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# The Edge

by  pci XYLENES & POLYESTERS &  wazir  
ADVISORS

Investment opportunities in Man  
Made Fiber (MMF) based Textile  
Manufacturing in India



# Investment Opportunities in Man Made Fiber (MMF) based Textile Manufacturing in India

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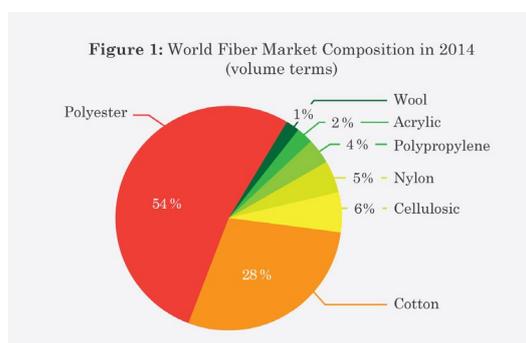
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# Global Textile Industry

## Overview

Textile and apparel manufacturing is a heterogeneous and rapidly changing industry, involving a gamut of activities from fiber manufacturing to the finished products. The global textile and apparel trade stood at US\$ 781 Bn in 2013 and is expected to grow at ~6% CAGR to US\$ 1,180 Bn by 2020 with apparel occupying the major share followed by fabric and yarn. The industry directly employs well over 170 Mn people worldwide, predominantly in Asia.

In 2014, the global fiber consumption was around 87 Mn tons, of which manmade fibers constituted around 62 Mn tons. Polyester constitutes around 54% share while cotton has around 28% share of total fiber consumption. All other fibers, although very important in the total mix in terms of functionality and performance, are insignificant in volume terms.



Source: PCI Analysis

China occupied the majority share of 52% of total global fiber consumption in 2014, followed by India and other South Asian countries accounting for around

11% share each. The textile production is strongly centered in Asia and the South Asian countries contribute a significant part of it. The growth in global trade and concentration of trade in Asia will drive investments in Asian countries having strong supply base for textile and apparel products. India will have an advantage from the investment point of view due to its strong manufacturing competitiveness and presence of complete supply chain.

## Manmade Fiber vs. Natural Fiber

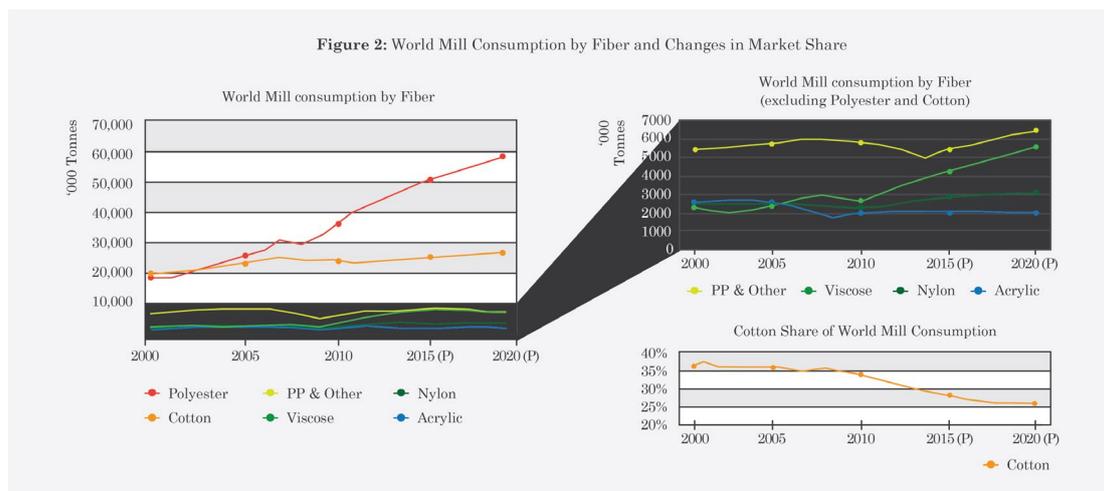
The major raw material used in the global textile industry are polyester and cotton, while fibers like nylon, viscose are growing fast. Polyester is expected to dominate global textiles in the foreseeable future in almost all end use categories, while cotton will slowly lose its share.

Within manmade fibers, polyester has a huge share of 76%. Fibers like nylon, acrylic and polyolefin are more expensive and used mainly for specialized applications like technical textiles.

Cotton has always been and will continue to be a crucial raw material to the textile industry, but due to supply side pressures and price volatility, it may struggle to satisfy growing demand in future, which in turn will increase the bias towards synthetic fibers, especially polyester. Cotton is losing its dominance due to efficiency, cost and availability of manmade fibers.

In recent years, polyester has shown an impressive growth at around 7.6% CAGR from 2000-2014 and has gradually eaten up the share of not only other manmade fibers but also cotton, the share of which in global fiber consumption is expected to decline from 38% in 2000 to 26% in

2020. Total polyester fiber sales were ~47 Mn tons in 2014, of which 68% was filament and 32% was staple fiber. The growth rate and absolute volume of polyester has exceeded significantly as compared to cotton or any other major fiber.



Source: PCI Analysis

## Key Fiber Trends

The impressive growth and volume of polyester fiber consumption is driven by the trends in the global market. The changes in the consumer lifestyle and attitude drive the trends in the end products and the impact of such trends is passed along the textile value chain through combination of requirements centered on cost, performance and availability. The nature and combination of these parameters steers the selection and use of specific fiber group.

Following key trends have been identified:

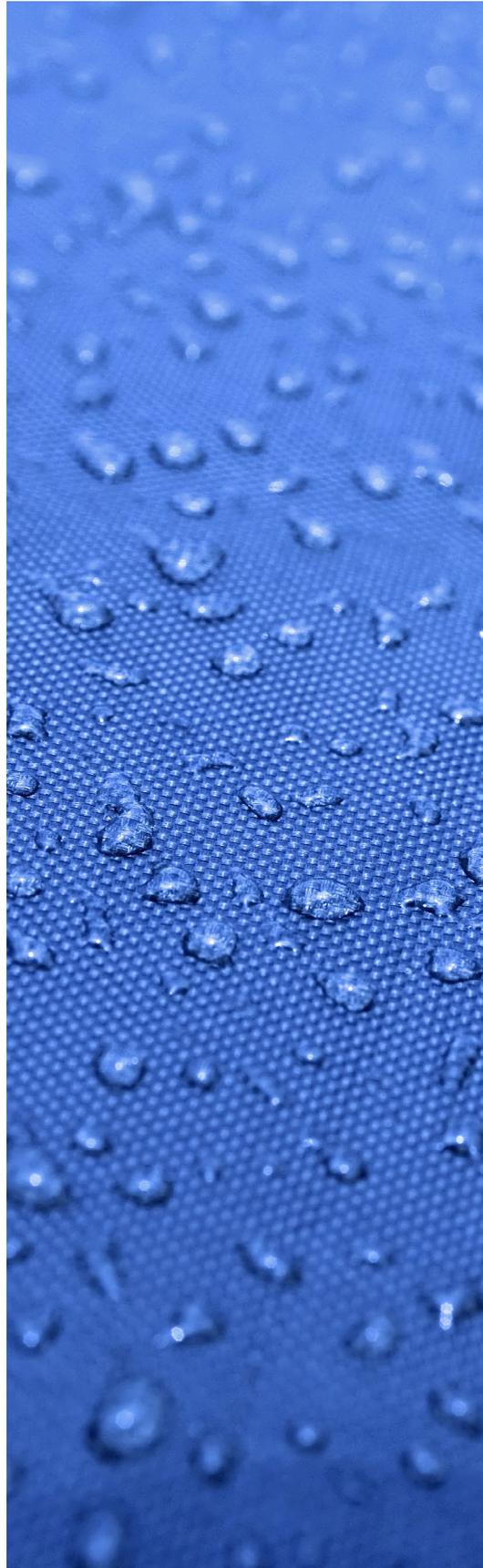
- Increased emphasis on fitness and health as more and more people are opting for sports and physical

exercises due to which they look for comfort along with performance.

- Fashion cycles are very short; brands frequently introduce new products and styles in the market.
- Consumer has become demanding and is seeking good quality at affordable prices.
- With increasing awareness about environmental issues, the concern of sustainability is growing.
- Requirement of low-cost and high performance material for automotive and industrial use.

Owing to the above trends in the global

market, polyester has proved to be the most cost-effective and adaptable fiber type, and has increasingly picked up the bulk of new business growth. It is recyclable and can be blended with other fibers like cotton and spandex for performance requirements. Polyester provides a combination of comfort and performance as it can be easily processed to improve the fiber properties. That is why, it has wide acceptance in various end use categories like sportswear, leisurewear, women dresses, home textiles, automotive, carpet, other industrial segments etc.



# Indian Textile and Apparel Industry

## Overview

India is the second largest manufacturer of textile and apparel in the world, next to China. The Indian textile and apparel industry was estimated at US\$ 115 Bn in 2014 and is expected to grow at a CAGR of 13% to attain a size of US\$ 243 Bn by 2020. Textile and apparel industry contributes to about 6% of the US\$ 2 Trillion Indian economy.

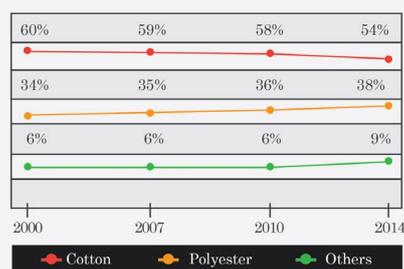
Apart from its financial scale, the industry holds importance from the employment point of view as well. The textile sector is the second largest provider of employment after agriculture. It provides direct employment to ~45 Mn people and indirect employment to an additional ~60 Mn people. The textile and apparel industry is also a major contributor to India's total export earnings. Currently, it contributes to ~12% of total export earnings.

The domestic market of textiles and apparel has grown at 11% CAGR over the last five years and was estimated at US\$ 76 Bn in 2014. It is expected to grow at 12% CAGR to attain a size of US\$ 154 Bn by 2020.

Indian textile and apparel market is still cotton dominated, while the global market has been inclined towards manmade fibers due to various obvious benefits. Cotton accounted for almost

54% of total fiber consumption in 2014 while polyester had a share of around 38%. However, it is interesting to note

Figure 3: Fiber Consumption Trend in India (volume terms)



Source: Wazir & PCI Analysis

that the share of Polyester in total mill consumption has been witnessing an increase in recent years, rising from 34% in 2000 to 38% in 2014, replacing the share of cotton majorly. It is expected that the consumption growth of cotton fiber will further decelerate in future due to factors discussed earlier.

India is the second largest exporter of textile and apparel in the world with a share of ~5% of the global trade. It exported textile and apparel goods worth US\$ 39 Bn in 2013-2014. With improved competitiveness in the international market, it is expected to grow at a CAGR of 15% and reach US\$ 89 Bn by 2020, provided India realigns its export basket mix with the global one.

India's presence is still insignificant in global trade of manmade fiber based textile products. Out of total 857 textile and apparel commodities (at

6 digit HS code level) traded in 2013 there are 382 commodities in which India had a share less than 1%. The collective trade in these commodities was ~US\$ 278 Bn, while India's trade was only ~US\$ 858 Mn which is just 0.3% of the total trade. Amongst the top 15 traded MMF based categories, India has a comparatively higher share in categories like polyester filament yarn, carpets, dresses, blouses and t-shirts. However, in 10 of these top traded categories India's share is very low (<3%). India should focus on those product categories for improving its export significantly.

**Table 1:** India's Trade Share in Top Traded MMF Based Textile, Apparel and Technical Textile Categories in 2013

Categories	World trade (US\$ Bn)	India exports (US\$ Bn)	India's % share
Sweaters	25.1	0.1	0.3%
Trousers	25.1	0.5	1.9%
Jackets	15.1	0.2	1.1%
T-Shirts	14.6	0.7	5.0%
Non Wovens	14.1	0.1	0.6%
Carpets	13.2	1.1	8.3%
Dresses	12.9	0.7	5.3%
Hosiery	12.7	0.0	0.3%
MMF Knitted fabric	12.3	0.0	0.1%
Brassieres	9.5	0.1	1.1%
Blouses	9.4	0.8	8.2%
Polyester FY	9.1	1.3	14.2%
Overcoats	8.1	0.0	0.4%
Spandex Mix Knitted Fabric	8.1	0.02	0.3%
PTY (Polyester Texturized yarn) Dyed Fabric	6.8	0.16	2.3%

Source: UN Comtrade & Wazir Analysis

## Trends in Domestic Market

India's economy has been one of the best performing economies in the last decade and is expected to maintain a high growth rate over the next 10-15 years. Economists have projected 7% - 9% GDP growth for India in the coming decade. Such a high economic growth will be the major driver of an increase in demand and consumer spending in India, which will include spending on textile and apparel.

In addition, Indian consumers' affinity towards brands and organized retailing is increasing, which is helping the consumption growth of all products including textile and apparel. Organized retailing in India currently stands at only 8% of the overall retail market of US\$ 550 Bn. Within this, apparel is the single largest category with a share of ~ 35%. The vast population base and growing economy has caused global retailers and brands to enter the Indian market, either on their own, or in partnership with a local player. With growth of disposable income, favourable demographics, changing lifestyles, and a high potential for penetrating non-metro urban markets; the share of organized retail in India is expected to reach 31% by 2025, within which ~ 42% will be apparel. Looking at this huge opportunity, leading international brands and retailers, which are not present in India today, are actively exploring the market entry options.

India is also witnessing growth of its aspiring middle class, who are

graduating from the so called 'Deprived' category. Many of the aspiring middle class households will graduate to upper middle class category, who tend to seek value and consume premium products. India, by definition, will also experience a significant wealth accumulation at the top of the pyramid. Households categorized under 'Globals' and 'Strivers' have equal consumption capacity as any other consumer of typical developed countries. This shift in number of households within different income brackets will improve the consumption of products and services, which will most definitely include textile and apparel as a lifestyle choice to enhance fashion.

With more than 60% of the population between 15-59 years old and 49% of population less than 25 years old, India has one of the youngest population bases. Its population is youngest among the BRIC countries. As the population is increasing in the productive age group of 20 – 60 years old, the percentage of dependents is gradually declining and it is helping the growth of discretionary income of India's fast developing population. India will certainly benefit from this demographic dividend for a long time, which will help in driving future consumption growth trends beyond the average expectation.

There has been a continuous rise in the number of working women in India over the years and it is expected to constitute more than one-fifth of the total workforce in the organised sector by 2020. As a result, the number of

double-income households is increasing fast. The growth of household income is supporting the textile and apparel consumption growth, especially in the important women's wear segment, which has a very consistent and variable fashion component.

Consumption of technical textiles can be majorly divided into two categories – by industry & by consumer. The domestic technical textile market is growing in both fronts.

#### *Growth of Industry Sectors*

A large number of technical textile products are consumed by industries like automotive, healthcare, infrastructure, oil & petroleum, etc. With increase in investments in these industry sectors and increased awareness level of the workers of those sectors regarding personal safety, consumption of technical textiles is increasing rapidly.

#### *Increased Awareness about Hygiene & Safety*

The increased consumer awareness about hygiene & safety is supporting the growth of technical textile materials like baby diaper, sanitary napkins, wipes, high visibility clothing etc. in domestic markets. The increased per capita income level has also helped to make those products affordable to a wider section of the population.

#### *Easier Availability of the Products*

The Government of India has taken many initiatives to increase investment in technical textile sector of India. This

has decreased India's dependence on imported finished products within the wide ranging technical textile category and has strived to make those products easily available at a lower price. This has also supported the consumption growth of technical textile materials both at industry and consumer levels.

#### *Infrastructure Development*

India has now focussed on developing its infrastructure including roads and railway. Moreover, many of the road construction is happening under BOT (Build, Operate and Transfer) model, where the developer has the focus on improving the quality and lifespan of the road. This will support the consumption growth of Geotextile products in future.

## Trends for Export Market

India is now being widely considered as the 'Next China' for sourcing textile and apparel products by global buyers. The following factors are playing major roles for India's increased share in international textile and apparel trade.

#### *Government Scheme for Export Promotion*

The Government of India has several schemes for the export promotion of textile and apparel products. These schemes help Indian manufacturers to increase their export through better marketing initiatives and by offering products at a competitive price.

Some of the major export promotion schemes are - Marketing Development Assistance Scheme, Technology Mission on Technical Textiles, Market Access Initiative Scheme etc.

#### *Next Alternative to China*

India is not only the second biggest manufacturer of textile, apparel and technical textile, it also offers diversified product baskets across the value chain at a competitive price. The design capability and flexibility of textile production lines have made India a sought after sourcing base for value added products and textile products of smaller lot size.

Advantages such as an English speaking industry representation, unbiased legal systems and a wide scale proven democracy have all provided India with a chance to score more than its nearest competitor China.

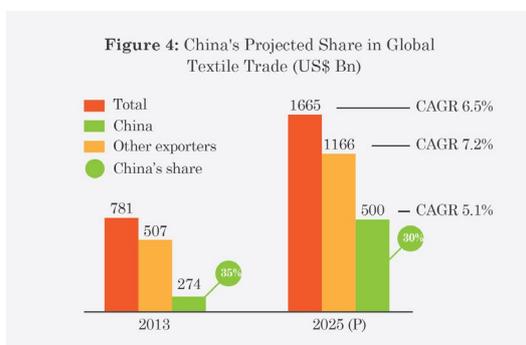
In the medium and longer term, domestic demand for apparel in China is slated for a high growth, which will eventually steer the primary focus of Chinese textile and apparel industry away from exports towards higher domestic use.

Moreover, the manufacturing cost of China at least in the developed eastern coastal provinces, is going up, which is making its textile industry less competitive in global markets.

There is also a specific shift in focus of China from just primary industries like textiles towards innovation driven industries like aerospace, artificial intelligence, biotechnology, information systems, photonics,

nanotechnology, nuclear physics, and robotics, etc., which will help the country to increase its wage rate. Obviously China's textiles will advance in sophistication and value addition at the same time.

All the above points put together, China's share in international trade of textile & apparel will likely come down from the present 35% to 30% by 2025. The global trade in textiles and clothing during this period which was US\$ 781 Bn in 2013 is expected to grow at a CAGR of ~6%, whereas Chinese exports will lag behind registering growth of ~ 5%. This lower-than-market performance will create a vacuum in value terms of ~US\$80 Bn by 2025. China's loss of share in global trade will undoubtedly throw up opportunities for India to take up a more significant market share.



Source: UN Comtrade & Wazir Analysis

### Trade Agreements

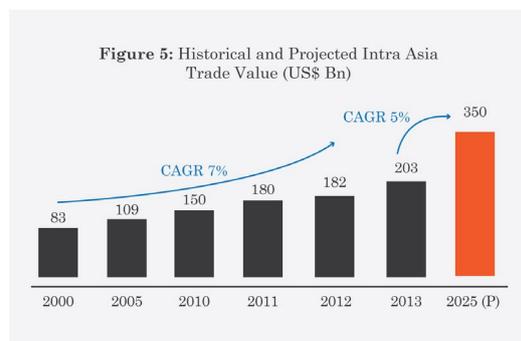
Bilateral and multilateral trade agreements play a major role in international trade. India has already signed CEPA with Japan. It has trade agreements with other Asian countries like Bangladesh, Sri Lanka, etc. These trade agreements are helping India to improve its exports of textile and

apparel. The Free Trade Agreement (FTA) with EU is also at a very advanced stage of negotiation. Once signed, this will act as a game changer for this industry as EU is the biggest trading block for India in textile and apparel.

### Growth in Intra Asia Trade

Asia has emerged as a major manufacturer-supplier of textile and apparel products to the developed and developing world. But now, the region is on the verge of entering into a new phase wherein its own consumption of textile and apparel products is going to become very significant.

The last decade has seen a significant rise in the intra-Asia trade of textile and apparel products. In 2000, it accounted for ~20% of the global textile and apparel exports which grew to 26% by 2013. In 2013, the intra-Asia trade stood at US\$ 203 Bn registering a steady growth of 7% over the past decade. It is expected to grow at a CAGR of 5% to US\$ 350 Bn by 2025. India will surely benefit from this trend as it has already signed trade agreements with different countries and is considered as the second biggest supplier for textile and apparel.



Source: UN Comtrade & Wazir Analysis

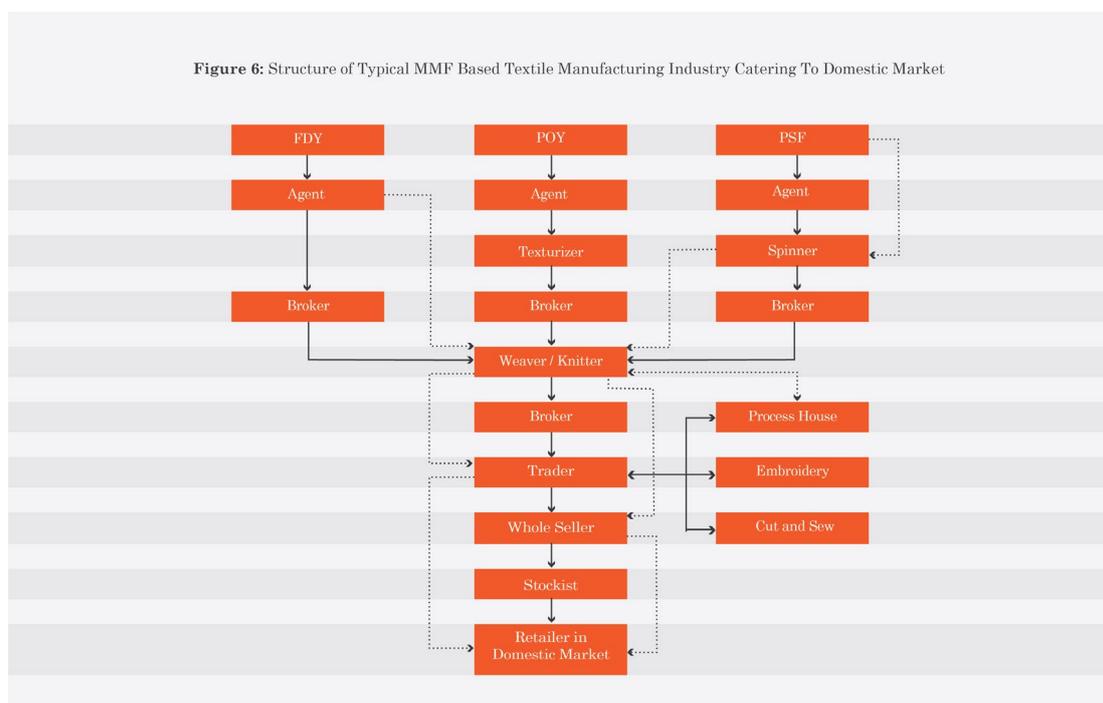
# Present Structure of MMF based Textile Manufacturing in India

The textile industry of India covers all the segments of MMF based textile value chain i.e., from fiber / filament manufacturing to cut & sew operation of final products.

India is the second largest producer of polyester fiber globally with presence of large companies. We occupied a share of ~8% in global polyester fiber production in 2014. The polyester based textile value chain of India beyond fiber can be divided into organized and unorganized sectors. The unorganized sector primarily consists of small and medium scale units which normally focus on only one process (e.g.,

weaving or knitting, processing etc.). On the other hand, organized sector units have large, more integrated or composite type production capacities and normally focus on multiple processes (e.g., spinning + weaving or weaving + processing etc.). Polyester fiber manufacturing and spinning are majorly organized sectors, whereas many small and medium enterprises exist in weaving, processing, cut and sew and embroidery sectors. Participation of the organized sector is limited in the fabric manufacturing (weaving & knitting) and processing sectors.

Figure 6: Structure of Typical MMF Based Textile Manufacturing Industry Catering To Domestic Market



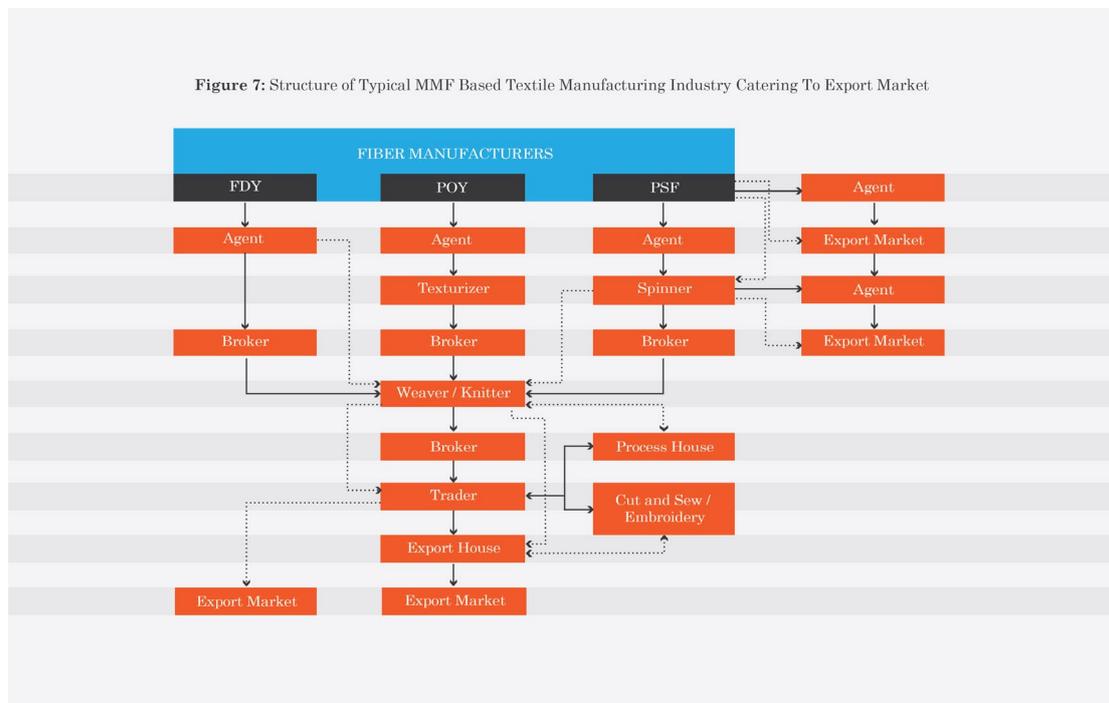
Source: Wazir Analysis

Industry structure is also different for domestic and export markets. A major part of the domestic market consumes mass products and the market is very much price sensitive. It is mainly catered by the unorganized sector, which normally has low volume or small scale manufacturing capacity and generally use outdated technology. These units are typically not capable of supplying to the export market as the quality expectation is much higher in these international markets. A typical structure of this industry, which supplies to domestic market, is shown in the figure 6.

The most important point to be noticed in the industry structure for domestic market, is the presence of too many

middle-men and too many possible permutations exist allowing for a combination of process flows through the supply chain. In this structure, agents and traders act as facilitator only and rarely stock the product leaving the risks for producers and retail buyers.

In the case of export markets, the structure is different. Export markets are majorly catered by the organized sector, which has large integrated players. The level of integration differs from company to company. Fiber manufacturing is normally a standalone activity. Some large players are integrated from spinning to weaving, others have weaving, processing and cut and sew operations



Source: Wazir Analysis

and there are some big players, which are vertically integrated from spinning to final product manufacturing.

Some medium to large capacity players, which are present within the unorganized industry, supply to export markets, either through an export house, or again through traders. The industrial structure of this system has been shown in the Figure 7.



# Investment Opportunities in MMF Based Textile Manufacturing in India

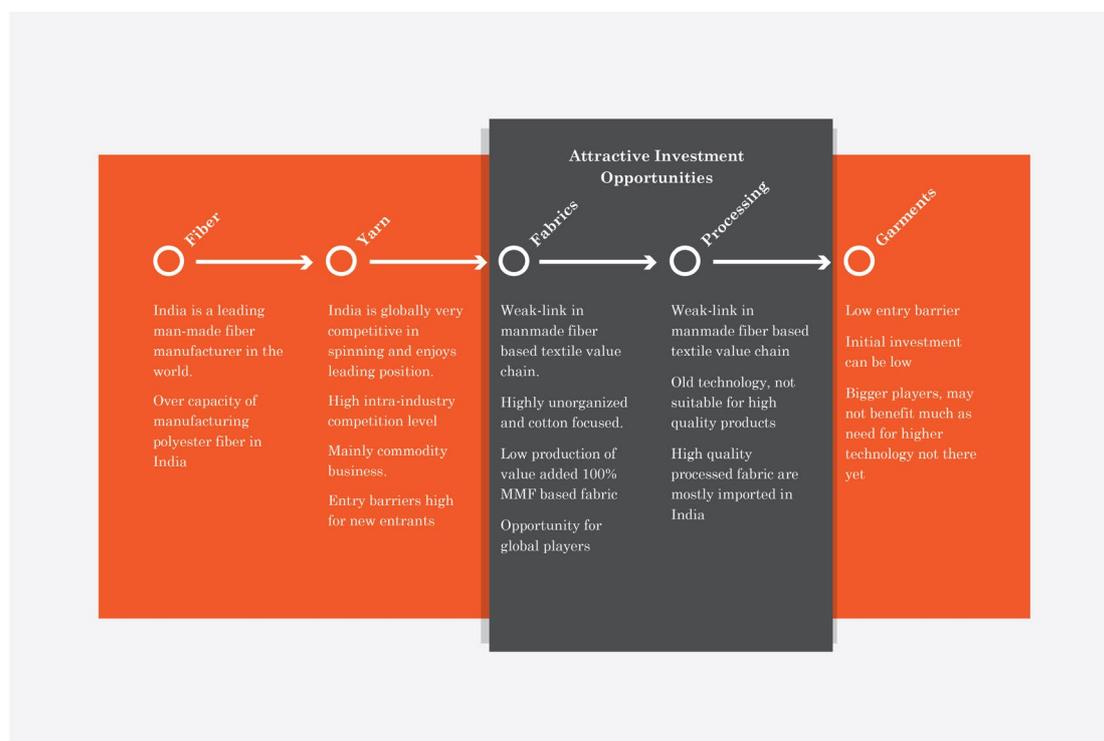
With the growing textile and apparel market of India and improving export competitiveness, there are significant opportunities across all fiber types and products. However, MMF based textile products are expected to lead the demand in future. While India is relatively self-sufficient in terms of fiber, yarn manufacturing and garmenting, the biggest opportunity lies within fabric manufacturing and processing of MMF based textiles.

A large part of the MMF based fabric manufactured and processed in India is low value added and primarily

supplied to the mass domestic market. However, there are many value added, performance based MMF fabrics, which are currently not being manufactured in India sufficiently and thus offer huge potential for future investments.

The major opportunities for investment in MMF textiles can further be looked at in terms of the following broad areas:

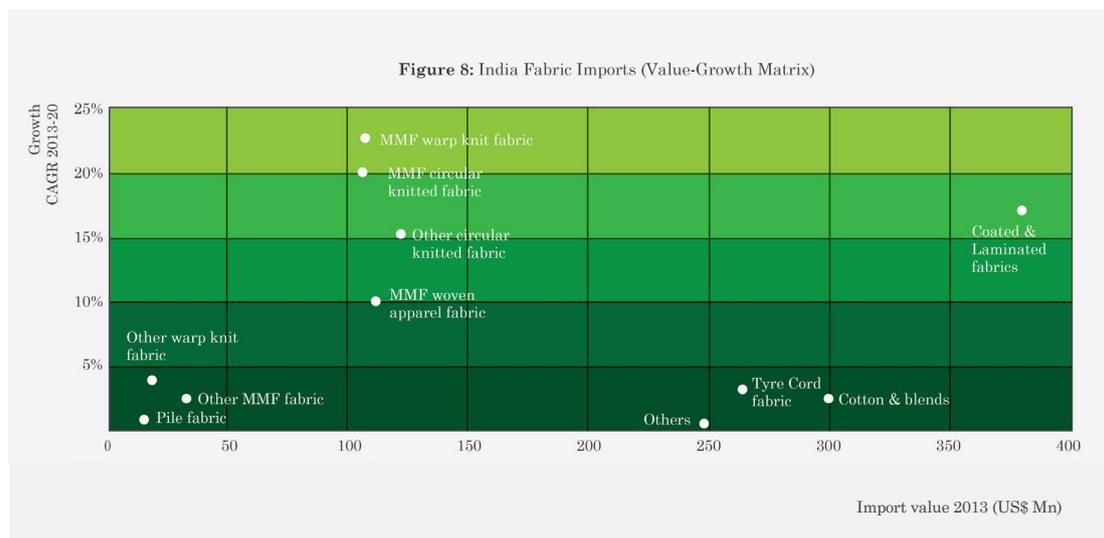
- Import substitution
- Growing segments in international trade
- Domestic market opportunities



## Replacing MMF based Textile Products Imported into India

India imported around US\$ 1.7 Bn worth fabric in 2013 and almost 60% of the fabrics imported were MMF based fabrics. Amongst the fabric categories imported, the fastest growing categories are MMF warp knit fabric and MMF circular knit fabric. Apart from these, coated and laminated fabrics and tyre cord fabrics are also attractive categories. Demand for these fabrics is expected to be high in future as well. Within the imported knitted fabrics, the major fabric types include 100% Polyester, Polyester-Spandex, Nylon and Nylon-Spandex based fabrics primarily used in sportswear & fashion wear. One of the major

reasons for high imports of these fabric types is limited processing capability in India for fabrics containing higher percentage of spandex. Also, high quality finer denier polyester filament yarns required for these fabrics are not easily available in India, especially microfilament yarns of less than 1 denier per filament (dpf). However, the fabric made from these fine deniers have high demand in sportswear and fashion wear in India and globally. Currently, a lot of these fabrics are imported from countries like Taiwan, Korea and China, primarily due to better technical knowhow available in these countries. However, with increasing costs of manufacturing in these countries there is opportunity for India to attract investments in manufacturing of these high value added product categories.



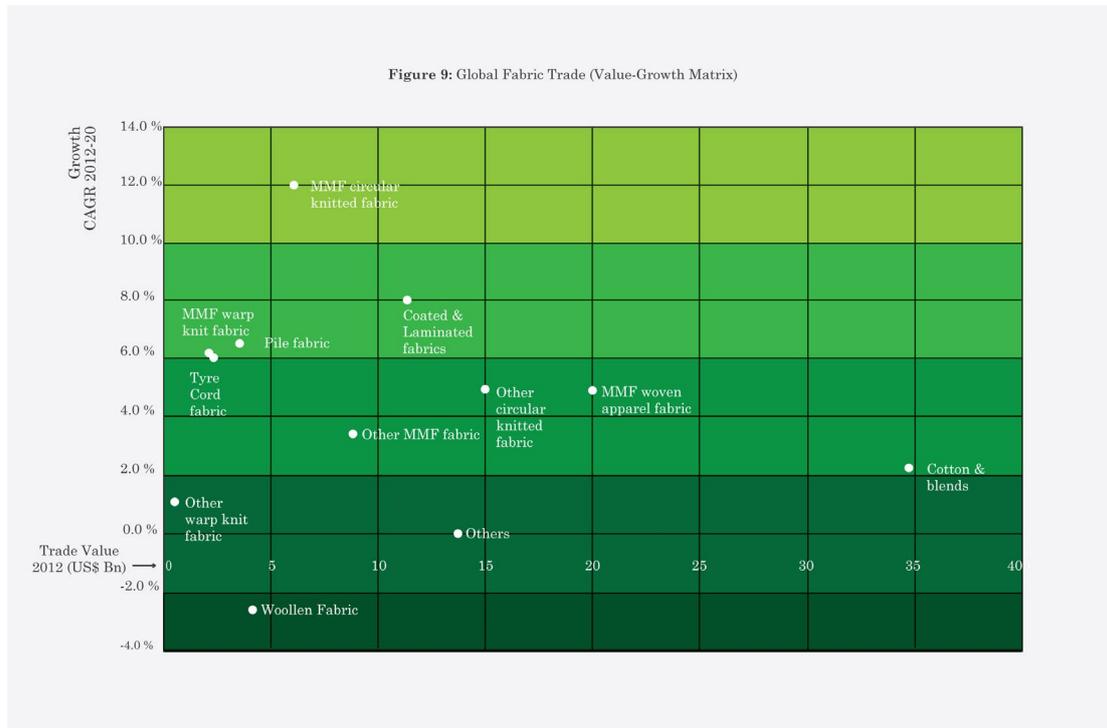
\*Other MMF fabric includes home textiles, technical textiles etc.  
 Other circular knitted fabric includes circular knits made of cotton and other natural fibers  
 Others include fabrics made of other natural fibers apart from cotton

Source: UN Comtrade & Wazir analysis

## Growing Export Opportunity for Specific MMF Based Textile Products

MMF based textiles is also growing in the export market. World fabric trade is around US\$ 123 Bn with MMF

textiles constituting more than 40% of trade. The trade of MMF based fabric types like circular knit fabrics, warp knit fabrics and coated & laminated fabrics is growing rapidly. Hence, investment in manufacturing of these MMF based fabrics will be a good idea.



\*Other MMF fabric includes home textiles, technical textiles etc.  
 Other circular knitted fabric includes circular knits made of cotton and other natural fibers  
 Others include fabrics made of other natural fibers apart from cotton

Source: UN Comtrade & Wazir analysis

## Domestic Market Demand for Specific MMF Based Products

### *Textile & Apparel*

Increasing price volatility and upward trend of cotton price has made Indian apparel brands to gradually shift the fiber mix in favor of synthetic fibers, especially polyester. Improvement in technical properties of polyester fiber has also supported this shift. A definite trend can be observed of higher share of polyester & viscose fiber in shirting and suiting fabrics, especially as blend with cotton. There is also trend of using lower GSM fabric for Saree, which is leading to increased consumption of polyester filament yarn (FDY).

Growth in women's wear category is highest in domestic market. There has been a continuous rise in the number of working women in Indian organized sector and it is expected to constitute more than one-fifth of the total workforce of organized sector by 2020. This has not only increased the consumption of western office wear but also dresses suitable for party wear. Global brands, which have entered Indian market, are offering such products and increasing sourcing from Indian manufacturers. Indian women's wear brands are also increasing the presence of office wear and party wear in their product mix. Fabrics with 100% MMF content or in blend with other natural / man-made fibers are very much suitable for such products.

Indian consumers are also experimenting a lot with their wardrobe including lingerie. Increased consumer education efforts and communication from leading lingerie brands have made Indian consumers conscious to use right type of lingerie suitable for a particular dress, e.g. Low rise panties for the low waist jeans, t-shirt bras for body hugging upper wear, sports bras for playing sports & exercising, strapless brassieres for the halter neck tops, etc. Use of polyester & nylon fiber is very high in such lingerie products and this growth will continue, especially for warp and circular knit products.

Young population, better performance of Indian players in International sports events and better sports infrastructure in urban India are supporting the growth of sports activities in India. In fact, Indians across all age groups are trying hard to remain fit and active. This is increasing the usage of active-wear / sportswear, especially among urban population. Consumption of MMF based performance fabric will keep on increasing in India.

Uniform is another category to see significant growth in coming future. Uniform can be majorly classified under two categories – school uniform & corporate uniform. Increasing number of school going children, usage of different uniform for different days by many private schools and usage of uniform by increasing number of schools are making this segment to grow. Corporates are also increasingly

becoming image conscious and using uniforms, especially for consumer facing activities. Various Government departments like Municipal Corporations and PSUs have also started adopting uniform code for their employees to promote equality and team work in their organizations. Polyester based fabric of higher GSM is used in such garment construction and demand of such fabric will grow significantly in coming years.

### *Technical Textiles*

Technical textile market is still at a nascent stage in India and almost all categories will observe significant growth in coming time, which will lead to increased usage of different types of fibers. There are three major trends, which will impact consumption of MMF in technical textiles in India.

It is estimated that less than 15% menstruating women use sanitary napkins in India today. The figure is abysmal as compared to any developed markets, where almost 100% women of that age use sanitary napkins. This low penetration is due to combination of three major reasons - low awareness level about menstrual hygiene among women of that age group, last mile gap in distribution and higher price of the product. Increased literacy rate among women, continued efforts from Government of India and enhanced focus of NGOs are improving this scenario. The market of sanitary

napkins is projected to grow by 11 Bn pcs if additional 20% women start using it in the next five years. Consumption of MMF will improve proportionately.

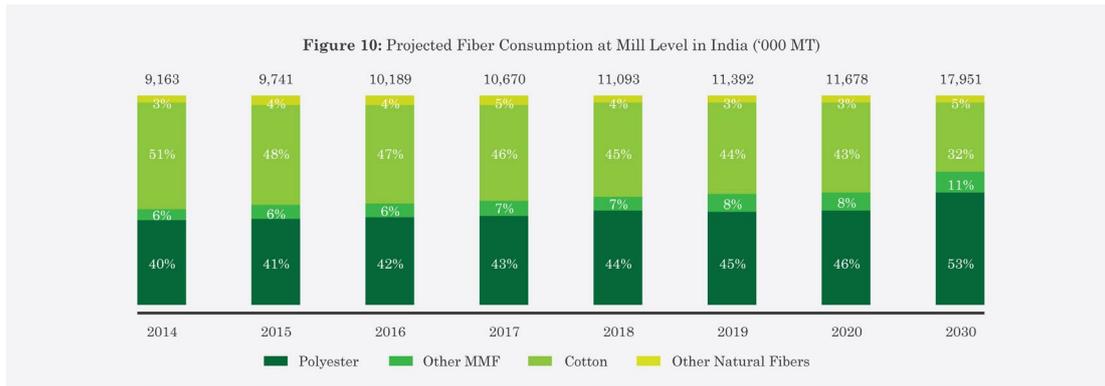
India has become a global manufacturing hub for automobiles. Major international auto manufacturers have already set up their plants in India and will keep on increasing the capacity as those bases are not only for catering the increasing demand from domestic market but partly covering the export markets of this region as well. It is estimated that the passenger vehicle production in India will increase from 3.2 Mn in 2014-15 to 10 Mn by 2020-21. As per the prevailing industry model, ancillary units are present near the car manufacturing units to supply material just in time. The increased manufacturing of cars will have a proportional increase in the demand of seat belts, airbags, seat covers and headliners, which all are MMF based.

Compliance norms are becoming stricter worldwide. Coupled with it the Indian industries and industrial workers are also becoming more and more informed and conscious about the health and safety issues at workplace. This is increasing the usage of protective wears like flame retardant apparel, high visibility apparel etc. MMF are extensively used in protective wear category and its consumption will grow many folds with the growth of protective wear market.

## Overall Impact on Fiber Consumption

The above factors will have a significant impact on the fiber consumption mix in India within the next five years. Indian textile industry will consume

more Polyester than Cotton within the next five years. Share of manmade fiber in total mill consumption is expected to reach ~65% by 2030. However, the share of cotton is expected to decrease from current level of ~55% to 32% by 2030.



Source: Wazir & PCI Analysis

# Advantage India

The business environment of India is very conducive now for foreign as well as local investors for investing in textile and apparel manufacturing. There is an abundance of raw material, skilled manpower is available at affordable rate, complete value chain of textile and apparel is present, infrastructure has been put in place for facilitating industrial activities and Government is giving attractive subsidies for investment and growth of the industry.

## Availability of Raw Material and Complete Value Chain

India is among the very few countries with a strong production base of wide range of fiber and yarns from natural fibers like cotton, jute, silk and wool to manmade fibers like polyester, viscose and nylon.

**Table 2: Fiber Production in India & India's global standing**

S. No.	Fiber	Production (In Mn Kg)	Global Position
1	Cotton	6,800	1st
2	Jute	2,357	1st
3	Silk	26	2nd
4	Man-made staple fiber	1,781	2nd
5	Wool	49	10th

Source: Office of Textile Commissioner (Provisional Data for 2014-15)

**Table 3: Yarn Production in India**

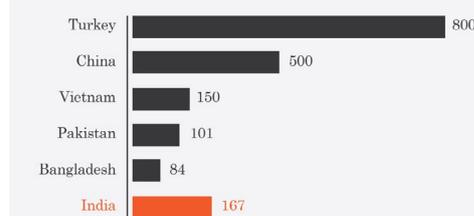
S. No.	Yarn	Production(In Mn Kg)
<b>Spun yarn</b>		
1	Cotton	4,057
2	Blended	915
3	100% Non Cotton	513
<b>Manmade Filament Yarn</b>		
1	Polyester	1,157
2	Viscose	44
3	Nylon	32
4	Polypropylene	13

Source: Office of Textile Commissioner (Provisional Data for 2014-15)

## Availability of Skilled Manpower

India has a large base of young people with abundant availability of skilled manpower having skill sets across all the activities of textiles value chain. The wage rate in India is competitive and is rising at a lower rate as compared to its competitors.

**Figure 11: Labour Wages in Textile Industry (US\$/Month)**



Source: Texprocil benchmarking report, ITMF cost comparison report, Wazir analysis \*labour cost includes all benefits"

With the business environment becoming more and more dynamic, more emphasis will be laid on high quality which will lead to the rise in demand of skilled workers in the coming time. Realizing this, the Government

of India has implemented several initiatives to develop the pool of skilled manpower in India. The Integrated Skill Development Scheme (ISDS) for the textiles and apparel sector has been implemented with an objective to build capacities of institutions providing skill development and training in the textile and apparel sector. The Government has allocated Rs. 1900 crore during its 12th Five year plan to train 15 lakh persons in the textile and apparel sector. India's young population and Government initiatives will ensure adequate and economical availability of trained manpower to the textile and apparel sector in the coming years.

## Cost of Manufacturing

India is present across the value chain of textile and apparel manufacturing. It has proved to be a competitive manufacturing destination and now buyers look at India as the next alternative of China. Although, the manufacturing cost in Pakistan and Bangladesh are still lower than India, but India has the additional advantages of much bigger domestic market, better adherence to compliance and political stability.

## Well-developed Infrastructure

India has well-developed infrastructure that supports business activities. Recognizing the role of infrastructure as a critical enabler of economic development, the present Government has put lot of emphasis on its further development. In the current budget plan, the central Government has allocated US\$ 2.25 Bn for development of roads and US\$ 1.6 Bn for development of railway Infrastructure.

### Roads

India has the second largest road network in the world spanning across 3.3 Mn Km. India's robust road network carries 65% of the freight and 80% of passenger traffic and connects all the major industrial hubs to the series of National highways which are all modern multi-lane road systems. National Highways constitute only about 1.7% of the road network but carry about 40% of the total road traffic. The length of National Highways is expected to grow from 92,851 km in 2014-15 to 100,000 km by the end of 2017.

Table 4: Average Cost Comparison of India with Competing Countries

Cost element	Unit	India	Bangladesh	China	Pakistan	Korea	Turkey	Indonesia
Labour cost *	US\$/month	167	84	500	101	1152	1004	226
Power cost	US\$/kwh	0.09	0.075	0.13	0.11	0.09	0.084	0.085
Water cost	US Cents / m3	39.5	27.5	52	27	50	30.73	49.19
Capital interest rate	%	12.8	13	6.15	7	4.8	10.24	9
Steam cost	US Cents / m3	1.6	1.2	1.6	1.3	2	2.1	1.16

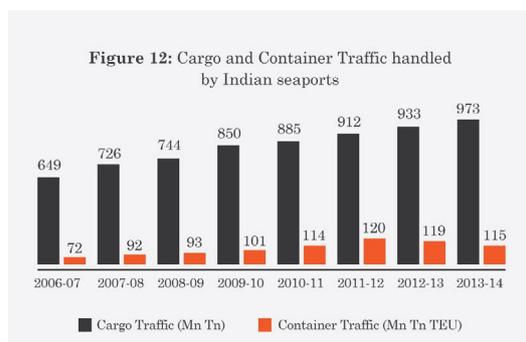
Source: Texprocil benchmarking report, ITMF cost comparison report, Wazir analysis  
\*labour cost includes all benefits

Indian Government has undertaken a seven-phase programme known as ‘National Highway Development Project (NHDP)’. It involves construction of following components:

- Golden Quadrilateral (GQ) to connect four major metropolitans namely Delhi, Mumbai, Kolkata and Chennai.
- North-South & East-West Corridor to connect extreme ends of the country i.e. Srinagar-Kanyakumari and Silchar-Portbandar respectively.
- NHDP Phase III to VII for construction and improvement of roads in remaining urban and semi urban areas.

### Seaports

India has an extensive coastline of ~7,517 km with 13 major and 200 minor ports. A large part of the cargo traffic is handled by major seaports of India. The cargo traffic handled by all seaports has grown significantly from 649 million tonnes in 2006-07 to 973 million tonnes in 2013-14.



Source: Indian Ports Association  
Note: TEU- Twenty Foot Equivalent Unit

India’s port infrastructure is well suited for its growing export demand as ports handle around 95% of Indian trade volumes. India’s total external trade has grown to US\$ 765 Bn in 2014 at a CAGR of ~15% since 2006. During the same period, cargo and container traffic grew at a CAGR of 6% and 7% respectively.

### Airports

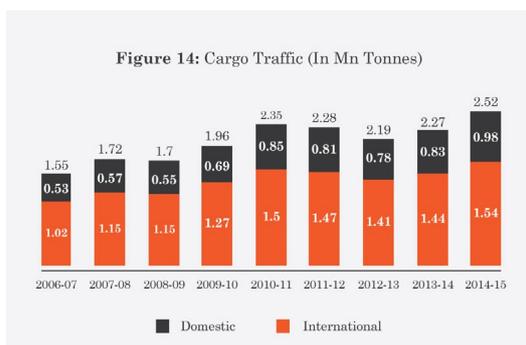
India has become the 9th largest civil aviation market in the world with 449 airports and airstrips. It is a rapidly growing sector in India and has undergone huge transformation with opening up of the sector. The industry is now dominated by private players.

The passenger traffic in India has witnessed a significant growth during 2006-07 to 2014-15 at a rate of 9% with both domestic and international air traffic growing at a rate of 9%.



Source: Airport Authority of India

The air cargo traffic has grown to 2.52 Mn tonnes in 2014-15 at 6% CAGR since 2006-07. The international cargo traffic occupied more than 60% share of total cargo traffic in 2014-15. Domestic cargo traffic has grown at 8% CAGR from 2006-07 to 2014-15 while international cargo traffic rose by 5% in the same time period.



Source: Airport Authority of India

## Availability of World Class Infrastructure

India has appropriate infrastructure to support textile manufacturing activities. There are around 40 Integrated Textile Parks sanctioned under the Government Scheme for Integrated Textile Parks (SITP). These textile parks consist of all required support infrastructure like ETP, training centers, social infrastructure etc. and are conducive to set up integrated textile factories.

There are several industrial zones spread over large areas across the country. These industrial zones have all required support infrastructure and are well connected with ports which make them suitable for setting up large factories. Industrial areas are also being developed for companies from specific countries. For instance, RIICO (Rajasthan State Industrial Development and Investment Corporation) has developed a fully functional industrial zone in North India exclusively for Japanese investments spread over an area more than 500 acres. Similarly, industrial zone has also been planned for investment from South Korean companies.

## CASE STUDY: BRANDIX INDIA APPAREL CITY

### Overview

Brandix India Apparel City is a product specific Special Economic Zone (SEZ) promoted by Brandix Lanka - Sri Lanka's largest apparel exporter - in Vizag, Andhra Pradesh. BIAC is a state-of-the-art apparel supply chain city spread over 4.04 million square meters, (1,000 acres). It has been given the status of Integrated Textile Park (ITP) by the Government of India. BIAC is envisaged as a complete apparel solution for both Knits & Woven garments. It has created a vertically-integrated manufacturing zone, which is geared to support large scale knitting, garment manufacturing, finishing, printing, embellishments and packaging.

### Connectivity

- BIAC is well connected to Vizag seaport, airport and railway station.
- It is linked to the National Highway 5 (NH-5) that connects Kolkata to Chennai.
- It also has customs clearance facility within its premises.

### Infrastructure Facilities

- **Water:** Water treatment plant

treating 60 million litres per day.

- **Power:** Secure connections to the national grid ensuring a reliable power supply.
- **Telecommunication:** State-of-the-art telecommunication facilities.
- **Effluent Treatment:** Common effluent treatment plant capable of treating 56 million litres of process effluent and domestic sewage per day. Does not require any pre-treatment from units.

#### **Fiscal Concessions**

- **Duty Free Import of Raw Materials & Machinery:** All types of capital equipment including second hand plant and machinery, raw materials and consumables, can be imported free of duty from any part of the World without any license or procedure.
- **Tax exemption:** 100% Income Tax exemption on export income for first 5 years, 50% for next 5 years thereafter and 50% of the ploughed back export profit for next 5 years.
- **Local Taxes:** Units are exempt from State sales tax and other levies as extended by the respective State Governments.

#### **Key Differentiators**

- Reduced capital investment cost on account of using common infrastructure and multiple shift operations as opposed to single shift, prevalent in most locations.
- Very large scale operations are possible due to the availability of land, supporting state-of-the-art infrastructure and abundant availability of quality labour.
- High operative efficiency in excess of 60% achieved due to easily trainable labour with low absenteeism and attrition rates.
- Short lead times due to availability of materials next door and enabled supply chain elements.
- High level of compliance ensured with an ISO 14001 certified environment management system

## Government Support

Government of India acts as a facilitator for the development of the textile industry in India. Given below is a summary of the major Central Government and State Government schemes that are active presently:

Scheme / Policy	Key Features
Revised Restructured Technological Upgradation Fund Scheme (RRTUFS)	<ul style="list-style-type: none"> <li>• 10% of the approved outlay for new sanctions will be earmarked for Micro, Small and Medium Enterprises (MSME).</li> <li>• Standalone spinning units – 2% Interest Reimbursement (IR) for new standalone / replacement / modernization of spinning machinery.</li> <li>• For units having spinning capacity with forward integration having matching capacity in weaving/ knitting/processing/garmenting – 5% IR.</li> <li>• Weaving –               <ol style="list-style-type: none"> <li>1. Brand new shuttleless looms – 6% IR and 15% capital subsidy or 30% Margin Money Subsidy (MMS).</li> <li>2. For 30% MMS - capital ceiling cap of Rs. 5 crore and subsidy cap of Rs. 1.5 crore would be adhered for MSME sector.</li> <li>3. Second hand imported shuttleless looms – 2% IR or 8% MMS on looms with 10 years vintage and with a residual life of minimum 10 years.</li> </ol> </li> <li>• Processing, Garmenting &amp; Technical Textiles (incl. non-wovens) – 5% IR and 10% capital subsidy for specified machinery of each sector. <i>(Note: In Processing, CETP/ETP will not be considered for support under TUFS.)</i></li> <li>• Handloom and silk sector – 5% IR or 30% capital subsidy on benchmarked machinery.</li> <li>• MSMEs including jute sector – 5% IR or 15% MMS with subsidy ceiling of Rs. 75 lakh.</li> <li>• Other segment i.e., i) cotton ginning and pressing; ii) wool scouring; combing and carpet industry; iii) synthetic filament yarn texturizing, crimping and twisting; iv) viscose staple fiber and viscose filament yarn; v) knitting and fabric embroidery; vi) weaving preparatory machines; vii) made-up manufacturing; viii) CAD, CAM and design studio and ix) jute industry – 5%IR</li> <li>• Investments like factory buildings, pre-operative expenses and margin money for working capital are eligible for benefit of reimbursement under the scheme only for apparel and handloom sector with 50% cap of total new eligible investment under RRTUFS. Land is altogether excluded from eligible investments under TUFS. This benefit, however, shall not be available for textile units under the Scheme for Integrated Textile Park (SITP).</li> <li>• Period of interest reimbursement – Interest reimbursement will be for a period of 7 years including 2 years of moratorium / implementation.</li> </ul>

Scheme / Policy	Key Features
Scheme for Integrated Textile Parks (SITP)	<ul style="list-style-type: none"> <li>Grant/Equity up to 40% of the textile park development project cost subject to a ceiling of Rs. 40 crore.</li> <li>GOI support under the Scheme will be generally in the form of grant to the SPV unless specifically decided by the PAC to be equity. However, the combined equity stake of GOI/State Government/State Industrial Development Corporation, if any, would not exceed 49%.</li> <li>Grant at 90% of the project cost subject to a ceiling of Rs. 40 crore for first two projects in the States of North East Region of India.</li> </ul>
Scheme for Integrated Textile Parks (SITP)	<ul style="list-style-type: none"> <li>Grant/Equity up to 40% of the textile park development project cost subject to a ceiling of Rs. 40 crore.</li> <li>GOI support under the Scheme will be generally in the form of grant to the SPV unless specifically decided by the PAC to be equity. However, the combined equity stake of GOI/State Government/State Industrial Development Corporation, if any, would not exceed 49%.</li> <li>Grant at 90% of the project cost subject to a ceiling of Rs. 40 crore for first two projects in the States of North East Region of India.</li> </ul>
Integrated Skill Development Scheme (ISDS)	<ul style="list-style-type: none"> <li>Assistance up to 75% of the cost of the project, within an overall ceiling of Rs. 10,000 per trainee.</li> </ul>
Technology Mission on Technical Textiles (TMTT)	<ul style="list-style-type: none"> <li>Upgrade existing Centre of Excellences and set up of four new COEs</li> <li>Support for business start-up</li> <li>Providing fund support for organizing workshops</li> <li>Support for standardization</li> <li>Market development Support for sale to the institutional buyers</li> <li>Market development Support for export sales</li> <li>Grant for conducting Contract Research and Development in identified institutes</li> </ul>
Swarnjayanti Gram Swarozgar Yojana (SGSY)	<ul style="list-style-type: none"> <li>Provide assistance to people by providing them income generating skills through a mix of bank credit and Government subsidy.</li> <li>Subsidy at a uniform rate of 30% of the project cost, subject up to Rs. 7,500 per individual.</li> </ul>
Integrated Processing Development Scheme (IPDS)	<ul style="list-style-type: none"> <li>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.</li> <li>The project cost shall be borne by the Center, State, Beneficiary, Bank loan in the ratio of 50:25:15:10 respectively.</li> </ul>

Scheme / Policy	Key Features
Merchandize Exports from India Scheme (MEIS)	<p>Rewards for export of products shall be payable as percentage of realized FOB value:</p> <ul style="list-style-type: none"> <li>• For handloom, jute and coir based products - reward rate is 5% for all countries</li> <li>• For all other eligible textile and apparel categories - reward rate is 2% for EU (28), USA, Canada and Japan.</li> </ul>
Duty Drawback	<p>Drawback rates for key textile and apparel categories:</p> <ul style="list-style-type: none"> <li>• Cotton yarn: 2.8% to 4.7%</li> <li>• Cotton fabric: 4.3% to 7.1%</li> <li>• Apparel: 7.5% to 9.8%</li> </ul>
Market Development Assistance (MDA)	<ul style="list-style-type: none"> <li>• Financial support to exporters for conducting export promotion activities abroad</li> </ul>
Market Development Assistance (MDA)	<ul style="list-style-type: none"> <li>• Financial assistance for carrying out marketing projects abroad, including               <ol style="list-style-type: none"> <li>1. Opening of showrooms</li> <li>2. National level participation in trade fairs/exhibitions</li> <li>3. Displays in international departmental stores</li> <li>4. Publication of world class catalogues to create brand identity for Indian products</li> <li>5. Publicity campaign and brand promotion</li> <li>6. Research and product development</li> </ol> </li> <li>• Assistance for building capacity for exporters, export promotion organizations etc. :               <ol style="list-style-type: none"> <li>1. For imparting training to Indian exporters</li> <li>2. For upgradation of laboratories, research institutes, universities and other National institutions for creating testing facilities</li> <li>3. For National level institutes and export promotion organizations to organize training programmes to upgrade quality, improve product and reduce rejection</li> <li>4. For setting up common facility centers, design centers by Industrial clusters, EPCs and National level Institutions</li> <li>5. For hiring consultants/designers in the buyer country for facilitating negotiations/product modification as per local requirements</li> </ol> </li> <li>• Assistance on reimbursement basis to individual exporters for charges/fees paid by them for fulfilling the statutory requirements in the buyer country</li> <li>• Assistance for conducting studies:               <ol style="list-style-type: none"> <li>1. Survey for promoting exports of the identified product groups from the State</li> <li>2. Project/study which the Empowered Committee in its deliberation feels would further the objectives of the Scheme</li> <li>3. Studies on WTO related matters and JSG/FTA/RTA studies</li> </ol> </li> </ul>

**Table 5:** Key Features of State Government Textile Policies

State	Gujarat	Maharashtra
Capital Subsidy	Nil	10%
Interest Subsidy	5-7%	5-7%
Power Subsidy	Power tariff subsidy @ Rs.1 per unit for a period of 5 years.	Nil
Stamp Duty Reimbursement	100% exemption for new industrial park	Nil
VAT/ Entry Tax Reimbursement	Remission up to 100% of fixed capital investments in plant & machinery.	Nil
Environment Related Schemes	Rs. 50,000 or 50% for water/energy/ environment audits. 20% or 20 Lakhs for cost of equipment.	Nil
Common Infrastructure/ Textile Park/ Cluster Development	50% with maximum limit of Rs.10-30 crore of total project cost.	Nil
Technology Acquisition and Upgradation Assistance	Assistance up to 50% or Rs. 25 lakhs, whichever is higher, for acquiring new technology with specialized application.	Nil
Skill Development/ Training	Financial assistance for setting up training institute. Allowance to weavers & trainees of powerloom sector.	Nil
Capacity Building Support	Nil	Nil
Others	Nil	Nil

Madhya Pradesh	Rajasthan	Karnataka
Nil	Nil	15-20% of the Fixed Assets
5-7%	5-7%	50% of the Credit Linked Capital Subsidy amount as interest subsidy over five years
Nil	50% exemption from payment of electricity duty for 7 years.	Reimbursement of cost of power paid @ Rs.1/ unit
Nil	50% exemption	50-100% reimbursement
Assistance amount equivalent to CST and/ or VAT paid by different units.	Reimbursement of 60% of VAT for purchase of yarn.	Full reimbursement of Entry Tax on Plant & Machinery and Capital Goods.
Nil	Nil	Assistance for Energy Audit/Water Audit/ Environmental Compliance & setting up CETP (Common Effluent Treatment Plant)
Nil	Nil	10-40% with a maximum cap of Rs. 10-25 crores in different units.
Nil	Nil	Nil
Nil	Nil	For Existing/New Project Implementation Agencies (PIAs) / Institutes - Financial assistance for Strengthening of Existing Skill Development Institutes/ Centres
Nil	Nil	Reimbursement of 50% of the cost of proposed interventions subject to a cap of Rs. 5-50 lakhs.
Nil	Exemptions for Luxury Tax- 100%, Land Tax- 50%, Mandi Fee-50%, Conversion charges-50%	Rs. 10 crores for setting up of CoE Special incentives for Mega projects upto Rs. 50 crores Social Accountability incentives

## How We Can Help?

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You might already have an understanding of the opportunities in MMF based textile manufacturing in India. Answering the following key questions will help you analyze your preparedness for the investment:

- What is the current and future demand of MMF based products in India?
- What are the profitable categories and which categories should be selected as per your business requirements?
- What will be the business model and product mix?
- What should be the ideal location for setting up the manufacturing plant?
- Who could be the suitable business partner? How can we develop the partnership?
- What will be your target market and consumer group?
- What should be the optimum capacities? How much investment will be required for the same?
- What kind of approvals and clearances will be required from Government? How to get those?

We would be happy to support you in answering the above questions and investing in this attractive business opportunity.




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We assist clients in strategy formulation and implementation, forming alliances and joint ventures, investments, market understanding, sector analysis and due diligence – thereby providing end to end solutions 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 functions – 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, contacts and combined expertise of its team to deliver value to clients.

Our services span the entire breadth of textile manufacturing value chain - from fiber to finished goods.

## 1. Strategy

Wazir delivers practical, implementable strategies for clients to meet their objectives. We assist clients to conceptualize, evaluate and select business opportunities in the textile and apparel sector.

Be it corporate strategy intending to enhance profitability or new market opportunity identification or sector growth strategy to support MSMEs, we are geared to advise our clients efficiently and effectively.

- *Corporate Strategy*
- *Market Opportunity Assessment*
- *Market Entry Strategy*
- *Location Analysis*
- *Business Performance Enhancement*
- *Product Diversification*
- *Marketing and Distribution Strategy*
- *Sector Mapping and Growth Strategy*
- *Policy Formulation Support*
- *Government Scheme Evaluation*

## 2. Implementation

Wazir provides implementation services to textile and apparel sector entities to convert the plans into reality. Wazir has the capability to execute every strategy that it recommends.

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.

- *Project Management and Monitoring*
- *Re-modelling 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*

## 3. Alliances

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.

- *Company Due-diligence*
- *Joint Venture*
- *Marketing Tie-up*
- *Technology Transfer*
- *M&A Execution*
- *Strategic and Financial Funding*



Since 1998, PCI Xylenes & Polyesters has been the global leader in consulting for the polyester and raw materials markets. Our mission is to deliver economic value to our clients through a unique combination of business insight, technology and professional consulting techniques. From supporting a client through a full feasibility study, creating a realistic marketing plan, providing partner or investor searches, training staff in new markets, or working on a retainer-basis, PCI will work with individual clients to deliver confidential single-client projects in a professional, cost-effective and timely manner.

## Technology Selection, Project Management Support and Sustainability

PCI has strong technical and project management capability which is often used by clients to assist with technology selection and project management of major investments. Our detailed knowledge of the available technology and our experience in major petrochemical project management is highly valued by clients seeking to optimize investments and deliver projects on time and within budget.

## Business and Strategic Planning

PCI provides impartial advice and guidance to clients who are developing long term strategy and business plans. This can range from early direct involvement with clients to lead or support the development of strategic options through to analysis and critiquing of an existing business plan.

## Investment Advisory

PCI is frequently engaged to provide independent advice and input into the assessment of client investment opportunities covering full technical and commercial due diligence. Using our fundamental understanding of the markets, our supply/demand outlook and price and margin forecasts, we are able to assist clients with a rigorous assessment of the investment opportunity.

## Financial Analysis

PCI maintains up to date financial models covering the polyester value chain which are used by clients to assist with analysis of business and current asset valuations, as well as being used to test viability of new project investments. These models allow our clients to assess sensitivities to major variables and to look at scenario planning for current and future business valuation.



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