed at garnering competitive advantage through improved quality, reduced costs or reduced time-to-market. In the recent times, technology has played a tremendous role in product innovation. Over the past few decades, there has been a growing concern globally about the fast depletion of global resources and the need to converse them for the future. Many breakthrough concepts and development have led to new materials and improve products. Few illustrations of innovations in the textile & apparel manufacturing sector are mentioned below:

Toray Industries Inc., Japan

Toray Industries Inc., Japan (Est. 1926) is an organization contributing through the creation of new value with innovative ideas, technologies, and products with more than 500 textile patent applications every year. It is a private company with R&D bases in Japan, China, Korea, Singapore, USA, Europe, Malaysia, and Thailand with special services in product development & testing. The focus segments of Toray are fibers & textiles, resins & chemicals, films, electronics & information related products, carbon fiber composite materials, life science, and environment treatment. Toray has collaborated with various MNCs, industry partners, public sector agencies & institutes for being a thought & innovative leader in the sector. In 2015, Toray received commendation for invention in the last seven years following the Prime Minister Prize, the Prize of the Chairman of the Japan Chamber of Commerce and Industry and the Invention Prize. The company spends 3% of its revenue on R&D expenses. Toray plans to invest US$ 1.9 Bn of R&D expenses over 3 years from the start of FY 2017, 50% of which will be allocated to R&D related to Green Innovation, and 25% to Life Innovation.

Hohenstein Institute, Germany

Hohenstein Institute, Germany (Est. 1946) is a private institute with more than 40 contact offices & laboratories in Europe, Asia and America with service reach in 46 countries. It has focused on applied research with practical application and publishes multiple research publications in the focus segments of functional textiles, hygiene, environment & medicine, fit & workmanship of clothing and personal protective equipment. The institute transfers knowledge through various means such as e-academy (webinars), client-specific training and organizing/participating in workshops, conferences etc. They provide services in textile testing, pattern service, inspection service, product performance & clothing physiology, education & training and consulting. The institute has collaborations with research associations, the agency for job portal & knowledge database and network for nanotech. Hohenstein has test & certification centers accredited under German National Accreditation Body (DAkkS) and is a founder member of the International Test Association for Applied UV Protection. Hohenstein pays special attention towards pattern and fitting service starting from design and development to production monitoring and has a special center for textile health sciences.

2.1.2 Growth through process and technological innovation- Global models

Manufacturing is no more just about making physical products. It is to meet changes in consumer demand, the nature of products, and the economies of production & supply chain. Innovation in manufacturing process requires modification in production method which can reduce turnaround time, enhance the product quality, trim cost of production, achieve the flexibility of customizing the product as per customer demands as well as reap other benefits that result in better competitiveness. All over the world textile research is primarily focused on technological innovations, fiber production and application, and environmental sustainability. Few illustrations of innovations in the textile & apparel manufacturing sector are mentioned below:

Advanced Functional Fabrics of America (AFFOA), USA

All over the world textile research is primarily focused on technological innovations, fiber production and application, and environmental sustainability. Advanced Functional Fabrics of America (AFFOA), MIT, USA (Est. 2016) is a non-profit organization founded by MIT with more than $300 million in funding from the U.S. Department of Defense, apparel manufacturers and the state of Massachusetts is one of the research institutes which are working towards the progressive textile industry. With a Vision to enable a manufacturing-based revolution by transforming traditional fibers, yarns, and textiles into highly sophisticated integrated and networked devices and systems, it aims to facilitate economic growth through fiber & fabric manufacturing. In 2017, AFFOA opened its first 'National Fabric Innovation Centre' with an investment of US$ 10 million with state of the art fabric prototyping facility. It has launched two product prototypes till now:

- **A Programmable & Scannable Backpack** - A coding system is woven into the plaid stripes on the backpacks and when scanned by a smartphone, the owner's information is displayed by an app called "Looks". The wearer can "program" their pack to include information like the favorite song, etc. which anyone can scan and get to know.
- Fabric Lifi - World's first fabric-based communication system that converts LED light into sound. AFFOA developed a cap with earphones which if gets under a designated area, starts receiving audio signals.

2.2 India's standing in the landscape of innovation & technology

Globally renowned companies have become successful by continuously evolving their systems & processes to not only meet the ever-changing demands of consumers but also by introducing newer and better products. This evolution is the result of an amalgamation of new technologies and improved methods of manufacturing which are efficient and highly productive. This aspect of manufacturing has been neglected by the Indian textile industry as only a handful of large and organized companies actually follow any type of systematic procedures for manufacturing and focus on incorporating modern technology into the system. This leads to higher waste generation, poor output quality, more defects and faults which in turn results in the decreased value of finished products.

Indian Textile and Apparel manufacturers, as well as retailers, must connect global into a digitally connected entity which centralizes and shares information from PLM, ERP, and other systems. The supply chain must be able to process real-time data and immediately service the customers accordingly. Indian T&A sector is in need of a technological revamp which can be brought about by adopting the following:

- ***Implementation of standard systems & processes:*** Implementation of standard systems & processes and lean manufacturing systems reduces/eliminates wastage at the source thereby increasing efficiency, better quality of products and resource optimization.
- ***Shortening lead times:*** Shorter lead times is the global trend today which is changing the structure of the entire textile value chain. It is important to make Right First Time (RFT) to save cost and time. Lead times can be shortened through digital sampling and continuous monitoring of production processes to reduce/eliminate faults and rework.
- ***Focus on Research and Development:*** Rapidly progressing technological revolution has also created the need for T&A industry to focus on R&D and market intelligence to offer the right product mix to the market. Conducting R&D must be woven into the DNA of the companies as it will be the platform for innovations to flourish.
- ***High-Performance Training:*** High-Performance Training is the need of the hour. People need to unlearn the traditional/outdated methods and relearn the skills required by the industry today. It is important for our workforce to upgrade their skills so as to be able to operate the advanced technological systems. Apart from technical skills, it is also important to provide operators with soft skills which include motivation, health & hygiene, group behavior, self-management, time management, etc. These skills instill them with organizational behavior that indirectly affects efficiency and productivity.
- ***Environment-friendly approach:*** Right from the growth of fibers i.e. cotton (agriculture) or synthetic (chemical synthesis) to the manufacturing of garments, textile industry consumes a large number of resources (land, water, coal, other fuels, chemicals etc.). Future development of any industry cannot be based on a model with no regards to its impact on the environment. Hence for the textile industry also, it becomes much more important to adapt to the green way of growth. The first step in this is to build an Environmental Management System (EMS). EMS is a set of practices & procedures that enable an organization to reduce its impact on the environment and also increase operating efficiency. The second step involves using new technologies which consume less energy or using renewable sources of energy. The third step involves creating a green & sustainable value chain wherein every input whether its fiber, dyes, chemicals, are all derived in an environment-friendly way**.**

Technological advancements are the most effective instrument for growth and change. Presently, the Indian economy is going through a pivotal phase with high economic growth & large investments coupled with the government's bold initiatives. Textile industry lies at the core of this development owing to its contribution to the economy as well as high employment generation potential. It is now important for manufacturing units in India to adopt these technological advancements to remain competitive in the global scenario.

2.3 Focus areas for Indian Industry – Growth through innovation & technology

2.3.1 Productivity and quality improvement

The demand for higher value at lower price strongly drives the need for productivity enhancement. Beyond a handful of organized players, the industry textile and apparel majorly comprises fragmented entities that lack the financial and managerial bandwidth to identify, analyze and rectify productivity

related challenges. This is specifically true for apparel sector units. In general, Indian garment units operate at lower productivity levels than their counterparts in countries like China, Bangladesh, Turkey, etc. A ballpark comparison of productivities in these countries is given below.

Table 4: Apparel Factory Productivity Levels in Selected Countries

Country	Productivity level
India	40-45%
Bangladesh	50-55%
Turkey	60-65%
China	60-65%

Source: Industry feedback

Fragmented nature of the industry, management mindset, lack of best practices & technical know-how and higher attrition rate are some of the major reasons which are responsible for this position.

Productivity improvement in the sector can be achieved by focusing on all entities of a manufacturing ecosystem- manpower, machine & material and capital. The key components of what is referred to as *'Factory re-engineering program'* are production planning & control, systems, and processes at the shop floor, workforce training, and use of work aids and factory layout planning. It is estimated that 15% improvement in productivity in apparel units can result in improvement of EBIDTA by 30%, even after paying higher wages to workers in form of production incentives. At a country level, the presence of efficient firms would increase India's overall image in the world market attracting larger orders and also enhance wage-earning opportunities of the workforce.

2.3.2 Design and product development

Product development involves modification of an existing product or formulation of an entirely new product that satisfies a newly defined customer want or market niche by offering additional benefits. It has become important for companies to assess the gap in the market and come up with new or improved products to have an advantage over competitors. A successful product development strategy can help businesses increase revenue and gain profitability. Product development has been adopted by numerous businesses to stay competitive in the market. For example- Nike came up with the Dri-fit fabric which was an unheard product initially but later took the sportswear industry by storm.

Several global companies follow the approach of increasing revenue through product development. For example, Freudenberg, world's 2nd largest nonwovens company invested USD 350 Mn of its sales in research and development, which is 4.2 % of its sales of USD 8400 Mn. Additionally, it engaged nearly 2700 employees into its R&D sector. Freudenberg measures the effectiveness of its R&D activities as the share of new products which was nearly 25% of its total sales.

2.3.3 Process control and monitoring

Continuous development of any industry is based on its ability to add more functionality and quality in its products while keeping simplification of use. In this dynamic time & age, product time on market has rapidly reduced because of frequently changing consumer tastes & preferences. Goods are being produced in small batches, primarily on client request and according to specific demand. This means that frequent modifications and new solutions have to be introduced which requires continuous development

of the production process. Integrating the whole production system including manufacturing with the overall information flow becomes a very pivotal area for the development of any industry. Also, integration of production processes becomes especially important in this time of rapidly developing Internet-based applications, cloud-based computing etc. Thus integrating the company's IT systems with shop floor operations will lead to an efficient way of managing both the supply chain & the production process.

Textile manufacturing involves multiple individual processes which have a significant impact on the quality of the final output. Any fault generated during the sequence of operations which does not get identified at the right stage leads to the rejection of the entire lot at the final stage. Hence monitoring of operations becomes increasingly important in the textile industry in order to check & correct faults. Monitoring plays an important role in ensuring the agility of the manufacturing system and the efficiency of control and management.

Therefore, in order to achieve a sustainable production environment, process robustness, quick responsiveness to client demands, and the Indian textile industry require the application of advanced & integrated monitoring systems.

One such system is 'Enterprise Resource Planning' (ERP) software. It is a management software that helps in achieving transparency in an organization. It brings all information of an enterprise under one roof for ease of planning and decision making. Nowadays ERP is a necessity in the manufacturing industry especially in the textile and apparel industry because of a large number of people and processes involved.

Indian textile industry is lagging behind in this front. Majority of the industry has not integrated their systems with IT. The industry is still using manual & outdated ways for maintaining quality and efficiency thus losing on production & higher revenue growth opportunity. Integrating industry's manufacturing capabilities with new & developed IT system will be a factor in achieving sustainable development.

2.3.4 Service level improvement

In today's competitive world, it's important to keep customer service fresh and accommodating, staying up to date on the latest convenience services and the best new products. Without good customer service, customer acquisition and retention becomes difficult. Implementing new technologies is a great way to enhance customer services. Improving customer service requires time, but taking time to improve it using technologies will surely increase customer satisfaction.

Use of technology can help achieve manufacturers' shorter lead times, faster delivery services, more responsive and coordinated to anticipate to the buyers demand, ultimately improving the efficiency and making it more competitive by reducing costs.

2.3.5 Sustainable development

At the core of sustainable development lies the responsibility towards the environment. The mere definition of sustainable development says that it is an approach that aims to balance the economic development needs against an awareness of the environmental & social limitations. Staying within our environmental limits is one of the central principles of sustainable development.

Textile manufacturing is an energy, chemical & resource-intensive industry. Right from the growth of fibers i.e. cotton (agriculture) or synthetic (chemical synthesis) to the manufacturing of garments, textile industry consumes a large number of resources (land, water, coal, other fuels, chemicals etc.). Consumption of all these resources means the release of large amounts of harmful emissions, solid and liquid chemical waste. It is a double-edged sword as it impacts the environment by both depleting natural resources and by releasing harmful byproducts in the environment. Future development of any industry cannot be based on a model where no regards are given to the impact that it has on the environment. Hence for the textile industry, it becomes much more important to adopt the sustainable way of growth.

Companies are now adopting a green, low carbon & environmental friendly approach. This is achieved by incorporating advanced technologies for energy saving & emission reduction, resource recycling and implementing low-carbon & energy-saving projects. The first step in this is to build an Environmental Management System (EMS). EMS is a set of practices & procedures that enable an organization to reduce its impact on the environment and also increase operating efficiency.

Figure 9: Environment Management System

The second step involves using new technologies which consume low energy or using renewable sources of energy to meet our needs. This will not only reduce emissions but it will also help in saving the energy cost of companies. The third step involves creating a green & sustainable value chain wherein every input whether it's fiber, dyes, chemicals, are all derived from the green and environment-friendly way.

Indian textile industry has been on the wrong end of this subject as many companies do not comply with rules & regulation for environmental protection. However, Government of India has now stricken the norms about environmental compliance and has started taking firm actions against defaulters. Companies from their end have also started taking positive steps towards achieving more cleaner and greener ways of manufacturing.

3 Aligning Textile Value Chain with Global Demand

3.1 Global value chain and India's positioning

3.1.1 Major consumption & supply base

Key Importers

EU-28 and the USA are the largest importing nations accounting for approx. 59% of global imports (approx. US$355 bn).

Figure 11: Key Import Nations 2007 (% share in value terms)

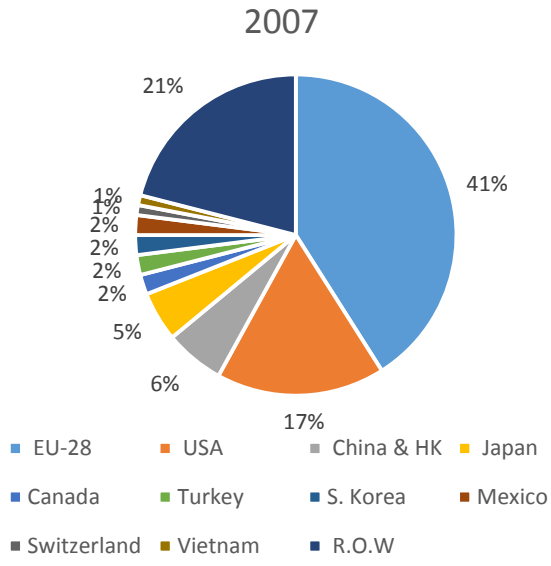
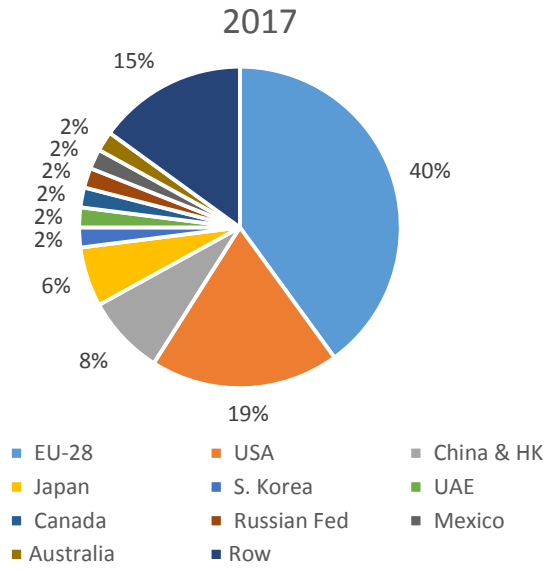


Figure 10: Key Import Nations 2017 (% share in value terms)



Data Source: UN Comtrade

It is worthwhile to note that the share of the top 10 global markets has increased from 79% in 2007 to 85% in 2017, which indicates faster growth of imports of new markets.

Key Exporters

China has remained the undisputed leader in the global textile and apparel exports. It accounted for around 37% share in global textile and apparel exports in 2017, which was substantially higher from the value of 34% in 2007. India maintained its second largest exporter position with 5% share, which has increased from 4% in 2007. India is followed by Bangladesh and Germany with 5% share each.

Figure 13: Key Export Nations 2007 (% share in value terms)

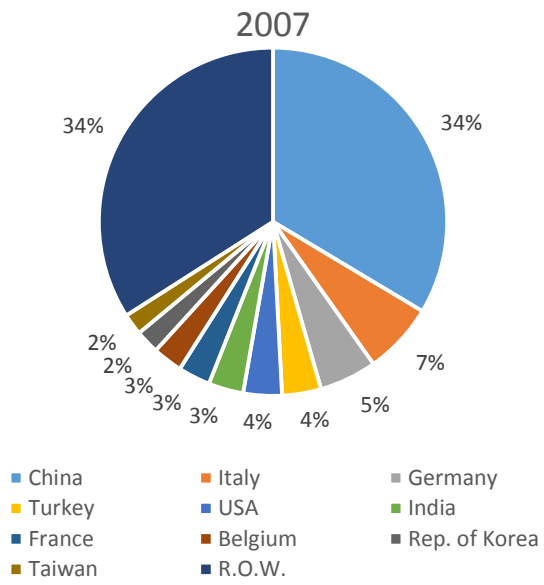
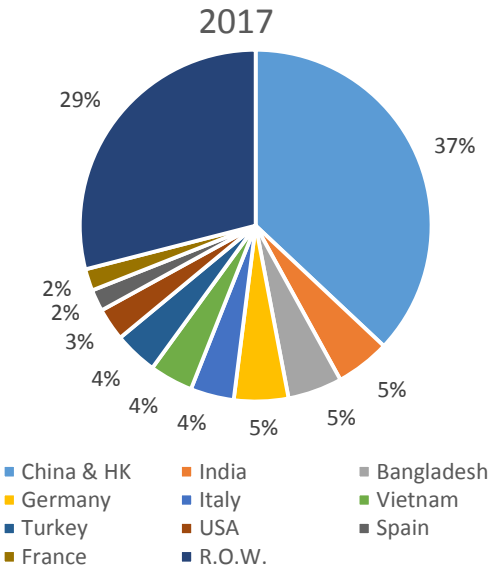


Figure 12: Key Export Nations 2017 (% share in value terms)



Data Source: UN Comtrade

Over the past decade, the share of the top 10 global textile and apparel exporters has increased from 66% in 2007 to 71% in 2017, which indicates that there has been a consolidation of global sourcing of textile and apparel products from these countries.

3.1.2 Emerging suppliers

The pace of growth of textile & apparel industry has given rise to new textile supplying destinations. With rising labor charges and inflation, China is no longer to be in the lucrative list of textile exporters. In the recent years, emerging suppliers like Bangladesh, Vietnam, Cambodia, Ethiopia and Kenya are likely to be the sourcing hubs in the global textile & apparel industry.

3.1.3 Buyer's preferences

Quality of the product and the service levels are the foremost things that a buyer seeks while purchasing products from any country. In terms of quality, India is amongst the top quality suppliers of yarn and home textile products as we have a well- established spinning sector with the latest technology. However, in the weaving and processing sector, due to the lack of the latest technology and technological know-how, India is not able to develop high-quality products, especially in synthetic textiles.

Also in the garment sector, India needs to develop strong capabilities in several products which are in high demand in the export market, for example, outerwear, suits, sweaters, lingerie etc. In order to achieve the quality levels required by international buyers, Indian textile industry needs to raise the performance of machinery, process and skill training of the manpower. Indian companies also need to focus on providing full package services to buyers and become long-term supply chain partners.

India is a reliable destination for buyers in terms of service levels. Indian companies (organized and unorganized) have the flexibility to cater to different order sizes (although there is a restriction in catering to high bulk orders in garments). However, India needs to further develop its product and services to tap the huge global export market potential.

3.1.4 Gaps in India's supply chain orientation

The Indian textile & apparel industries have one of the longest and extremely fragmented supply chains in the world, with existence of many intermediaries between the producer and the final consumer. Each intermediary leads to lengthening of lead times as well as costs. By the time, the product reaches the end customer, its price is increased manifold. For India to be a cost competitive destination, it has to reduce the aforementioned. The Government of India is also taking appreciable steps towards boosting this industry through various schemes which will have great positive impact in the future. An increasing focus on research and development in this sector by Textile Research Associations (TRAs) will help the industry in competing with the global market where the demand of innovative products in increasing.

Though Government has taken sundry initiatives to boost the sector in India, it is yet to exploit its full potential. Some of the major challenges faced by the industry today are:

- **Higher input costs compared to competing nations**

India has one of the highest costs of capital compared to most competing countries which affects the cost of production and thus its competitiveness. The present lending rate in India is 11.0% to 12.5% while that in other competing countries like China, Turkey, Vietnam, etc. ranges from 5 to 7%. Also, the power cost in India is much higher compared to competing nations.

- **Absence of fibre neutrality**

Globally, manmade textiles and garments are in high demand. But India, despite being second largest textile exporter in the world, lags in this category because of unavailability of manmade fibres at competitive prices. The textiles value chain in India bears a differential tax treatment while countries like China, Pakistan, Sri Lanka, Indonesia and Thailand follow a fibre neutral policy. There is a need to align our production with the world consumption patterns through the introduction of a fibre neutral tax policy.

- **Low technology level**

The Textile Industry suffers from the use of low and outdated technologies especially in the power loom sector, processing, etc. In general, spending on R&D, product development etc. by textile companies in India is quite low. As a result, India has had a nominal presence in high value added segments and innovation driven technical textile segment.

- **Poor Access to Credit**

Poor access to credit is one of the major hindrance in the growth of the sector. Major institutions providing input-credit are largely centralized and unable to reach the dispersed and largely home-based weavers and artisans. Also, very few institutional sources are there to provide working capital to them. Due to this, artisans/weavers depend on their own sources of fund to cater to their fixed as well as working capital needs.

- **Absence of FTAs with major markets**

Countries like Bangladesh, Turkey, Cambodia, Pakistan, etc. have duty free access in the major Textile markets of US and/or EU. Exporters from these countries enjoy duty advantage ranging from 10% to as high as 34%, depending on product. The absence of a FTA in the case of India with EU and US makes

Indian exports to these nations significantly more expensive compared to that from various other competing countries.

- **Fragmented nature of industry lacking economies of scale**

Indian textile sector is largely unorganized and small in size, especially the fabric manufacturing, fabric processing, and garment manufacturing segments. These segments suffer from lack of capacities and use old technologies. Capacity expansion or technology upgradation is a big challenge for these small and medium scale units with limited resources because of the higher risks perceived by lenders and also because of lack of awareness.

3.2 Orientation of supply chain

3.2.1 Building customer centric approach

The center of delivery models for manufacturers and factories are their buyers and markets who are now looking for more connection, more adaptability, and more responsiveness. Shortening production cycle times, a high degree of product variation & personalization are the fast becoming prerequisites for the manufacturers. Buyers want more designs & variants, specific to their individual usage profile & requirements with zero tolerance for quality. Manufacturers must become more customer-centric, delivering products that do more and meet better buyer needs, while driving new user experiences. To have a production model that delivers intelligent and appropriate customization of basic product design, production environments must be balanced which is the key to drive “mass customization”. This requires escalated time-to-market structure which can be achieved through execution accuracy, agility, more efficient and accurate processes for ensuring quality at all levels and speed delivery.

The new levels of communications at every level across the value chain, manufacturers will be able to collaborate more effectively and respond to competitive pressures, shortening product lifecycles, rising demand for product customization. This will make both the factories and market to be more accurate in data, more efficient in traceability, thus being more efficient in production enabling manufacturers to reach new conclusions & make processes better. This can be done by using digital, smart sensors enriching experiences and design evolution.

3.2.2 Adopting new methods of manufacturing

Industry 4.0 has different names coined like the Internet of Things, additive manufacturing, man-to-machine communication, smart manufacturing, and artificial intelligence. It is a revolutionary wave in the industry to transform the ways of manufacturing making the factories ‘smart’. Cheap labor and working with traditional manufacturing systems like Unit Production System (UPS), Progressive Bundle System (PBS) etc. will not have the supremacy as before against the newly adopted manufacturing systems. The new manufacturing systems are detailed below:

- **Micro Factory**

Digital Textile Micro Factory is a model of future manufacturing that will enable the production of customized products in a competitive way, near to meet the customers’ demand through the digital networking of automated processes. In this, the demonstration of every production stage right from design, color management & printing, digital cutting, assembling, labeling to finishing with the use of state-of-the-art digital and automated machines are conveyed. Micro factories facilitate the type of

production that is responsive to the market ensures optimized use of materials, hence contributing to greater levels of sustainability.

- **Speed Factory**

Speed factory offers the traits of swift and faster production. Faster the manufacturing, faster the product in the hands of the customer. The concept occurred from the gap between sourcing and consumption destinations. The time measured in months for production can be reduced to hours, ensuring trendy products and no huge inventory. It aims at spurring domestic manufacturing, by slashing transportation costs, reduced manufacturing costs and reduced human touch to save time & money, with higher quality. Adidas Speed factory and Under Armor Lighthouse are examples of speed factory.

- **Store Factory**

Store factories use the state-of-art technologies such as 3D body scanners, 3D printers to manufacture products directly in store according to the customers. The concept of the store factory caters to the growing demand for customization and less inventory. Boston based label Ministry of Supply has installed Shima Seiki's WHOLEGARMNET MACH2X knitting machine offering customized 3D knit blazer in just 90 minutes.

- **On-demand Manufacturing**

The fast-paced fashion can be met by on-demand apparel manufacturing system using fully automated that pumps finished goods to the customer basket at a much faster speed. In this, the apparel products will be manufactured in batches based on customer shipping address, geographic locations, fabric requirement etc. For systematic on-demand manufacturing, the inventory in the form of raw materials like fabric, plastic, paper, and leather needs to be maintained. Amazon has recently unveiled on-demand manufacturing system which is likely to influence the apparel industry.

- **Cluster Factory**

Cluster factory is primarily the unorganized set-ups within an apparel manufacturing hub. In the maze of lanes, each lane specializes in a certain operation of apparel manufacturing- whether it be the operation of cutting, sewing or finishing. The entire hub can be viewed as one massive assembly line. These cluster factories excel in the optimum use of man and machine & achieving productivity due to the repetitive nature of tasks.

3.2.3 Product diversification and exploring new markets

In this strenuous market environment with product maturity and international competitiveness, Indian textile & apparel industry need to explore more products to keep its mark in the global landscape. Generally, diversification is considered to be a corporate strategy for a company, which seeks to increase profitability through greater sales volume obtained from new products and new markets. Despite huge potential to gain more share in the markets, Indian exports to the destinations is only 5% of the demand. To survive in this competitive landscape, manufacturers have to heed in finding new products, better services, new markets and new revenue streams.

3.3 Integration of supply chain

3.3.1 Large scale investment

Indian textile industry is at a tipping point; moving forward from a low value-added product to high-end products. There is a vast scope on the horizon for India to improve its textiles consumption and production as it is expected to become a burgeoning growth sector. With the increase in investments in India, we will be able to further tap into the huge domestic and global market.

Globally, the textiles industry is characterized by huge investments in research and development to develop novel products with more functionalities and features. The growth of India as a manufacturing hub for textiles will depend on the attractiveness of India's domestic market and attracting investments in high-end textile products to cater to global demand.

The textile industry can achieve its economies of scale by doing large-scale investments from foreign and domestic investors. Investment can be greatly amplified through improvement in ease of doing business, competitive lending rates, and a fiber neutral tax structure. Additionally, partnerships of financial and technological know-how sharing with global players will help in making our presence felt globally. Alongside various partnerships, focus on research and innovation has to be intensified domestically to make our products more R&D intensive and globally competitive.

3.3.2 Consolidation of unorganized manufacturing

Indian manufacturing scenario is fragmented into different areas. Majorly the spinning is the most organized sector of the textile value chain whereas all the other sectors happen to be unorganized. Woven fabrics are being produced in Surat, Delhi NCR, knitwear production happens in Ludhiana, Tirupur whereas garmenting is done in Bangalore, Delhi, NCR, and Ahmedabad. The unorganized manufacturing is poor in shape leading to a slowdown in the growth of investment, bottlenecks of infrastructure, fluctuations in exchange rates & raw material prices and rising import intensity in the machinery.

The revival of manufacturing in the sector can be led by the consolidation of the unorganized manufacturing bringing them under one umbrella. The sector is labor intensive and such reforms will lead to the generation of employment and achieving a more inclusive economic growth of India. This will also help to lessen the supply side challenges and help to reach the target customers at the right cost.

3.4 Role of trade agreements in opening up potential markets

Indian textile industry is a less attractive destination for investments due to the tariff barriers it faces in major international markets, high input costs, low margins, etc. In fact, reverse FDI flows in the sector driving new investments to compete countries like Bangladesh, Vietnam, Ethiopia etc. is a major challenge.

In order to achieve the desired growth in our textile and apparel industry, it is imperative to get large-scale investment both foreign and domestic. To make Indian textile and apparel industry an attractive destination for investment, certain policy initiatives need to be taken such as:

a) Early finalization of FTA with EU to address the tariff disadvantage of the industry vis-à-vis competing countries.
b) Lending rates to be made more competitive for textile sector
c) Establishing a fibre neutral duty structure to align industry with the global demand

d) Incentivizing setting up of mega textile clusters to promote scale in the industry.

Earlier, strict labour laws in the textile industry were also a problem for the investors. However, these labour laws have now been relaxed in the recently released Rs. 6,000 cr. garment sector package. This move by the government has been very well received by the industry.

Steps like these will further help in attracting the desired investment in the sector.

4 Enhancing Competitiveness and Attracting Investments

4.1 Building an ecosystem to achieve global standards

4.1.1 Improving manufacturing practices

Technology and innovation are synonymous with growth and development for any sector or industry. Globally renowned companies have become successful by continuously evolving their systems & processes to not only meet the ever-changing demands of consumers but also by introducing newer and better products. This evolution is the result of an amalgamation of new technologies and improved methods of manufacturing which are efficient and highly productive. This aspect of manufacturing has been neglected by the Indian textile industry as only a handful of large and organized companies actually follow any type of systematic procedures for manufacturing and focus on incorporating modern technology into the system. This leads to higher waste generation, poor output quality, more defects and faults which in turn results in the decrease in the value of finished products.

To improve manufacturing performance of the textile industry of India, it becomes imperative to incorporate more efficient methods of manufacturing and newer technologies to complement the system.

4.1.2 Enhancing labour skills

Indian textile industry needs requisite technical know-how and the skilled manpower required for the manufacturing of high-end 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 textiles in the curriculum of various universities/institutions at graduate and postgraduate 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.

4.1.3 Stricter adherence to compliance and regulations

There is a growing pressure on textile companies around the world to become sustainable and green. This pressure comes from the government, from society, environmental campaigners & NGOs. The result of which emerged in the form of various laws & regulations on the right ways of processing textiles & apparel. The government has built multiple compliances which range from labor compliance, social compliance, environmental compliance, and compliance for waste disposal & other manufacturing compliances. The objective of these rules & regulation is to provide a stipulated framework for the industry to work in such that it does not cause harm to the society & the environment.

On an average, a manufacturing company in India has to follow around 70 compliances and file over 100 returns every year. Government authorities such as Labour Department, Director of Factories, PF & ESI office, Pollution Control Board etc. regulate these compliances. However, the key issue is that these compliances are not followed properly in the textile sector and the reason again is the fragmented state of the industry. Lack of awareness & training and the high cost of compliance makes the implementation of compliances complicated especially for small-scale industries. This non-compliance from the industry is not only harmful to the environment but it also adversely impacts the image of the Indian textile industry in the global market.

Although the government has made stringent laws & regulation, if the industry will not comply with those regulations, sustainable growth cannot be achieved. For this, a joint effort between government & industry is needed wherein government can provide an accessible platform for the textile companies for eco-compliances while the industry must strictly implement the regulations laid by the government.

4.1.4 Improving logistics and connectivity

The presence of a robust logistics-related infrastructure and an effective logistics management system facilitates the seamless movement of goods from point of production to point of consumption. The progress of the textile sector holds an immense value for the Indian economy, and improving logistics would increase exports, generate employment and give the sector a better place in the global supply chain.

There is a tremendous scope for the further jump in India's rankings if the existing infrastructure and cost efficiencies of the sector are addressed. The present system leads to redundant manual documentation and procedural complexities which is severely denting the performance of the trade and resulting in delays. To ensure the ease of trading in the global and domestic arena it is important that steps are taken to develop the logistics and improve connectivity in the sector in a well-integrated manner. It can be achieved by harnessing the potential of emerging technology, bringing investment, creating human capital, removing bottlenecks, single window clearance system, and simplifying procedures.

4.2 Promoting investments in indigenous manufacturing

4.2.1 Manufacturing of specialized raw materials

Specialized raw materials help to increase the attractiveness of India as a manufacturing base for buyers all over the world. Indian textile industry needs to understand and capitalize on its potential market opportunity by aligning its investment towards the global demand of different products. The Indian textile industry needs to keep an eye in emerging product categories such as technical textile, functional textile, non-woven etc. and target their growing markets as well. Keeping pace with the requirements of buyers in export markets and responsiveness to it can help exporters to have better competitiveness.

4.2.2 Manufacturing of world class textile machineries

Over the years, India has established a strong and vertically integrated supply chain in textile and apparel manufacturing. Manufacturing in India will give a significant competitive advantage to the global machinery manufacturers in providing better service to buyers, especially in terms of spare parts.

The present textile machinery manufacturers are already exporting all over the world and the fresh investment in this sector will scale it up many times. Once machinery manufacturers decide to set up their unit in India, spare parts suppliers will also follow them. Many Indian companies will also start manufacturing the machinery parts looking at the potential future demand. A similar scenario has already been observed in the automobile industry. Once spare parts availability becomes easier and quicker, it will also help in increasing the market size of those machineries.

4.3 Role of government policies in enhancing competitiveness

Government role in achieving these sustainability goals would be of utmost importance. A collaborated effort from the industry and the government is required in order to implement the growth plans for the textile sector.

Government Support: Government has been constantly putting forth the efforts to introduce schemes & policies for the making the industry more sustainable in its approach towards growth:

a) **Technological Up gradation Fund Scheme (TUFS)**: This is a flagship scheme of ministry of textiles under which capital subsidy is given to textile companies for the purchase of new machinery. Following benefits are provided under the scheme:

Table 5: Benefits under ATUFS scheme

S. No.	Segment/Unit Type	Rate of Capital Investment Subsidy (CIS)	CIS cap per individual entity
1	Garmenting, Technical Textiles	15%	Rs. 30 crore
2	Weaving for brand new Shuttle-less looms (including weaving preparatory and knitting), Processing, Jute, Silk and Handloom	10%	Rs.20 crore
3 (a)	Composite unit/Multiple Segments – if the eligible capital investment in respect of Garmenting and Technical Textiles category is more than 50% of the eligible project cost	15%	Rs. 30 crore
3 (b)	Composite unit/Multiple Segments –If the eligible capital investment in respect of Garmenting and Technical Textiles category is less than 50% of the eligible project cost	10%	Rs. 20 crore

Data Source: Ministry of Textiles, GoI

b) **Integrated Processing Development Scheme (IPDS)**: This scheme provides a grant up to 50% of the project cost (excluding land cost) with a ceiling of Rs. 75 Crores for projects with Zero Liquid Discharge Systems and Rs. 10 Crores for projects with conventional treatment systems. Support for marine discharge projects would be analyzed on a case to case basis with a maximum ceiling of Rs. 75 Crores. The project cost shall be borne by the Center, State, Beneficiary, Bank loan in the ratio of 50:25:15:10 respectively.

c) **Lean Manufacturing Competitiveness Scheme for MSMEs:** The scheme provides assistance for implementation of Lean Manufacturing techniques primarily cost of lean manufacturing consultant (80% by GoI & 20% by beneficiaries).

Initiatives Required: To conceptualize this growth through sustainable investments & innovation, government needs to promote this idea across the industry. Some of the policy initiatives which the government should address are mentioned below:

a) **Simplification of laws & procedures for industry compliance:** There are a lot of challenges which industries are facing due to lack of clarity of compliance norms & considerable amount of time being spent on getting them cleared. Government should work towards simplifying these laws in order to reduce compliance related load.

b) **Promoting Self-Regulation & Self-Certification:** Biding to the idea of minimum government & maximum governance, Government should give power to companies for self-certification. This would

avoid the need of continuous inspection & monitoring and companies will also benefit from uninterrupted operations.

c) **Introducing Sustainability Related Incentives:** As mentioned in the earlier segments, the cost of sustainability is not viable for small scale industries. Currently, there is no incentive for the industry to adapt sustainable methods and hence in order to promote the culture of sustainability, government should come up with some incentive schemes.

1. Incentives for putting up R&D facilities
2. Incentives for companies with sustainability standards & certification
3. Incentives for taking up green initiatives

About FICCI

The Federation of Indian Chambers of Commerce and Industry (FICCI) is an association of business organizations in India established in 1927. FICCI draws its membership from the corporate sector, both private and public, including SMEs and MNCs. The chamber has an indirect membership of over 2, 50,000 companies from various regional chambers of commerce. It is headquartered in the national capital New Delhi and has presence in 12 states in India and 8 countries across the world.

FICCI is a non-government, not-for-profit organization involved in sector specific business policy consensus building, and business promotion and networking. It provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community. It organizes conferences, forums, exhibition, trade fairs, etc. bringing the industry insight forward.

About Wazir

Wazir Advisors is a Management Consulting assisting its clients in strategy formulation and implementation, forming alliances and joint ventures, investments and market understanding, sector analysis and due diligence-thereby providing end to end solution spanning the complete business cycle in textile value chain.

Having worked with leading Indian and International companies, public sector organizations, Government departments, development agencies, trade bodies etc., Wazir has a deep understanding of global textile sector dynamics and right connect with the people who matter.

Wazir's team of textile experts possess experience across function – projects, operations, sourcing and marketing in the sector. The team members have worked on strategy and implementation assignments in all major textile and apparel manufacturing and consumption base. Wazir leverages its body of knowledge, contact and combined expertise of its team to deliver value to clients.

Scope of Our Operations

Strategy	Implementation	Alliances
Wazir delivers practical, implementable strategies for clients to meet their objectives. Be it corporate strategy intending to enhance profitability or sector growth strategy to support MSMEs or evaluating Government scheme to access its impact, we are geared to advise our clients efficiently and effectively. Our services include: • Sector Mapping and Growth Strategy • Policy Formulation Support • Government Scheme Evaluation • Corporate Strategy • Market Opportunity Assessment • Market Entry Strategy • Location Analysis • Business Performance Enhancement • Product Diversification • Marketing and Distribution Strategy	Wazir provides implementation services to textile and apparel sector entities to convert the plans into reality. Whether it is to manage a Government scheme or to improve productivity in apparel factories or to identify the most suitable technology; we have in-house competence to cover all the critical elements of implementation. Our services are: • Project Management and Monitoring • Re-modeling of Manufacturing Plant • Process Re-engineering • Productivity Improvement • Supply Chain Optimization • Feasibility and Techno-Economic Viability (TEV) Study • Investment Promotion • Cluster and Industrial Park Development	Partnerships and collaborations are ways to achieve accelerated growth, expand market reach and attain technical advancement. Realizing the importance and need of inter-organization alliances in textile and apparel sector, Wazir has developed broad range of services to support companies and organizations looking for inorganic growth globally. Our services include: • Company Due-diligence • Joint Venture • Marketing Tie-up • Technology Transfer • M&A Execution • Strategic and Financial Funding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