

# Textile Research Report

December 2025

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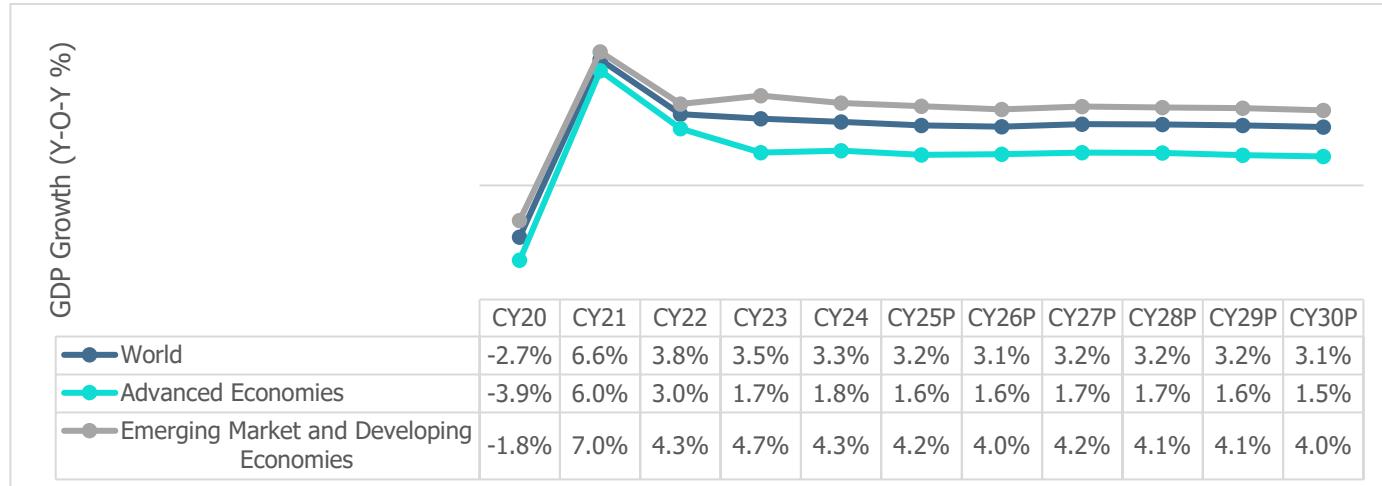
## 1 Economic Outlook

### 1.1 Global Economy

#### Global economic growth expected to sustain at ~3% in near term

Global growth, which peaked at 3.5% in CY23, moderated to 3.3% in CY24 and is projected to decline further to 3.2% in CY25 and 3.1% in CY26. This slowdown is largely attributed to escalating trade tensions, particularly the imposition of new U.S. tariffs and retaliatory measures from key trading partners. These developments are expected to push global tariff levels to historic highs, dampening trade flows and weakening growth prospects. In response, countries are reassessing their strategic priorities and policy frameworks. Central banks are likely to recalibrate monetary policies, while prudent fiscal management and structural reforms will be essential to address rising debt levels and mitigate widening global inequalities.

**Chart 1: Global Growth Outlook Projections (Real GDP, Y-o-Y change in %)**



Source: IMF – World Economic Outlook, October 2025; Note: P-Projection

**Table 1: GDP growth trend comparison - India v/s Other Economies (Real GDP, Y-o-Y change in %)**

	Real GDP (Y-o-Y change in %)										
	CY20	CY21	CY22	CY23	CY24	CY25P	CY26P	CY27P	CY28P	CY29P	CY30P
India	-5.8	9.7	7.6	9.2	6.5	6.6	6.2	6.4	6.5	6.5	6.5
China	2.3	8.6	3.1	5.4	5.0	4.8	4.2	4.2	4.0	3.7	3.4
Indonesia	-2.1	3.7	5.3	5.0	5.0	4.9	4.9	5.0	5.0	5.1	5.1
Saudi Arabia	-3.8	6.5	12.0	0.5	2.0	4.0	4.0	3.3	3.3	3.3	3.3
Middle East	-2.3	4.7	6.4	2.6	2.6	3.5	3.8	3.8	3.7	3.7	3.7
Latin America	-6.9	7.4	4.3	2.4	2.4	2.4	2.3	2.6	2.7	2.8	2.6
Brazil	-3.3	4.8	3.0	3.2	3.4	2.4	1.9	2.2	2.3	2.4	2.5
Euro Area	-6.0	6.4	3.6	0.4	0.9	1.2	1.1	1.4	1.3	1.2	1.1
United States	-2.1	6.2	2.5	2.9	2.8	2.0	2.1	2.1	2.1	1.9	1.8

Source: IMF- World Economic Outlook Database (October 2025); Note: P- Projections, India's fiscal year (FY) aligns with the IMF's calendar year (CY). For instance, FY24 corresponds to CY23.

## 1.2 Indian Economic Outlook

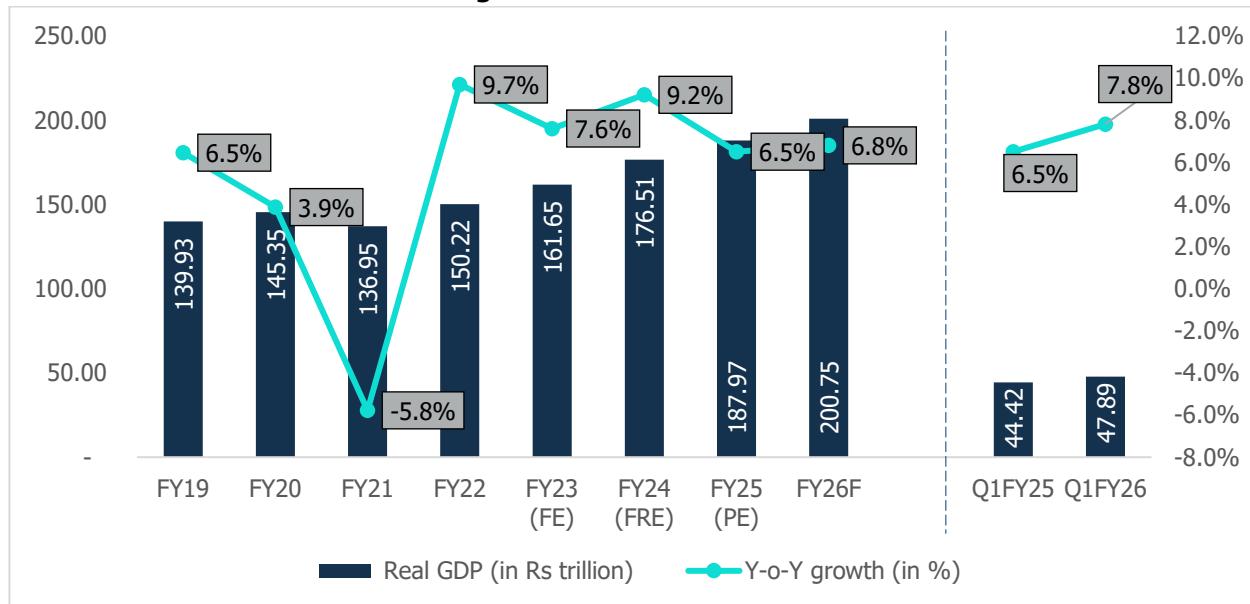
### 1.2.1 GDP Growth and Outlook

#### Resilience to External Shocks remains Critical for Near-Term Outlook

India's economy continues to show rapid growth. In the first quarter of FY26, the country's GDP grew by 7.8% compared to the same period last year, which saw a 6.5% increase. For the full year FY26, GDP is expected to grow by 6.8%, supported by rising rural demand, better job opportunities, and active business conditions.

In FY25, provisional estimates show a growth of 6.5% (Rs 187.97 trillion), led by robust performance in manufacturing, construction, and financial services. Consumer spending rose by 7.6%, and government spending increased by 3.8%, both contributing to the overall growth. In FY24, India's GDP grew by 9.2% (Rs 176.5 trillion), the highest in over a decade (excluding the pandemic year).

**Chart 2: Trend in Real Indian GDP growth rate**



Source: MOSPI, RBI.

Note: FE – Final Estimates, FRE- First Revised Estimates, PE – Provisional Estimates, F - Forecasted

#### GDP Growth Outlook (October 2025)

**FY26 GDP Outlook:** The RBI projects real GDP growth at 6.8% for FY26, driven by strong private consumption, steady investment, and resilient rural and urban demand. A favourable monsoon, robust services sector and improving corporate balance sheets support this outlook.

However, risks from prolonged geopolitical tensions, global trade disruptions, and weather-related uncertainties remain. Taking these into account, the RBI has reaffirmed its growth projections.

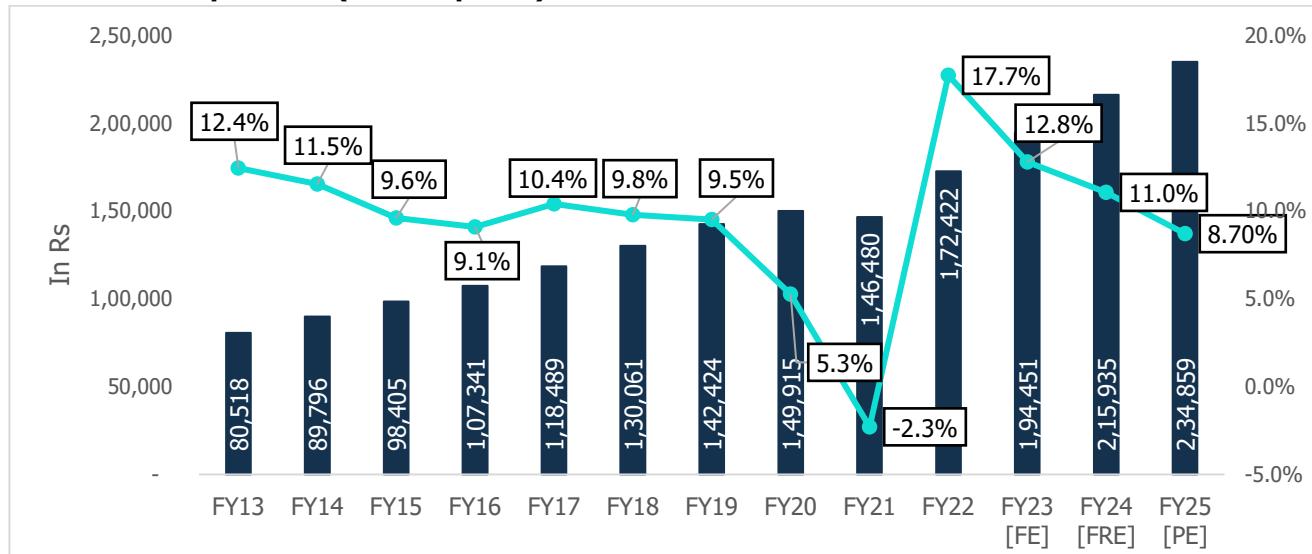
**Table 2: RBI's GDP Growth Outlook (Y-o-Y %)**

FY26P (complete year)	Q2FY26P	Q3FY26P	Q4FY26P	Q1FY27P
6.8%	7.0%	6.4%	6.2%	6.4%

Source: Reserve Bank of India; Note: P-Projected

### 1.2.2 India's GDP Per Capita

India's per capita GDP has shown a consistent upward trend over the past decade, reflecting steady economic growth. Rising per capita income, driven by robust economic development, enhances consumer confidence and discretionary spending, reflecting a higher standard of living and overall prosperity. From FY13 to FY25, the per capita GDP is expected to increase from Rs 80,518 to Rs 234,859, with an average growth rate of around 9% annually. Key drivers of this growth include structural reforms, digitalization, rising domestic consumption, and increased foreign investment. However, there was a slight dip in FY20, primarily due to the economic impact of the COVID-19 pandemic. Despite this, the country has rebounded with strong growth rates in subsequent years, supported by economic recovery and continued expansion in various sectors.

**Chart 3: Per capita GDP (current prices)**

Source: MOSPI; Note: FE – Final Estimates, FRE- First Revised Estimates, PE- Provisional Estimates

### 1.2.3 Gross Value Added (GVA)

Gross Value Added (GVA) is the measure of the value of goods and services produced in an economy. GVA gives a picture of the supply side whereas GDP represents consumption. India's recovery in FY25 was powered by a broad-based rebound across sectors. The gap between GDP and GVA growth stood at 0.1 percentage point in FY25, with GDP growing at 6.5% and GVA at 6.4%, as per MoSPI's provisional estimates released in August 2025.

The agriculture and allied sector grew by 4.6% in FY25 (up from 2.7% in FY24), supported by a good monsoon, better crop output, and strong allied activities. The industrial sector grew by 5.9% in FY25, down from 10.8% in FY24 due to weaker manufacturing, with FY24 growth driven by strong manufacturing sales, construction (9.4%), utilities, and supportive policies. The services sector grew by 7.2% in FY25, down from 9.0% in FY24, supported by public administration (8.9%), financial services (7.2%), and trade and transport (6.1%), contributing Rs 94.4 trillion to the economy.

From Q1FY25 to Q1FY26, the overall GVA at basic price had a Y-o-Y growth from 6.5% to 7.6%, indicating a stronger economic performance. Most sectors showed growth, with Services sector growing significantly from 6.8% to 9.3%, and Agriculture, Forestry & Fishing rebounding from 1.5% to 3.7%. However, Mining & Quarrying declined sharply from 6.6% to -3.1%, and Electricity, Gas & Water supply slowed considerably from 10.2% to 0.5%.

**Table 3: Sectoral Growth (Y-o-Y % Growth) - at Constant Prices**

At constant Prices	FY19	FY20	FY21	FY22	FY23 (FE)	FY24 (FRE)	FY25 (PE)	Q1FY25	Q1FY26
<b>Agriculture, Forestry &amp; Fishing</b>	<b>2.1</b>	<b>6.2</b>	<b>4.1</b>	<b>4.6</b>	<b>6.3</b>	<b>2.7</b>	<b>4.6</b>	<b>1.5</b>	<b>3.7</b>
<b>Industry</b>	<b>5.3</b>	<b>-1.4</b>	<b>-0.9</b>	<b>12.2</b>	<b>2.5</b>	<b>10.8</b>	<b>5.9</b>	<b>8.5</b>	<b>6.3</b>
Mining & Quarrying	-0.9	-3.0	-8.6	6.3	3.4	3.2	2.7	6.6	-3.1
Manufacturing	5.4	-3.0	2.9	10.0	-1.7	12.3	4.5	7.6	7.7
Electricity, Gas, Water Supply & Other Utility Services	7.9	2.3	-4.3	10.3	10.8	8.6	5.9	10.2	0.5
Construction	6.5	1.6	-5.7	19.9	9.1	10.4	9.4	10.1	7.6
<b>Services</b>	<b>7.2</b>	<b>6.4</b>	<b>-8.2</b>	<b>9.2</b>	<b>10.3</b>	<b>9.0</b>	<b>7.2</b>	<b>6.8</b>	<b>9.3</b>
Trade, Hotels, Transport, Communication & Broadcasting	7.2	6.0	-19.7	15.2	12.3	7.5	6.1	5.4	8.6
Financial, Real Estate & Professional Services	7.0	6.8	2.1	5.7	10.8	10.3	7.2	6.6	9.5
Public Administration, Defence and Other Services	7.5	6.6	-7.6	7.5	6.7	8.8	8.9	9.0	9.8
<b>GVA at Basic Price</b>	<b>5.8</b>	<b>3.9</b>	<b>-4.2</b>	<b>9.4</b>	<b>7.2</b>	<b>8.6</b>	<b>6.4</b>	<b>6.5</b>	<b>7.6</b>

Source: MOSPI; Note: FRE – First Revised Estimates, FE- Final Estimates, PE – Provisional Estimates

#### 1.2.4 Trends in Per capita State Domestic Product (SDP)

State Domestic Product is the total value of goods and services produced, during any financial year, within the geographical boundaries of a state. The top 10 best performing states on per capita SDP include Delhi, Gujarat, Karnataka, and Tamil Nadu.

As of FY25, major states having a per capita SDP below national average include Andhra Pradesh, Rajasthan, Madhya Pradesh, and Uttar Pradesh growing y-o-y by 8.0%, 6.9%, 4.7%, and 7.9% respectively. Bihar is the poorest performing state with a per capita SDP of Rs. 33,996. It has consistently been performing the poorest since FY18, growing merely at a CAGR of 4.5% from FY18 to FY25.

**Table 4: Per Capita State Domestic Product (SDP) for Key States (at constant prices, in Rs.)**

State\UT	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25
Andhra Pradesh	1,03,177	1,08,853	1,10,587	1,10,971	1,18,349	1,23,853	1,31,083	1,41,609
Bihar	26,719	29,092	29,798	26,839	27,674	30,678	33,966	36,342

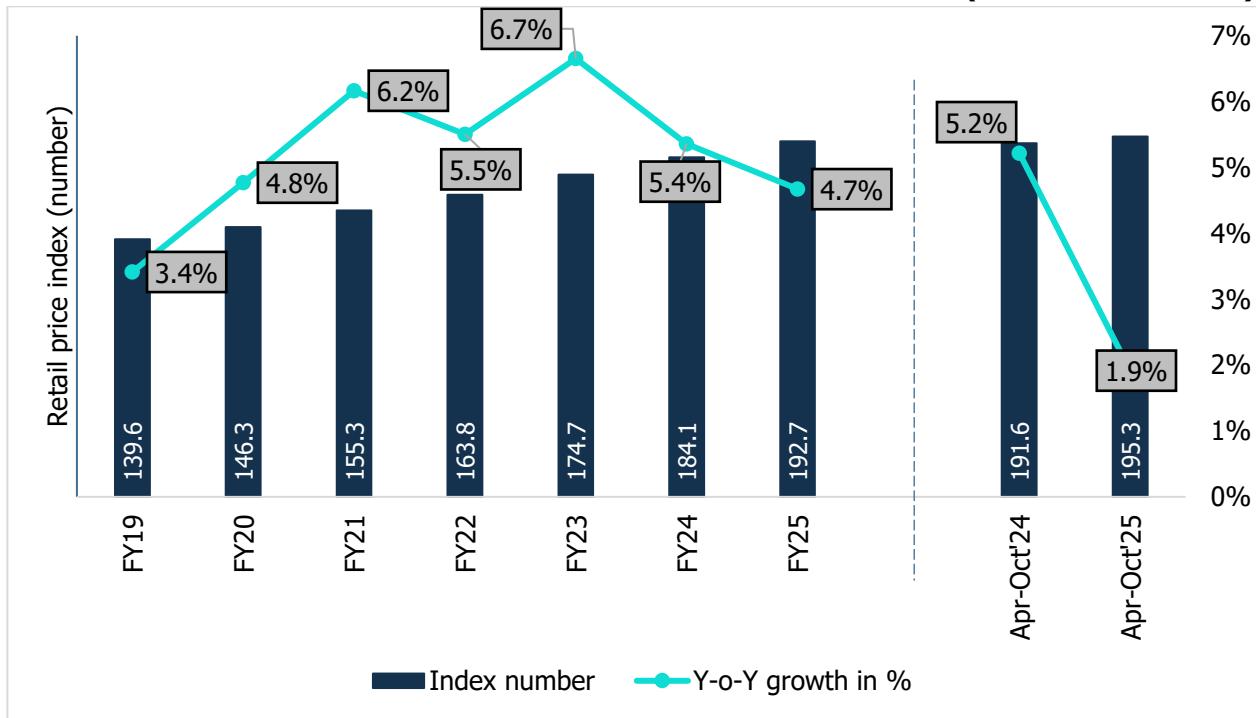
Gujarat	1,43,604	1,54,887	1,64,060	1,56,285	1,70,519	1,81,963	NA	NA
Karnataka	1,40,747	1,49,024	1,56,478	1,49,673	1,65,517	1,82,371	1,91,970	2,04,605
Madhya Pradesh	54,824	59,005	60,452	56,086	61,011	63,681	67,301	70,434
Maharashtra	1,37,808	1,40,782	1,45,626	1,27,550	1,41,651	1,54,979	1,66,013	1,76,678
Rajasthan	73,529	73,975	76,840	73,447	79,490	84,585	90,414	96,638
Tamil Nadu	1,33,029	1,41,844	1,44,845	1,43,482	1,54,269	163,205	1,78,496	1,97,747
Uttar Pradesh	41,771	42,333	43,061	39,866	45,294	48,014	51,898	55,990
Delhi	2,52,960	2,57,597	2,60,559	2,28,162	2,39,821	2,52,768	2,71,490	2,83,093

Source: MOSPI

### 1.2.5 Consumer Price Index

The Consumer Price Index (CPI) for the April–October 2025 recorded a combined inflation rate of 1.9%, marking the lowest quarterly retail inflation of the current CPI series. The moderation was driven by the impact of decline in GST, favorable base effect and to drop in inflation of Oils and fats, Vegetables, Fruits, Egg, Footwear, Cereals and products, Transport and Communication etc.

**Chart 4: Retail Price Inflation in terms of index and Y-o-Y Growth in % (Base: 2011-12=100)**

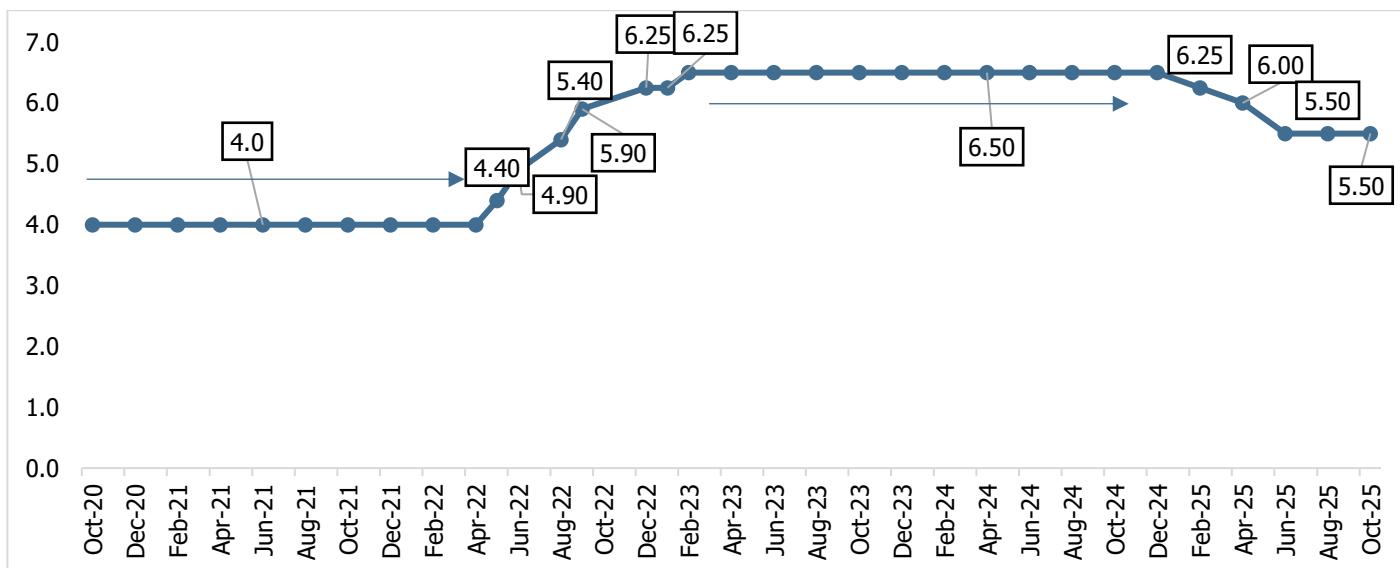


Source: MOSPI

The CPI is primarily factored in by RBI while preparing their bi-monthly monetary policy. At the bi-monthly meeting held in October 2025, RBI projected inflation at 2.6% for FY26 with inflation during Q2FY26 at 1.8% and Q3FY26 at 1.8%, Q4FY26 at 4.0% and Q1FY27 at 4.5%.

Considering the current inflation situation, RBI has maintained the repo rate to 5.5% in the October 2025 meeting of the Monetary Policy Committee.

**Chart 5: RBI historical Repo Rate**



Source: RBI

Further, the central bank continued its stance as 'neutral'. The economic growth outlook for India is expected to maintain momentum, supported by private consumption and continued growth in fixed capital formation. The uncertainty has resurfaced as the temporary pause on US tariff hikes has ended and higher duties on some Indian exports now apply, even though trade talks have resumed.

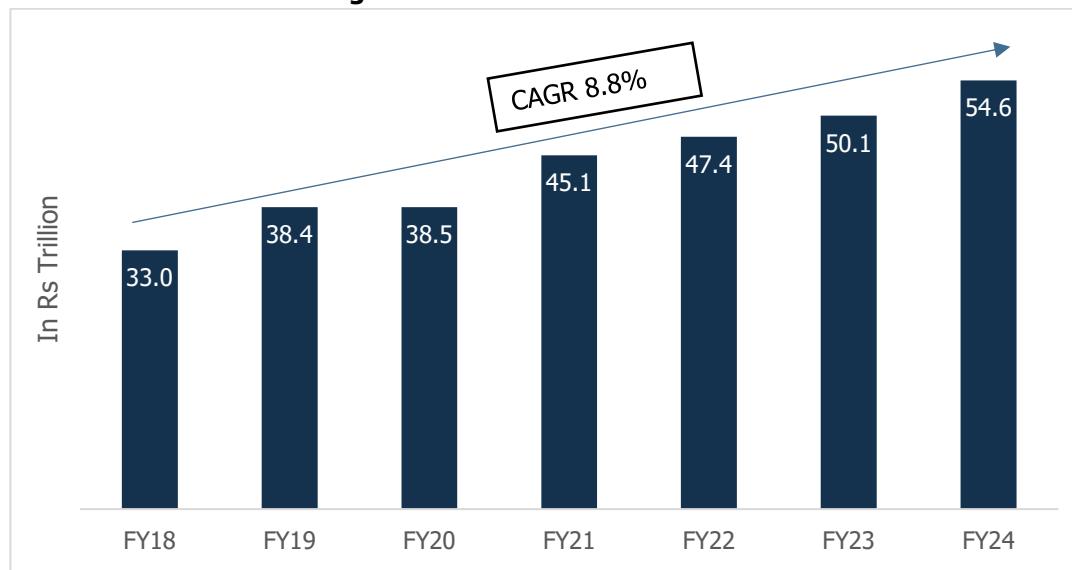
The RBI has adopted for a non-inflationary growth with the foundations of strong demand and supply with a good macroeconomic balance. The domestic growth and inflation curve require the policies to be supportive with the volatile trade conditions.

### 1.2.6 Trends in Household and Gross Savings

Household savings are of the household sector, measured as its excess of income over consumption and invested in financial assets and physical assets. Household savings in India have grown at an 8.8% CAGR since FY18, reaching Rs 54.6 trillion in FY24, a 9.0% y-o-y increase. A shift toward physical assets, particularly housing and gold/silver ornaments, reflects a preference for tangible investments amid high inflation and slow growth in monetary assets.

This trend is driven by heavy borrowing, especially in housing, auto, and personal loans, leading to a six-year high in household financial liabilities. Savings in mutual funds and life insurance also grew, with an 11.5% and 13.6% y-o-y increase, respectively, while investment in equities and capital market instruments rose as they offer higher returns than bank deposits.

### Chart 6: Household Savings

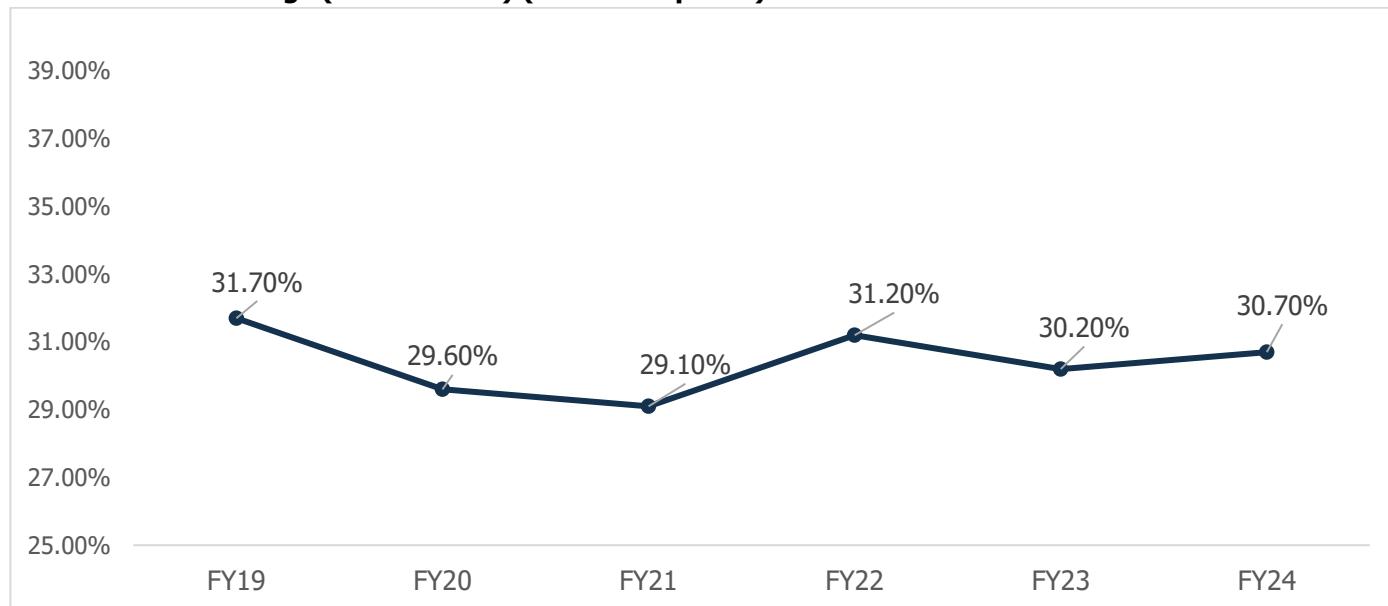


Source: MOSPI

Gross domestic savings are the total savings within the economy, comprising the savings of the household, private corporate and public sectors. Gross Domestic Savings as percentage of GDP, has seen a flat growth moving within a narrow range. Within the last five years, it was highest in FY19 at 31.7%. It declined to less than 30% during FY20 and FY21 on account of pandemic increasing again to 31.2% in FY22 before declining to 30.2% in FY23. The trend picked up marginally in FY24 to 30.70%.

As of FY24, Savings were Rs. 92.59 trillion indicating a y-o-y growth of 12.3% while GDP was at Rs. 301.23 trillion showing a growth of 12.0%.

### Chart 7: Gross Savings (as % of GDP) (at current prices)



Source: MOSPI

### 1.2.7 Growth of the middle class in India and the rural economy in India

India's rural economy is becoming a significant driver of the Fast-Moving Consumer Goods (FMCG) sector's resurgence, signalling a promising turnaround in aggregate demand after a slow start to the 2024-25 financial year. The Reserve Bank of India (RBI) highlights that rising incomes and improved infrastructure are fuelling increased rural consumption of FMCG products. This boost is supported by a rise in rural savings, marked by growing numbers of savings bank accounts and balances, and a reduction in inflationary pressures, which has allowed rural consumption to catch up with urban areas. Additionally, favourable monsoon conditions and improved sowing data are expected to sustain this growth, complemented by increased government spending on rural development and infrastructure.

The expansion of middle-income households in rural India is transforming the country's economic landscape. This growth is driven by rising incomes, increased discretionary spending, a shift towards online and omnichannel shopping, and advancements in payment and logistics infrastructure. There is also a notable dietary shift in rural areas from carb-based foods to more protein-rich diets. India's middle class, characterized by significant income variability, exhibits diverse spending patterns. Lower-middle-class households allocate much of their income to private healthcare, education, and essential consumer goods, such as motorbikes and basic appliances. In contrast, the upper-middle-class invests in luxury items, entertainment, property, and personal services, with a higher propensity to own assets like cars, computers, and air conditioners. Both segments of the middle class are substantial and emerging as key drivers of consumption and economic growth in India. Recent policies, including the Mahatma Gandhi National Rural Employment Guarantee Act, have increased rural incomes, enabling more rural households to enter the middle class. The growing, more inclusive, and politically engaged middle class reflects broader economic growth, although there is a risk of social strain if growth falters and quality job creation does not keep pace.

The India Meteorological Department (IMD) expects a stronger-than-usual southwest monsoon, which should improve crop production and refill water reservoirs helping boost spending in rural areas.. Improvements in agriculture and rural spending are emerging as bright spots in demand conditions. The government's Budget measures, which focus on agriculture, infrastructure, and rural development, aim to increase incomes and revitalize the rural sector. These measures include transforming agricultural research, introducing new crop varieties, promoting natural farming, and enhancing digital infrastructure for agriculture. Successful implementation of these programs, coupled with proper fund allocation, is crucial for improving farm incomes and strengthening supply chains. A shift towards diversified, high-value agricultural production, along with marketing and trade reforms, is needed to foster more inclusive, environmentally friendly, and climate-resilient agriculture.

Despite higher absolute incomes among the wealthy, the sheer size of India's middle class indicates it will become a major force in the economy, creating one of the world's largest markets. This burgeoning middle class, with its growing discretionary spending power, is poised to drive investment, generate employment, and spur further economic growth. Assuming effective reforms are implemented, and the middle class expands to over one billion people, its role will be pivotal in India's economic and social fabric, influencing a wide range of activities from consumption to employment and political change.

### 1.2.8 Overview on Key Demographic Parameters

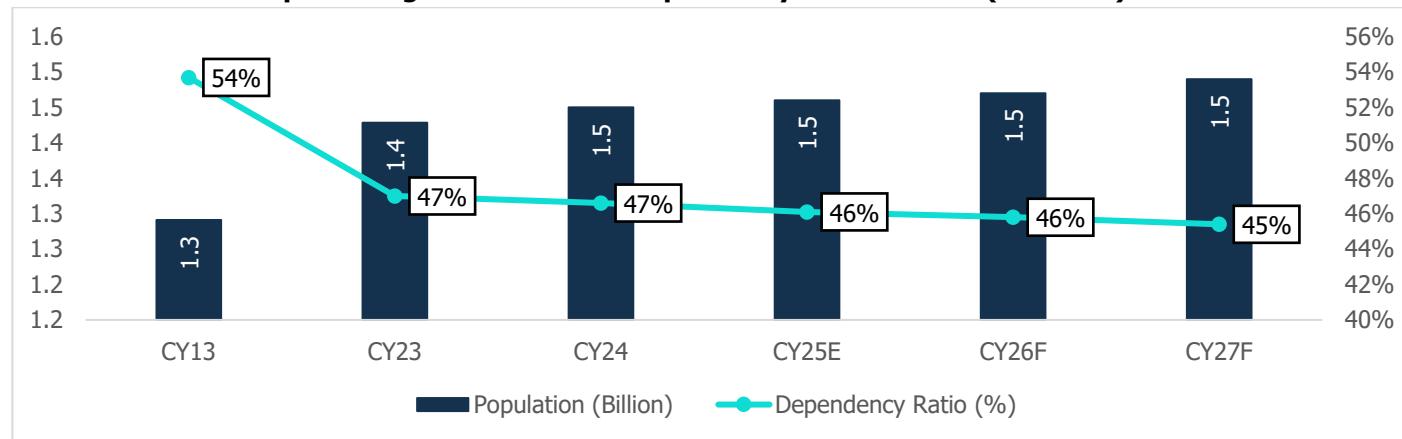
- Population growth and Urbanization

The trajectory of economic growth of India and private consumption is driven by socio-economic factors such as demographics and urbanization. According to the world bank, India's population in CY22 surpassed 1.42 billion, slightly higher than China's population (1.41 billion) and became the most populous country in the world.

Age Dependency Ratio is the ratio of dependents to the working age population, i.e., 15 to 64 years, wherein dependents are population younger than 15 and older than 64. This ratio has been on a declining trend. Declining dependency

means the country has an improving share of working-age population generating income, which is a good sign for the economy. It was as high as 76% in 1983, which has reduced to 47% in CY23. However, this ratio is expected to rise again to 54% by CY36, driven by an increase in the elderly population as life expectancy improves.

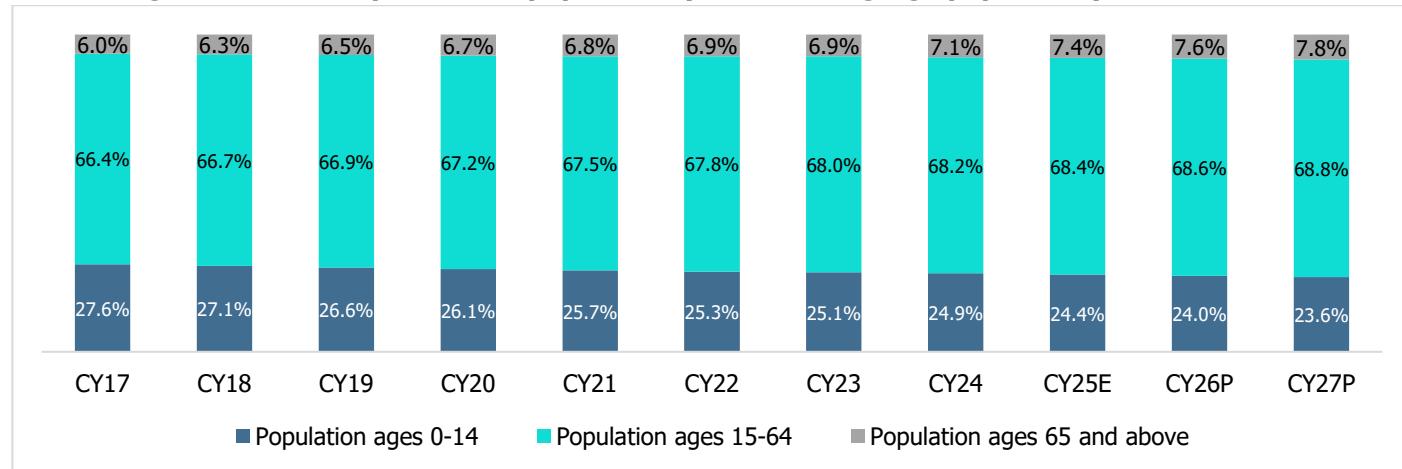
**Chart 8: Trend in Population growth vis-à-vis dependency ratio in India (in Billion)**



Source: World Bank Database, MOSPI; Note: E- Estimated, F- Forecasted

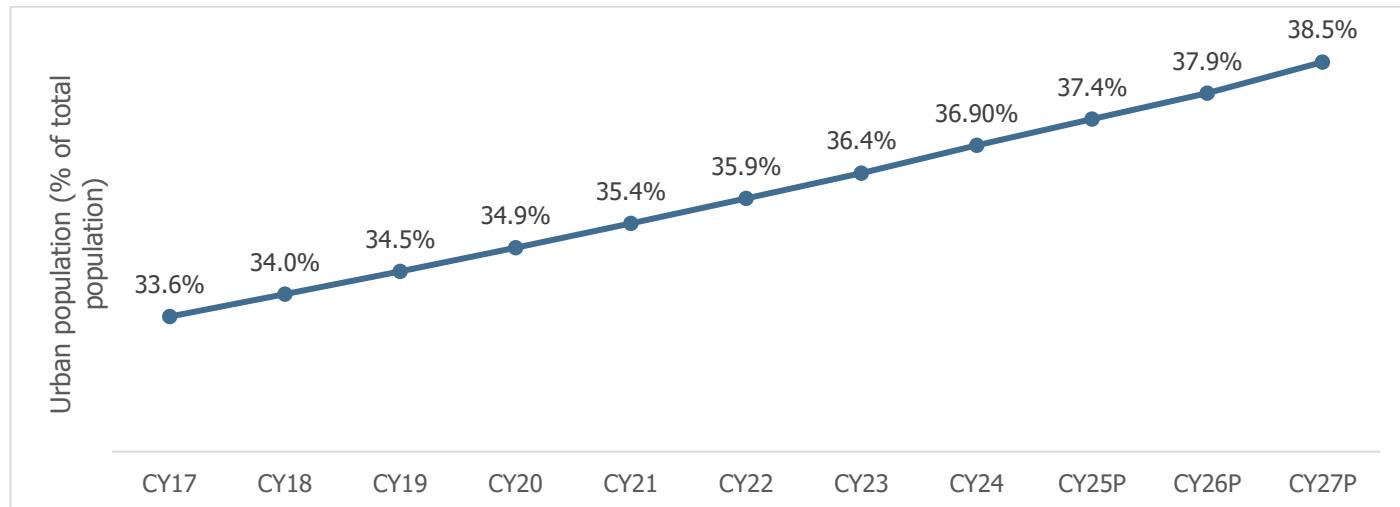
Despite a projected rise in the dependency ratio to 54% by CY36, India's young and growing workforce, especially in newly urbanised towns, will continue to drive income growth and consumer demand. This presents strong opportunities for sectors like consumer electronics, transportation, and railways. Rising employment, urbanisation, and government investment in rural development and digital infrastructure will further boost demand, while increased tech adoption supports long-term consumption growth across both urban and rural markets.

**Chart 9: Age-Wise Break Up of Indian population (% of working-age population)**



Source: World Bank Database; Note: E- Estimated, F- Forecasted

The urban population is significantly growing in India. The urban population in India is estimated to have increased from 413 million (32% of total population) in CY13 to 519.5 million (36.4% of total population) in the year CY23. India is undergoing a significant urban transformation, with the urban population projected to rise to 40% by CY36. This shift is driven by factors such as improved living standards, increased employment opportunities in urban areas, and government initiatives aimed at urban development. This rapid urbanisation might necessitate substantial investments in infrastructure, housing, and transportation.

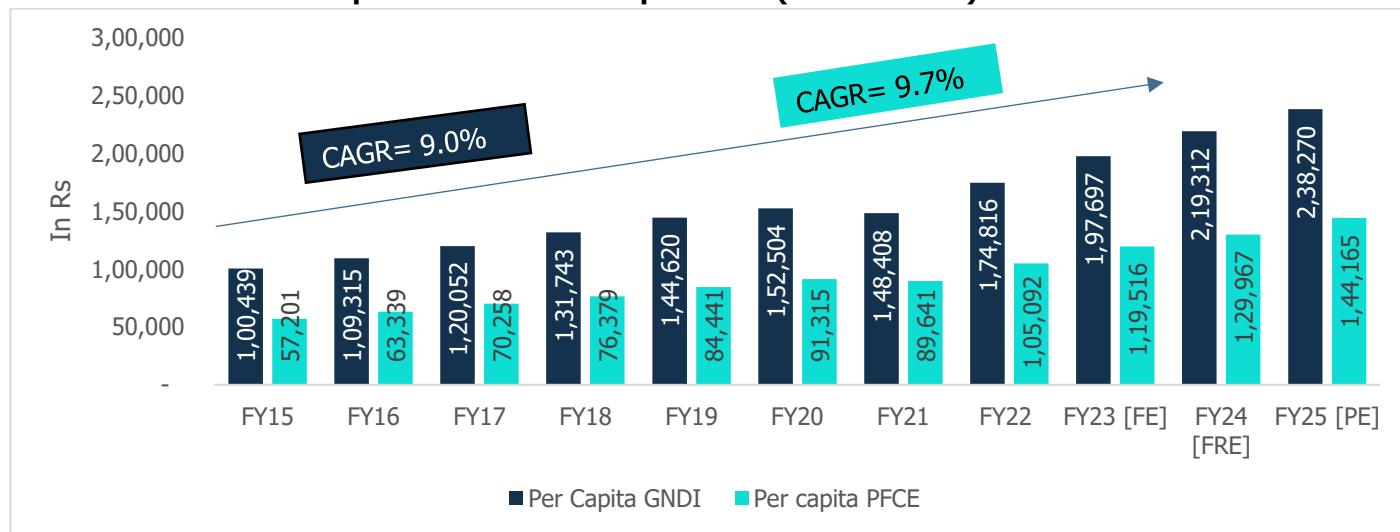
**Chart 10: Urbanization Trend in India**

Source: World Bank Database; Note: E- Estimated, F- Forecasted

- Increasing Disposable Income and Consumer Spending**

Gross National Disposable Income (GNDI) is a measure of the income available to the nation for final consumption and gross savings. Between the period FY15 to FY25, per capita GNDI at current prices registered a CAGR of 9.02%. More disposable income drives more consumption, thereby driving economic growth.

With increase in disposable income, there has been a gradual change in consumer spending behaviour as well. Per capita Private Final Consumption Expenditure (PFCE) which is measure of consumer spending has also showcased significant growth from FY15 to FY25 at a CAGR of 9.7%.

**Chart 11: Trend of Per Capita GNDI and Per Capita PFCE (Current Price)**

Source: MOSPI; Note: FRE – First Revised Estimates, FE – Final Estimates, PE- Provisional Estimates

### 1.3 Concluding Remarks

From a macroeconomic standpoint, India remains one of the most resilient large economies in a challenging global environment. The IMF forecasts GDP growth of 6.6% in CY2025, far outpacing the estimated CY25 global average of

3.2%. This performance reflects a combination of strong domestic fundamentals, policy stability, and a sustained focus on capital formation. While the global economy continues to face uncertainty from geopolitical conflicts, commodity price volatility, and rising public debt, India's diversified growth drivers, stable policy framework, and expanding export ecosystem position it well to navigate these headwinds.

The latest phase of India–U.S. trade relations has been shaped by Washington's decision in 2025 to impose higher tariffs on select imports, including steel, aluminium, chemicals, and certain electronics. These measures form part of a wider recalibration of U.S. trade policy aimed at reducing strategic dependencies and protecting domestic manufacturing. While India was among the affected countries, the direct impact on its export performance is expected to be limited. The affected categories constitute less than 4% of India's total exports, and key sectors such as steel subject to a 50% tariff have only modest exposure to the U.S. market. With strong domestic demand from infrastructure and energy sectors, Indian steel producers are likely to absorb the impact with minimal disruption.

Conversely, sectors such as textiles and apparel may benefit indirectly, as U.S. buyers continue diversifying sourcing away from China and other high-cost Asian economies. India's competitive cost base, skilled labour availability, and expanding production capacity especially under the government's Production-Linked Incentive (PLI) scheme are positioning it as a preferred manufacturing alternative. Electronics and engineering goods have similarly seen strong investment momentum, reflected in the rapid scale-up of smartphone production and Apple's decision to expand iPhone assembly operations in India.

Despite the tariff frictions, the overall tenor of India–U.S. engagement remains constructive. During their meeting on February 13, 2025, Prime Minister Narendra Modi and President Donald Trump reaffirmed a shared goal to enhance bilateral trade from USD 200 billion to USD 500 billion by 2030. As of September 2025, the Ministry of Commerce and Industry has described ongoing negotiations as "positive and forward-looking," with both sides exploring ways to reduce duties on pharmaceuticals, auto components, and IT hardware. These developments underline a broader effort to establish a more balanced and durable trade relationship that aligns with India's manufacturing ambitions and America's supply chain resilience goals.

The recent 56<sup>th</sup> meeting of the Goods and Services Tax (GST) Council announced some major changes in the existing GST structure. The focus is majorly on simplifying it to a two-tiered GST tax structure of 5% and 18%, phasing out the currently existing 12% and 28% slabs. There is also a de-merit tax rate for luxury and 'sin' goods at a 40% tax slab. These changes are typically aimed at increasing the disposable income and in turn boosting consumption, as well as promoting the ease of doing business. The GST rationalization is expected to be a positive step towards economic growth, stimulating private consumption and ease inflationary pressures. As of 2025, most textiles and garments up to Rs 2,500 attract **5% GST**, higher-end garments 18%, and MMF/raw materials now enjoy a lower 5% rate, simplifying taxation and boosting industry competitiveness.

Beyond the U.S., India is actively broadening its export base to reduce dependency on any single market. Strengthening trade links with the European Union, ASEAN, and African economies is helping diversify risk and stabilize export earnings. Policy initiatives supporting logistics modernization, lower tariff barriers, and industrial corridor development continue to enhance India's competitiveness as a global manufacturing hub.

Domestically, policy momentum remains strong. The 56th meeting of the GST Council marked a major structural reform by proposing a simplified two-rate system of 5% and 18%, replacing the earlier four-slab framework, along with a 40% demerit rate for luxury and sin goods. This rationalization aims to reduce compliance burdens, enhance efficiency, and stimulate private consumption. Together with recent revisions in personal income tax rates, these measures are

projected to release savings exceeding Rs 2.5 lakh crore into the economy, supporting demand and easing inflationary pressures.

The Union Budget's allocation of Rs 11.21 lakh crore for capital expenditure in FY26 further reinforces the government's commitment to infrastructure-led growth. Public investment is expected to catalyse private sector activity, evidenced by rising project announcements and growing imports of capital goods. Improving rural demand, supported by healthy monsoon progress, favourable sowing conditions, and adequate reservoir levels, provides additional tailwinds for consumption and investment.

In sum, while the recent U.S. tariff actions introduce short-term challenges, their overall economic impact on India is likely to be marginal. Supported by robust domestic demand, diversified trade linkages, and a deepening industrial base, India remains firmly on a high-growth trajectory. Over the medium term, these dynamics are expected to strengthen its position as a resilient, cost-competitive, and strategically significant player in the evolving global economic order.

## 2 Global Textile Industry

The global textile industry is a vast and dynamic sector that plays a crucial role in the world economy, connecting agriculture, manufacturing, design, and retail across continents. It encompasses the production of fibres, yarns, fabrics, and finished garments, involving both natural and synthetic materials. The industry is constantly evolving through innovation, with trends in fashion, sustainability, and technology driving its direction. From cotton fields to high-tech textile labs, the sector reflects a blend of artisanry and industrial scale.

Major textile-producing countries include China, India, Bangladesh, Vietnam, and Türkiye, which serve as key hubs for manufacturing due to their large labour forces and established infrastructures. Meanwhile, Western nations often lead in high-end fashion design, textile innovation, and sustainable solutions. The industry supports millions of jobs worldwide, from farming and factory work to marketing and retail, making it a vital contributor to both developing and developed economies. This industry supports a wide range of products, including clothing, household textiles (like curtains and bed linens), industrial fabrics, and technical textiles used in sectors like healthcare, construction, and automotive.

Overall, the textile industry is a complex and interconnected system that supports a wide range of economic activities, cultural expressions, and everyday needs. From the sourcing of raw fibres to the creation of high-performance technical fabrics and fashionable garments, each stage contributes significantly to global trade and employment. Innovation, sustainability, and responsiveness to consumer trends are driving the industry's transformation, making it an essential future focused segment. As it evolves, the textile sector remains a key player in shaping global economies and lifestyles.

### 2.1 Sectors in the Global Textile Industry

The global textile industry is vast and diverse, comprising several key sectors that span the entire value chain from raw materials to finished products. The main sectors of the textile industry globally are:

**1. Spinning Sector:** The spinning sector is the foundation of the textile industry, responsible for converting raw fibres like cotton, wool, jute, and synthetic materials into yarn. India is one of the world's largest producers of cotton and cotton yarn. Spinning mills are highly mechanized and are concentrated in states like Tamil Nadu, Maharashtra, and Gujarat. This sector supplies yarn to both domestic weavers and international buyers.

**2. Weaving and Knitting Sector:** This sector focuses on transforming yarn into fabric. Weaving is done using handlooms or power looms, while knitting is commonly used for stretchable or close-fitting fabrics. India's power loom sector is decentralized and prominent in towns like Bhiwandi (Maharashtra), Erode (Tamil Nadu), and Surat (Gujarat), producing a wide range of fabrics including cotton, polyester, and blends. Meanwhile, the handloom sector plays a crucial role in preserving traditional crafts and providing rural employment.

### 3. Textile Processing Sector:

The textile processing sector plays a critical role in adding value to fabrics by transforming raw or greige textiles into finished products ready for use. Key processes include dyeing, printing, and finishing, each of which impart specific properties to the fabric.

- **Dyeing** involves imparting uniform color to yarns, fabrics, or garments using a range of natural or synthetic dyes. Techniques such as reactive, vat, or disperse dyeing are selected depending on the fiber type and desired colorfastness.

- **Printing** allows for the creation of patterns and designs on fabrics, using methods such as screen printing, rotary printing, or digital printing. Advanced printing technologies enable high-precision designs with minimal waste.
- **Finishing** encompasses a variety of mechanical and chemical treatments to improve the texture, feel, strength, appearance, and functionality of textiles. Examples include softening, anti-shrink, water-repellent, flame-retardant, anti-pilling, and wrinkle-free finishes.

These processes not only enhance the aesthetic appeal of textiles but also their performance characteristics, making them suitable for diverse end-uses such as apparel, home textiles, technical textiles, and exports. Processing units often adopt a combination of chemical, thermal, and mechanical treatments tailored to meet specific requirements of domestic and international buyers.

However, the sector faces significant sustainability challenges. Textile processing is water-intensive, generates large volumes of effluents, and uses chemicals that can be hazardous if not managed properly. To address these issues, there is a growing push to modernize operations with eco-friendly technologies, such as low-liquor dyeing, digital printing, closed-loop water systems, enzymatic treatments, and energy-efficient finishing machines. Adoption of such practices not only reduces environmental impact but also enhances compliance with international standards like OEKO-TEX and GOTS, which are increasingly demanded by global buyers.

**4. Garment and Apparel Sector:** The apparel and garment manufacturing sector represents one of the most dynamic, value-driven, and labour-intensive segments of India's textile value chain. In this segment, fabrics—both natural and man-made—are cut, stitched, and assembled into finished garments for domestic markets and export destinations. India is among the top global producers and exporters of ready-made garments (RMG), offering a wide portfolio of products such as shirts, trousers, dresses, suits, knitwear, denim, and ethnic wear. The sector caters to a diverse range of buyers—from high-street brands and global retailers to niche, premium segments—supported by a strong raw material base, skilled workforce, and competitive cost structure.

#### 2.1.1 Regional Hubs and Product Specialization:

India's apparel manufacturing ecosystem is geographically diversified, with distinct regional strengths:

- Tiruppur (Tamil Nadu): Recognized as the Knitwear Capital of India, Tiruppur accounts for nearly 45% of India's total knitwear exports, specializing in cotton and blended garments for global brands.
- Bengaluru (Karnataka): A leading export-oriented apparel hub, home to numerous large garment exporters producing woven and knitwear for international fashion houses.
- Noida and Delhi NCR: Serve as major manufacturing clusters for high-volume ready-made garments, catering to both domestic branded apparel and export orders.
- Ludhiana (Punjab): Dominates the woolen and hosiery segment, known for sweaters, thermals, and winter wear.
- Tripura and Guwahati (North-East): Emerging centers for knitwear and handloom-based garment production, supported by government incentives to promote textile activity in the region.
- Jaipur and Kolkata: Specialized in ethnic and traditional wear including block-printed, embroidered, and handwoven apparel that appeals to global fashion buyers.

**Economic and Employment Impact:** The apparel sector plays a pivotal role in India's export economy—contributing around 12–13% of total export earnings and accounting for roughly 40% of India's total textile exports. It employs over 45 million people directly, and an additional 60 million indirectly across allied activities such as packaging, logistics,

embroidery, and accessories. The industry's labour-intensive nature makes it a major source of livelihood for women and rural communities, fostering inclusive economic growth.

**Technological Advancements and Modernization:** While traditionally labour-driven, the sector has witnessed increasing adoption of automation and digitalization, including computer-aided design (CAD), automated cutting, and real-time production monitoring. Export-oriented units are integrating lean manufacturing, supply-chain traceability, and Industry 4.0 technologies to improve productivity and ensure compliance with international standards. Investment in green manufacturing, energy-efficient machinery, and eco-friendly processing has also become a focus area as global buyers demand more sustainable sourcing.

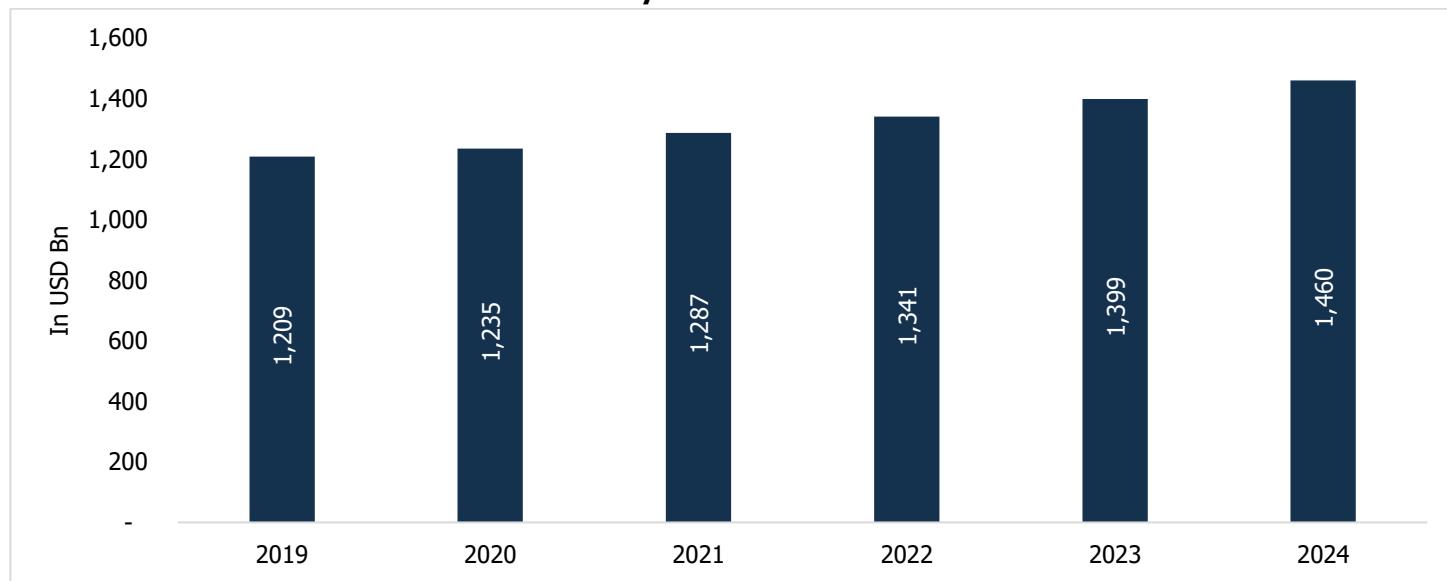
**5. Home Textiles and Made-Ups Sector:** The home textiles and made-ups sector cover a range of products such as bed linen, towels, curtains, cushions, carpets, and tableware fabrics. These products are in high demand globally and are a significant part of India's textile exports. Cities like Karur and Panipat are renowned for producing and exporting home textiles. The sector combines industrial-scale production with artisan skills, especially in areas like embroidery and handwoven furnishings.

### Types of Textiles

1. **Natural Textiles:** Natural Textiles are made from fibres that come from natural sources like plants and animals. Common examples include cotton, wool, silk, and jute. These textiles are known for being breathable, biodegradable, and comfortable, making them widely used in clothing, home furnishings, and traditional crafts.
2. **Synthetic Textiles:** Synthetic Textiles are created from chemical processes using petroleum-based products such as ethylene, p-xylene, and monomers. Fibers like polyester, nylon, acrylic, and spandex fall under this category. These textiles are durable, wrinkle-resistant, and quick-drying, and are commonly used in fashion, sportswear, and industrial applications.
3. **Technical Textiles:** Technical Textiles are specially designed for performance and functionality rather than aesthetics. They are used in fields such as medicine, construction, automotive, agriculture, and defence. Examples include medical gowns, fire-retardant fabrics, industrial filters, and geotextiles, offering properties like strength, flexibility, and resistance to extreme conditions.

## 2.2 Global Textile Industry Market Size

The global textile industry has shown consistent growth over recent years, with its market size increasing steadily from USD 1,209 billion in 2019 to an estimated USD 1,460 billion in 2024. This upward trend reflects the rising demand for textiles across various segments including fashion, home furnishings, and technical applications. The growth is driven by factors such as expanding global population, the rise of fast fashion, and advancements in textile technology. Additionally, growing awareness around sustainable and functional textiles has further diversified market offerings, contributing to this continued expansion in value.

**Chart 12: Global Market Size of Textile Industry**

Source: Industry Sources

### 2.3 Emerging Opportunities in Global Textile Industry

**1. Sustainable and Eco-Friendly Textiles:** Sustainability is rapidly becoming a cornerstone of the global textile industry. There is increasing demand for eco-friendly fibres such as organic cotton, hemp (fabric is a textile made from the fibres of the Cannabis sativa plant), and bamboo, as well as the adoption of sustainable dyeing and finishing techniques that minimize environmental impact. Many brands are implementing waterless dyeing processes, using biodegradable materials, and transitioning to closed-loop production systems. Consumers now actively seek ethical, eco-conscious fashion choices, creating a strong business case for investing in green innovations.

**2. Opportunities through Renewable Energy and Water Efficiency:** Emerging opportunities in the global textile industry include the efficient utilization of renewable energy sources such as wind and solar power, which can lower operational costs and enhance sustainability credentials. Coupled with the effective operation of water treatment and effluent management systems, particularly in dyeing and finishing, textile manufacturers can reduce water consumption, recycle effluents, and minimize environmental impact. This integration of energy and water efficiency not only improves cost competitiveness and operational resilience but also supports compliance with international standards like OEKO-TEX, GOTS, and Bluesign, making Indian textile products more attractive in eco-conscious global markets. India is adopting renewable energy for textile manufacturing, supported by policies like the Perform, Achieve and Trade (PAT) scheme and state-level solar incentives.

**3. Smart Textiles and Wearable Technology:** Smart textiles are transforming fabrics into interactive, tech enabled materials by integrating sensors, conductive fibres, and electronics into the cloth itself. These materials can monitor vital signs such as heart rate, temperature, or movement, making them highly valuable in healthcare, military, sportswear, and fashion-tech. With a high potential in technology-driven consumer markets, these fabrics are paving the way for intelligent apparel that enhances performance and personal health monitoring.

**4. Technical and Functional Textiles:** There is growing demand for high-performance textiles across industries such as automotive, medical, construction, and defence. These technical textiles are engineered with special features like fire

resistance, moisture-wicking, and antimicrobial protection. Geotextiles are used in infrastructure projects, while medical textiles include surgical gowns and wound care materials. As industrialization spreads in developing nations and safety standards become stricter worldwide, this segment offers enormous commercial potential.

**5. Digital Printing and Customization:** Digital printing is revolutionizing textile production by enabling on demand, short-run, and highly customizable fabric printing with minimal waste. This technology allows brands to quickly respond to market trends, personalize products for individual customers, and reduce overproduction. Particularly beneficial in fashion, activewear, and home décor, it offers a cost-effective solution for creative freedom, fast turnaround, and eco-conscious manufacturing.

**6. Recycling and Circular Economy:** The shift toward a circular economy in textiles is gaining momentum as brands and consumers seek to reduce textile waste and promote resource efficiency. New technologies are enabling textile-to-textile recycling, while upcycled fashion and resale platforms are becoming mainstream. Brands are also investing in second-hand and rental markets. These strategies not only support sustainability but also align with growing consumer demand for zero-waste and responsible fashion.

**7. E-commerce and D2C Models:** E-commerce is opening global markets for textile brands, especially through direct-to-consumer (D2C) models. Online platforms allow brands to reach customers without the need for physical stores, while tools like virtual try-ons and 3D product visualization enhance the shopping experience. Lower overhead costs, personalized marketing, and direct feedback loops make this a highly effective growth strategy, particularly for new or niche brands.

**8. Bio-Based and Alternative Fibers:** Innovative fibres derived from biological sources like mushrooms, pineapple leaves, banana stems, and lab-grown spider silk are gaining attention as alternatives to synthetic and water-intensive materials. These bio-based textiles are often biodegradable and sustainably produced, making them ideal for eco-conscious and luxury fashion markets. Their unique textures and properties also offer fresh design possibilities for cutting-edge apparel.

## 2.4 Leading Textile Manufacturers

**1. Arvind Limited (India):** Arvind Limited is a textile manufacturer and engaged in denim production globally. The company operates across a vertically integrated supply chain, including spinning, weaving, dyeing, and garment manufacturing. Arvind has eco-friendly practices like waterless dyeing and the use of organic cotton. Beyond textiles, the company is also involved in apparel brands, retail, and technical textiles, serving both domestic and international markets, including partnerships with major global brands.

**2. Esquel Group (Hong Kong):** The Esquel Group is a producer of premium cotton shirts in the world. It operates a fully integrated business model from cotton farming and spinning to garment manufacturing. The company manufactures for global fashion brands including Ralph Lauren, Tommy Hilfiger, and Nike.

**3. Shandong Ruyi Group (China):** The group operates in textile value chain and owns stakes in various brands around the world. It has invested in wool processing, synthetic fibre production, and ready-to-wear fashion. With acquisitions in Europe and Japan, the company operates not just in textile manufacturing but also in global fashion retail.

**4. Toray Industries (Japan):** Toray Industries is a Japanese multinational corporation that operates in synthetic fibres, technical textiles, and advanced materials such as carbon fibre. The company plays a role in industries beyond fashion, including aerospace, automotive, and medical textiles. Toray's textiles are used in sportswear and outdoor gear, and the company has forged long-term partnerships with global apparel giants.

**5. Albini Group (Italy):** The Albini Group produces shirting. The company combines traditional Italian weaving expertise with cutting-edge technology to create cotton fabrics in the world. It supplies to designer labels. Albini also took sustainability initiatives, including organic cotton farming and natural dye use.

#### **6. Milliken & Company (USA)**

Milliken & Company, based in the United States, is a global manufacturer indulged in technical and specialty textiles. The company produces a range of textiles for industries such as military, healthcare, flooring, and transportation.

**7. Hyosung TNC (South Korea):** Hyosung TNC, a South Korean textile company, is a producer of spandex. The company also produces nylon, polyester, and other high-performance fibres for the apparel, industrial, and automotive sectors. Hyosung also operates in eco-friendly textiles, including recycled and bio-based fibres. Its fabrics are widely used in activewear, lingerie, and outerwear by leading global brands. The company continues to expand its global footprint.

**8. Vinatex – Vietnam National Textile and Garment Group (Vietnam):** Vinatex is Vietnam's textile and garment group, encompassing a network of companies involved in spinning, weaving, dyeing, and apparel manufacturing. Vinatex caters to global apparel brands. The company is now investing in digital transformation and sustainability to enhance competitiveness and reduce environmental impact in its supply chain.

**9. Lenzing Group (Austria):** Lenzing Group produces sustainable, cellulose-based fibres such as TENCEL, Modal, and Lyocell. These fibres are derived from renewable wood sources and are known for their softness, strength, and environmental friendliness. Lenzing works under sustainable fashion movement by partnering with brands to promote biodegradable and low-impact textiles.

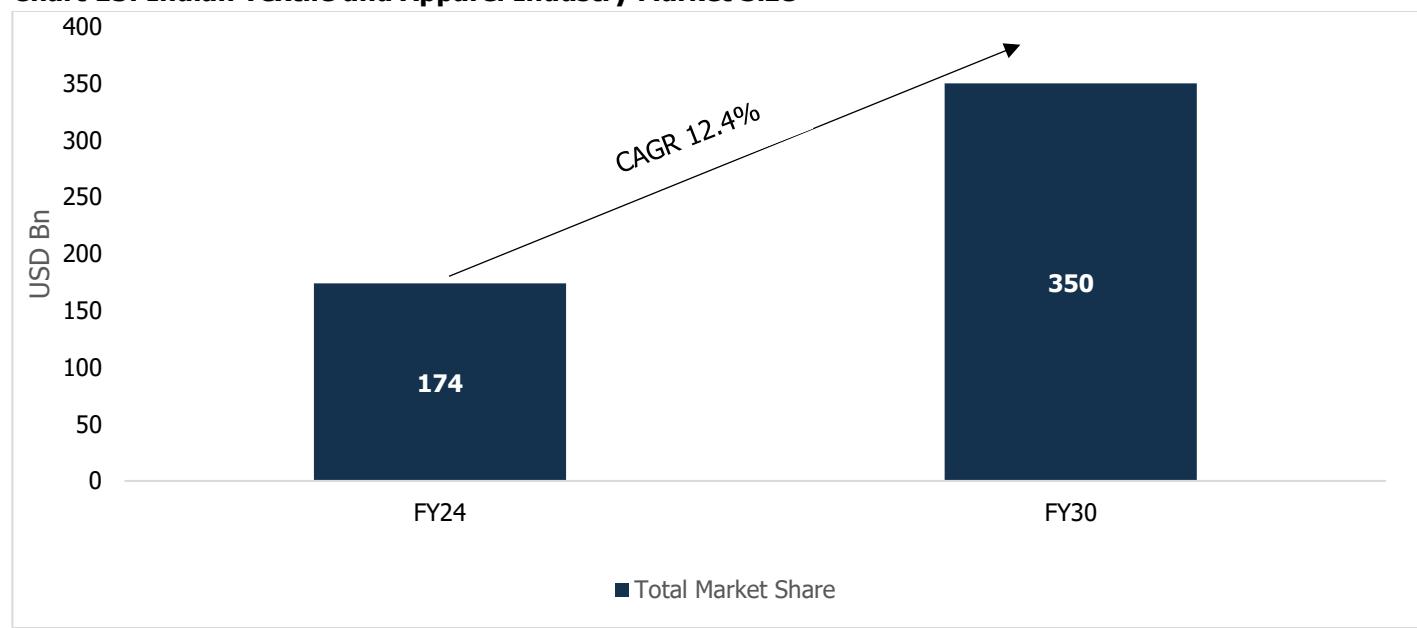
### 3 Indian Textile Industry

#### 3.1 Overview of Indian Textile Industry

The Indian textile and apparel industry spans a vast, interconnected value chain, starting from the cultivation of natural fibres and production of synthetic materials to spinning, weaving, processing, apparel manufacturing, and retail. As the world's second-largest producer of textiles and garments and the third-largest exporter, India holds a significant position in the global market. The sector contributes around 13% to industrial production, 2.3% to GDP, and 12% to national exports. The industry's scope includes not just apparel, but also home textiles and technical textiles, placing India among the top five global exporters across various textile segments.

Beyond manufacturing, the sector has strong linkages with allied domains. It supports agriculture by creating demand for cotton, wool, and jute, while contributing to rural livelihoods. The sector collaborates with designers to integrate traditional craftsmanship with contemporary aesthetics. Moreover, efficient logistics and e-commerce platforms expand market access, benefiting even small and rural enterprises. With increasing emphasis on sustainability, ethical sourcing, and circular fashion, India is establishing itself not only as a major supplier but also as a global trendsetter in textiles..

**Chart 13: Indian Textile and Apparel Industry Market Size**



Source: PIB, CareEdge Research

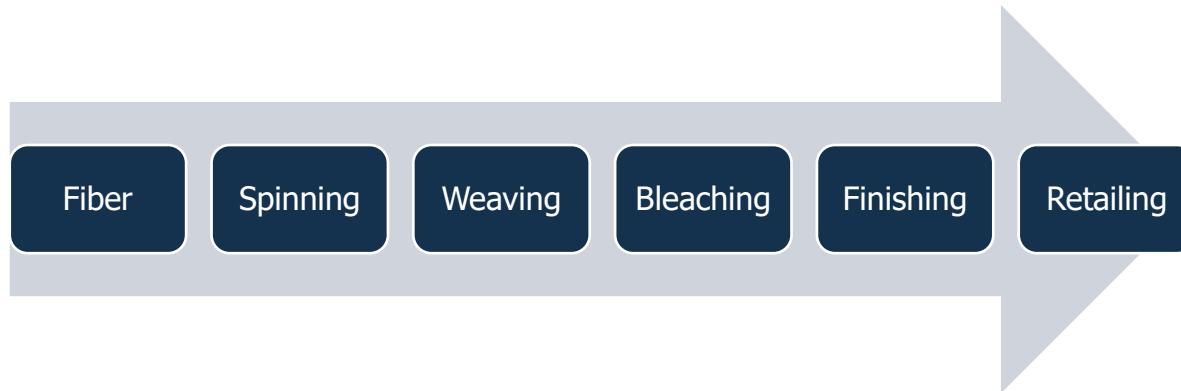
The Indian textile and apparel industry is set to grow from USD 174 Billion in FY24 to USD 350 Billion in FY30, with a 12.4% CAGR driven by rising domestic and export demand. Domestically, rising disposable incomes, and rapid urbanization have led to increased consumption of fashion and home textiles. The boom in online retail and e-commerce platforms has also expanded market access and visibility, particularly for small and medium textile enterprises.

On the global front, India has benefitted from shifting supply chains as countries seek alternatives to China, positioning India as a reliable sourcing destination. Government interventions such as the Production-Linked Incentive (PLI) scheme, the establishment of PM MITRA Parks, and support for technical and man-made fibres have further strengthened infrastructure and innovation capabilities. Sustainability trends, focus on organic cotton, and the increasing popularity

of Indian handlooms and heritage textiles in international markets have also boosted the sector's appeal. Together, these factors have created a solid foundation for long-term, inclusive growth in industry.

### **3.2 Indian Textile Industry: Overview of the Value Chain**

The textile value chain encompasses the entire process of transforming raw fibre into finished textile products. It begins with the sourcing of raw materials, such as natural fibres like cotton and wool or synthetic fibres like polyester and nylon. These fibres are then spun into yarn, which is woven or knitted into fabric. The fabric undergoes wet processing, including dyeing, printing, and finishing treatments to enhance its appearance and functionality. During garmenting, the fabric is cut and stitched into final products such as clothing or home textiles. The finished goods are distributed through retail or wholesale channels to reach consumers. Increasingly, the value chain incorporates post-consumer recycling and upcycling, reflecting the industry's growing commitment to sustainability and circular practices.



**1. Fiber Acquisition:** The textile value chain begins with raw material sources, which lays the groundwork for all subsequent processes. This stage involves acquiring both natural fibres such as cotton, wool, and silk, and synthetic fibres like polyester and nylon. The selection of raw materials greatly affects the cost, quality, and sustainability of the final textile products. After sourcing, the materials go through fibre processing, where they are cleaned, aligned, and converted into spinnable fibres through processes like ginning and carding. Proper fibre preparation is crucial to ensure consistent yarn quality. These fibres are then spun into yarn using methods such as ring spinning or air-jet spinning, which determine key properties like strength, elasticity, and texture.

In India, fibre sourcing is closely tied to regional agro-climatic conditions, which support the cultivation and availability of key fibres in specific states. Cotton is sourced primarily from Maharashtra, Gujarat, Telangana, and Punjab, where black soil and warm climates are ideal for cotton cultivation. Jute is sourced mainly from the alluvial plains of West Bengal, due to the humid climate and fertile soil near the Ganges delta. Karnataka is India's largest producer of mulberry silk. Assam is known for its unique varieties like Muga and Eri silk, which are sourced from indigenous silkworm's native to the region. India also imports synthetic fibres like polyester and viscose, mostly from China, South Korea, and Indonesia, to support its growing man-made fibre industry, as domestic production is still catching up. Additionally, Rajasthan's Bhilwara, widely recognized as the 'Textile City of India,' is a hub for fibre procurement and fabric manufacturing, particularly in cotton and synthetic textiles.

**2. Fabric Formation:** Second phase begins with the weaving and knitting stage which transforms yarn into fabric. While weaving creates more structured fabrics, knitting allows for flexibility and stretching, with the chosen technique influencing the final product's application. Once the fabric is formed, it undergoes dyeing and finishing. This stage enhances the aesthetic appeal and adds functional traits such as water resistance or wrinkle-free properties. These

processes must comply with environmental and safety standards to support sustainability goals. The finished fabric then moves to garment manufacturing, where it is cut, stitched, and assembled. This stage demands skilled labour and often integrates technologies like digital design tools to improve speed and precision. In the weaving industry, within a time span of ten years, a total of 715 clusters across various States/UTs received financial assistance amounting to Rs. 49,655.02 lakh, supporting widespread development in the weaving sector. Through this, 1,73,421 weavers benefited via skill upgradation, provision of upgraded looms, individual worksheds, and lighting units.

- The fabric formation stage is distributed across different textile hubs. Surat (Gujarat) is India's largest centre for synthetic fabric weaving, especially polyester and georgette. Ludhiana (Punjab) is a hub for woollen and hosiery fabrics, while Tiruppur (Tamil Nadu) specializes in cotton knitwear and T-shirts. Bhiwandi (Maharashtra) is known for power loom-based fabric production. Fabric dyeing and finishing units are heavily concentrated in Surat, Jetpur (Gujarat), and Erode (Tamil Nadu). However, many of these processing hubs face environmental compliance issues, especially around wastewater management.
- In the garment manufacturing phase, Tiruppur leads in knitwear exports, while Bangalore (Karnataka) is a key hub for apparel manufacturing, particularly for export-oriented women's wear and fashion garments. Delhi-NCR, Noida, and Gurugram (Haryana) house many medium and large garment exporters, especially in ready-made garments (RMG). These regions depend heavily on skilled and semi-skilled labour, particularly women, and are gradually adopting CAD ((Computer-Aided Design) /CAM (Computer-Aided Manufacturing) and automation tools in export units. Meanwhile, India imports a small portion of high-end garments and winterwear from countries like China and Bangladesh to serve premium domestic markets.

### 3.3 Key segments of the Indian textile industry

The Indian textile industry is one of the most diverse and dynamic sectors of the country's economy, encompassing a broad spectrum of segments that reflect both its rich heritage and modern advancements. From age-old natural fibres like cotton, wool, silk, and jute to innovative manufactured fibres and technical textiles, the industry spans the entire value chain including raw material sourcing, spinning, weaving, processing, and garment manufacturing. Each segment plays a vital role in driving exports, generating employment, and contributing to India's global reputation as a leading textile and apparel hub. Together, these segments serve both domestic demand and international markets, blending tradition with technology and artisanry with commercial scale.

#### 1. Natural Fibres: Cotton, Wool, Silk & Jute Textiles

India's textile industry is historically grounded in natural fibres like cotton, wool, silk, and Jute textiles.

- **Cotton** is the largest segment, with India being the world's top producer. Cotton textiles include spinning, weaving, and garmenting of yarns and fabrics used both domestically and globally. States like Gujarat, Maharashtra, and Tamil Nadu and Bhilwada are hubs. India's cotton yarn exports are a vital component of the industry, representing a substantial portion of 25-35% of its total production in FY2024. The primary driver for the revenue growth in fiscal 2026 will be the recovery in yarn exports to China. Exports form a significant portion of the industry's revenue, with China being one of the key markets.
- **Woolen textiles**, though smaller, are significant in colder northern regions like Punjab and Himachal Pradesh. Known for high-quality shawls, suits, and blankets, this segment supports winter clothing

and luxury wear. India's total wool production for the year 2023–24 is estimated at 33.69 million kilograms, indicating a slight rise of 0.22% over the previous year's output. The production stood at 36.76 million kilograms in 2019–20 and 33.61 million kilograms in 2022–23. State wise Rajasthan remains the dominant contributor to national wool output, accounting for 47.53% of the total, followed by Jammu & Kashmir (23.06%), Gujarat (6.18%), Maharashtra (4.75%), and Himachal Pradesh (4.22%). In terms of year-on-year growth, Punjab led the way with an impressive annual growth rate of 22.04%, trailed by Tamil Nadu at 17.19% and Gujarat at 3.20%.

- **Silk** holds deep cultural and artisanal significance in India, as it is the only country producing all four natural silk types such as Mulberry, Tussar, Eri, and Muga. Karnataka leads in production, with regions like Banaras and Kanchipuram known for traditional handloom silk. India is the second-largest global producer and consumer of silk, with raw silk output rising from 31,906 MT in 2017–18 to 38,913 MT in 2023–24, and mulberry cultivation expanding to 263,352 hectares in FY24. Despite a provisional dip in 9MFY25 with a production of 30,614 MT, the sector shows steady growth, supported by modernization, government initiatives, and strong export performance, led by high-value products like fabrics, garments, and silk carpets.
- **Jute:** India ranks as the world's top jute producer, followed by Bangladesh and China, with cultivation mainly concentrated in West Bengal, Assam, and Bihar. However, production and domestic usage are on the decline due to costly procurement, limited raw material supply, and outdated equipment. Demand is further impacted by strong competition from synthetic alternatives and fibres like mesta.

**2. Synthetic and Man-Made Fibres (MMF):** This segment includes polyester, viscose, nylon, acrylic, and other man-made fibres and filaments. These are widely used due to their durability, affordability, and versatility textiles are heavily utilized in sportswear, industrial textiles, home furnishing, and technical applications. The MMF sector is rapidly expanding, supported by changing urban lifestyles, innovation in fibre technology, and global demand for performance fabrics. The demand for man-made fibres and fabrics (MMF&F) increased in 2022–23 as garment manufacturers turned to MMF&F due to the rising cost of cotton. In 2023–24, MMF&F production grew at a robust 14.7%, with synthetic fibre output surging by 25.5% and synthetic yarns rising by 8.6%. In 2024–25, the production of man-made fibres and fabrics is expected to grow steadily, driven by rising demand from the apparel sector and high cotton prices, which are pushing manufacturers toward more affordable synthetic alternatives. Meanwhile, the Cotton Corporation of India (CCI) has increased the Minimum Support Price for cotton, encouraging farmers to sell at government centres. This has limited private ginnings' access to cotton, and with CCI expected to release stocks only after June, domestic prices may stay elevated. However, Indian cotton remains costlier than global rates, reducing its competitiveness in export markets.

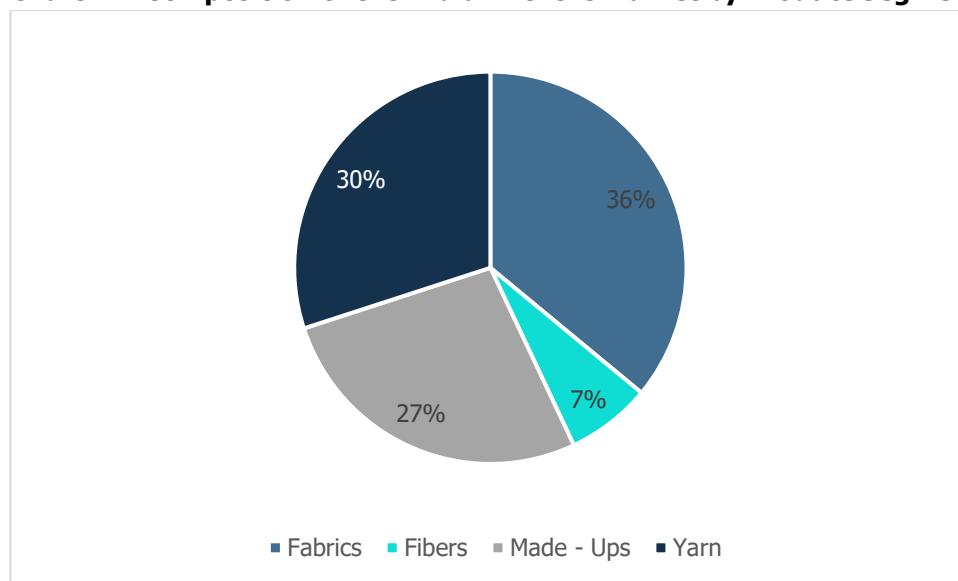
### 3.3.1 Overview of Technical Textile

Technical textiles are specialized fabrics designed primarily for function and performance, rather than appearance. Unlike conventional textiles, which focus on aesthetics or comfort, technical textiles are engineered to meet the demanding needs of various industries. They incorporate advanced fibers, high-strength yarns, coatings, and innovative finishes to provide properties such as durability, tensile strength, chemical resistance, fire retardancy, and thermal stability. Their applications span sectors like automotive (seat belts, airbags, tires), construction (geotextiles, insulation, scaffolding

nets), agriculture (shade nets, crop covers), healthcare (surgical sutures, protective clothing), and safety (fire-resistant garments, bulletproof vests).

### 3.4 Composition of the Indian Textile Market by Product Segment

**Chart 14: Composition of the Indian Textile Market by Product Segment**



Source: SRTEPC, CareEdge Research

In the Indian textile market, fabrics account for 36%, yarn 30%, made-ups 27%, and fibres 7% of the total industry composition. The largest share of fabrics reflects India's strong position in weaving, knitting, and fabric processing (woven, knitted, and non-woven fabrics) which forms the core of the manufacturing value chain. Yarn's significant 30% share indicates the country's historical strength in spinning (cotton, synthetic, and blended yarns) and its role as a major intermediate product supplier. Made-ups, at 27%, highlight the growing focus on value-added products (garments, home textiles and technical textiles) catering to both domestic consumption and exports. The relatively small 7% share of fibres shows that raw materials (cotton, wool, silk, polyester, and other man-made fibres) are quickly converted into yarn and fabrics rather than being sold as such, reflecting the industry's emphasis on downstream production, operational efficiency, and value addition throughout the textile value chain.

**3. Technical Textiles and Industrial Use:** Technical textiles, a rapidly growing and innovation-driven segment, refer to textile products used for applications beyond conventional clothing. These include automotive textiles (such as airbags and seat belts), medical textiles (like masks and PPE kits), agro textiles (e.g., crop covers), defence textiles, and more. India is actively investing in this field through dedicated missions and incentive programs that promote research and development, adoption of advanced machinery, and enhancement of global competitiveness.

The industry is currently facing challenges such as limited availability of high-performance fibres, a lack of entrepreneurial initiatives, and gaps in skilled manpower. To address these issues and drive sectoral growth, the government has launched the National Technical Textiles Mission (NTTM), with a funding allocation of Rs. 1,480 crores. NTTM supports R&D, market development, exports, and skill training. Initiatives like GIST 2.0 and the GREAT scheme are fostering stronger linkages between academia and industry. Under NTTM, over 168 research projects and 71 innovations have been undertaken. Additionally, the budget boosts capital subsidies for technical textiles investments,

increasing the subsidy for spinning modernization from 2% to 6% to reduce costs and promote machinery upgrades. Furthermore, events such as Technotex 2024 and progressive state policies are contributing to the overall development of the sector.

**4. Readymade Garments (RMG), Handlooms & Handicrafts:** The Readymade Garments (RMG) or apparel industry is a key part of the overall textiles industry in India. Indian textiles and apparel products have high global appeal due to their fine craftsmanship across the entire value chain from fibre, yarn, and fabric to apparel. RMG industry in India is a non-capital-intensive industry and it is largely unorganised with 60-70% where the manufacturers belong to the micro, small and medium enterprises (MSME) operating in specific clusters across the country. In FY 2024–25, India's wearing apparel sector grew 6.2% (IIP index 116.7), driven by strong domestic demand, especially in North and West India. Textile and apparel exports, including handicrafts, rose 7% from April to December 2024, fuelled by demand from the US, UK, and UAE. Lower inventories in the US and EU have increased apparel imports since mid-2024. The India-UK Free Trade Agreement offers preferential tariff access, enhancing export competitiveness, while ongoing EU trade talks may open further markets. These factors support sustained growth amid global shifts away from China sourcing.

### **3.5 Growth drivers of Indian textile industry**

**1. Abundant Raw Material Availability:** India is one of the largest producers of cotton, jute, and silk in the world, providing a durable base for textile manufacturing. The wide availability of natural fibres, along with increasing production of man-made fibres, ensures a steady and cost-effective supply of raw materials, supporting both traditional and modern textile segments.

**2. Large Skilled Workforce:** The Indian textile industry benefits from a vast pool of skilled and semi-skilled labour. Millions of weavers, artisans, and factory workers are engaged across rural and urban areas, making it one of the largest employment-generating sectors in the country. This human resource strength supports mass production as well as intricate handcrafted products.

**3. Rising Domestic Consumption:** India's growing middle class, increasing disposable income, and urbanization are fuelling a steady rise in domestic textile and apparel consumption. The demand for both ethnic and western wear, along with home textiles and lifestyle products, is expanding in metros, towns, and even rural areas.

**4. Strong Export Potential:** Indian textiles are in high demand globally due to their quality, variety, and competitive pricing. India exports textiles and apparel to over 100 countries, with key markets including the U.S., European Union, and the Middle East. Government initiatives like RoSCTL (Rebate of State and Central Taxes and Levies) and the PLI (Production Linked Incentive) scheme further boost export competitiveness.

**5. Government Support and Policy Push:** The Indian government has introduced several initiatives to strengthen the textile sector, such as the National Technical Textiles Mission, Integrated Textile Parks (SITP), and the PLI scheme for MMF and technical textiles. Subsidies, tax rebates, and infrastructure investments are also encouraging modernization and attracting foreign investment.

**6. Technological Advancements and Modernization:** The industry is rapidly adopting advanced machinery, automation, and sustainable technologies to improve productivity and meet global standards. Smart textiles, digital printing, and eco-friendly dyeing processes are gaining traction, helping Indian manufacturers stay competitive in the international market.

**7. Growth of E-Commerce and Fashion Retail:** Online shopping platforms and organized retail have revolutionized textile and apparel sales in India. E-commerce has made it easier for small brands, artisans, and startups to reach a wider audience, while global fashion trends are quickly influencing consumer choices through digital media.

**Textile Weaving:** India's weaving industry is underpinned by a diverse array of fibre inputs comprising man-made, natural, and specialty fibres, each contributing uniquely to the sector's scale of operations, structural composition, and level of technological advancement.

- Man-made fibres (MMF), with the production volume at 5.481 million metric tons in FY24, are integral to industrial weaving. Widely used in the organized power loom and mill sectors, MMFs such as polyester and viscose are processed through automated systems, including high-speed shuttle-less looms like air-jet and rapier machines. Their uniformity and tensile strength make them ideal for mass production of blended fabrics, ready-made garments, furnishings, and technical textiles. MMFs enable high efficiency, cost-effectiveness, and scalability, positioning India competitively in global textile exports.
- Cotton, producing 5.50 million metric tons in FY24, remains the backbone of India's traditional and semi-mechanized weaving industry. It is processed in handloom and power loom units, with handlooms preserving artisanal techniques and power looms enabling higher productivity. Cotton's softness and breathability make it ideal for ethnic wear, casual clothing, and home textiles, giving it a unique dual role in both mass and artisanal markets.
- Jute (1.0439 million metric tons) and silk (30,614 metric tons) also play vital roles. Jute is mainly woven for industrial uses like sacks and mats, supporting rural agro-industries and eco-friendly products. Silk drives the luxury and heritage segment, produced mainly on handlooms and jacquard looms in clusters such as Varanasi, Kanchipuram, and Assam, supporting artisanal livelihoods and cultural heritage.
- Consumer preferences in India are rapidly evolving due to urbanization, rising incomes, and growing sustainability awareness. Domestic demand covers ethnic wear (sarees, kurtas) and functional fabrics (wrinkle-free, moisture-wicking). Regional tastes differ, with the South favouring fine cotton, the East silks, and the West colourful prints like Bandhani and Patola. Globally, Indian fabrics are sought after in the US, Europe, and the Middle East for shirting, home textiles, and eco-labelled products, pushing producers to meet international quality and ethical standards.
- Challenges include industry fragmentation, outdated technology in smaller units, and competition from imports. Government programs such as the National Handloom Development Programme, Power Tex India, and the PLI scheme aim to modernize infrastructure, enhance skills, and boost exports. The growth of e-commerce and rising consumer interest in handmade and sustainable textiles offer new opportunities. Balancing tradition with innovation and sustainability is key to the industry's future.

**Textile Processing:** The Indian textile processing industry, valued at USD 158 billion in 2023, is poised to grow to USD 241 billion by 2030, driven by both natural and synthetic fibres. Natural textiles like cotton and silk lead the market due to India's abundant raw materials, traditional expertise, and growing global demand for eco-friendly fabrics. Meanwhile, synthetic fibres are the fastest-growing segment, fuelled by demand for durable, affordable, and versatile fabrics used in activewear, fast fashion, and technical textiles. Textile processing involves preparing fibres and fabrics for dyeing and finishing by removing impurities and creating uniform surfaces to ensure better colour absorption and fabric performance. Quality control during processing helps maintain consistent texture, strength, and durability throughout production.

**Competitive Strength of the Indian Textile Industry Across the Value Chain:** India's textile industry enjoys a strong competitive advantage across the entire value chain from abundant raw material availability to a wide spectrum of finished goods and robust export capabilities. The country hosts over 3,376 spinning mills, numerous weaving mills and processing units, supported by a skilled workforce and a growing base of textile parks, including 7 planned PM MITRA mega parks. This extensive infrastructure enables the production of a broad range of products, from basic fabrics

to high-end fashion, technical textiles, and handcrafted goods. Coupled with efficient port logistics, a competitive cost structure, supportive government policies, and adherence to international quality standards, India has positioned itself as a versatile and reliable global textile powerhouse.

### **3.6 Key Players Across the Indian Textile Value Chain**

- **Fiber / Raw Material:** Players in the fiber segment include Grasim Industries, JBF Industries, and Aditya Birla Group, supplying viscose, polyester, and cotton fibers to domestic and global markets.
- **Spinning:** Spinning companies such as Vardhman Textiles, Arvind Limited, and Trident Group dominate yarn production, offering cotton, blended, and synthetic yarns for diverse applications.
- **Weaving / Fabric Manufacturing:** Weaving players like Arvind Limited, Raymond, and Sutlej Textiles works in woven fabrics for apparel, shirting, and suiting segments.
- **Bleaching & Finishing / Processing:** Processors including Welspun India, Bombay Dyeing, and JCT Limited further does some additions to fabrics through bleaching, dyeing, printing, and finishing to meet domestic and export standards.
- **Retailing / Apparel & Garments:** Apparel and retail players such as Aditya Birla Fashion & Retail (Pantaloons), Raymond, and Arvind Brands works in the ready-made garments and branded apparel market in India.

### **3.7 SWOT Analysis of the Textile Industry**

- **Strengths:** The Indian textile industry benefits from a vast and diverse manufacturing base that covers cotton, MMF, handloom, powerloom and garmenting. A skilled workforce and rich cultural heritage, particularly in handloom and khadi, give India a distinctive global identity. Continued government support through schemes like PLI, PM MITRA Parks, and SITP boosts modernization and competitiveness. Additionally, India is gradually strengthening its presence in man-made fibres and technical textiles—segments that hold strong growth potential.
- **Weakness:** Despite its strengths, the sector faces serious internal weaknesses. High costs of cotton and MMF make Indian products less competitive internationally. The supply chain remains fragmented, dominated by small, unorganised units with outdated machinery and inconsistent quality. Export competitiveness is weakened by the absence of FTAs, cumbersome export procedures and high compliance costs. Infrastructure issues such as unreliable power supply and inefficient logistics add to operational challenges. Environmental compliance remains a major weakness, as many MSMEs lack the financial capacity to invest in cleaner, sustainable technologies.
- **Opportunities:** The industry has several promising opportunities ahead. The global move towards "China-plus-one" sourcing positions India favourably for attracting new business. Demand for MMF, technical textiles, athleisure and home furnishings is growing rapidly, offering avenues for diversification. Integrated textile parks under PM MITRA can create efficient, end-to-end ecosystems that overcome fragmentation. A rising global preference for sustainable and circular textiles opens new niche markets for companies willing to invest in green technologies. Additionally, potential FTAs and strong domestic consumption trends provide substantial long-term expansion opportunities.
- **Challenge:** The Indian textile sector must deal with increasing raw material price volatility, which raises production costs and affects competitiveness. Compliance with global sustainability standards requires

significant investment in wastewater treatment, energy-efficient machinery and safe chemical processing—challenges that smaller units struggle to meet. Infrastructure bottlenecks such as power shortages and logistics inefficiencies further burden operations. MSMEs face difficulties in accessing capital or upgrading technology, leaving them vulnerable in an increasingly competitive market.

- Threat: India faces intense external threats from competitors like Bangladesh, Vietnam and China, all of which enjoy cost advantages or better market access through FTAs. Geopolitical uncertainties, trade tensions and shifting global demand patterns add instability to exports. Tightening international ESG and labour standards pose the risk of losing key markets if Indian manufacturers fail to comply. Climate risks such as erratic rainfall and pest attacks affect cotton output, adding further uncertainty. MSMEs remain particularly vulnerable to these threats due to limited financial and technological resilience.

### **3.8 Machinery and Equipment Used in Textile Manufacturing and Processing**

- **Stenters:** Stenters are essential machines in textile finishing, primarily used for heat-setting, drying, and controlling the width of fabrics after dyeing or printing. They ensure uniform moisture removal and stabilize the fabric to prevent shrinkage, distortion, and uneven finishing. By enabling precise width control and consistent drying, stenters significantly enhance the dimensional stability and appearance of the fabric, making them indispensable for large-scale textile manufacturing units.
- **Drying Ranges:** Drying ranges are continuous systems designed to remove moisture from fabrics following washing, bleaching, or dyeing processes. These machines provide consistent and uniform drying, which is critical for maintaining fabric quality and preventing defects caused by uneven moisture distribution. Their high efficiency and automation reduce processing time, increase productivity, and lower operational costs, making them vital for modern textile operations.
- **Jet Dyeing Machines:** Jet dyeing machines are high-performance dyeing systems ideal for woven and knitted fabrics, especially delicate and blended materials. They operate with low liquor ratios, which reduces water and chemical consumption while achieving superior dye penetration and color consistency. Their fast dyeing cycles and gentle handling make these machines essential for high-quality, eco-friendly fabric manufacturing with increased throughput.
- **Jiggers (Dyeing Jiggers, Jumbo Jiggers, Hydraulic Jiggers):** Jiggers are batch dyeing machines used extensively for woven fabrics such as cotton, polyester blends, and PV suitings. They provide excellent control over dye penetration and fabric tension, ensuring uniform coloration throughout the batch. Hydraulic and jumbo jiggers offer greater capacity, efficiency, and precision, making them particularly suitable for heavy and dense fabrics. Their flexibility and batch-wise processing capability make them valuable assets for specialized dyeing operations.
- **Weight Reduction Machines:** Weight reduction machines are used primarily for polyester fabrics, where they carry out controlled hydrolysis to reduce fabric weight. This results in a softer hand feel, improved drape, and enhanced appearance—qualities highly valued in fashion and premium apparel fabrics. These machines allow manufacturers to create differentiated, value-added products that command better market prices and meet evolving consumer preferences.
- **Zero-Zero Finishing Machines:** Zero-Zero finishing machines perform mechanical finishing to improve fabric smoothness, uniformity, and appearance. These machines help eliminate wrinkles and creases, enhance surface feel, and prepare the fabric for high-quality garmenting or processing. By delivering a refined, premium finish, Zero-Zero systems boost product quality and help manufacturers achieve export-grade finishing standards.

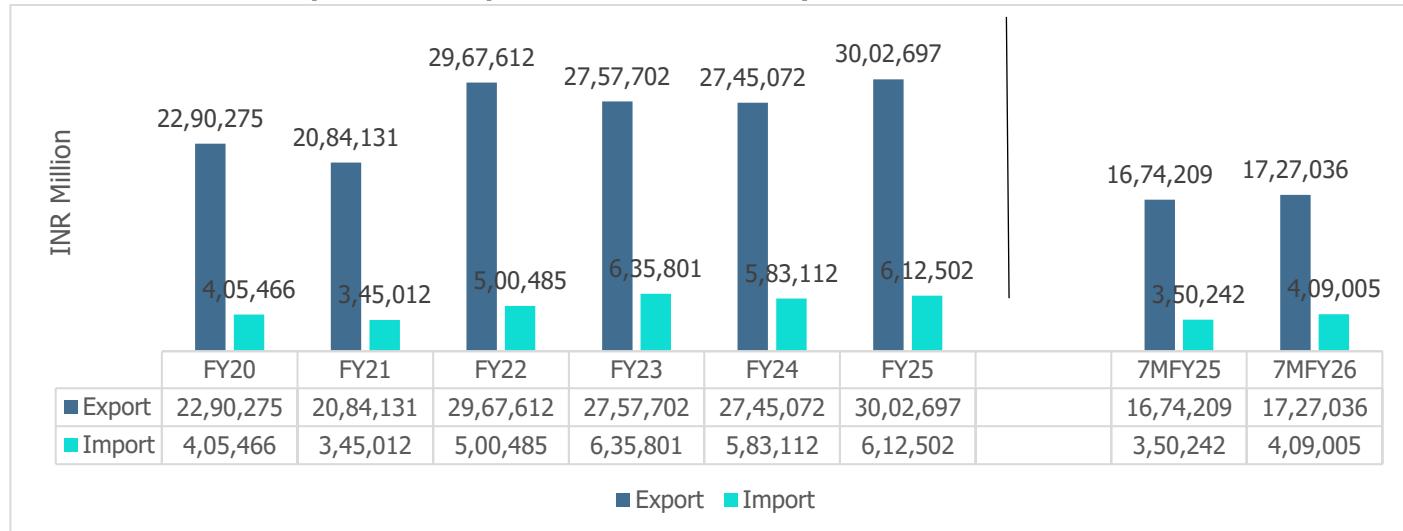
- **Calender Machines:** Calender machines compress fabric between heated rollers to achieve smoothness, compactness, and aesthetic enhancement. They can create glossy, lustrous finishes on synthetic and blended fabrics, especially suitings. The calendering process improves the fabric's structure and feel, increasing its commercial value and suitability for high-end apparel and furnishing applications.
- **Open Decotize (O.D.) Machines:** Open decotize machines work to remove creases and improve the softness and handle of the fabric before final finishing. This process enhances dye absorption, ensures more uniform finishing, and eliminates processing defects. O.D. machines contribute significantly to raising the overall quality and consistency of processed fabrics, especially those requiring premium finishing.
- **Singeing Machines:** Singeing machines play a critical role in fabric preparation by burning off loose and protruding fibers from the surface. This creates a smooth, clean fabric essential for high-quality printing, dyeing, and finishing. By reducing pilling and improving fabric durability, singeing enhances both the appearance and performance of textiles, making it indispensable for premium manufacturing.
- **Super Finish Machines:** Super finish machines apply specialized finishing treatments that improve the feel, shine, and overall appearance of high-value fabrics. They are typically used for premium suiting and shirting materials to impart a luxury touch. These machines help manufacturers differentiate their products and cater to upscale markets demanding superior finishing quality.
- **Folding Machines:** Folding machines automate the process of folding fabrics into uniform, defect-free lots for packing and dispatch. They ensure consistent folding quality, reduce manual handling, and prevent creasing or damage during packaging. By improving efficiency and protecting fabric integrity, folding machines support streamlined operations and professional product presentation.
- **Continuous Washing Ranges:** Continuous washing ranges effectively clean fabrics in a high-speed, energy-efficient manner. They offer better washing uniformity than batch systems and reduce water consumption while improving throughput. This makes them essential for large-volume textile manufacturing units aiming for efficiency, sustainability, and consistent quality.
- **Merceriser Machines:** Merceriser machines treat cotton fabrics with caustic soda under tension, enhancing their luster, strength, and dye affinity. The process results in richer colors, improved tensile strength, and a premium finish that significantly elevates fabric quality. Mercerisation is particularly important for high-quality cotton fabrics used in export-oriented garments and home textiles.
- **Shrinkage Range Machines:** Shrinkage range machines ensure that fabrics achieve stable, controlled shrinkage levels before garmenting. This mechanical process improves dimensional stability and prevents post-manufacturing shrinkage, which is critical for export compliance and customer satisfaction. These machines help manufacturers deliver reliable, high-performance fabrics.
- **Cold Pad Batch Dyeing (CPBD) Machines:** CPBD machines enable low-temperature dyeing of cotton fabrics using minimum water and chemicals. This eco-friendly process delivers superior color uniformity while reducing energy consumption. Widely adopted for sustainable manufacturing, CPBD systems enhance efficiency and environmental compliance.
- **Continuous Bleaching Ranges:** Continuous bleaching ranges prepare fabrics for dyeing by removing natural impurities and achieving uniform whiteness across the entire length of the fabric. These machines ensure consistently high-quality bleaching at industrial scale, improving dye uptake and overall finish quality.

- PAD Dry & PAD Steam Ranges:** PAD dry and PAD steam ranges apply chemical finishes, dyes, or resins uniformly across fabric surfaces. They ensure precise pickup and fixation of chemicals, contributing to superior finishing, better dyeing outcomes, and improved functional properties such as wrinkle resistance or softness.
- Lafer Machines:** Lafer machines are specialized finishing machines used for raising or brushing the fabric surface to create a soft, plush texture. They are commonly used for winter wear, flannels, and value-added specialty fabrics. Lafer finishing enhances tactile appeal and adds warmth, making fabrics suitable for niche and premium applications.

### 3.9 Trends in Exports and Imports of Textile Industry

India's textile export sector continues to reflect the country's strong capabilities across a diverse product spectrum, ranging from traditional cotton-based items to modern, value-added garments. In FY24, the export structure showcases India's strategic shift toward higher-value products and greater market diversification, aligning with global demand trends and the government's export-oriented policy framework.

**Chart 15: Trends in Exports and Imports of Textile Industry**



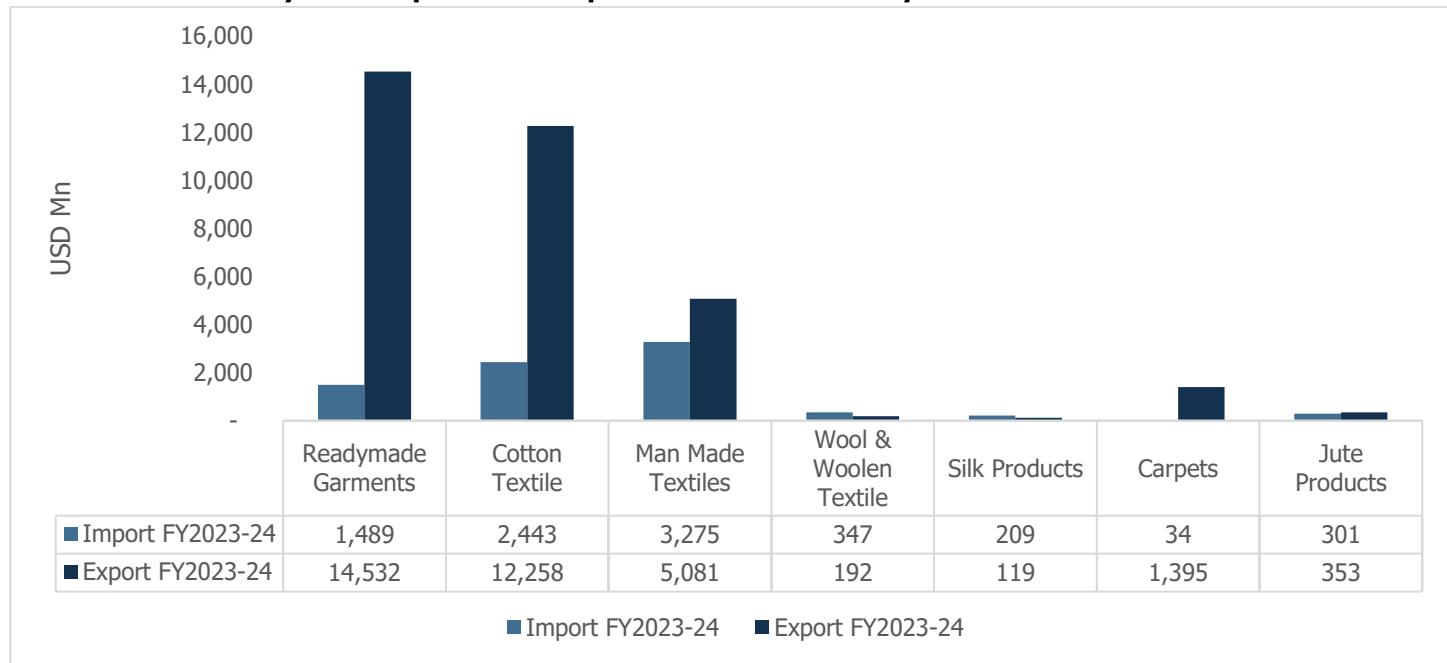
Source: CIME, CareEdge Research

The Indian textile industry has consistently maintained a strong trade surplus, underscoring its position as a leading global exporter. Analysing import-export data from FY20 to FY25, along with the reported 7M FY25 and 7M FY26 data, reveals a stable and growing export base. While imports have risen gradually from INR 405,466 million in FY20 to INR 6,12,502 million in FY25 and further to INR 350,242 million in 7M FY25 and INR 409,005 million in 7M FY26, the exports still continue to far outpace them, increasing from INR 2,290,275 million in FY20 to INR 30,02,697 million in FY25, with further improving from INR 1,674,209 million in 7M FY25 to INR 1,727,036 million in 7M FY26.

This growth trajectory in exports can be attributed to several factors. India's extensive raw material base, skilled labour, and integrated textile value chain contribute to its competitive advantage globally. Moreover, increasing global demand for Indian textiles, along with diversified product categories like ready-made garments, home textiles, and technical textiles, is fuelling the rise. Additionally, India's focus on sustainability and digital transformation is attracting more international buyers seeking reliable and eco-conscious suppliers. The industry is expected to continue its export trend, with growing penetration in new markets, value-added.

On the import side, India relies on high-performance synthetic fibres, specialty fabrics, textile machinery, and certain chemicals and dyes that are not widely produced domestically. These imports support industry modernization, innovation, and the manufacture of value-added products meeting global standards. This balanced trade highlights India's integrated and dynamic role within the global textile ecosystem.

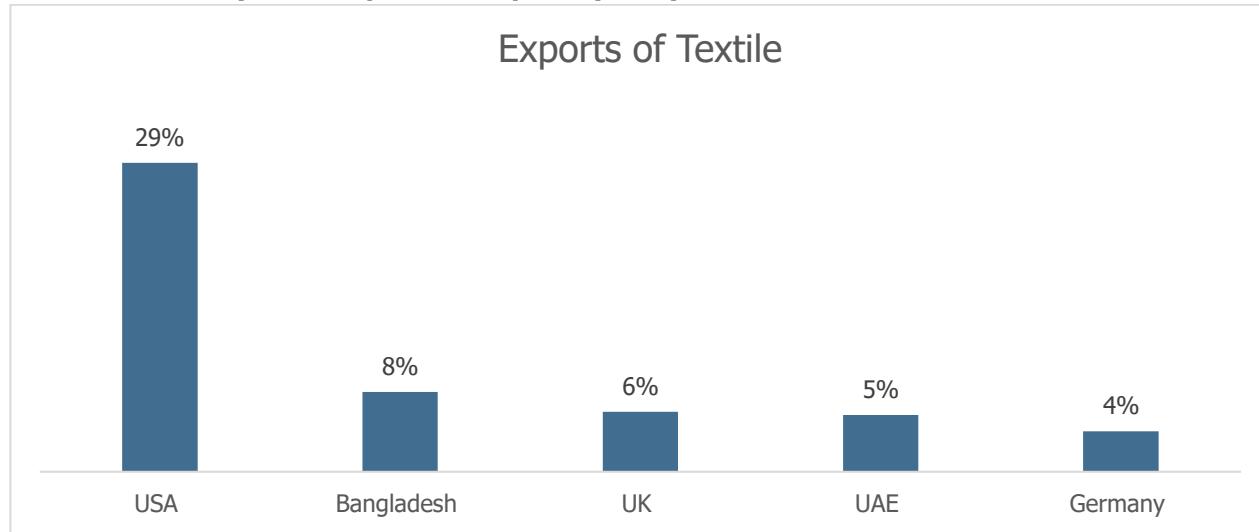
**Chart 16: Commodity Wise Exports and Imports of Textile Industry**



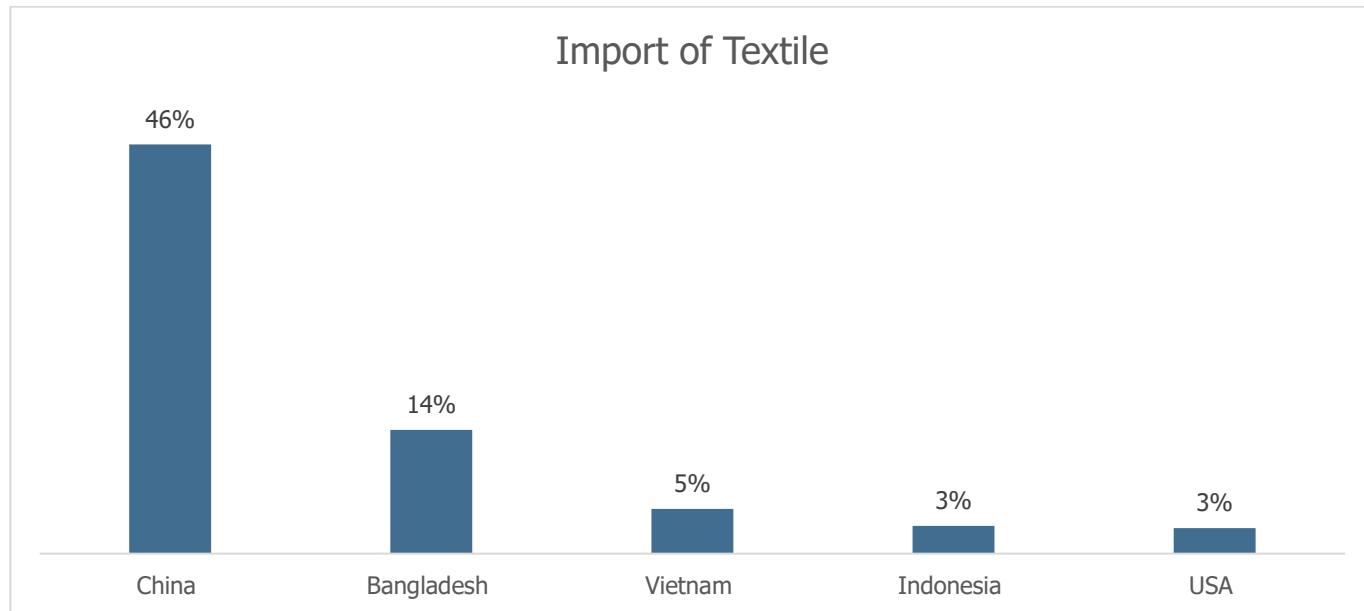
Source: Ministry of Textile

India's textile and apparel (T&A) sector, including handicrafts, has consistently maintained a strong trade surplus over the past five years, with exports reaching USD 35.9 billion in FY2023-24 compared to imports of USD 8.9 billion. Key segments like readymade garments, cotton textiles, man-made textiles, and carpets have driven this performance, with readymade garments alone contributing over USD 14.5 billion in exports. While imports have risen in categories like man-made fibres and wool primarily to meet domestic production needs, India remains a net exporter in most segments. Although, The latest data shows a slight dip in the total exports, it underscores India's global competitiveness in Textile and Apparel, particularly in natural fibre-based and value-added product categories.

In FY 2023–24, India's largest export in the textile and apparel sector was readymade garments, accounting for approximately 41% of total exports, followed by cotton textiles at around 34%, and man-made textiles at 14%. These segments dominate due to India's strong manufacturing base, skilled labour, and global demand for affordable garments and cotton-based products. On the import side, man-made textiles formed the largest share at 37%, followed by cotton textiles at 27%, and readymade garments at 17%. Despite strong domestic production, imports in man-made and cotton textiles are driven by the need for high-quality fibres, specialized synthetic fabrics, or blends not widely produced in India, often required by high-end apparel or export-oriented manufacturers. Thus, India exports high-value finished goods while importing select raw materials and specialized intermediate products to support its textile ecosystem.

**Chart 17: Country-wise Exports & Imports (FY25) of Textile**

Source: CMIE, CareEdge Research



Source: CMIE, CareEdge Research

In FY25, India's textile exports were led by the USA (29%) due to strong demand for garments and home textiles, followed by Bangladesh, the UK, UAE, and Germany, which rely on India for yarn, apparel, and home furnishing products. On the import side, China dominated with 46% because of its low-cost supply of synthetic fibres, fabrics, and textile machinery. Imports from Bangladesh, Vietnam, and Indonesia mainly reflect India's need for affordable garments and man-made fibre inputs. Overall, the pattern highlights India's export strength in finished products and its dependence on imports for raw materials and cost-efficient intermediate inputs.

### 3.10 Impact of Trade Policies and Global Demand on Textile Exports and Imports

Global textile consumption is rebounding post-pandemic but remains uneven due to inflationary pressures in the West, shifting fashion trends, and increased emphasis on sustainability and circular fashion. Countries are demanding more eco-friendly, traceable, and ethically produced textiles, pushing Indian exporters to align with international certifications and sustainability standards.

At the same time, India's import dynamics are evolving. While the country continues to import specialised fabrics, advanced machinery, and high-performance raw materials mainly from China, Bangladesh, and Vietnam the government has imposed higher import duties on synthetic textiles and yarns and is actively promoting domestic manufacturing. These measures support national initiatives such as "Make in India" and *Atmanirbhar Bharat* (Self-Reliant India), aimed at reducing dependency on foreign inputs.

Geopolitical shifts and supply chain realignments are encouraging global brands to diversify sourcing away from China toward India, especially in home textiles, man-made fibre garments, and technical fabrics. Indian exporters are positioning themselves as reliable partners in the global textile supply chain. Balancing current trade challenges with proactive sustainability, digital trade adoption, and innovation will be key to strengthening India's global textile standing.

India has recently strengthened its global trade partnerships through a series of key Free Trade Agreements (FTAs). The India–United Kingdom FTA, finalized in July 2025, grants duty-free access on nearly 99% of Indian export tariff lines to the UK, including major sectors such as textiles, leather, engineering goods, and garments. In return, India will gradually lower tariffs on about 90% of UK imports, fostering deeper trade integration between the two nations. The agreement is also expected to enhance cooperation in services, digital trade, and mobility of professionals, significantly boosting India's export potential.

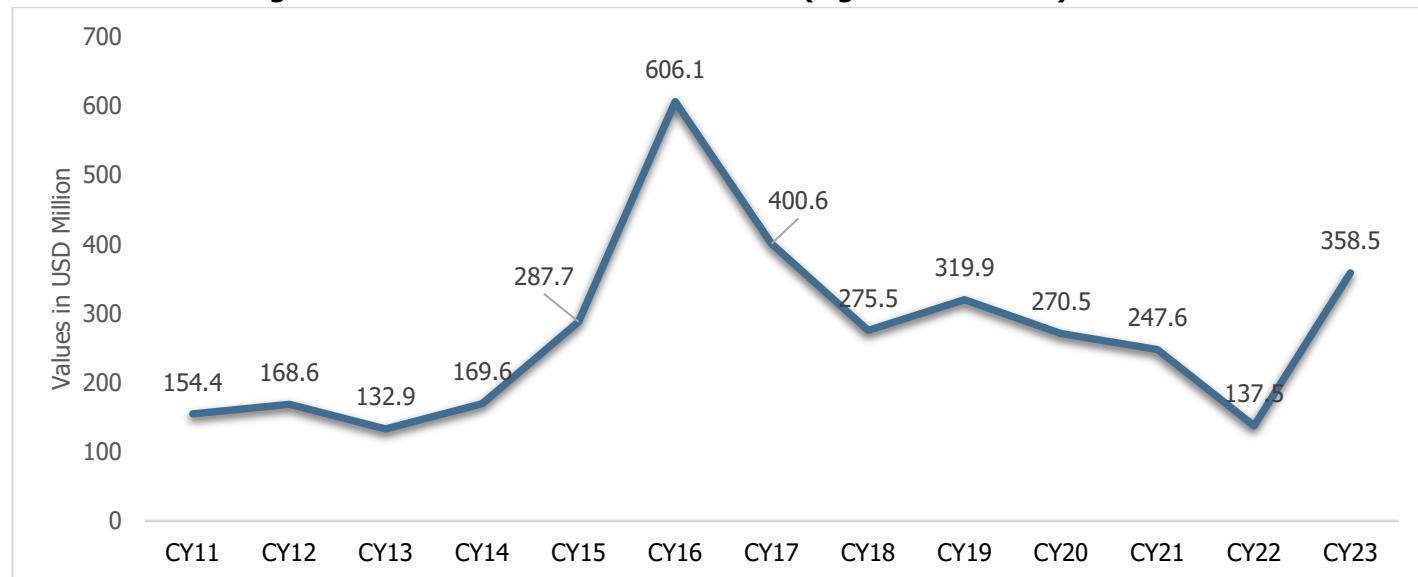
The India–UAE Comprehensive Economic Partnership Agreement (CEPA), signed in February 2022 and effective from May 2022, has significantly deepened trade relations between the two nations. Bilateral trade has nearly doubled to USD 83.7 billion in FY 2023–24, with non-oil trade forming a major share. For India's textile and apparel sector, CEPA has been especially beneficial by offering duty-free market access to the UAE, a key re-export hub for global markets. This has boosted exports of fabrics, garments, home textiles, and man-made fibre products, particularly from MSMEs. The agreement has also encouraged greater investment, sourcing partnerships, and technology collaborations in sustainable textile manufacturing.

The India–EFTA Trade and Economic Partnership Agreement (TEPA), signed in March 2024 and set to take effect from October 2025, marks India's first comprehensive FTA with four advanced European economies such as Switzerland, Norway, Iceland, and Liechtenstein. With a strong focus on investment, job creation, and sustainable trade, TEPA aims to bring in USD 100 billion in FDI and create 1 million jobs in India over 15 years. For the Indian textile and apparel sector, the agreement opens new market opportunities through tariff concessions on nearly 99% of India's exports, including textiles, garments, organic chemicals, and processed products. This will help Indian manufacturers gain duty-free access to high-value European markets, enhance competitiveness, and attract technology and design collaborations in areas such as sustainable fabrics, technical textiles, and high-quality apparel manufacturing. Overall, TEPA is expected to strengthen India's textile exports, promote value addition, and support the sector's integration into premium global supply chains. Over the years, the Government of India has introduced several trade and pricing interventions to stabilise the textile sector and promote exports. In 2025, multiple measures were implemented including the temporary removal of the 11% import duty on cotton (August 2025), later extended till December 2025, to ease input cost pressures on

spinning and apparel units. The Export Obligation period under the Advance Authorisation Scheme was also extended from 6 to 18 months for items under Quality Control Orders, benefitting exporters of man-made fibre and technical textiles. Additionally, the RoDTEP (Remission of Duties and Taxes on Exported Products) scheme paused earlier in the year was reinstated in June 2025 and subsequently extended till March 2026, ensuring continuity of export incentives. These measures, alongside periodic adjustments in Minimum Support Prices (MSP) for key raw materials like cotton and jute, underscore the government's balanced approach to protect domestic producers while sustaining export competitiveness across the textile value chain.

### 3.11 The Foreign Direct Investment in Textiles Sector

**Chart 18: The Foreign Direct Investment in Textiles Sector (Fig. in USD Million)**



Source: Department of Industrial Policy & Promotion, Ministry of Commerce and Industry, Govt. of India, CareEdge Research

Foreign Direct Investment (FDI) in India's textile sector has fluctuated over the past decade, shaped by global economic conditions, domestic policy reforms, and shifting market dynamics. The sector experienced notable growth during the mid-2010s, particularly following the launch of initiatives such as *Make in India* and various policy measures designed to attract foreign capital. However, this momentum slowed in subsequent years due to global trade uncertainties, including the US–China trade war, Brexit, volatile crude oil prices, and the rise of protectionist measures in key markets. These developments heightened investor caution, disrupted supply chains, and increased operational risks. The COVID-19 pandemic further exacerbated the situation by triggering factory shutdowns, labour shortages, and a sharp decline in global demand, all of which contributed to a downturn in FDI inflows into the Indian textile industry. In recent years, FDI has begun to recover, supported by strategic government interventions such as the Production Linked Incentive (PLI) scheme for man-made fibres and technical textiles. India's emergence as a dependable alternative to traditional manufacturing hubs has also enhanced its attractiveness to foreign investors. FDI continues to play a critical role in strengthening India's textile and apparel sector by facilitating capital infusion, technology transfer, and global integration.

Key drivers of FDI in the sector include the availability of raw materials like cotton and jute, a large skilled workforce, competitive production costs, and rising demand for sustainable and innovative textiles. These investments open opportunities in value-added segments such as technical textiles, performance wear, and export-oriented garments.

Strategically, increased FDI is crucial for upgrading infrastructure, bringing in advanced technologies, improving quality standards, and deepening India's integration with global textile supply chains, thus strengthening the country's position as a global textile hub.

Aspect	Key Details
<b>FDI Policy</b>	Most sectors open for 100% FDI under the automatic route; policy reviewed regularly to ensure competitiveness.
<b>FDI Inflows Growth</b>	Increased from USD 36.05 bn (FY 2013–14) to USD 81.04 bn (FY 2024–25), a 14% rise over FY 2023–24.
<b>Top Sectors (FY 2024–25)</b>	Services – 19% (USD 9.35 bn, +40.77% YoY), Computer Software & Hardware – 16%, Trading – 8%.
<b>Manufacturing FDI</b>	Grew 18% YoY to USD 19.04 bn (FY 2024–25) from USD 16.12 bn in FY 2023–24.
<b>Top Recipient States</b>	Maharashtra – 39%; Karnataka – 13%; Delhi – 12%.
<b>Top Source Countries</b>	Singapore – 30%; Mauritius – 17%; USA – 11%.
<b>Cumulative FDI (2014–25)</b>	USD 748.78 bn, up 143% from USD 308.38 bn (2003–14), equals 70% of total USD 1,072.36 bn FDI in 25 years.
<b>Source Countries</b>	Expanded from 89 (FY 2013–14) to 112 (FY 2024–25), showing broader global participation.
<b>Key Reforms (2014–2019)</b>	Higher FDI caps in Defense, Insurance, Pension; liberalized rules for Construction, Civil Aviation, Single Brand Retail.
<b>Reforms (2019–2024)</b>	100% FDI (automatic route) allowed in coal mining, contract manufacturing, insurance intermediaries.
<b>Union Budget 2025</b>	Proposed raising FDI limit to 100% for companies reinvesting full premium domestically.
<b>Overall Outcome</b>	India reinforced as a preferred global investment hub due to liberal policies, economic resilience, and investor confidence.

### 3.12 Government Regulations Supporting the Sector

The Indian Government has been implementing various policy initiatives and schemes for supporting the development of textile sector. These schemes and initiatives are created to promote technology upgradation, creation of infrastructure, skill development and sectoral development in the textile sector. Moreover, these initiatives focus on creating a conducive environment and provide enabling conditions for textile manufacturing in the country which will help in boosting the textile sector. The Union Budget announced an outlay of INR 5272 crores for the Ministry of Textiles for 2025-26. This is an increase of 19% over budget estimates of 2024-25 (Rs. 4417.03 crore).

Further, previously, the government announced various incentives/schemes towards increasing the global competitiveness of the Indian textile industry which includes the extension of Rebate of State and Central Taxes and Levies (RoSCTL), Remission of Duties and Taxes on Export Products (RoDTEP), Production Linked Incentive Scheme (PLI) and PM Mega Integrated Textile Region and Apparel (PM MITRA).

These schemes have given a boost to the capacity expansions by various textile players and form an integrated textiles value chain right from spinning, weaving, processing/dyeing, and printing of garments at one location leading to a reduction in operational and logistics costs of the players thereby increasing margins. The Government has also signed FTAs with UK and UAE to boost apparel export. In addition to this, the RoDTEP scheme has also been launched supporting the garments and apparel exporters' margins by export incentives.

#### a) Production Linked Incentive (PLI) Schemes

The Government of India has introduced the Product Linked Incentive (PLI) scheme in textile products to enhance India's manufacturing capabilities and enhancing exports. The financial outlay of this scheme is Rs. 10,683 crores covering five years. The scheme has two parts:

Part-1) where minimum investment is Rs. 300 crore and minimum turnover required to be achieved for incentive is Rs. 600 crores.

Part-2) where minimum investment is of Rs. 100 crore and minimum turnover required to be achieved for incentive is Rs. 200 crores.

**b) Remission of Duties and Taxes on Exported Products (RoDTEP)**

The Remission of Duties and Taxes on Exported Products (RoDTEP) scheme was launched in the year 2020, with applicability from 1st January 2021. This scheme was enforced to repeal and reduce taxes for exported products and thereby increasing exports from the country. The scheme's objective is to refund currently un-refunded duties and taxes. This scheme is available to eligible exporters at a notified rate as a percentage of Freight On Board (FOB) value. In addition to this, Rebate on certain export products will also be provided subject to value cap per unit of the exported product. RoDTEP is implemented by Customs through a simplified IT System.

As of the latest update in October 2024, the **Remission of Duties and Taxes on Exported Products (RoDTEP)** scheme encompasses **10,642 tariff lines** at the 8-digit level. Majorly, the Employment Oriented Sectors like Marine, Agriculture, Leather, Gems & Jewellery etc. are covered under the Scheme. Other sectors like Automobile, Plastics, Electrical / Electronics, Machinery etc. also get support of this scheme. Moreover, entire value chain of textiles also gets covered through RoDTEP & RoSCTL. The budget allocation for RoDTEP Scheme for the current financial year 2024-25 is Rs. 16,575 crores. The benefits of the RoDTEP scheme have also been extended to exports from Domestic Tariff Area (DTA) units till September 30, 2025.

Amongst the various sectors, cotton-based textile products have received favourable rates under RoDTEP in the range of 3.8%-4.3% as compared to around 2% rate under MEIS although there is a cap on the maximum benefit available under RoDTEP. The Federation of Indian Export Organisations (FIEO) has appreciated the Government's move to extend the Remission of Duties and Taxes on Exported Products (RoDTEP) Scheme until 31st March 2026, covering exports from Domestic Tariff Areas (DTAs), Advance Authorisation holders, Special Economic Zones (SEZs), and Export Oriented Units (EOUs). This move will continue to provide exporters with remission for unrefunded central, state, and local taxes and duties incurred during the production and distribution of export goods. The extension was made to provide policy continuity and help exporters remain competitive amid global trade challenges.

**c) Comprehensive Economic Partnership Agreement (CEPA) with UAE**

The Comprehensive Economic Partnership Agreement (CEPA) agreement was signed between the two nations India and United Arabs Emirates (UAE) on 18 February 2022. It is India's complete free trade agreement signed with any countries in a decade. CEPA was operationalized on 01 May 2022.

Overall, India is going to benefit from preferential market access provided by the UAE on over 97 % of its tariff lines which account for 99% of Indian exports to the UAE in value terms particularly from labour-intensive sectors such as Gems and Jewellery, Textiles, leather, footwear, sports goods, plastics, furniture, agricultural and wood products, engineering products, pharmaceuticals, medical devices, and Automobiles. As regards trade in services, Indian service providers will have enhanced access to around 111 sub-sectors from the 11 broad service sectors. CEPA is expected to increase the total value of bilateral trade in goods to over USD 100 billion and trade in services to over USD 15 billion within five years. In the coming years, this agreement will significantly increase export of apparels and textile products to UAE.

#### d) Financing Subsidy Schemes

The Indian government actively supports the textile industry's growth and modernization through various financing subsidy schemes.

- **Pradhan Mantri MUDRA Yojana:** This broader scheme offers loans to micro-units across various sectors, including textiles. It provides loans under three categories (Shishu, Kishore, and Tarun) with varying loan amounts and interest rate subsidies.
- **Scheme for Capacity Building in Textile Sector (SAMARTH):** This scheme addressed the skilled manpower shortage by providing financial assistance for skill development programs relevant to the textile industry. It provided financial support to training providers conducting these programs. As of March 27, 2025, more than 4.78 lakh users have been registered on the Samarth portal. As on March 19, 2025, a total of 3.82 lakh beneficiaries have been trained (passed) and 2.97 lakh beneficiaries (77.74%) have been placed. The SAMARTH scheme has been extended until March 2026, with an additional budget of Rs.495 crore allocated to train 3 lakh more individuals.

#### e) Other Schemes –

##### ➤ **PM Mega Integrated Textile Region and Apparel (PM MITRA) park**

With a vision of building Atma Nirbhar Bharat and to position India strongly on the Global textiles map, the Government has approved the setting up of 7 PM MITRA parks as announced in Union Budget for 2021-22. This will include 7 Mega Integrated Textile Region and Apparel Parks which will be set up at Greenfield/Brown field sites located in different willing states. This project will develop 50% Area for pure Manufacturing Activity, 20% area for utilities, and 10% area for commercial development. With a total budget allocation of Rs 4,445 crore spread over the period from 2021–22 to 2027–28, the scheme aims to reduce logistics costs, attract greater foreign direct investment (FDI), and enhance India's competitiveness in global textile markets. As of now, seven PM MITRA Parks have been approved across key textile-producing states including Gujarat, Maharashtra, Madhya Pradesh, Tamil Nadu, Karnataka, Uttar Pradesh, and Telangana, laying the foundation for a more efficient and globally integrated textile industry.

##### ➤ **Textile Cluster Development Scheme (TCDS)**

The Indian textile industry relies on interconnected clusters, some of which struggle with outdated technology. This inefficiency hinders worker productivity. To address this, the Ministry of Textiles has implemented the Textile Cluster Development Scheme (TCDS) from 2021-22 to 2025-26. This scheme aims to create a modern, connected workspace for existing new textile units, improving their operational and financial viability. The TCDS cluster development model offers several benefits, including cost-effective production, access to better technology, and a more competitive manufacturing environment. With a total budget of Rs. 853 crores allocated to finalize ongoing projects; this scheme aims to revitalize the Indian textile industry. As of March 18, 2025, about 1.22 lakh employment opportunities have been generated under the scheme. During 2024-25, Rs. 34.48 crore have been released.

**Integrated Processing Development Scheme (IPDS)**

The Ministry of Textiles has implemented the Integrated Processing Development Scheme (IPDS) to help the industry meet environmental standards. This program, initially launched during the 12th Five Year Plan, is being extended with modifications from 2021-22 to 2025-26 to focus on building new and upgrading existing common effluent treatment plants (CETPs) in both processing clusters and new parks, especially in coastal zones. This ongoing initiative aims to address environmental challenges faced by the textile processing sector.

**Bharat Tex 2025**, India's largest global textile event, was successfully organized from February 14 to 17, 2025, at Bharat Mandapam, New Delhi. The event spanned 2.2 million square feet and featured over 5,000 exhibitors, providing a comprehensive showcase of India's textile ecosystem. More than 1,20,000 trade visitors, from 120+ countries including global CEOs, policymakers, and industry leaders, attended the event.

Bharat Tex 2025 served as a platform to accelerate the government's "Farm to Fibre, Fabric, Fashion, and Foreign Markets" vision. India's textile exports have already reached Rs. 3 lakhs crores, and the goal is to triple this to Rs. 9 lakh crores by 2030 by strengthening domestic manufacturing and expanding global reach. The event demonstrated India's leadership in the textile sector and its commitment to innovation, sustainability, and global collaboration.

**The Amended Technology Upgradation Fund Scheme (ATUFS)** is a key initiative aimed at promoting modernization and enhancing the competitiveness of India's MSME-driven textile sector. Its primary objective is to facilitate the flow of credit for technology upgradation by providing financial incentives to units investing in benchmarked machinery and equipment. By supporting capital investments, the scheme encourages textile businesses to adopt advanced, energy-efficient, and globally competitive technologies. As of the 2025-26 Union Budget, the Amended Technology Upgradation Fund Scheme (ATUFS) has been allocated Rs.635 crore, marking a 48% increase from the revised estimate of Rs.390 crore in the previous fiscal year. This allocation aims to clear committed liabilities for Unique Identification Numbers (UIDs) generated up to March 31, 2022, as the scheme officially concluded on that date.

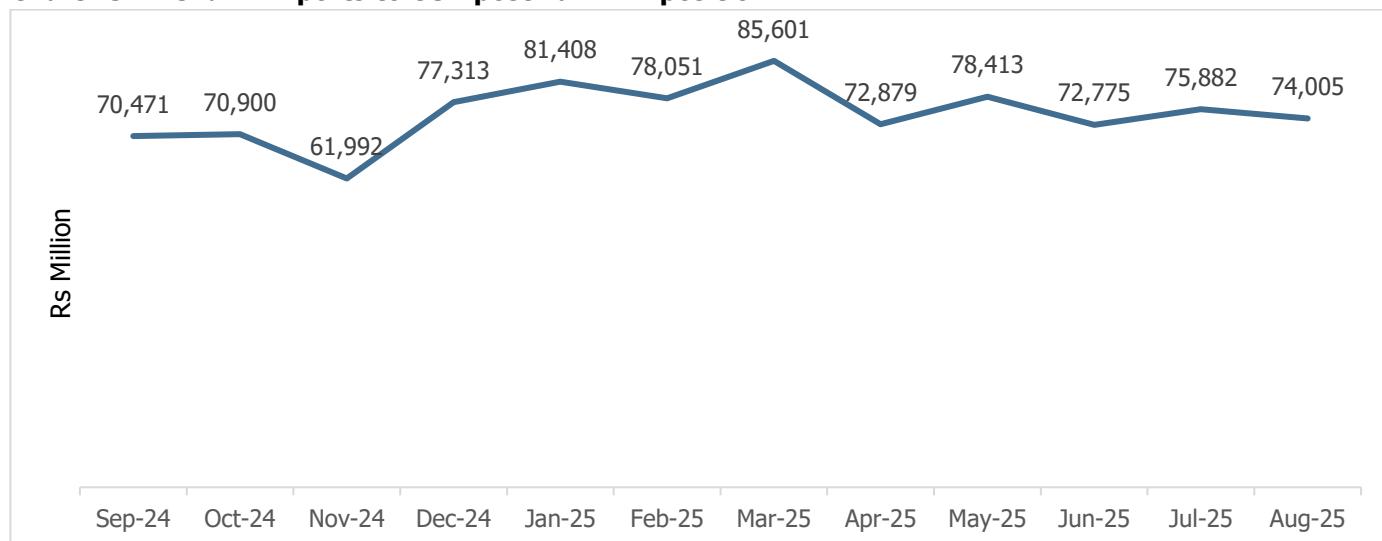
**RIPS 2024: Empowering Rajasthan's Textile Industry:** The Rajasthan Investment Promotion Scheme (RIPS) 2024 is a comprehensive initiative by the Government of Rajasthan aimed at transforming the state's industrial landscape, with a significant focus on the textile sector. Under this scheme, textile enterprises can avail themselves of various incentives, including capital subsidies ranging from 13% to 28% over ten years, turnover-linked incentives between 1.2% to 2% for a decade, and investment subsidies with up to 75% reimbursement of state taxes for seven years. Additional benefits encompass 100% exemptions on electricity duty, stamp duty, conversion charges, and land tax, along with employment boosters offering an extra 10% to 15% on chosen asset creation incentives. The scheme also provides green incentives, freight subsidies, cluster incentives, and training and skilling support. Recognizing textiles as a manufacturing thrust sector, RIPS 2024 offers a 10% thrust booster on top of the selected asset creation incentive. Furthermore, the policy allows for phased investments without loss of benefits and offers customized packages for large-scale investments exceeding ₹500 crore, thereby positioning Rajasthan as a competitive and investor-friendly destination for textile manufacturing.

- **The Samarth Scheme (Scheme for Capacity Building in the Textile Sector):** This scheme addresses the critical need for a skilled workforce in the evolving textile ecosystem. Implemented by the Ministry of Textiles, the scheme aims to train over ten lakh youth across the value chain, excluding spinning and weaving, with a strong focus on industry-led training modules. It emphasizes hands-on, demand-driven skill development through partnerships with textile industry associations, state agencies, and sectoral training partners. The programme ensures post-training placement assistance and alignment with the National Skill Qualification Framework (NSQF) to maintain uniform quality standards. By bridging the gap between manpower availability and industry requirements, the Samarth Scheme enhances employability, productivity, and quality output across both organized and traditional segments. Together, these initiatives create an enabling ecosystem for the textile sector by promoting technology adoption, innovation, and human capital development, thereby reinforcing India's attractiveness as a preferred destination for foreign direct investment.
- The National Technical Textile Mission (NTTM), launched in 2020 with an outlay of Rs 1,480 crore. The mission aims to position India as a global hub for technical textiles, a high-value and innovation-driven segment encompassing applications such as geotextiles, medical textiles, agro-textiles, and industrial textiles. It focuses on four main components research, innovation, and development, promotion and market development, export promotion, and education, training, and skill development. The mission encourages the establishment of Centres of Excellence, collaboration with international institutions, and support for start-ups and MSMEs engaged in technical textile manufacturing. By fostering indigenous innovation and expanding domestic capacity, NTTM seeks to reduce import dependence, enhance export potential, and integrate India more deeply into global technical textile value chains.
- India's textile industry, a major contributor to employment and exports, continues to benefit from the government's proactive policy interventions. To address the demand-supply gap and ensure steady access to quality raw materials, the Government of India has extended the import duty exemption on raw cotton (HS 5201) till 31st December 2025. This move, aimed at stabilizing input costs across the textile value chain from yarn to garments supports both manufacturers and consumers. The decision is expected to strengthen India's global competitiveness while ensuring that farmers' interests remain protected under the Minimum Support Price (MSP) mechanism operated by the Cotton Corporation of India (CCI).
- In another key step, the Directorate General of Foreign Trade (DGFT) has extended the Export Obligation (EO) period under the Advance Authorisation Scheme from 6 to 18 months for products covered under Quality Control Orders (QCOs) issued by the Department of Chemicals & Petrochemicals (DCPC) and the Ministry of Textiles. This extension provides critical relief to exporters of man-made fibre (MMF) and technical textiles, ensuring easier access to raw materials and enhancing ease of doing business. Around 18% of Advance Authorisations are issued to the textile sector, highlighting the importance of this facilitation for export growth and production continuity.

### 3.13 The impact of U.S Tariffs on the Indian Textile Exports: -

The U.S. government's recent decision to increase tariffs on select Indian textile and apparel imports has significantly influenced industry dynamics. In the months following the announcement, India's textile exports to the U.S. witnessed a sharp moderation as buyers reassessed sourcing strategies and renegotiated contracts to offset higher landed costs. Exporters faced order deferrals, tighter margins, and rising inventory levels, particularly in cotton and apparel segments that are highly dependent on the American market. While short-term pressures have affected production and employment in key clusters, the policy shift has also prompted Indian manufacturers to accelerate diversification toward alternative markets such as the EU, Middle East, and Latin America. Additionally, the focus is shifting toward higher-value segments, including technical textiles and sustainable fabrics, supported by domestic initiatives like the PLI and NTTM schemes. Overall, the industry is experiencing a transitional phase adapting to trade realignments while striving to strengthen its global competitiveness and reduce market concentration risks.

**Chart 19: Trend in Exports to USA post Tariff Imposition**



Source: CMIE, CareEdge Research

India's textile exports to the United States recorded steady growth, peaking at around Rs 85,600 million in March 2025. This momentum was driven by post-holiday restocking, firm demand for value-added garments, and stable raw material costs. However, from April 2025 onward, exports began to moderate as U.S. retailers reduced orders amid high inventory levels and softer consumer sentiment. The situation further deteriorated after mid-2025, following the U.S. administration's decision under President Trump to impose higher tariffs on select textile and apparel imports from India. The move, aimed at narrowing the U.S. trade deficit, adversely impacted India's price competitiveness, leading to reduced order volumes, shipment delays, and tighter margins for exporters.

In response to these headwinds, Indian textile players are increasingly focusing on cost optimization, product innovation, and supply chain efficiency to mitigate the impact of external shocks. Companies are investing in automation, digital design, and smart manufacturing technologies to enhance productivity and reduce dependence on labour-intensive processes. Simultaneously, industry bodies are engaging with policymakers to seek trade concessions, explore preferential market access, and push for greater export incentives. The medium-term outlook suggests a period of adjustment, where Indian exporters will recalibrate strategies toward value addition, operational efficiency, and diversified market linkages to restore growth momentum in a more uncertain global trade environment.

### 3.14 Recent Developments in the textile Industry

1. Temporary Waiver of Import Duty on Cotton (till December 31, 2025): To offer immediate relief to textile manufacturers struggling with high raw material costs, the government temporarily waived import duty on cotton until December 31, 2025. This move was introduced at a time when domestic cotton production had fallen sharply, pushing mills to rely heavily on imports. By removing the duty, imported cotton became considerably cheaper, lowering the input cost for spinning and weaving units. This has helped exporters maintain competitive pricing despite the tariff shock from the U.S., and has provided short-term breathing space, especially for small and medium enterprises that were facing cost pressures.
2. Diversification of Export Markets Beyond the U.S.: Recognizing the risk of excessive dependence on a single market, the government and export bodies have encouraged textile manufacturers to diversify into nearly 40 alternative markets beyond the United States. These include Latin America, Africa, West Asia, Central Asia, and emerging European destinations. The strategy aims to distribute export risks more evenly, ensuring that a tariff shock in one major market does not collapse demand for Indian products. By expanding into multiple destinations, exporters can stabilize orders, develop new buyer relationships, and reduce vulnerability to geopolitical disruptions such as tariff hikes.
3. Exporters Offering Discounts or Absorbing Costs to Retain Buyers: To maintain long-standing relationships with American importers, many Indian exporters are offering price discounts or absorbing part of the additional cost created by U.S. tariffs. This approach is particularly common among larger manufacturers who see value in preserving their market presence and buyer loyalty. However, this strategy comes at the expense of profit margins, which have contracted sharply as companies choose to sacrifice earnings to avoid losing clients. While this helps retain U.S. orders in the short term, it is not sustainable for smaller firms with limited financial buffers.
4. Shift Toward Value-Added Segments like MMF and Technical Textiles: The industry is also responding to tariff pressures by shifting its product mix toward higher-value and less price-sensitive segments such as MMF-based apparel, technical textiles, and niche speciality fabrics. These segments offer better margins, face comparatively lower competitive pressure from countries like Bangladesh and Vietnam, and align more closely with global consumption trends—particularly in performance wear, medical textiles, and industrial applications. By moving into advanced and diversified textile categories, Indian exporters aim to reduce dependence on low-value cotton garments and strengthen long-term competitiveness even in the presence of tariff challenges.

### 3.15 Outlook for the Indian Textile Industry

The Indian textile industry remains strongly positioned for significant growth through the latter 2020s, bolstered by rising global demand, shifting supply-chain strategies, sustainability momentum, rapid technology adoption and robust government support. With the domestic textile and apparel market valued at roughly USD 174 billion in FY2025 and projected to grow at a healthy pace to 2030, India is increasingly seen as a global hub for both volume manufacturing and value-added textile output.

Technological advancements are becoming more important than ever: beyond traditional mechanisation, there is growing interest in digitisation, automation, and even smart/technical textiles and recycling-ready processes all aligned with global trends for efficiency and sustainability. Government-backed initiatives such as the newly announced Tex-RAMPS (for research & innovation), and ongoing support under PM MITRA Parks Scheme, Scheme for Integrated Textile Parks (SITP) and Production Linked Incentive Scheme (PLI) continue to strengthen infrastructure, plug-and-play manufacturing ecosystems, and encourage investment in state-of-the-art technology.

Sustainability and ESG-compliance have become non-negotiable globally. Indian textile firms are gradually adopting eco-friendly practices from energy-efficient machinery to water conserving dyeing and waste-management to meet international buyer expectations. At the same time, there is an emerging opportunity in technical and MMF-based textiles, which help reduce dependency on unpredictable cotton yields.

On the trade front, shifting global sourcing strategies (the “China + 1” effect) offer India a chance to attract orders previously routed to China. Recent trade developments such as the India–UK Free Trade Agreement are opening up duty-free or preferential markets for Indian textiles, particularly home textiles and apparel.

However, challenges remain. Domestic cotton output has dropped to multi-year lows, prompting a surge in cotton imports to keep mills running which could undercut the cost advantage and increase exposure to global commodity price swings. Rising input costs (raw materials, energy), global economic slowdown, and policy/tariff changes in major export markets (like the US) could also dampen growth momentum.

## 4 Indian Grey Cloth Industry

### 4.1 Overview of Indian Grey Cloth Industry

Grey cloth, also referred to as greige fabric, is an unprocessed textile produced directly from the loom or knitting machine, prior to any bleaching, dyeing, or finishing treatments. Typically composed of natural or synthetic fibres such as cotton, polyester, or their blends, it retains its original, untreated appearance, usually a pale, off-white or greyish hue. As a foundational material in the textile industry, grey cloth is essential for further processing, serving as the primary substrate for customized fabric development. Its versatility and adaptability make it a critical component in the production of finished textiles across various applications. It is widely used in sectors such as apparel, home textiles, industrial textiles, and technical fabrics, and plays a key role in global textile supply chains due to its versatility, cost-effectiveness, and scalability.

Grey cloth plays a vital role in enabling value addition across the textile value chain. Its characteristics such as yarn count, weave density, fibre composition, and weight can be tailored to meet diverse end-use requirements. The manufacturing of grey cloth is highly mechanized, involving automatic shuttles less looms, air-jet looms, or rapier looms, depending on the desired fabric quality and output efficiency. Quality parameters like evenness, tensile strength, and contamination level are crucial at this stage, as they directly affect downstream processing outcomes such as dye uptake, print clarity, and finish durability.

From an industrial standpoint, the grey fabric segment is often considered a barometer for upstream textile activity, with demand closely linked to garment production cycles and export orders. Large-scale production hubs, especially in countries like India and China, benefit from vertical integration, allowing grey cloth to be rapidly converted into finished goods. Moreover, the fabric has gained relevance in the context of sustainable textile production, with manufacturers increasingly focusing on organic fibre sourcing, reduced water usage during processing, and adoption of eco-friendly finishes, starting from the grey fabric stage.

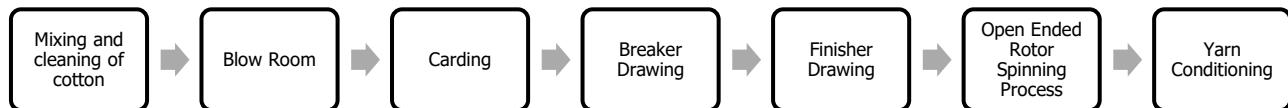
As global fashion and furnishing markets demand faster turnaround and greater customization, grey cloth offers manufacturers the flexibility to stockpile unfinished material, reducing lead times by dyeing or finishing fabric as per real-time market needs. This makes it not only a functional base material but also a strategic asset in agile textile manufacturing and supply chain management.

### 4.2 Processes for Grey Cloth Production and Market Share

#### Manufacturing / production process

**A. Spinning:** Yarn manufacturing through Open Ended Rotor Spinning is the process of converting Raw Cotton lint obtained after ginning into yarn. This process involves removal of external impurities (Termed as Trash) to the maximum extent. During the manufacturing process cotton is opened, cleaned and then is converted through a series attenuation of Sliver involving fibre to orient parallel to its axis through the process doubling into final yarn.

The production of the Yarn at units is carried out by following processes/steps as set out below.



- (1) **Mixing & Cleaning:** - Cotton fibers are delivered to spinning units in the form of tightly compressed bales from various sources such as ginners, cotton stations, or processed cotton suppliers. To ensure consistency in quality, the cotton from these different sources is first blended through a process called mixing. Since the bales are highly compressed, they must be opened before further processing. This initial stage takes place in the mixing and opening section of the Blow Room. Here, the cotton is broken down into smaller tufts, which are then transported to the main blow room machinery for further cleaning.
- (2) **Blow Room:** In this stage of the process, cotton lint is thoroughly opened and cleaned to achieve the highest possible level of fibre separation and impurity removal. The primary goal is to ensure the cotton is broken down into fine tufts while eliminating physical contaminants such as dust, leaf particles, and other foreign matter. This is accomplished by passing the cotton lint through a series of high-speed revolving beaters of various designs, supported by air currents that aid in loosening and separating impurities from the fibres. Once adequately opened and cleaned, the cotton lint is transferred to the next stage carding via a Chute Feed System. This automated feeding mechanism eliminates the need for manual handling and ensures a smooth, continuous transfer of material between processes, enhancing production efficiency and consistency. Any waste or by-product generated during the blow room operations is efficiently managed through an Automatic Waste Evacuation System, which collects and removes waste material without interrupting the production flow. This not only maintains cleanliness within the facility but also supports a more sustainable and efficient manufacturing process.
- (3) **Carding:** - Carding is the process of converting opened cotton lint into a thin web first and then in a loose open rope like form, called sliver. This process plays a vital role in determining the quality of the final yarn, as well-carded fiber is essential for producing high-quality yarn. As such, carding is often regarded as one of the most important steps in the spinning process from a quality perspective. During this process of carding there are two types of waste generated, (i) liker-in-dropping and (ii) flat strips. Both of these waste materials are collected separately through an automated waste management system, ensuring that the production line remains clean and efficient. These waste types fall under the category of "sellable waste" in spinning mills, as they can be reused or sold for secondary applications.
- (4) **Drawing:** - Once the carded sliver is produced, it must be further evened out to ensure consistency in yarn quality and to maintain control over key yarn parameters. This is achieved through a process known as Doubling and Drafting. For open-end (OE) spinning applications, the carded sliver first undergoes a step called Breaker Drawing. In this stage, multiple carded slivers are combined (doubling) and then stretched (drafting) to produce a more uniform sliver. This process significantly improves the evenness of the sliver by blending and straightening the fibres. The sliver from the Breaker Drawing is then fed into Finisher Draw Frames for further refinement. During this stage, the drafting process is enhanced by the use of an auto-leveler a highly sensitive mass measuring device installed within the machine. This instrument continuously monitors and adjusts the sliver thickness, ensuring greater uniformity and improved output quality. Additionally, during the drafting process, the fibres are aligned parallel to the sliver axis, which is essential for achieving uniformity and strength in the final yarn. This alignment and evenness are critical to producing high-quality yarn in the final stages of manufacturing. Overall, the Doubling and Drafting process plays a key role in improving sliver uniformity,

enhancing fibre orientation, and ensuring that the final yarn meets the desired standards of quality, consistency, and performance.

- (5) **Open end rotor spinning machines:** - The sliver produced from the Draw Frames is directly fed into the Rotor Spinning Machine, with each rotor position using one can of sliver. From these cans, sliver is individually fed into the Spin Box of each rotor position. Inside the Spin Box, an Opening Roller with a saw-tooth surface separates and individualizes the fibres. These fibres are then guided into the Rotor, which spins at extremely high speeds. The centrifugal force throws the fibres onto the groove of the rotor, where yarn formation begins. This spinning method is called Open-End Spinning, as there is a continuous open gap between the incoming fibres and the yarn already being formed. Fibers are fed using a feed roller and fibre channel, aligned onto the rotor groove, and the newly formed yarn is drawn out through the navel into the machine's winding system. The yarn is wound directly onto yarn tubes (parallel cheese packages) at the winding unit. Each package is produced to a preset length, after which the spindle stops automatically, and the doffer system replaces the full package with an empty one. Each empty tube carries a starter yarn, which is spliced to the new yarn by the piecing unit, restarting the winding process without manual intervention. As the OE spinning system produces a final marketing-ready package, no additional winding is needed. These yarn packages typically range from 2 kg to 4 kg, based on market requirements.
- (6) **Yarn Conditioning:** - The yarn packages produced from the rotor spinning process are subsequently sent for yarn conditioning in a vacuum yarn conditioning plant.

#### A. Weaving

Weaving is the process in which two different sets of yarns or threads are interlaced with each other to form a fabric or cloth. One of these sets is called warp which is the lengthwise yarn running from the back to the front of the loom. The other set of crosswise yarns are the fillings which are called the weft or the woof.

The production of the Grey Fabric at our units is carried out by following processes/steps as set out below:



- (1) **Yarn Procurement and Quality Check:** The process begins with the procurement of quality yarn, typically in cone form, for both warp and weft purposes. Upon arrival, the yarn undergoes thorough quality checks to ensure it meets the desired specifications such as counts, tensile strength, elongation, and uniformity. Lab testing is conducted to verify twist per inch (TPI), count strength product (CSP), hairiness, and nep content. This ensures the yarn is suitable for further processing and will perform well during weaving.
- (2) **Warping and Warp Tying:** Once the yarn passes inspection, the next stage is warping, where the required number of yarn ends are wound in parallel from cones onto a warp beam. This is done by mounting the cones on a creel and guiding the yarns through tension controllers and stop motion devices to ensure alignment and uniform tension. Depending on the design and production schedule, the process may proceed to warp tying. In case of repeated styles already running on the loom, the new warp beam is connected to the previously running one using a warp tying machine. This machine automatically ties each new yarn end to the corresponding old

end, allowing the new warp to be pulled through the existing drop wires, healds, and reed. This method significantly reduces loom downtime and manual re-threading, enabling a faster and more efficient transition.

- (3) **Sizing:** After warping or tying, the warp yarns are sent for sizing, which is essential to strengthen the yarns and reduce friction-related breakages during weaving. In the sizing machine, the warp sheet is passed through a size solution consisting of starch and others. The yarns are then squeezed to remove excess liquid and dried using steam or hot air dryers. The final product is a sized warp beam where yarns have a protective coating that enhances their performance on high-speed looms.
- (4) **Drawing-In / Knotting-In:** Depending on whether it is a new design or a repeat order, either drawing-in or knotting-in is done. For a new design, each warp end is manually drawn through drop wires, heald eyes (of the heald frames), and the dents of the reed in a specific sequence according to the fabric design. For repeat orders, knotting-in is done using the warp tying machine to connect the new warp to the existing ends, which are already set in the loom. This saves time and ensures consistency in production.
- (5) **Weaving on Airjet Looms:** With the warp beam ready and installed on the loom, the weaving process commences. Airjet looms, which are known for their high speed and precision, are used to insert the weft yarn using a stream of compressed air. As the warp threads are raised and lowered by the heald frames to form a shed, the weft yarn is blown across the width of the fabric through this shed. The reed then beats the weft into place, and the process continues in a cycle to produce the fabric. Airjet looms are especially suitable for producing lightweight to medium-weight fabrics at high efficiency.
- (6) **Grey Fabric Inspection:** Once weaving is completed, the grey fabric is taken for inspection to identify and grade any defects. The fabric is unrolled and passed over a lighted inspection table or through a manual inspection system. Trained personnel look for defects such as broken ends, broken picks, oil stains, floatings, thick and thin places, or any irregularities in the weave. The inspection is usually conducted as per the industry practice, and based on the number and type of faults, the fabric is categorized into different quality grades.
- (7) **Sorting and Packing:** In the final stage, the fabric is sorted according to grade, length, quality, and order specifications. The sorted fabric is then packed in suitable packaging materials such as polythene sheets, HDPE fabric, or carton boxes. For export or bulk dispatch, rolls may be vacuum packed or placed on pallets. Each package is labelled with all necessary details for easy identification. The entire lot is prepared for dispatch along with packing lists and invoices, completing the grey fabric production process.

#### **Preparing Warps and Wefts for Weaving:-**

The warp yarns, which form the foundation of fabric, undergo several preparatory steps before weaving—namely spooling, warping, and slashing. In spooling, yarn is wound onto large cones placed on a creel. From there, the yarns are transferred onto a warp beam, aligned in parallel. These yarns are then fed into a slasher machine for slashing (or sizing), where they are coated with a protective layer typically starch-based or synthetic (e.g., polyvinyl alcohol or water-soluble acrylics). This sizing process strengthens the yarns, reducing breakage and abrasion during weaving. Finally, the sized yarns are wound onto the final warp beam, ready to be used on the loom.

**Shedding:** In the shedding process, alternate warp yarns are lifted to create an opening, or shed, allowing the filling yarn (weft) to be inserted through the warp. On modern weaving looms, shedding is performed automatically by a component called the harness. The harness is a rectangular frame that holds a series of wires known as heddles. As

each warp yarn unwinds from the warp beam, it is threaded through an eye in the heddle. The process of threading each warp yarn through the correct heddle eye is called drawing-in.

**Picking:** As the warp yarns are lifted during shedding, the weft yarn is inserted through the shed using a carrier device. Each pass of the weft yarn from one side of the loom to the other is known as a pick. Various types of looms use different methods to insert the weft yarn, depending on their design. Common types include shuttle looms, shuttleless looms, and circular looms, each employing distinct techniques for weft insertion.

**Beating up:** This stage of the weaving process, known as battening, involves compacting the fabric after each weft insertion. All warp yarns pass through the heddle eyelets and then through the reed, a comb-like frame. With every pick (weft insertion), the reed moves forward to push or beat the weft yarn firmly against the already woven fabric. This action ensures a tight and compact fabric structure, contributing to the strength and uniformity of the finished material.

**Taking Up and Letting Off:** As the shedding, picking, and battening processes occur, the newly formed fabric is gradually wound onto the cloth beam, a step known as "taking up." Simultaneously, the warp yarns are released from the warp beam, a process referred to as "letting off." The weave pattern is determined by how groups of warp yarns are raised by the harnesses to allow the insertion of the weft yarn. Variations in this movement result in different types of fabric weaves, each offering unique characteristics. These weave structures not only influence the appearance and utility of the fabric but also determine its strength, texture, and durability.

In India, particularly in textile hubs like Ahmedabad, the production and processing of grey cloth play a significant role in the textile industry. The city's well-established infrastructure and skilled workforce support the efficient manufacturing & Processing of grey fabric. Local textile mills and processing units employ advanced pretreatment technologies to cater to both domestic and international markets. By adhering to international standards in fabric preparation, Indian manufacturers enhance the quality and competitiveness of their products in the global textile market.

#### 4.3 Growth Drivers and Challenges

##### Key Growth Drivers in Grey Cloth Segment (India) Key Challenges in Grey Cloth Segment (India)

<p><b>1. Strong Domestic Textile Ecosystem:</b> India has a well-established textile value chain, from raw cotton to finished garments. The grey cloth segment, being the intermediate stage between yarn and finished fabric, benefits immensely from this integration. Many weaving clusters across states like Gujarat, Maharashtra, Tamil Nadu, and Uttar Pradesh fuel consistent demand and output in the grey fabric space.</p>	<p><b>1. Technological Obsolescence in Weaving Units:</b> A significant portion of India's weaving sector still operates with outdated shuttle looms, leading to lower productivity, higher defect rates, and inconsistent quality. While modern looms like rapier and air-jet are gaining traction, adoption remains limited due to high capital costs.</p>
<p><b>2. Rising Demand from Processing and Garmenting Units:</b> The increase in domestic and export demand for processed fabrics and ready-made garments creates a stable pull for grey cloth. As garment manufacturers look to scale production, they rely on a</p>	<p><b>2. Fragmented and Unorganized Structure:</b> The grey cloth segment is highly fragmented, with many small and unorganized players. This leads to challenges in maintaining quality standards, meeting large-volume orders, and adhering to global compliance norms, making it harder to attract premium buyers.</p>

steady supply of greige fabric, especially in cotton and blended categories.	
<b>3. Cost-Competitiveness of Indian Producers:</b> India's grey cloth producers, especially in traditional weaving clusters, have maintained a competitive cost structure due to low labour costs and access to raw materials. This makes India an attractive sourcing destination for bulk fabric orders from both domestic processors and overseas buyers.	<b>3. Volatility in Raw Material Prices:</b> Being closely tied to cotton yarn prices, the grey fabric segment is vulnerable to raw material cost fluctuations. When yarn prices spike or fall suddenly, it impacts weaving unit margins and working capital cycles.
<b>4. Government Support &amp; Cluster Development:</b> Schemes like Integrated Textile Parks, Amended TUFS, and PM-MITRA have improved infrastructure and technology access for grey cloth producers. Power subsidies and other incentives provided by state governments (like in Gujarat and Maharashtra) are also boosting output and modernization in weaving hubs.	<b>4. Environmental and Compliance Pressures:</b> Though grey fabric production itself is less polluting, the segment is increasingly being scrutinized for labour practices, energy consumption, and traceability. Export buyers now expect traceable, ethically sourced fabrics, which small weavers often find hard to deliver due to lack of systems and certifications.
<b>5. Export Potential in Emerging Markets:</b> As many Southeast Asian and African countries expand their textile processing capacities but lack strong weaving bases, Indian grey cloth exports have opportunities to grow. With consistent quality and scalability, Indian suppliers are gradually penetrating these markets.	<b>5. Competitive Pressure from Other Countries:</b> Countries like China, Vietnam, and Pakistan offer grey fabric at competitive prices with better consistency and large-scale capacity. This affects India's export potential unless Indian weavers modernize and scale up rapidly.

#### 4.4 Outlook for Grey Cloth Industry:

The outlook for grey cloth in India is optimistic, marked by consistent growth in production and demand across key fabric types. Cotton and polyester continue to dominate the market, with rising consumption driven by both domestic needs and export potential. The industry is benefiting from improved manufacturing capabilities, innovation in fabric blends, and increasing preference for versatile textile materials across fashion and industrial applications.

Regionally, states like Gujarat and Tamil Nadu remain central to the sector's momentum, backed by strong infrastructure and skilled labour. With supportive government policies, technological advancements, and a growing focus on sustainability, the grey cloth market is well-positioned for long-term expansion. The sector is expected to maintain a healthy balance between volume growth and value generation, reinforcing its crucial role in India's textile economy.

#### 5 India's Competitive Advantage in Global Textiles:

India holds a distinct competitive edge in the global textile and apparel industry due to several strategic advantages, which collectively enhance its appeal as a preferred manufacturing destination. These include:

**1. Labour and skills strengths in Indian Textiles:** India maintains a labour cost advantage in the global textile market through a combination of factors such as a large, flexible workforce, regional wage variations, and increasing productivity driven by skill development and operational efficiencies. The presence of vertically integrated textile hubs enables streamlined production and reduced overheads, while government support and ongoing infrastructure improvements further lower operational barriers. These elements collectively enhance India's competitiveness and reinforce its position as a key player in the international textile industry.

**2. Supply Chain in Indian Textiles:** India's rise in the Logistics Performance Index to 38th in 2023 from 54<sup>th</sup> position in 2014 reflects better port infrastructure, customs efficiency, and cargo movement. This enhances the textile supply chain by reducing delays and improving delivery reliability. Lower logistics costs directly benefit manufacturers by increasing margins. Whereas Bangladesh continues to face persistent logistical challenges. These issues were highlighted during a meeting held by the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), where international buyers raised concerns about slow internet speeds, shipment delays, and container congestion at Chattogram port. These ongoing inefficiencies hinder Bangladesh's ability to meet tight delivery schedules. In contrast, India's advancing logistics ecosystem ensures faster turnaround, strengthening its appeal as a preferred textile sourcing destination.

**3. Production Scalability:** India's textile sector benefits from a well-developed infrastructure that includes large industrial clusters, integrated textile parks, and specialized hubs, enabling scalable production across the value chain. Initiatives like the PM MITRA scheme, with Rs. 4,445 crores allocated for seven mega parks, and facilities such as the Kakatiya Mega Textile Park in Telangana, which aims to generate over 100,000 jobs, reflect this strength. Established clusters like Tiruppur and hi-tech hubs like Palladam in Tamil Nadu facilitate large-scale, diversified manufacturing. Proximity to ports and robust logistics further enhance export efficiency, enabling India to meet both niche and bulk global demand. Bangladesh's textile industry is mostly made up of small and medium units with limited value chain integration, while Vietnam, though improving, still lacks large-scale, fully integrated parks. In contrast, India offers investment-ready, integrated zones that cover the entire value chain, giving it an edge in efficiency, scalability, and production control.

**4. Diversification, Sustainability, and Innovation:** India benefits from a vast and diversified domestic market that drives continuous innovation and demand for a wide variety of textile products, enabling manufacturers to adapt quickly to changing global fashion trends. The country also has a strong network of small and medium enterprises (SMEs) that contribute flexibility and niche expertise, especially in artisanal and regional textile crafts. Additionally, India's growing adoption of sustainable and eco-friendly practices, such as organic cotton cultivation and water-saving dyeing technologies, aligns with the rising global emphasis on ethical fashion. This commitment to sustainability enhances India's appeal to environmentally conscious brands and consumers worldwide. Moreover, robust digitalization and increasing integration of Industry 4.0 technologies are gradually improving productivity and quality, helping Indian textiles compete more effectively on the global stage. Indian Textile Processing Industry

**5. Raw Material Advantage:** India enjoys strong self-reliance in key textile raw materials, producing about 24% of global cotton, and is the leading jute goods producer globally, contributing around 70% of the world's total production, and ranking second in silk production. It has expanding capacity in man-made fibres. Unlike other countries such as Sri Lanka, Indonesia and Turkey which depend on raw material imports such as raw cotton, yarn, and fabrics, India's domestic supply helps lower costs, reduce delays, and ensure supply chain stability.

## 5 The Swift Transformation of Fashion Trends in India

In 2025, technology is revolutionizing India's fashion industry by making shopping more interactive and personalized. Augmented Reality (AR) allows customers to virtually try on clothes, accessories, and makeup using their smartphones or in-store AR mirrors, helping them visualize how items will look without physically wearing them. This innovation enhances online shopping experiences, reduces uncertainty, and lowers return rates. Additionally, digital fashion platforms are utilizing artificial intelligence to offer personalized style recommendations based on individual preferences and body types. These advancements not only streamline the shopping process but also open new avenues for creative expression, blending traditional fashion with cutting-edge technology.

Inclusivity and gender-fluid fashion are gaining momentum, with designers creating unisex clothing lines that challenge traditional gender norms. Oversized silhouettes, neutral tones, and adaptable designs are becoming mainstream, reflecting a broader societal shift towards acceptance and diversity. Additionally, the resurgence of 90s and early 2000 trends, such as low-rise jeans, cargo pants, and vibrant neon colors, is evident in contemporary streetwear, appealing to a sense of nostalgia among younger generations. This revival signifies the cyclical nature of fashion and its ability to reinvent past styles for modern audiences.

In essence, India's fashion scene in 2025 and further, is a vibrant tapestry woven from threads of cultural reverence, sustainability, technological innovation, and inclusive design, reflecting the country's evolving identity on the global fashion stage.

Fast fashion, characterized by the rapid production of trendy, affordable clothing, has transformed the global textile industry. This model emphasizes quick turnaround times, cost efficiency, and continuous product updates to meet ever-changing consumer demands. While it has democratized fashion by making it more accessible, it also poses significant challenges for textile manufacturers, including environmental degradation, labor concerns, and the need for agile production processes.

To navigate the complexities of fast fashion, textile manufacturers must address several critical requirements:

1. **Flexible Supply Chains:** Manufacturers need agile supply chains capable of quickly adapting to new designs and fluctuating consumer demands. This involves efficient logistics, responsive inventory management, and close collaboration with suppliers to ensure timely delivery of materials and products.
2. **Cost Efficiency:** Maintaining low production costs is essential to offer affordable products. Manufacturers achieve this by optimizing operations, reducing material waste, and leveraging economies of scale. However, this cost-cutting pressure can sometimes lead to compromises in labor conditions and environmental standards.
3. **Sustainable Practices:** There's a growing demand for eco-friendly production methods. Manufacturers are encouraged to use sustainable materials, such as organic cotton or recycled fabrics, and to implement processes that minimize water usage and chemical pollution. Adopting sustainable practices not only meets consumer expectations but also aligns with environmental regulations.
4. **Ethical Labor Standards:** Ensuring fair wages, safe working conditions, and compliance with labor laws is vital. Ethical labor practices are increasingly scrutinized by consumers and watchdog organizations, making it imperative for manufacturers to uphold high labor standards and avoid exploitative practices.
5. **Quality Control:** Despite the fast-paced production, maintaining product quality is crucial to meet consumer satisfaction and reduce return rates. Implementing rigorous quality assurance processes helps ensure that products meet established standards and customer expectations.

6. **Technological Integration:** Adopting advanced technologies, such as automation and data analytics, can enhance efficiency, reduce waste, and improve decision-making processes. Technologies like 3D design and AI-driven forecasting enable manufacturers to respond swiftly to market trends and optimize production workflows.
7. **Waste Management:** Implementing effective strategies to manage and reduce textile waste is important for environmental sustainability and regulatory compliance. Practices such as recycling, upcycling, and adopting circular economy principles help minimize the environmental footprint of textile manufacturing.
8. **Transparency and Traceability:** Providing clear information about sourcing, production processes, and supply chain practices helps build consumer trust and meet regulatory requirements. Utilizing technologies like blockchain and IoT devices can enhance traceability, ensuring that every step of the supply chain is accountable and transparent.

## 5.1 India's Emerging Textile Powerhouse and FDI Magnet

● **Overview:** India's textile industry continues to evolve into a globally competitive sector, supported by regional clusters that specialize in diverse textile segments. Cities such as Bhilwara, Surat, Tiruppur, Ludhiana, and Panipat have emerged as prominent centers of textile manufacturing, processing, and exports. Each region contributes uniquely to India's textile value chain, benefiting from local resource availability, industrial ecosystems, and policy-driven support for investment and modernization.

● **Economic Significance and Growth Momentum:** Among these hubs, Bhilwara—often known as the "Textile City" or "Manchester of Rajasthan"—has gained recognition for its strong polyester and suiting fabric base, contributing nearly Rs 25,000 crore annually to the textile economy and generating substantial employment. Similarly, Surat in Gujarat dominates synthetic and man-made fiber production, while Tiruppur in Tamil Nadu is a global knitwear export hub. Ludhiana leads in woolen and hosiery products, and Panipat is well-known for its home textiles and handloom products. Collectively, these clusters contribute a significant share to India's textile exports and domestic market supply.

● **Strategic Advantages and Industrial Infrastructure:** Bhilwara's integrated textile ecosystem with more than 400 spinning, weaving, and dyeing units offers a complete fiber-to-fabric value chain. Other centers such as Surat and Tiruppur benefit from well-developed logistics networks, access to ports, and specialized industrial estates. The ongoing establishment of textile parks, Mega Integrated Textile Region and Apparel (PM MITRA) Parks, and Common Effluent Treatment Plants (CETPs) across multiple states further strengthens India's textile infrastructure, making these regions attractive destinations for Foreign Direct Investment (FDI).

● **Government Policy Support:** Under initiatives like the Textile and Apparel Policy 2025 (Rajasthan), Gujarat Textile Policy, and Tamil Nadu Integrated Textile Policy, several state governments are offering fiscal incentives, infrastructure support, and training programs to enhance competitiveness. The Central Government's Production Linked Incentive (PLI) Scheme and National Technical Textiles Mission also aim to modernize textile clusters and encourage value-added production.

● **Skill Development and Academic Support:** Educational institutions such as Manikya Lal Verma Textile and Engineering College (Bhilwara), The Southern India Mills' Association (SIMA) Training Centers (Tiruppur), and The Institute of Fashion Technology (Surat) play an instrumental role in producing technically skilled professionals. Industry-academia collaborations across these regions ensure that emerging technologies in fabric innovation, dyeing, and sustainable processing are effectively adopted.

Bhilwara is an ideal location for a textile company like Sonaselection because the city is among India's largest and most dynamic textile hubs. With over 850 manufacturing units and an annual textile industry turnover of roughly Rs

25,000 crore, the region produces about 50% of India's polyester fabrics and suiting materials and exports yarn and fabric worth around Rs 3,800 crore annually. The district accounts for about 44% of Rajasthan's yarn production capacity, with vast infrastructure including spinning mills, weaving units, processing houses and power-loom clusters.

For Companies, locating operations in Bhilwara provides access to a well-integrated textile ecosystem from raw material supply and yarn production to weaving, finishing and export infrastructure which reduces procurement and logistic costs. The concentration of skilled labor established supply-chain networks, and high production capacity make it easier to scale up. Moreover, with the state government and local industry pushing modernization (loom upgrades, processing capacity expansion, synthetic/MMF focus), Bhilwara's infrastructure and policy environment support growth, innovation, and export readiness.

### **Conclusion:**

Bhilwara, along with other regional textile hubs like Surat, Tiruppur, Ludhiana, and Panipat, collectively symbolizes India's transformation into a diversified and investment-friendly textile ecosystem. The combination of strong local manufacturing bases, policy incentives, and rising foreign investment interest positions these centers as key contributors to India's global textile competitiveness and sustainable economic growth.

- Among these hubs, Bhilwara often known as the '**Textile City of Rajasthan**' has gained recognition for its strong polyester and suiting fabric base, contributing nearly Rs 25,000 crore annually to the textile economy and generating substantial employment. Similarly, Surat in Gujarat dominates synthetic and man-made fiber production, Tiruppur in Tamil Nadu is a global knitwear export hub, Ludhiana leads in woolen and hosiery products, and Panipat is well-known for home textiles and handloom products. Collectively, these clusters contribute a significant share to India's textile exports and domestic market supply." **Economic Significance and Growth Trajectory:** Bhilwara's textile sector is a cornerstone of its economy, contributing approximately Rs 25,000 crore annually. The city produces over 50% of India's polyester fabrics and suits, with exports nearing Rs 3,800 crore. Employing around 85,000 individuals directly and an additional 60,000 indirectly, Bhilwara's textile industry is a major employment generator in the region.
- **Strategic Advantages and Infrastructure:** The city's strategic location in Rajasthan, coupled with its proximity to major cotton-producing areas, provides a steady supply of raw materials. Bhilwara boasts over 400 manufacturing units, including spinning mills, weaving units, and dyeing facilities, facilitating a comprehensive value chain from fiber to fashion. The establishment of textile parks and industrial estates further enhances its appeal to investors.
- **Government Initiatives and Policy Support:** The Rajasthan government's Textile and Apparel Policy 2025 aims to bolster the sector's growth by offering substantial financial incentives, addressing infrastructure challenges, and promoting skill development. These initiatives are designed to attract both domestic and foreign investments, fostering a conducive environment for industry expansion.
- **Educational Institutions and Skill Development:** Institutions like the Manikya Lal Verma Textile and Engineering College play a crucial role in producing a skilled workforce adept in textile engineering and related fields. These educational establishments collaborate with industries to ensure a steady supply of trained professionals, meeting the evolving demands of the textile sector.

**Conclusion:** Bhilwara's emergence as a leading textile hub in India is a testament to its strategic initiatives, robust infrastructure, and supportive policies. With continued investment and innovation, the city is poised to strengthen its position as a global player in the textile industry, contributing significantly to India's economic growth and employment generation.

## 5.2 Policies of Rajasthan for Textile Industry:

The Rajasthan Textile and Apparel Policy-2025 envision transforming Rajasthan into a global textile manufacturing hub. The policy aims to attract investments worth Rs 10,000 crore and generate employment for approximately 2 lakh individuals over the next five years. It encompasses a wide array of sectors, including garment manufacturing, technical textiles, handloom, wool processing, leather products, and footwear manufacturing.

Under the Rajasthan Textile and Apparel Policy 2025, the state has introduced a range of incentives to promote industrial growth and environmental sustainability. These measures aim to bolster the textile sector's competitiveness and attract significant investments.

### Financial Incentives for Industrial Growth

The policy offers substantial financial support to encourage investment in the textile industry:

- **Asset Creation Incentive (ACI):** Capital subsidies ranging from 13% to 28% of Eligible Fixed Capital Investment (eFCI) are provided, varying based on project size and location.
- **Turnover-Linked Incentive (TLI):** Enterprises can avail themselves of incentives between 1.2% and 2% of their net sales turnover.
- **Capital Subsidy Ceiling:** Subsidies are capped at Rs 50 crore for the first three years, Rs 65 crore for the next four years, and Rs 80 crore for the subsequent three years.
- **Stamp Duty and Registration Fee Exemption:** 100% exemption is granted to encourage investment in land and property.
- **Electricity Duty Exemption:** 100% exemption on electricity consumption for a specified period to reduce operational costs.

### Environmental Sustainability Initiatives

Recognizing the importance of sustainable practices, the policy includes provisions to promote environmental responsibility:

- **Green Solution Incentive:** 50% reimbursement, up to Rs 12.5 crore, for adopting environmentally friendly technologies.
- **Patent and Copyright Costs:** 50% reimbursement to encourage innovation and intellectual property protection.

### Support for Export Units

To enhance the global competitiveness of Rajasthan's textile sector, the policy provides:

- **Freight Subsidy:** 25% reimbursement on export freight, capped at Rs 25 lakh per year.
- **Skill Development:** Financial support for training workers to enhance their skills and productivity.

These comprehensive incentives are designed to position Rajasthan as a leading hub for textile and apparel manufacturing, emphasizing sustainable growth, innovation, and global competitiveness.

Regarding the recent imposition of reciprocal tariffs by the United States, India faces a 27% tariff on textile imports. In comparison, other major textile-exporting countries face higher tariffs such as Bangladesh (37%), Vietnam (46%), Cambodia (49%), Pakistan (29%), and China (34%). This relatively lower tariff on Indian textiles may provide a competitive advantage in the U.S. market.

These developments underscore the strategic importance of the Rajasthan Textile and Apparel Policy in enhancing the state's textile sector's competitiveness on the global stage.

### **5.3 The Bangladesh Crisis: A Catalyst for India's Textile Industry**

Bangladesh has long been a formidable player in the global textile market, primarily due to its competitive labour costs and preferential trade agreements. However, recent political unrest and economic challenges have disrupted its garment sector, creating a significant opportunity for India to capitalize on the shifting dynamics.

- **Impact of Bangladesh's Crisis on Its Textile Sector:** The political turmoil in Bangladesh has led to factory shutdowns, labor unrest, and a decline in export orders. This instability has prompted global retailers to reconsider their sourcing strategies, seeking more reliable alternatives to mitigate risks associated with disrupted supply chains.
- **India's Strategic Positioning:** India, with its established textile infrastructure and skilled workforce, is well-positioned to absorb the displaced demand from Bangladesh. Indian textile hubs like Tirupur, Ludhiana and Bhilwara are experiencing increased inquiries from international buyers seeking stable and efficient production partners. The Indian government's initiatives, such as the PM Mega Integrated Textile Region and Apparel (PM MITRA) scheme, aim to enhance the sector's competitiveness by providing modern infrastructure and reducing logistics costs.
- **Leveraging Trade Agreements:** Recent trade agreements, such as the India-UK Free Trade Agreement, have further bolstered India's attractiveness as a sourcing destination. These agreements eliminate tariffs on key textile exports, providing Indian manufacturers with a competitive edge over countries like Bangladesh and China.
- **Employment and Economic Growth:** The shift in global sourcing to India has the potential to generate significant employment opportunities. If India were to secure a modest portion of the global apparel market currently dominated by Bangladesh, it could significantly bolster employment within India's apparel sector. Such an increase in market share could lead to the creation of a substantial number of direct and indirect employment opportunities, thereby enhancing the sector's contribution to the national economy.

The crisis in Bangladesh has inadvertently opened avenues for India to strengthen its position in the global textile market. By leveraging its infrastructure, skilled labor, and favorable trade agreements, India can attract displaced investments and expand its share in global textile exports. However, to sustain this growth, India must address challenges related to labor shortages, factory scalability, and production costs to remain competitive on the world stage.

### **5.4 Automated Technologies in Bhilwara Textile Industry**

Bhilwara, often referred to as "Vastranagari," stands as a prominent textile hub in India, playing a pivotal role in the nation's textile industry. The district's textile operations encompass spinning, weaving, processing, and denim production, contributing significantly to both the state's economy and employment landscape.

Bhilwara's processing houses have an annual capacity of approximately 70 to 75 crore meters, constituting 85% of Rajasthan's total processing capacity. The district hosts nearly 20 processing houses, equipped with over 75 stenters and 416 chambers, processing nearly 573 lakh meters of fabric monthly. The textile industry in Bhilwara employs over

75,000 individuals directly and an additional 60,000 indirectly, making it the largest employer in both the organized and unorganized sectors after agriculture.

**Production Capacity:** Bhilwara is home to 16 spinning mills and 5 open-end spinning units, collectively producing tonnes of polyester/viscose and cotton yarn annually. This output accounts for about 44% of Rajasthan's total yarn production capacity.

**Infrastructure:** The district boasts 7.67 lakh spindles and 19,500 rotors. The mill sectors of Bhilwara have 48 knitting machines and more than 2100 looms enriching its capacity of production.

**Technological Advancements:** Bhilwara is recognized for adopting advanced technologies, including air jet spinning, and is the sole producer of silk yarn in Rajasthan.

## 5.5 Sustainable Fashion

Sustainable and recycled fashion are gaining significant momentum in India, reflecting a broader global shift towards eco-consciousness in the apparel industry. This transformation is propelled by a combination of grassroots innovation, government initiatives, and the emergence of forward-thinking brands.

In urban centers like Mumbai, communities are actively engaging in upcycling practices. For instance, in Dharavi, artisans repurpose discarded plastic waste into woven products such as bags and mats, blending traditional techniques with modern sustainability goals.

Companies utilize hemp as a primary fabric, offering biodegradable and durable clothing options. They focus on upcycling textile waste into stylish garments, emphasizing zero-waste policies and innovative designs. Advancements in technology are also playing a crucial role. Brands are incorporating blockchain for supply chain transparency and artificial intelligence to optimize production processes, thereby reducing waste and enhancing sustainability efforts. Together, sustainable and recycled fashion represents a shift towards a more circular and responsible industry, where the focus is on longevity, ethical practices, and reducing environmental footprints.

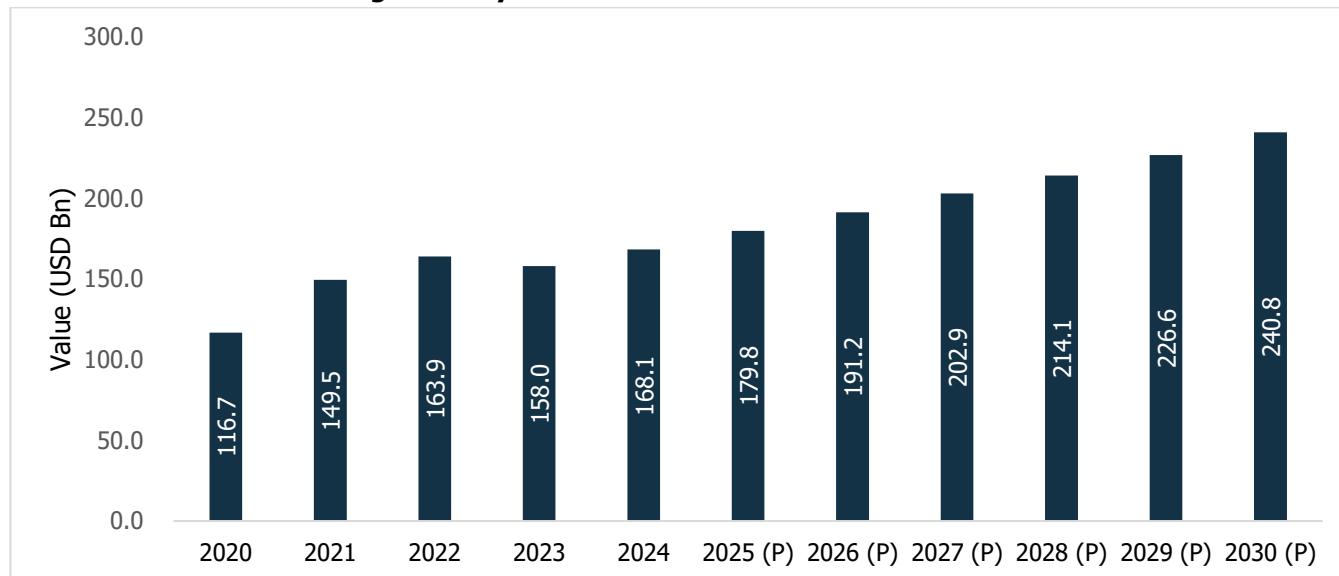
## 6 Overview of Indian Textile Processing Industry

### 6.1 Indian Textile Processing Industry

The textile processing industry covers a range of treatments applied to fibres, yarns, and fabrics to enhance their appearance, texture, and performance characteristics. These processes are vital for converting raw materials into finished textiles suitable for various applications, including clothing, home furnishings, and industrial products. Core stages include pre-treatment (desizing, scouring, bleaching), dyeing and printing, and finishing, which imparts properties such as softness, wrinkle resistance, and water repellence. The industry is substantial and continues to grow steadily, driven by a strong supply of raw materials, a large and cost-effective labour force, and rising domestic demand. With abundant availability of key inputs and efficient labour costs, the industry can produce competitively priced products, attracting significant interest from both local and global manufacturers.

Supportive policy measures, investment incentives, and focus on local manufacturing are creating a favourable environment for capacity expansion and technological upgrades. At the same time, increasing awareness around sustainable production and the rise of digital commerce are opening new growth avenues. India's push towards trade cooperation through free trade agreement and heightened demand for eco-friendly textiles are expected to boost exports and enhance India's position in the global market. With these trends, the industry is well-placed to sustain healthy growth in the coming years.

**Chart 20: Textile Processing Industry Market Size and Forecast**



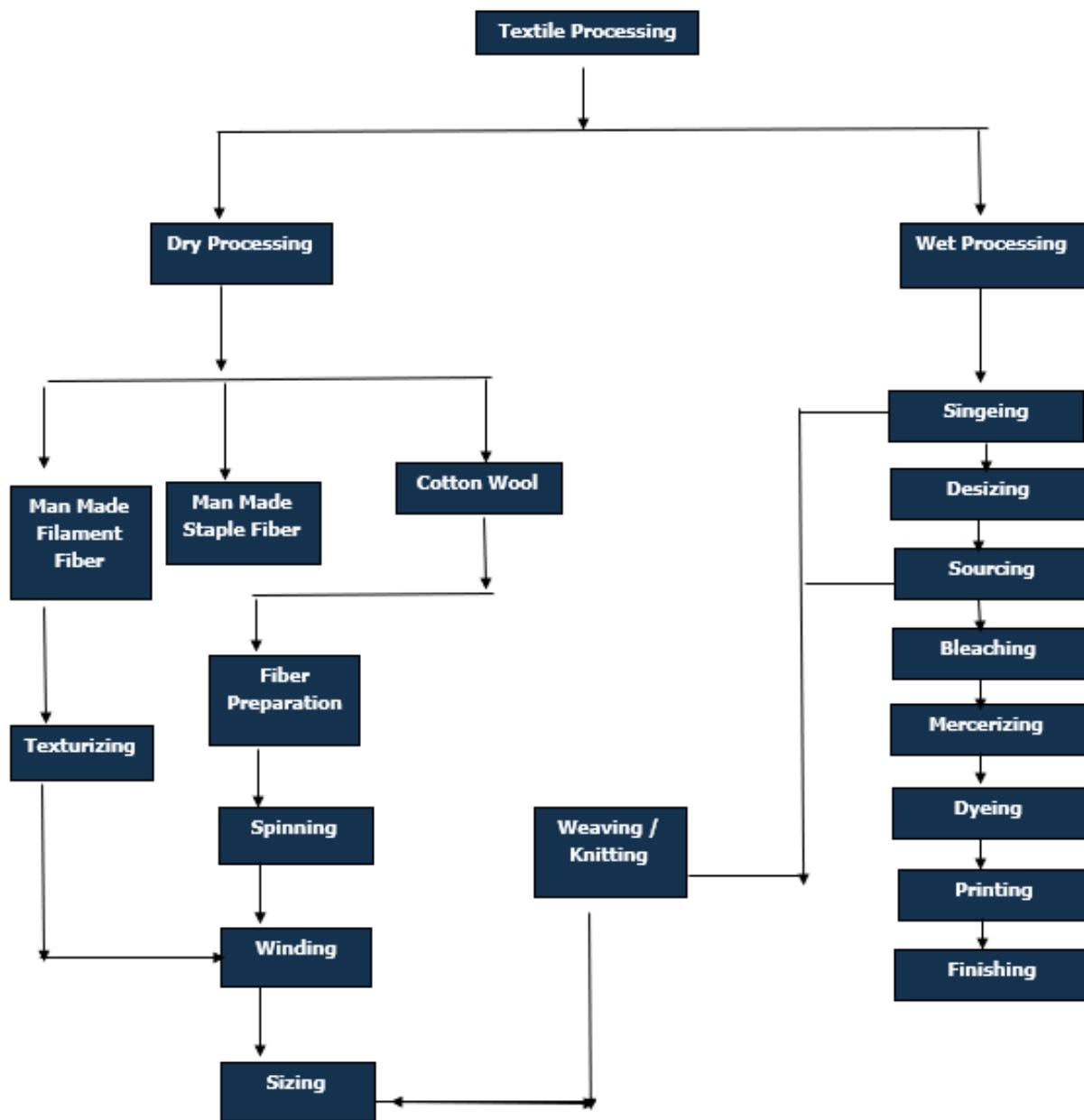
Source: Maia Research, CareEdge Research

After a challenging CY20, marked by pandemic related disruptions, CY21 marked a sharp recovery driven by increased demand as markets reopened and production resumed after the impact of Covid-19. CY22 continued this growth trajectory, albeit at a slower pace, with a moderate increase. However, in CY23, the industry faced a slight decline possibly due to challenges like fluctuating cotton prices, diminishing demand, capacity under-utilization and dumping of imported fabrics and garments from China and Bangladesh.

The Indian apparel and textile industry had a mixed performance in calendar year 2024 (CY24), characterized by modest growth, export woes, and strategic direction toward sustainability and rising global competitiveness. Projections for

CY25 to CY30 indicate steady and stable growth. This growth outlook is expected to be driven by factors such as the recovery from past setbacks, the continued expansion of domestic and international markets, and advancements in processing technologies that enhance efficiency and sustainability. The increasing demand for eco-friendly textiles and the adoption of digitalisation and automation in production are likely to fuel this growth. By CY30, the Indian textile processing industry is expected to mature, supported by its competitive edge in both local and global markets, ensuring long-term stability and growth despite short-term fluctuations.

### Textile Processing Flow Chart



Source: CareEdge Research

**1. Textile Processing Overview:** Textile processing refers to the entire chain of operations involved in converting raw fibers whether natural like cotton and wool or synthetic like polyester and nylon into finished fabric ready for use. The process broadly consists of two major stages. Dry Processing and Wet Processing. Dry processing involves mechanical and physical operations that transform fibers into yarn and fabric, while wet processing uses chemical and aqueous treatments to clean, color, and finish the material.

**2. Dry Processing:** Dry processing encompasses all physical steps carried out before any chemical treatment. It includes handling both natural and synthetic fibers, converting them into yarn, and then into fabric.

- **Man-Made Filament Fiber:** Man-made filament fibers are continuous synthetic strands, such as polyester, nylon, or viscose filament. These fibers are directly produced in long lengths through extrusion and can be used as they are or textured to improve performance characteristics.
- **Texturizing:** Texturizing is a mechanical process that modifies smooth filament yarns to create bulk, stretch, and softness, mimicking the comfort of natural fibers. Techniques like false-twist texturizing or air-jet texturizing introduce crimps or loops in the filament, improving elasticity, warmth, and fabric feel.
- **Man-Made Staple Fiber and Cotton/Wool:** Staple fibers both synthetic and natural are short-length fibers that require spinning to form yarns. Cotton and wool fall into this category and need preparatory processes to ensure smooth yarn production.
- **Fiber Preparation:** In this step, fibers are cleaned, blended, carded, and combed. These operations align the fibers parallel to each other, remove impurities, and produce a uniform sliver (a loose strand of fibers) ready for spinning. Proper fiber preparation ensures strength, evenness, and smoothness in the final yarn.
- **Spinning:** Spinning converts the prepared sliver into continuous yarn by drawing and twisting it. The twist binds fibers together, imparting strength and cohesion. Different spinning methods such as ring, rotor, or air-jet spinning are used depending on fiber type and desired yarn quality.
- **Winding:** Winding is the process of transferring spun yarn from smaller bobbins onto larger cones or packages suitable for further processing. It also helps in clearing weak or uneven sections of yarn, ensuring smoother weaving or knitting.
- **Sizing:** Sizing is an important step where a protective film (made from starch, PVA, or synthetic resins) is applied to the yarn surface. This coating enhances yarn strength, reduces friction, and minimizes breakage during weaving. After weaving, this layer must be removed during wet processing (desizing).
- **Weaving / Knitting:** In weaving, two sets of yarns the warp and the weft are interlaced at right angles to form woven fabric. In knitting, yarns are interlooped to form knitted structures. Both processes create what is called greige fabric, which is unfinished and requires subsequent wet processing to enhance its usability.

**3. Wet Processing:** Wet processing involves chemical treatments that improve the fabric's appearance, texture, and functionality. It includes preparatory, coloration, and finishing stages.

- **Singeing:** Singeing removes loose or protruding fibers from the surface of the fabric by passing it rapidly over a gas flame or heated plate. This makes the surface smooth and prevents pilling, ensuring a cleaner appearance after dyeing and printing.
- **Desizing:** Since yarns are coated with sizing material before weaving, desizing is required to remove this layer. Enzymatic, oxidative, or acid desizing methods are used depending on the size material. Proper desizing ensures uniform dye absorption in later stages.

- **Scouring:** Scouring is a deep cleaning process that removes natural impurities such as waxes, oils, and dirt, as well as residual chemicals from the fabric. It typically involves boiling the fabric in an alkaline solution. This step improves absorbency, allowing dyes and finishes to penetrate evenly.
- **Bleaching:** Bleaching eliminates the natural color of fibers to produce a uniform white base, suitable for dyeing or printing. Hydrogen peroxide is commonly used for cotton fabrics, while milder agents are applied for wool and silk to prevent damage.
- **Mercerizing:** Mercerization is a chemical treatment applied to cotton fabric using concentrated caustic soda (NaOH). It causes the fibers to swell, increasing luster, strength, and affinity for dyes. This step significantly enhances the brightness and smoothness of cotton textiles.
- **Dyeing:** Dyeing imparts uniform color to the textile material, which can be done at the fiber, yarn, fabric, or garment stage. Various dye types (reactive, vat, disperse, etc.) are chosen based on fiber composition. The process involves controlled temperature, pH, and time to ensure consistent coloration.
- **Printing:** Printing applies colored patterns or designs to specific areas of the fabric using pigments or dyes. Techniques include screen printing, digital printing, and roller printing. Printing adds aesthetic value and is commonly used for fashion and home textiles.
- **Finishing:** Finishing is the final stage that imparts specific functional or aesthetic properties to the fabric. It includes mechanical finishes (like calendering, raising, or compacting) and chemical finishes (like wrinkle resistance, water repellency, flame retardancy, or softening). Finishing gives the fabric its final handle, appearance, and performance suited to its intended end use.

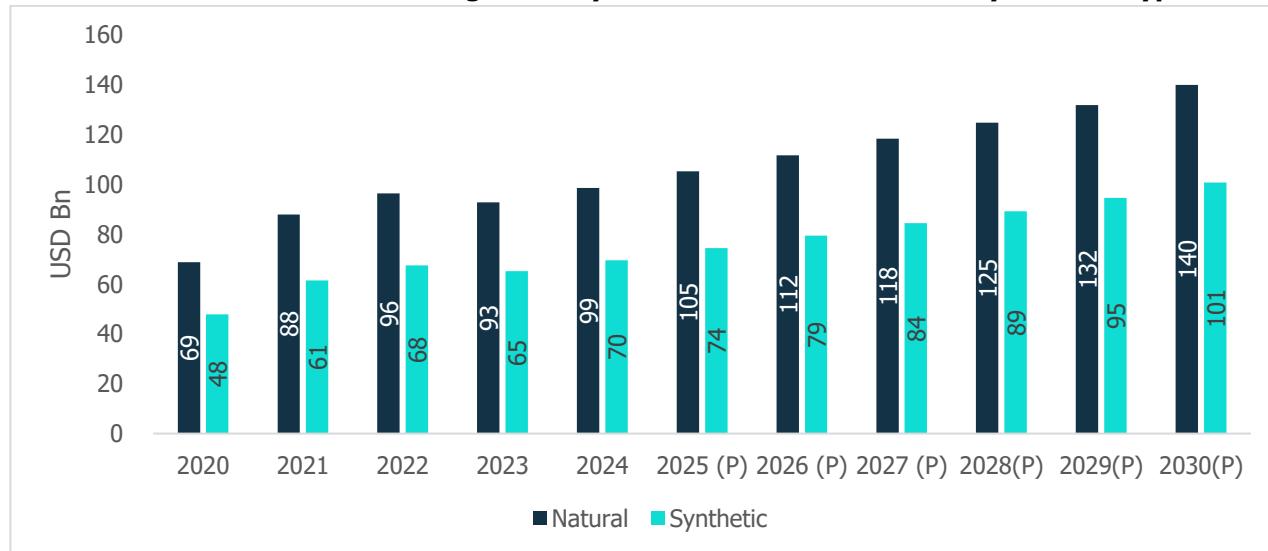
**4. Final Output:** The combined dry and wet processing stages transform raw fibers into finished textile fabrics that are clean, strong, visually appealing, and functional. These fabrics are then ready for garment production, home furnishings, or industrial applications.

#### 6.1.1 Indian Textile Process Market Size by Product Type

Natural textiles represent the leading segment within India's textile processing industry. The country benefits from an abundant supply of natural fibres such as cotton, jute, and silk, which ensures stable and cost-efficient raw material availability. This self-sufficiency reduces reliance on imports and supports scalable, consistent production.

India's deep-rooted tradition in natural fibre cultivation and textile craftsmanship has fostered strong consumer trust in these materials. Valued for their comfort, breathability, and environmental attributes, natural textiles align closely with evolving consumer preferences. This has reinforced their market leadership and sustained high demand in both domestic and international markets.

Synthetic textiles form the fastest-growing segment in India's textile processing industry, driven by their versatility, durability, and affordability. Comprising fibres such as polyester, nylon, and viscose, they serve a broad range of sectors including sportswear, fast fashion, and technical textiles. Their capacity for mass production and limited reliance on agricultural cycles further enhances their appeal. The industry is also embracing sustainability, with rising adoption of recycled fibres and eco-friendly manufacturing processes to meet global environmental standards. Supported by technological advancements and strong export potential, synthetic textiles are rapidly gaining market share and are poised to play a key role in India's emergence as a global textile leader.

**Chart 21: Indian Textile Processing Industry Market Size and Forecast- By Product Types**

Source: Maia Research, CareEdge Research

The Indian textile processing industry, valued at USD 159 billion in CY24, is projected to reach USD 241 billion by CY30, driven by growth across both natural and synthetic fibre segments. Natural textiles, which currently lead the market with USD 99 billion, are expected to grow to USD 140 billion in CY30, due to India's abundant raw material base, traditional expertise in cotton and silk, and rising global demand for breathable and eco-friendly fabrics. The sector also benefits from government support and strong consumer preference for sustainable, comfortable materials. On the other hand, synthetic fibres are the fastest-growing segment, projected to increase from USD 70 billion in CY24 to USD 101 billion by CY30, fuelled by demand for durable, affordable, and easy-care fabrics used in activewear, fast fashion, and technical applications. This growth is further supported by increased investment in recycling technologies, innovation in performance textiles, and India's rising role as a low-cost, high-capacity global manufacturing hub. Together, these factors are shaping a robust and diversified future for India's textile processing industry.

### 6.1.2 Indian Textile Processing Industry Export Contribution

India's textile processing industry plays a pivotal role in bolstering the nation's export capabilities. It contributes significantly to employment and economic growth, making India one of the largest exporters of textiles and apparel globally.

- **Large-Scale Manufacturing Units:** Large-scale manufacturing units are central to India's textile processing industry, enabling high-volume production to meet both domestic and global demand. These expansive facilities are concentrated in key textile hubs such as Surat, Ahmedabad, and Tirupur, each specializing in distinct segments of textile production. In Surat, Gujarat, the focus is on synthetic textiles, particularly polyester fabrics, with the city being one of the largest centres for polyester production in India. Ahmedabad, known as the 'Manchester of the East,' has a rich history in textile manufacturing, especially in cotton fabrics. Tirupur, Tamil Nadu, stands out as a leading centre for knitwear, contributing significantly to India's garment exports.
- **Export Infrastructure and Logistics Connectivity:** India's expanding network of ports, inland container depots, and freight corridors enables efficient movement of goods, reducing turnaround

<p>times for exports. Textile hubs such as Mumbai, Chennai, and Mundra offer direct shipping access to key international markets, which facilitates cost-effective and timely delivery of processed textiles.</p>
<ul style="list-style-type: none"> <li>• <b>Technological Advancements:</b> The adoption of modern technologies, such as automated dyeing machines and waterless dyeing techniques, enhances product quality and reduces lead times. These innovations make Indian textiles more appealing to global buyers seeking efficiency and sustainability.</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Strong Domestic Textile Ecosystem:</b> India's well-integrated domestic supply chain, encompassing everything from raw material production to finished goods, enhances export readiness. This integration ensures timely delivery and consistent quality, strengthening India's position in the global textile market.</li> </ul>

## Growth Drivers of Indian Textile Processing Industry

India's textile processing industry has significantly enhanced its export capabilities through various strategic initiatives.

- **Government Support and Policies:** The Indian government has implemented several initiatives to modernize the textile sector, and boost exports. The Amended Technology Upgradation Fund Scheme (ATUFS), seeks to enhance productivity, quality, and employment while promoting export growth and import substitution. Additionally, the establishment of Mega Integrated Textile Region and Apparel (MITRA) Parks aims to streamline operations and reduce logistics costs by creating integrated textile hubs. Export incentives under schemes like the Merchandise Exports from India Scheme (MEIS) further support the industry's global competitiveness.
- **Free Trade Agreements (FTAs):** India's Free Trade Agreement (FTA) with the UK will enable demand in the textile sector by removing duties on major exports such as garments and fabrics, allowing Indian products to compete more strongly in the UK market. This should raise export levels and assist in employment generation in the textile sector, which is labour-intensive. India is actively pursuing Free Trade Agreements with key partners to enhance market access for its textile products. Negotiations with the European Union (EU) focus on reducing tariffs and aligning industry standards to facilitate smoother trade. Similarly, discussions with the United States (US) aim to secure preferential access for Indian textiles, potentially eliminating tariffs and boosting exports. These agreements are expected to level the playing field for Indian exporters in global markets.
- **Sustainability Trends:** Global demand for eco-friendly textiles has prompted Indian manufacturers to adopt sustainable practices. Techniques such as waterless dyeing and the use of organic cotton are becoming prevalent, aligning with international environmental standards.
- **Export-Focused Product Diversification:** India's textile exports encompass a wide range of products, including ready-made garments, home textiles, and ethnic wear. This diversification allows India to cater to various international markets, enhancing its global footprint. Notably, home textile exports have seen significant growth, driven by global demand and strategic initiatives.
- **Digital Platforms and E-Commerce:** The rise of e-commerce has opened new avenues for Indian textile exporters. Several platforms enable Indian manufacturers to reach international customers more easily,

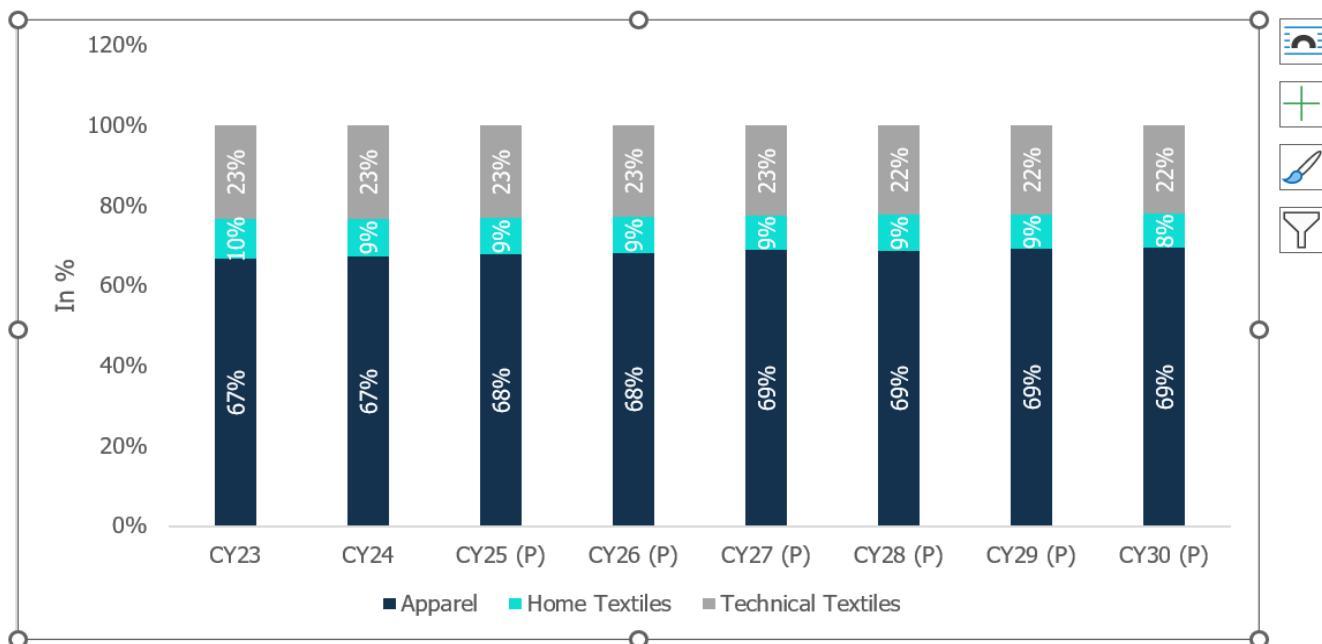
expanding their global presence. This digital expansion facilitates access to a broader customer base and streamlines the export process.

#### **6.1.3 Key sustainability challenges in the Indian textile processing industry:**

- |   |
|---|
| 1. <b>Excessive Water Consumption:</b> Textile processing, especially dyeing and finishing, requires large amounts of water, leading to over-extraction from water-scarce areas and water pollution due to untreated chemical discharge.                              |
| 2. <b>Chemical Pollution:</b> The use of hazardous chemicals, such as toxic dyes and heavy metals, is widespread, contributing to environmental degradation and health risks for workers and nearby communities.  |
| 3. <b>High Energy Consumption:</b> The energy-intensive nature of textile processing results in significant carbon emissions, with many units still relying on non-renewable energy sources like coal and diesel.   |
| 4. <b>Textile Waste Generation:</b> Large amounts of fabric scraps, offcuts, and non-recyclable packaging contribute to solid waste, which often ends up in landfills, increasing environmental pollution.  |
| 5. <b>Limited Recycling and Circular Economy Practices:</b> There is a lack of widespread adoption of recycling processes for textile waste, and the industry has yet to fully embrace circular economy practices that could reduce waste and enhance material reuse. |

#### **6.2 Indian Textile Process Market Size by Application**

The Indian textile processing industry caters to a broad spectrum of applications, reflecting its diverse capabilities and deep integration across domestic and global value chains. Key application areas include apparel, which remains the largest segment driven by strong domestic consumption and growing exports, home textiles, such as bed linen, curtains, and upholstery, supported by rising urbanization and lifestyle upgrades and technical textiles, a rapidly emerging segment used in sectors like healthcare, automotive, construction, and agriculture. Additionally, industrial textiles serve niche applications requiring specialised performance characteristics like durability, resistance, and insulation. This wide application base not only ensures the industry's resilience but also positions it for robust growth, driven by evolving consumer preferences, policy support, and increasing investments in innovation, sustainability, and capacity expansion.

**Chart 22: Indian Textile Processing Industry Market Size and Forecast- By Application**

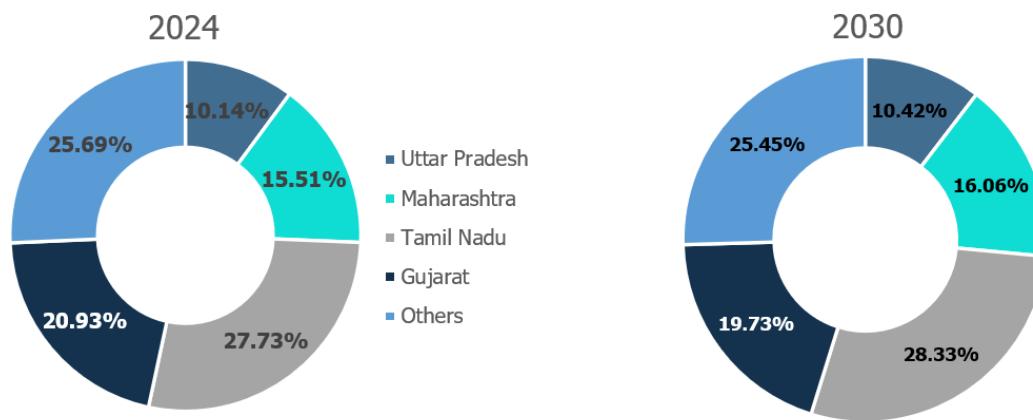
Source: Maia Research, CareEdge Research

Apparel continues to dominate, maintaining a strong and slightly growing share from 67% in CY24 to 69% by CY30 driven by India's large consumer base, rising fashion consciousness, the growth of organized retail, and expanding export markets. This increase also reflects growing demand for fast fashion and performance wear, particularly in synthetic and blended fabrics.

Home textiles, which include products like bed linens, towels, and curtains, hold a steady but slightly declining share, falling from 9% in CY24 to 8% by CY30. The demand remains stable due to factors like rising disposable income, positively impacting the living standards, home renovation trends, and export strength, the relative decline suggests other segments are growing at a faster pace. Meanwhile, technical textiles used in sectors such as healthcare, agriculture, automotive, and infrastructure maintain a consistent share of 23% until CY27, before slightly dipping to 22% by CY28 and beyond. Despite the marginal decline, this segment is expected to remain vital, fuelled by government initiatives like the National Technical Textiles Mission and increasing industrial usage. Overall, while apparel remains the core driver, the data reflects a well-diversified application mix supporting sustained industry growth.

### **6.3 Indian Textile Process Market Size by Region**

The Indian textile processing industry is geographically well-distributed, with several key states driving its growth through strong industrial infrastructure, skilled labour, and access to raw materials. Major regions like Uttar Pradesh, Maharashtra, Tamil Nadu, and Gujarat play a pivotal role in shaping the sector, each contributing based on their regional strengths in traditional textiles, spinning, dyeing, and synthetic processing. In addition to these leading states, many other regions are emerging as new textile hubs, supported by government incentives and increasing private investment. This regional spread ensures a balanced and resilient growth trajectory for the industry nationwide.

**Chart 23: Indian Textile Processing Industry Market Share and Forecast- By Region**

Source: Maia Research, CareEdge Research

Others Include: Rajasthan, Telangana, Karnataka, and Andhra Pradesh

The regional revenue distribution of India's textile processing industry from 2024 and 2030 reflects the dominance of traditional hubs with slight shifts. Tamil Nadu remains the top contributor, increasing from 27.73% in CY24 to 28.33% CY30(P), supported by its strong industrial base, export-oriented units, and integrated processing facilities. Maharashtra's share is expected to grow from 15.51% to 16.06%, driven by its increasing focus on synthetic textiles and improved logistics infrastructure. Uttar Pradesh may see a modest increase from 10.14% to 10.42%, reflecting steady expansion in traditional textile zones and enhanced state-level initiatives. In contrast, Gujarat sees a minor decline from 20.93% to 19.73% in CY30(P), potentially due to saturation and rising competition from other states. The "Others" category remains relatively stable, suggesting that while new regions are developing, growth is more pronounced in the established centres.

#### **6.4 Technology Landscape**

India's textile processing industry is experiencing a significant transformation, moving from traditional methods to modern, technology-driven solutions. Traditional processing techniques such as manual dyeing and screen printing are often labour-intensive, inconsistent, and environmentally taxing. In contrast, modern technologies emphasize efficiency, precision, and sustainability. Innovations such as automated machinery, advanced treatment processes, and eco-compliant systems improve product quality while reducing operational costs and environmental impact.

A key area of advancement is the adoption of innovative processes like digital printing, enzyme-based treatments, and waterless dyeing. Digital printing offers high-speed, low-waste, and highly customizable fabric solutions with reduced water and chemical usage. Enzyme-based processes replace harsh chemicals with eco-friendly biological agents for fabric treatment, improving sustainability and fibre strength. Similarly, waterless dyeing technologies, including those utilising supercritical carbon dioxide, are gaining prominence amid growing water scarcity and increasingly stringent environmental regulations.

The integration of automation and Industry 4.0 technologies is further revolutionising textile processing. IoT-enabled systems, real-time analytics, and smart sensors facilitate precise monitoring and control, ensuring consistent quality and optimal resource use. Automation, robotics, and AI-driven tools are streamlining production, reducing manual intervention, and enhancing predictive maintenance and supply chain visibility. These advancements are essential for improving turnaround times, meeting global standards, and staying competitive in an increasingly demanding market.

## Types of New and Sustainable Textile Processing and Dyeing Technologies

**New Techniques of Textile Processing and Dyeing:** With the increasing global focus on sustainability, the textile industry has been shifting toward eco-friendly and resource-efficient technologies. Conventional wet processing and dyeing methods consume large amounts of water, energy, and chemicals, often leading to significant environmental pollution. Modern innovations aim to minimize these impacts by adopting cleaner, faster, and waterless dyeing systems that enhance productivity and quality while ensuring environmental safety.

**Supercritical CO<sub>2</sub> Dyeing:** One of the most significant innovations in waterless dyeing is the use of supercritical carbon dioxide (CO<sub>2</sub>) as a dyeing medium. In this process, CO<sub>2</sub> is heated and pressurized until it reaches a supercritical state, where it behaves like both a gas and a liquid. The dye dissolves in this medium and efficiently penetrates synthetic fibres such as polyester and nylon. This eliminates the use of water and the need for effluent treatment. The CO<sub>2</sub> used in the process can be captured and recycled, making it a closed-loop and sustainable technology. It also offers advantages such as faster dyeing cycles, better dye fixation, and energy savings.

**Digital (Inkjet) Textile Printing:** Digital printing has emerged as a modern alternative to traditional screen printing. This process involves applying dyes or pigments directly onto fabrics through computer-controlled inkjet printers. Digital printing drastically reduces water usage by nearly 90 percent since it requires no screens, washing, or rinsing steps. It allows precise control over designs and colors, enabling high-resolution prints, short production runs, and easy customization. Moreover, digital printing minimizes chemical waste and reduces energy consumption, making it highly suitable for sustainable textile production.

**Plasma and Ozone Treatments:** Surface modification using plasma and ozone technologies is another eco-friendly development in textile processing. Plasma treatment involves exposing the fibre surface to ionized gas, which alters its properties and improves dye absorption without using water or chemicals. Similarly, ozone treatment is used for bleaching and cleaning fabrics, replacing conventional chemical bleaching agents like hydrogen peroxide. These methods operate at room temperature, save energy, and reduce environmental pollution, while also improving dye uptake and color fastness.

**Enzymatic or Bioprocessing:** Enzymatic processing uses natural biological catalysts instead of harsh chemicals in various textile treatments such as scouring, bleaching, and polishing. Enzymes like amylase, cellulase, and catalase perform specific functions—removing impurities, smoothing fabric surfaces, and eliminating residual chemicals. These processes operate under mild conditions, consume less energy and water, and produce biodegradable effluents. Bio-scouring and bio-polishing have become common in cotton and knitwear processing, as they enhance softness and appearance while being environmentally benign.

**Foam Dyeing and Finishing:** Foam dyeing is a relatively new technique where dyes and finishing agents are applied to fabrics in the form of foam rather than liquid. Since foam contains less water, this method reduces water usage by nearly 70–80 percent and also lowers drying energy requirements. The process provides uniform coloration and can be applied to various fibres including cotton and polyester. In finishing, foam application is also used for coatings, flame retardants, and softeners, ensuring a more sustainable alternative to conventional padding and drying methods.

**Nanotechnology-Based Processing:** Nanotechnology is increasingly being integrated into textile processing to impart special functionalities such as UV protection, antimicrobial properties, stain resistance, and self-cleaning effects. This is achieved by coating fabrics with nanoparticles or embedding them within the fibre structure. Such treatments are highly durable and often require fewer chemicals compared to traditional finishing processes. Nanotechnology is particularly useful in performance and technical textiles used in sportswear, defense, and healthcare applications.

**Low-Liquor Ratio (LLR) Dyeing Machines:** Modern dyeing machines are designed to operate with very low liquor ratios, meaning that they use minimal water relative to the fabric weight. Advanced systems like airflow, jet, and soft-flow machines can reduce water consumption by 50 to 70 percent compared to conventional methods. These machines also cut down chemical and energy usage while ensuring consistent dyeing quality and reproducibility. LLR technology represents a major step toward efficient and sustainable textile processing.

**Eco-Bleaching and Low-Temperature Processes:** Recent developments in bleaching technology allow fabrics to be whitened effectively at lower temperatures using stabilized peroxide and advanced oxidation systems. These eco-bleaching processes consume less energy, prevent fibre damage, and improve fabric feel. They are particularly suitable for organic cotton and delicate textiles, aligning well with the growing demand for environmentally friendly materials.

**Recycled and Natural Dye Systems:** The use of natural dyes extracted from plants, minerals, and insects has been revived as part of the sustainable textile movement. Additionally, recycling dye baths and reusing dye effluents help conserve water and reduce waste generation. Although natural dyes often have limitations in shade range and color fastness, they are non-toxic, biodegradable, and align with circular economy principles. Many sustainable brands now use natural or low-impact dye systems to meet eco-certification standards and consumer preferences for green products.

## 6.5 SWOT Analysis: Indian Textile Processing Industry

### Strengths:

The Indian textile processing industry benefits from a well-integrated and self-reliant value chain encompassing fiber production, yarn manufacturing, fabric processing, and garmenting. This end-to-end capability enhances flexibility and reduces dependence on imports. India is also one of the leading producers and exporters of man-made fibers, fabrics, and made-ups, supported by a cost-competitive manufacturing base and a large skilled workforce. Furthermore, government initiatives such as the Production Linked Incentive (PLI) Scheme, the establishment of PM MITRA Parks, and the extension of RoDTEP benefits have strengthened the sector's global competitiveness and encouraged fresh investments in processing infrastructure.

### Weaknesses:

Despite its advantages, the industry faces several internal challenges. Poor infrastructure, particularly the unreliable supply of water and electricity, hampers smooth operations and increases production costs. The absence of adequate Common Effluent Treatment Plants (CETPs) in small industrial clusters adds to environmental compliance difficulties. Tightening environmental norms have also increased expenditure on effluent treatment and pollution control systems, straining the financial capacity of small and medium enterprises. Moreover, limited access to affordable finance restricts modernization efforts, leading many units to operate with outdated and inefficient machinery. The shortage of skilled and technically trained labor especially in semi-urban and rural textile hubs—further limits productivity and the adoption of advanced technologies.

### Opportunities:

There are strong growth opportunities driven by modernization, export potential, and sustainability trends. Upgrading to automated, energy-efficient, and eco-friendly technologies can significantly improve productivity, quality, and cost efficiency. India's expanding global trade relations—through recent Free Trade Agreements (FTAs) with the UAE and the UK, and ongoing negotiations with the EU—are expected to open new markets and enhance export competitiveness. Additionally, the growing global focus on sustainable and circular textile production presents an opportunity for Indian manufacturers to differentiate themselves through green certifications, traceability, and environmentally responsible processing practices.

**Threats:**

The Indian textile processing sector continues to face strong external pressures, particularly from China's dominant position in global textiles. Chinese manufacturers benefit from advanced technology, automation, large-scale production, and substantial government support, allowing them to achieve superior cost efficiency. This results in highly competitive pricing that challenges Indian processors in both domestic and international markets. There are also persistent concerns about dumping practices, where low-priced Chinese textiles flood markets and erode the margins of Indian producers. Additionally, global buyers increasingly demand faster turnaround times and consistent quality—areas where India still struggles due to fragmented supply chains, logistical bottlenecks, and slower processing cycles. Without focused investments in technology, skill development, and process optimization, Indian processors risk losing further ground in the global value chain.

## 7 Overview of Fabric Industry in India

### 7.1 Introduction of Fabric Industry in India

Fabrics are an essential component of the textile industry, acting as the intermediary between raw material processing which is yarn and the production of final products, such as clothing, home furnishings, and industrial materials. They are created from fibres, whether natural (like cotton or wool) or synthetic (such as polyester or nylon), and undergo various production methods to become usable materials with specific characteristics.

Manufacturers use three major ways to make fabrics: weaving, knitting, and non-woven processes. Weaving crosses two different sets of yarns at right angles, creating a fabric that is firm, stable, and long-lasting. Knitting interloops yarns to form fabrics that are flexible, stretchy, and soft. Non-woven processes bond or felt fibres directly, without using yarns. These fabrics are usually used for cost-effective, disposable, or specialized technical functions. One can group fabrics according to their method of construction and physical characteristics, such as strength, elasticity, and texture. Below is the division of fabrics in terms of type of construction and major physical factors:

Fabric Type	Examples	Production Method	Strength	Elasticity	Texture
Woven	Denim, Poplin, Twill	Interlacing of yarns	High	Low	Structured, crisp
Knitted	Jersey, Rib, Interlock	Interlooping of yarns	Moderate	High	Soft, flexible
Non-Woven	Felt, Spunbond, Geotextile	Bonding of fibres	Varies	Limited to Moderate	Smooth or coarse

Fabrics are crucial to the textile industry, not only adding to the manufacture of everyday products but also to their functional performance and beauty. In fashion, the choice of fabric has a direct impact on the design, drape, and comfort of a garment. For instance, fabrics with moisture-wicking or stretch properties are greatly sought after in sportswear and activewear.

Within the home textiles segment, producers value fabrics that are durable, easy to maintain, and provide tactile comfort, particularly for items like upholstery, curtains, and bedding. Technical textiles, on the other hand, are specifically designed to fulfill specific performance requirements—like fire retardancy, tensile strength, or thermal insulation—based on their end uses.

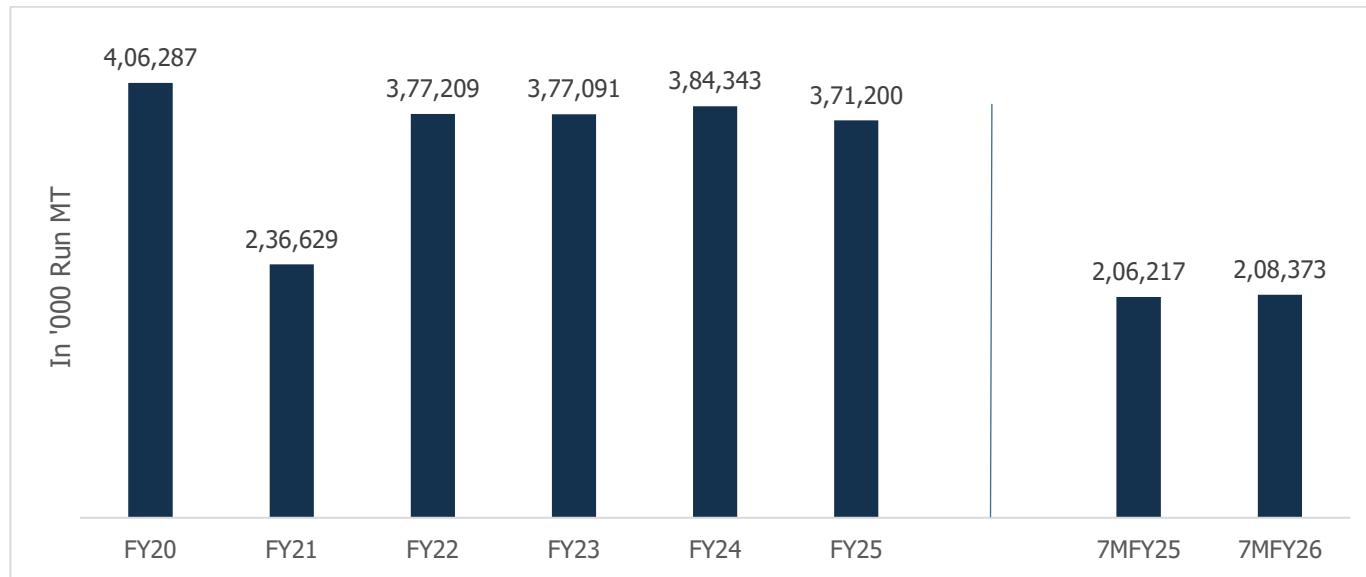
With the industry moving towards more sustainability, the need for eco-friendly materials keeps increasing. Biodegradable materials, recycled fibers, and intelligent textiles are revolutionizing the market by providing high performance while meeting environmental needs.

## 7.2 Types of the Fabrics and their application in the industry

Fabric Type	Description	Examples	Applications
Woven Fabrics	Made by interlacing two sets of yarns – the weft (horizontal) and the warp (vertical). They are strong, firm, and durable, with limited stretch.	<ul style="list-style-type: none"> <li>Denim: A thick cotton fabric used in jeans and casual wear.</li> <li>Twill: A fabric with a diagonal weave used in trousers and jackets.</li> </ul>	<ul style="list-style-type: none"> <li>Apparel: Formal wear, trousers, jackets, denim jeans.</li> <li>Automotive: Upholstery, airbags, and seatbelts.</li> <li>Home Textiles: Bed linens, curtains, and upholstery materials.</li> <li>Industrial: Workwear and protective clothing.</li> </ul>
Knitted Fabrics	Made by looping yarns together to create a stretchy, flexible material that can stretch in all directions.	<ul style="list-style-type: none"> <li>Jersey Knit: Soft and stretchy fabric used for t-shirts.</li> <li>Rib Knit: Stretchy fabric used in sweaters and other garments.</li> </ul>	<ul style="list-style-type: none"> <li>Apparel: Casual wear, activewear, sportswear (t-shirts, leggings, dresses).</li> <li>Medical: Compression garments, socks, stockings.</li> <li>Children's Wear: Soft and stretchy materials for ease of movement.</li> </ul>
Non-Woven Fabrics	Created by bonding fibers together using mechanical, thermal, or chemical methods, without the need for yarns or threads. Lightweight and disposable.	<ul style="list-style-type: none"> <li>Spunbond: Used in medical and hygiene products like surgical gowns and masks.</li> <li>Needle punch: Used in carpets and automotive insulation.</li> <li>Melt blown: Used for filtration materials. – Air laid: Used in wipes and diapers.</li> </ul>	<ul style="list-style-type: none"> <li>Medical Textiles: Surgical masks, gowns, bandages, and wound dressings.</li> <li>Geotextiles: Soil stabilization, erosion control, drainage systems.</li> <li>Automotive: Soundproofing, insulation, and filtration.</li> <li>Packaging: Durable protective covers and shopping bags.</li> </ul>

## 7.3 Trend in the production of Cotton woven Fabrics.

Cotton woven fabric production was at 406,287.4 thousand Meters in FY19-20. However, the COVID-19 pandemic severely impacted the industry in FY20-21, causing a sharp decline to 236,628.5 thousand Meters due to factory shutdowns and supply chain disruptions. Since then, production has gradually rebounded, reaching 384,343.3 thousand Meters in FY23-24, signalling a recovery and a return to pre-COVID levels, driven by increased demand for casual and athleisure wear along with technological advancements.

**Chart 24: Cotton Woven Production**

Source – CMIE, CareEdge Research

Technological advancements in the cotton woven fabric industry have led to significant improvements in production efficiency and sustainability. Innovations such as automated weaving, eco-friendly dyeing techniques, and advanced manufacturing processes have enhanced fabric quality while reducing environmental impact. The demand for cotton woven fabrics has surged, particularly driven by the growing popularity of casual and athleisure wear. Consumers increasingly prioritize comfort, breathability, and versatility, making cotton a preferred choice for everyday and activewear. This shift has significantly impacted the textile industry, compelling manufacturers to embrace modern technologies and sustainable practices to meet evolving market demands for high-performance and eco-conscious fabrics.

#### **7.4 End-User Industries for Fabrics**

##### **1) Apparel and Fashion Industry**

The Apparel and Fashion sector is a key industry where fabrics are central to the design, functionality, and comfort of clothing. Fabrics are chosen based on their texture, appearance, and performance, helping designers create garments that are both stylish and wearable. With advancements in fabric technology, modern materials now offer added features like moisture-wicking, UV protection, and antibacterial properties, meeting the changing needs of consumers. Fabrics are carefully selected to match the intended garment, its purpose, and the season. For example, lightweight cotton is often used in summer clothing due to its breathability, while heavier materials like wool are preferred for winter wear for added warmth.

Types of Fabrics in Apparel:

**Woven Fabrics:** These are commonly used for structured garments such as trousers, blouses, and jackets. They are known for their durability, strength, and ability to resist creases.

**Knitted Fabrics:** These fabrics provide stretch and comfort, making them ideal for casual wear, sportswear, and activewear, like t-shirts, leggings, and sweaters.

**Non-woven Fabrics:** Though used less frequently in mainstream fashion, non-woven fabrics are often employed for accessories, linings, and support elements due to their lightweight and disposable nature.

## 2) Home Textiles and Upholstery

The Home Textiles and Upholstery industry focuses on fabric products used in homes to provide comfort, function, and style. Fabrics for home use need to be both durable and attractive, suitable for items like curtains, bedding, and furniture. These textiles not only enhance the décor of living spaces but also offer comfort and practicality. Fabrics for home textiles must withstand frequent use and laundering while maintaining their appearance and feel. In addition to aesthetics, many modern home fabrics are designed to offer extra benefits, such as stain resistance, fire-retardant properties, and UV protection. With an increasing demand for sustainable living, eco-friendly fabrics are also gaining popularity in home textiles.

Common Fabric Types in Home Textiles:

<b>Curtains and Drapes:</b> Heavy woven fabrics such as velvet are often used in curtains and drapes for their aesthetic appeal and ability to block light. Some are also designed for thermal insulation.
<b>Bedding and Linens:</b> Soft and breathable materials like cotton and linen are used for bed sheets, pillowcases, and covers, valued for their comfort and ease of maintenance.
<b>Upholstery:</b> Sturdy fabrics like canvas and chenille are used for covering furniture such as sofas and chairs, ensuring they are durable, easy to clean, and resistant to wear.

## 3) Industrial and Technical Applications

In Industrial and Technical Applications, fabrics are specially engineered to serve critical roles in various sectors like construction, automotive, and healthcare. These fabrics are created for specific purposes such as protection, insulation, filtration, offering superior strength, durability and functionality. Unlike typical fabrics, industrial textiles are designed to meet the demanding conditions of specific industries.

Key Fabric Types in Industrial Use:

<b>Protective Clothing:</b> Fabrics that are fire-resistant or offer protection against chemicals and heavy-duty wear are essential in industries like manufacturing, emergency services, and oil and gas. These fabrics ensure safety and comfort for workers in hazardous environments.
<b>Geotextiles:</b> Woven and non-woven fabrics are used in civil engineering for applications such as soil stabilization, erosion prevention, and drainage in construction projects.
<b>Filtration Fabrics:</b> Non-woven materials, such as spun-bond and melt-blown, are commonly used in filters for air and water purification systems, industrial machinery, and other filtration systems.
<b>Automotive Textiles:</b> Fabrics in the automotive industry are used for components like seat covers, airbag linings, and soundproofing materials. These fabrics must meet strict safety standards for fire resistance, heat tolerance, and durability.

## 7.5 Overview, Processes and Growth Drivers of Cotton Ginning & Pressing Industry

- Overview of the Cotton Ginning and Pressing Industry**

The cotton ginning and pressing industry plays a crucial role in the textile supply chain, acting as the key link between raw cotton farming and cotton-based production. This industry handles the processing of raw cotton picked from farms to remove the cotton fiber (lint) from the seeds and other waste. Once this is done, the fiber is pressed into bales and sent to textile mills for further use. India, being one of the biggest producers of cotton in the world, has a strong ginning and pressing network, mostly located in cotton-growing states like Gujarat, Maharashtra, Telangana, and Andhra Pradesh.

- Main Processes in Cotton Ginning**

The main process in cotton ginning starts with feeding raw cotton into machines. These machines pull apart the fiber from the seeds using either saw gins or roller gins. Saw gins are usually used for short-length cotton, while roller gins work better for long-length cotton. After the fiber is separated, it is cleaned, dried, and pressed into standard-sized bales. These bales are then packed and labelled for delivery to textile companies. The removed seeds are not wasted; they are used to produce cottonseed oil, animal feed, or are planted again for future crops.

- Growth Drivers and Key Factors in Cotton Ginning & Pressing Industry**

The growth of the cotton ginning and pressing industry is supported by several factors. One major reason is better technology the use of modern machines, moisture control tools and fiber cleaners has improved efficiency and helped produce better quality cotton with fewer impurities. These upgrades help meet the rising demand for clean, high-grade cotton, especially from leading textile and clothing companies. In addition, the growing demand for cotton fabrics in both local and international markets is pushing the industry forward. Government help through subsidies and upgrade plans under programs like the Technology Mission on Cotton (TMC) has also supported the creation of advanced ginning centers, especially in smaller towns and rural areas. Other important reasons include more land being used to grow cotton, better crop management methods and the rise of connected supply chains where ginning centers are located close to spinning units. Also, increasing concern for the environment has led to a shift toward natural fibers like cotton, making high-quality ginning even more important in today's market.

## 7.6 Growth Drivers and Challenges

Growth Drivers of the Fabrics Industry in India	Challenges for the Fabrics Industry in India
<b>Rising Domestic and Global Demand:</b> India's growing population, increasing income levels, and evolving fashion preferences are driving the demand for various fabrics like cotton, synthetic, mixed, and speciality fabrics. Indian fabric exports are also rising globally due to affordable prices and robust production capabilities.	<b>Scattered and Unorganised Units:</b> Many fabric-making units, especially in weaving and dyeing, are small and unregistered, causing issues such as inconsistent product quality, poor working conditions, and limited capacity for technological adoption. This makes it difficult for them to compete with larger, more modern facilities.
<b>Strong Textile Ecosystem:</b> India has a comprehensive textile system from raw materials (like cotton, wool, silk, polyester) to yarn production, weaving	<b>Fluctuating Raw Material Prices:</b> The prices of key raw materials such as cotton, viscose, and polyester fluctuate due to global supply-demand changes, weather

<p>or knitting, dyeing, and final stitching. This integrated system helps fabric manufacturers access materials and services easily, saving time and costs.</p>	<p>conditions, and trade regulations. This volatility makes it difficult for fabric manufacturers to plan production, control costs, and offer consistent prices, affecting profitability and delivery schedules.</p>
<p><b>Government Support and Schemes:</b> Initiatives like the Production Linked Incentive (PLI) for synthetic fibres, MITRA parks scheme, and Technology Upgradation Fund Scheme are helping companies improve and scale up production. These programs aim to increase global competitiveness and attract investment into Indian fabric companies.</p>	<p><b>Outdated Machinery and Low Productivity:</b> Many fabric makers still rely on old machinery and handlooms, leading to low productivity, higher waste, and inconsistent fabric quality. Many small players lack the resources or knowledge to upgrade to modern systems, hindering their ability to meet quality standards and take on large orders.</p>
<p><b>Shift Towards Specialised and Eco-Friendly Fabrics:</b> Fabrics with additional features such as protection against germs, sunlight, or water, as well as eco-friendly production methods, are gaining popularity. The increasing use of fabrics in sportswear, medical textiles, and specialised garments is creating new opportunities for the industry.</p>	<p><b>Environmental and Regulatory Pressures:</b> The fabric dyeing and treatment process uses significant water and chemicals, causing pollution. With growing pressure to adopt sustainable practices, manufacturers are expected to install wastewater treatment systems and switch to eco-friendly chemicals. However, these changes require substantial investment, which many small units cannot afford.</p>
<p><b>Growth of Online Sales and New Brands:</b> The rise of direct-to-consumer brands and online fashion platforms is increasing the demand for diverse fabric types and quicker delivery. Manufacturers are using online platforms to connect directly with clothing brands and designers.</p>	<p><b>Transport and Infrastructure Challenges:</b> Many fabric production units are located in small towns or rural areas where transport and infrastructure are unreliable. This causes delays in sourcing raw materials and delivering finished products. Additionally, small businesses in these regions often struggle to access financial support, hindering expansion and smooth operations.</p>

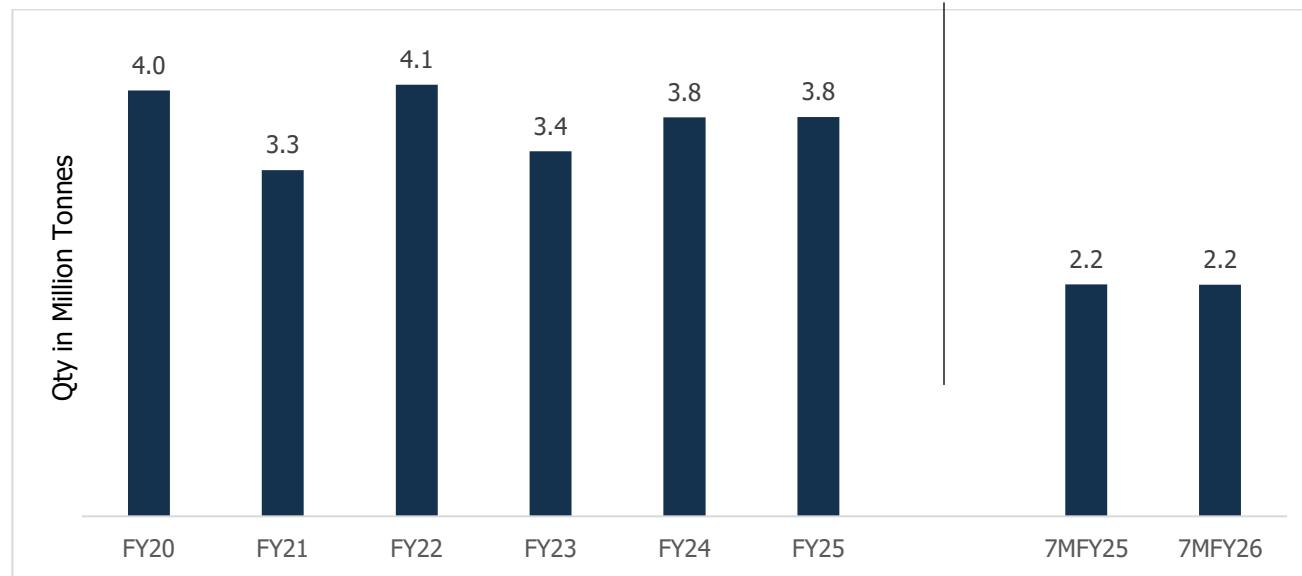
## 8 Outlook for Cotton Yarn: Market Trends, Growth Drivers, and Challenges

### 8.1 Trend in the Cotton Yarn Production

India's cotton industry boasts a complete value chain, exporting everything from raw cotton to finished garments, a testament to its expertise in this crucial material. This robust export ecosystem significantly bolsters India's net foreign exchange earnings, solidifying cotton's position as a cornerstone of the nation's economic well-being. The Indian cotton industry has demonstrated remarkable resilience, bouncing back significantly after the disruptions caused by the pandemic. Cotton is a vital commercial crop in India, contributing about 24% to global cotton production and sustaining the livelihoods of millions of farmers and workers. It plays a crucial role in India's foreign exchange earnings through exports of raw cotton, intermediate products, and finished goods. India holds the largest cotton acreage in the world.

Several factors support continued growth in cotton yarn production. The "China Plus One" strategy, where businesses are diversifying their manufacturing bases away from China, has shifted some global demand towards India. Additionally, the government's supportive policies, including the Minimum Support Price (MSP) program, create a favourable environment for cotton farmers and producers. Accordingly, the Indian cotton industry has overcome recent challenges and is well-positioned for continued success. Its strong domestic market, export potential, and supportive government policies provide a solid foundation for future growth.

**Chart 25: Trend in Production of Cotton Yarn**



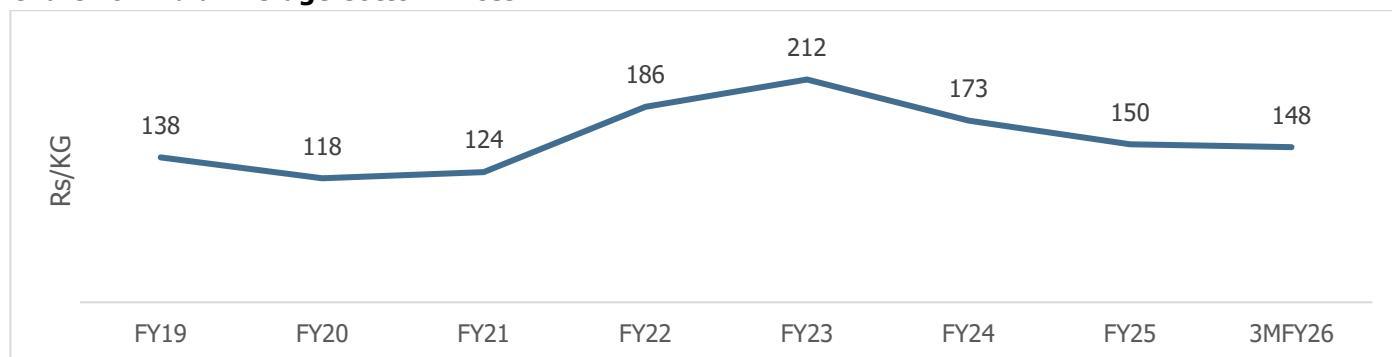
Source: CMIE, CareEdge Research

Cotton yarn production in India has shown moderate fluctuations over the past few years, reflecting both domestic and global textile-market dynamics. Production stood at 4.0 million tonnes in FY20, but declined to 3.3 million tonnes in FY21 due to pandemic-driven disruptions in demand and mill operations. Output recovered strongly in FY22 to 4.1 million tonnes, supported by improved export demand and normalised manufacturing activity. However, FY23 saw another dip to 3.4 million tonnes, largely because of high cotton prices and weakening global demand. In FY24, production improved to 3.8 million tonnes, a level that is expected to be broadly maintained in FY25, reflecting stabilising cotton availability and steady orders from both domestic and international buyers.

## 8.2 Trend in Cotton Prices

Indian cotton prices have seen significant fluctuations in recent years, influenced by global supply chain disruptions, demand variations, and input cost pressures. After a sharp rise due to supply constraints and strong export demand, prices started to ease with improved availability and stabilizing market conditions. This moderation in prices is providing some relief to textile manufacturers by lowering raw material costs, potentially improving their margins. However, the softening trend may affect farmer earnings and needs to be balanced with supportive government policies. Overall, the cotton market is entering a more stable phase, though global dynamics and weather conditions will continue to play a crucial role.

**Chart 26: India Average Cotton Prices**



Source: Index Mundi

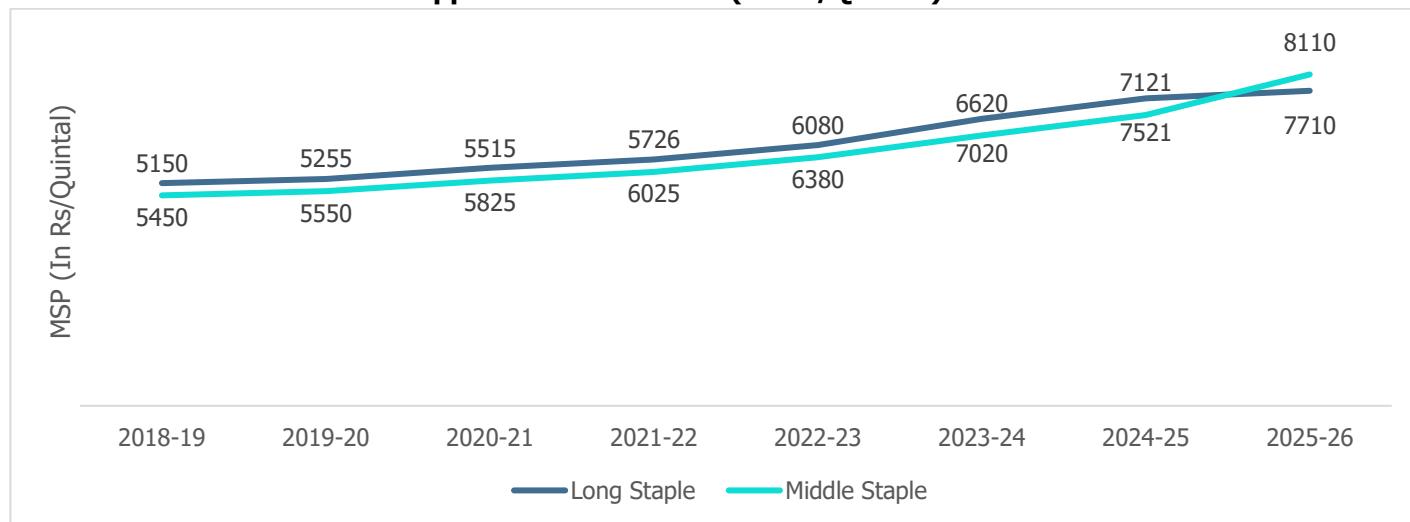
**Table 4: Cotton Season-wise Monthly average prices of a few popular varieties of lint cotton (in Rs per quintal)**

Product	Oct - March 2023-24	Oct - March 2024-25	y-o-y % change
S-6	16,117	15,223	-6%
J-34	14,884	14855	-0.2%

Source: Office of Textile Commissioner, CareEdge Research

The Indian government sets a Minimum Support Price (MSP) for cotton to safeguard the income of cotton farmers. This MSP serves as a safety net, guaranteeing a minimum price for their produce in case market prices fall below this level. The MSP for cotton in India varies depending on the variety and staple length. The breakdown of the current MSP for the 2025-26 marketing season (October-September):

- Medium Staple Cotton: Rs 7710 per quintal
- Long Staple Cotton: Rs 8110 per quintal

**Chart 27: Trend of Minimum Support Price on Cotton (in Rs /Quintal)**

Source: Cotton Association of India, CareEdge Research

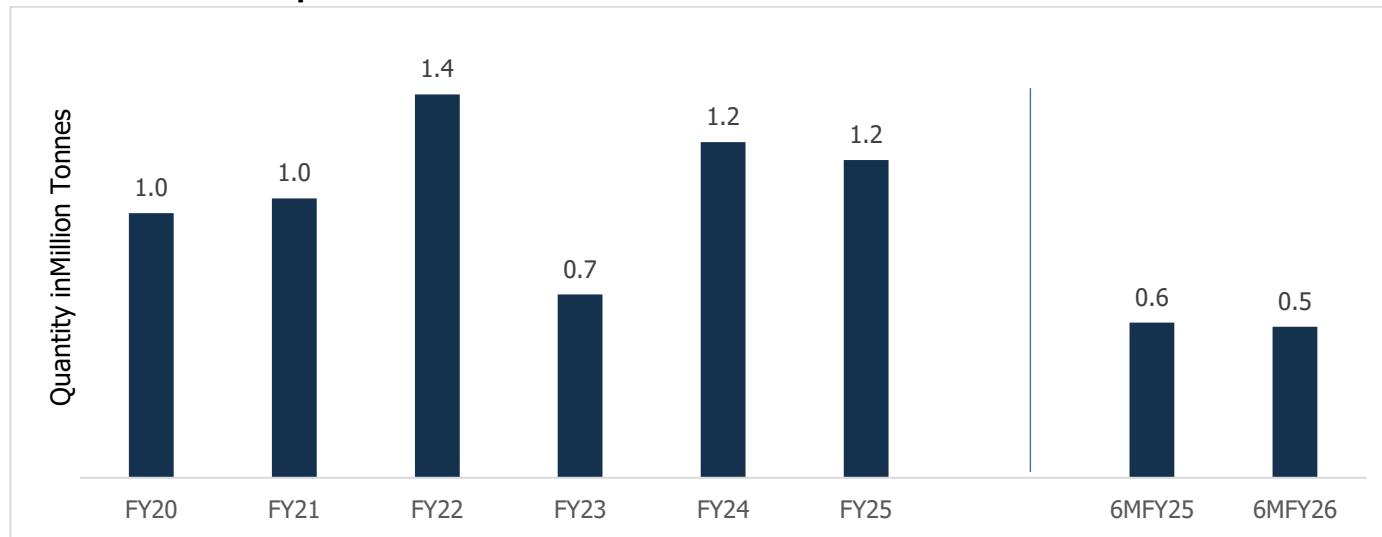
### 8.3 Export Market for Cotton Yarn

#### Demand Dynamics for Indian Cotton Yarn

India's cotton yarn exports are a vital component of the industry, representing a substantial portion of 25-35% of its total production. Currently, Indian cotton holds the most competitive pricing in the global market, attracting buyers with its affordability. As a result, there has been a noticeable rise in exports, as reported by the Cotton Association of India. The cost advantage enjoyed by Indian cotton over supplies from the United States and Brazil, the world's leading exporters, can be attributed to lower prices and freight costs, which are influenced by India's proximity to importing countries. However, despite the strong demand and promising export prospects, India's exports may face limitations due to a reduction in surplus caused by an anticipated decrease in local production.

However, FY23 posted significant challenges, with exports plunging by 52% year-on-year due to a sharp disparity between domestic and international cotton prices, making Indian cotton yarn less competitive in global markets. Additionally, a global economic slowdown, driven by high inflation and recessionary pressures in key economies such as the US and EU, led to weaker demand for textiles, further affecting Indian cotton yarn exports. While FY24 saw signs of recovery, the momentum remained gradual.

The global ban on cotton exported from China's Xinjiang region has created a chance for India to increase its share of the cotton yarn market. While the global economic slowdown presents obstacles, the shift in sourcing destinations offers an opportunity for Indian cotton yarn exporters. Addressing the price disparity and focusing on cost efficiencies will be crucial for capitalizing on this chance and ensuring the long-term success of the industry.

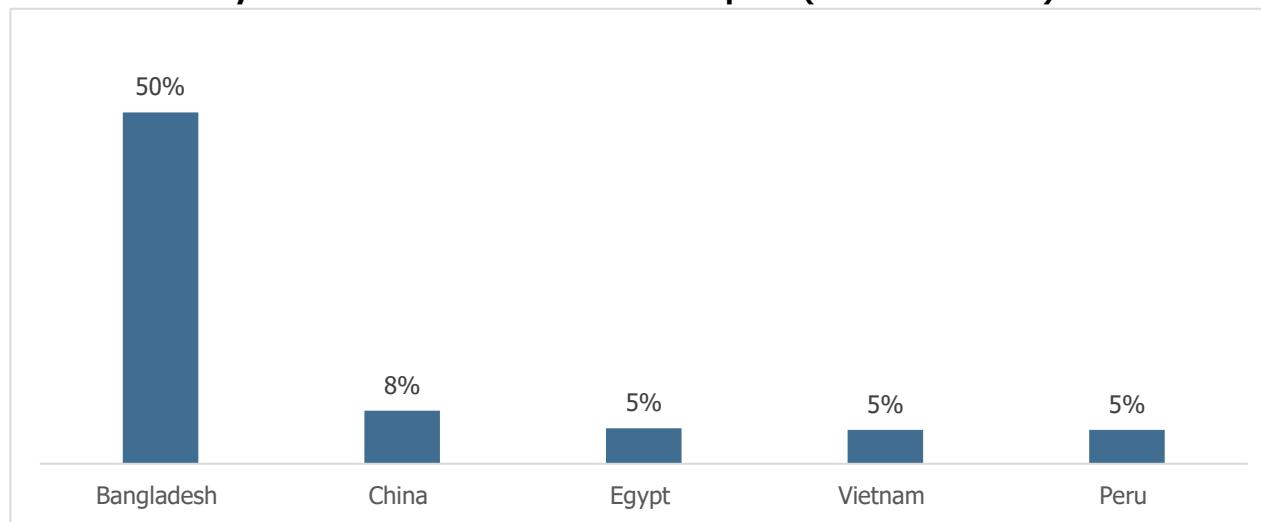
**Chart 28: Trend in Exports of Cotton Yarn**

Source: CIME, CareEdge Research

#### **8.4 Export Destination for India**

India is one of the world's largest producers and exporters of cotton yarn, playing a pivotal role in the global textile value chain. With abundant raw cotton availability, cost-effective labour, and a robust spinning capacity, India serves as a key supplier of high-quality cotton yarn to various textile manufacturing hubs around the world. Cotton yarn exports form a crucial segment of the country's textile export basket, catering to countries that have large downstream industries in weaving, knitting, and garment production. Over the years, India's cotton yarn exports have shown dynamic trends influenced by global demand patterns, trade policies, and shifting preferences in the international textile market. The country's strategic geographical location and trade relations with countries like Bangladesh, China, and Vietnam further reinforce its position as a reliable and competitive supplier of cotton yarn globally.

In the 10-month periods of FY24 and FY25, Bangladesh consistently led as the top export destination for India's cotton yarn, driven by its robust garment manufacturing sector that relies heavily on Indian yarn imports due to limited domestic cotton production. China remained the second-largest importer, although its demand showed relative stability amid policy shifts and global competition. Vietnam, Egypt, and Peru accounted for smaller yet steady shares, reflecting their growing textile sectors and demand for high-quality yarn. The data also highlights a slight increase in export diversification, with marginal growth in shares held by other countries, suggesting India's ongoing efforts to broaden its market base through strategic trade relations and improved logistics connectivity.

**Chart 29: Country-wise share of India Cotton Yarn Exports (% Share to Total)-FY25**

Source: CMIE, CareEdge Research

### 8.5 Growth Drivers and Key Challenges for the Cotton Yarn Market

Growth Drivers	Challenges
1. Rising Demand in Textiles: The global demand for cotton yarn continues to grow, driven primarily by the booming textile and apparel industries. Cotton yarn serves as a critical raw material for garments, home furnishings, and industrial textiles. As populations grow and disposable incomes rise, particularly in developing countries, the demand for clothing and textiles also increases, directly benefiting the cotton yarn sector.	1. Volatile Cotton Prices: Cotton prices are highly sensitive to global supply demand dynamics, weather patterns, and government policies. Sudden price spikes or crashes directly impact the cost structure of yarn producers, who often have limited flexibility to pass on the price changes to buyers, thus squeezing their margins.
2. Favourable Government Policies: Many governments, particularly in cotton-producing nations like India, have introduced supportive policies to boost the textile value chain. Incentives such as the Production Linked Incentive (PLI) scheme, subsidies on capital investment, and assistance in modernizing infrastructure have created a conducive environment for growth in the cotton yarn industry.	2. Global Competition: The industry faces stiff competition from low-cost manufacturing countries like Vietnam, Bangladesh, and Pakistan, where labour and operational costs are lower. These competitors often enjoy better trade access and infrastructure, making it harder for others to maintain market share without significant cost optimization.
3. Growing Export Opportunities: With increasing global integration and demand for quality yarn, exporting countries like India, Vietnam, and Pakistan are seeing a rise in international orders. Trade tensions, such as those between the US and China, have also redirected orders to alternative suppliers, enhancing export potential for others in the region.	3. Dependency on Monsoon & Agriculture: Cotton being an agricultural crop, its supply is heavily dependent on favourable climatic conditions. In countries like India, monsoon failure or pest outbreaks can drastically affect cotton output, leading to raw material shortages or inflated prices for yarn manufacturers.
4. Sustainability Trends: Environmental awareness among consumers is fuelling demand for natural, biodegradable fibres like cotton. As sustainability becomes a top priority for global fashion brands, the preference for cotton yarn over	4. Power and Labour Costs: Power availability and cost, along with labour-related challenges, are significant concerns in many manufacturing hubs. Frequent power outages, rising wage bills, and labour shortages during peak seasons can disrupt operations and reduce profitability.

synthetic alternatives like polyester is expected to strengthen, creating a long-term growth trajectory.	
5. Vertical Integration by Brands: Global fashion and retail brands are increasingly adopting vertical integration by directly sourcing yarn from mills to ensure quality, traceability, and ethical compliance. This strategy has opened new long-term contracts for cotton yarn manufacturers and improved their revenue visibility.	5. Operational and External Challenges Facing the Cotton Yarn Industry: Spinning mills face multiple challenges that threaten their global competitiveness, including technological obsolescence, where outdated machinery leads to lower productivity, poor quality, and higher wastage. Additionally, tightening environmental regulations demand significant capital investment in sustainable practices, straining especially small and mid-sized units. On top of these operational hurdles, the industry is exposed to geopolitical risks such as changes in trade agreements, tariffs, sanctions, and conflicts, all of which can disrupt supply chains and create uncertainty for export-driven businesses.

## 8.6 Outlook for the Cotton Yarn Industry

In India, e-commerce portals have boosted the sales of traditional garments by giving larger exposure to producers who were confined to one geography. Other growth drivers include a rise in the millennial and Gen Z population. Additionally, rising purchasing power in emerging and developed economies is expected to add to the industry's growth prospects. In the near term, despite challenges from inflation and higher interest rates, customer expectations have improved, and further economic normalization is expected to bode well for the industry.

The domestic cotton yarn production is anticipated to experience medium-term growth due to a projected softening of cotton prices. This price decrease is expected as fresh cotton harvests arrive and export levels decline. However, geopolitical tensions and potential disruptions like those impacting the Red Sea route could cause future cost and demand fluctuations. Furthermore, both domestic and global cotton crop supply and pricing will likely influence overall demand sentiment.

Additionally, the surplus production capacity within the country has intensified competition, leading to margin pressures due to market price undercutting. In response, the government's focus aligns with its aim of inclusive and participatory development. Their central strategy involves bolstering domestic textile manufacturing by establishing best-in-class infrastructure, promoting technological advancements to foster innovation, and enhancing skill development while leveraging the sector's traditional strengths.

## 9 Ready Made Garment Industry

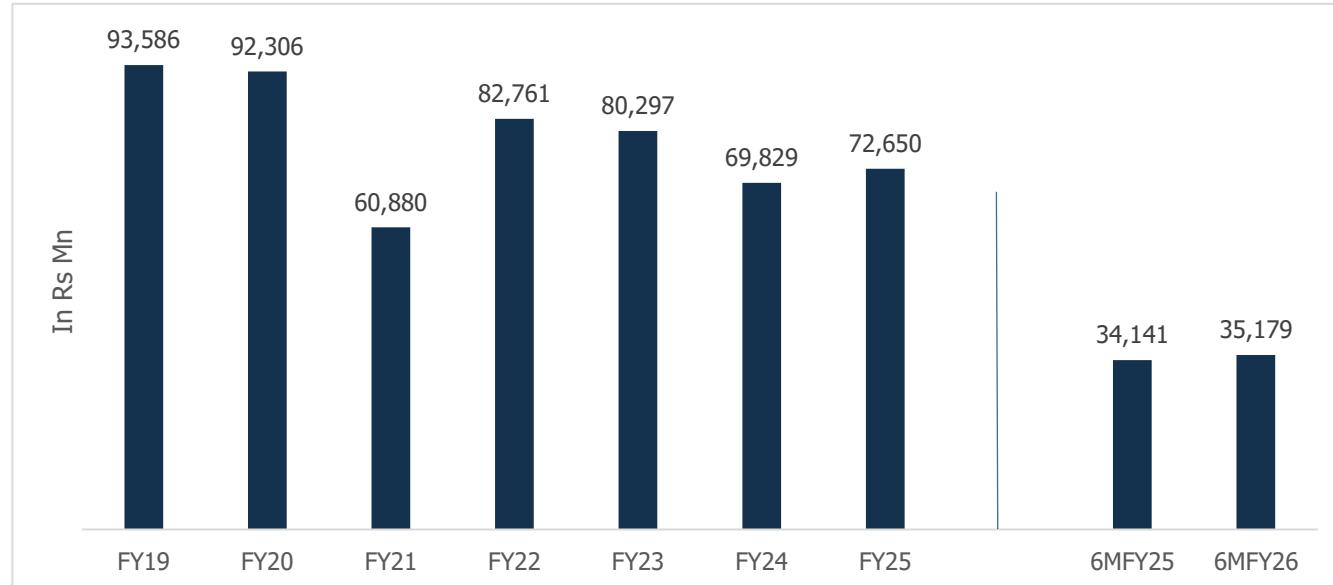
### 9.1 Overview of the sector

The Readymade Garments (RMG) or apparel industry is the major segment of the overall textiles industry in India. Indian textiles and apparel products have high global appeal due to their fine craftsmanship across the entire value chain from fibre, yarn, and fabric to apparel. RMG industry in India is a non-capital-intensive industry and it is largely unorganised with 60-70% where the manufacturers belong to the micro, small and medium enterprises (MSME) operating in specific clusters across the country. The Indian textile and apparel industry are highly diversified with a wide range of segments ranging from products of traditional handloom, handicrafts, wool, and silk products to the organized textile industry in India. India is the 6th largest exporter of Textiles & Apparel in the world. The Indian RMG exports currently accounts for around 41% of total textile and clothing production in India as per the Ministry of Textiles.

### 9.2 Review of the sector

The Index of Industrial Production (IIP) for India's wearing apparel sector registered a 6.2% year-on-year growth in FY25, reaching an index level of 116.7. This growth was primarily driven by robust domestic demand, as retail sales in the apparel segment rose by 6%, particularly led by North and West India majorly. The textile and apparel industry contributes 2.3% to GDP, 13% to industrial production, and 12% to exports. The Ministry of Textiles reported a 7% increase in textile and apparel exports, including handicrafts, from April to December 2024, compared to the same period the previous year. India exported textile items worth USD 34.4 billion in 2023-24, with apparel constituting 42% of the export basket and materials/semi-finished materials at 34% and finished non-apparel goods at 30%. The overall manufacturing sector also showed positive momentum, with a 3.0% IIP growth in March 2025, indicating broader industrial recovery. Furthermore, moderating inflation especially in clothing and footwear, which generally ranges between 2%- 3% helped stabilize input costs and enhance production efficiency. These combined factors contributed to the sustained industrial growth in the wearing apparel segment during the fiscal year.

**Chart 30: Demand & Supply Trend Analysis for Readymade Industry**



Source: CMIE, CareEdge Research

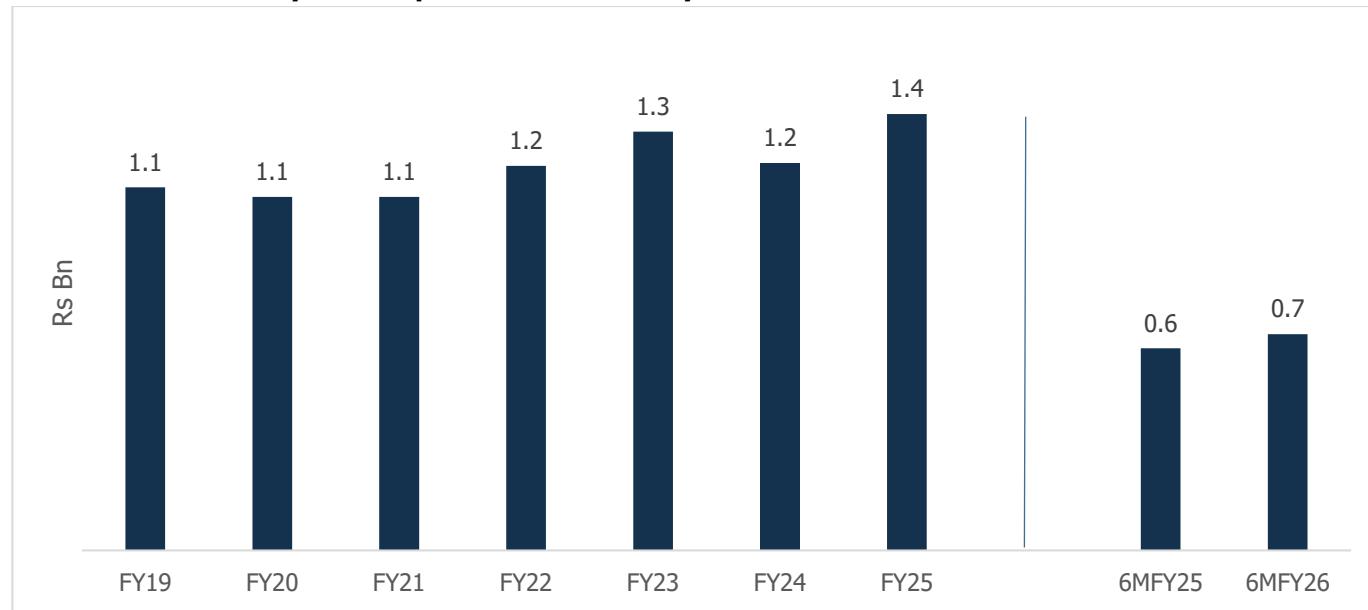
Production (in Rs million) has fluctuated considerably from FY19 to FY25, rising initially to Rs 93,586 million in FY19 before declining to Rs 92,306 million in FY20 and then dropping sharply to Rs 60,880 million in FY21 due to pandemic-related disruptions, labour shortages, and supply-chain constraints. Output recovered in FY22 to Rs 82,761 million but softened again through FY23 and FY24 as industries faced uneven raw material availability and subdued demand. FY25 shows a modest improvement to Rs 72,650 million, while the rise from 34,141 million in 6MFY25 to 35,179 million in 6MFY26 indicates a slow but steady recovery, though levels remain below the pre-pandemic peak.

**Table 5: Indicators for the RMG industry**

Indicators	FY24	FY25	Y-o-Y % Change	March 2024	March 2025	Y-o-Y % Change
IIP index of wearing apparel	109.9	116.7	6.2%	143.0	144.8	1%
WPI of manufacture of wearing apparel	150.8	153.4	2%	151.5	154.5	2%

Source: CMIE, CareEdge Research

**Chart 31: Trend Analysis of Export Market in Readymade Garments**

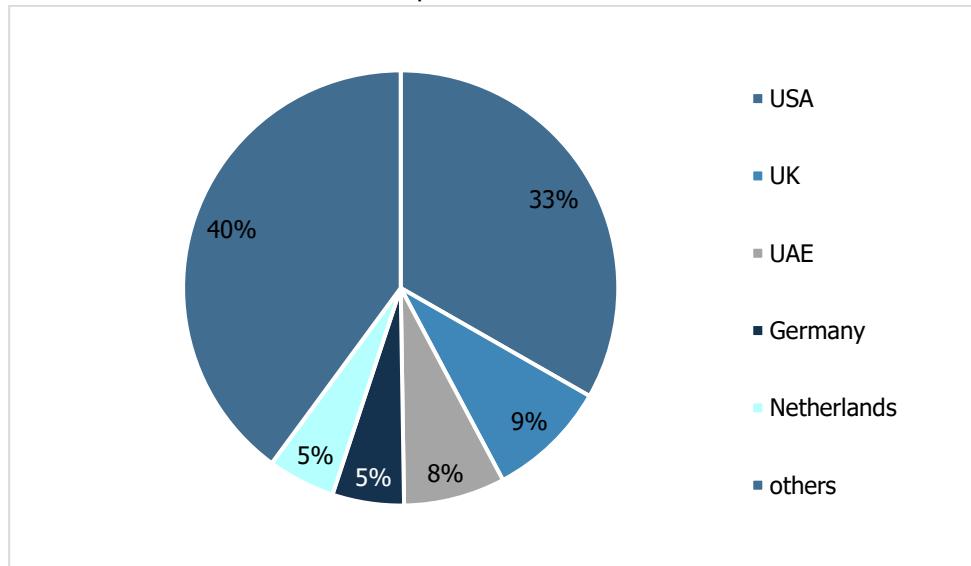


Source: CMIE, CareEdge Research

India's readymade garment (RMG) exports experienced a decline in FY24, attributed to several factors. The global economic slowdown, exacerbated by geopolitical tensions such as the Red Sea crisis, led to increased freight costs, impacting the competitiveness of Indian exports. Additionally, high retail inventory levels and sluggish demand from key markets like the U.S. and Europe further dampened export performance. In contrast, FY25 witnessed a recovery in RMG exports, driven by a shift in global sourcing strategies, with Western buyers moving away from traditional suppliers like China and Bangladesh. Government initiatives, including the Production-Linked Incentive (PLI) scheme and proposed free trade agreements with the UK and EU, provided further support to the sector's expansion. However, challenges such as rising labor and freight costs, along with geopolitical uncertainties, continued to pose risks to sustained growth.

### 9.3 Trade in RMG Industry Top of Form

Chart 32: Destination-wise RMG exports from India FY25



Source: CMIE, CareEdge Research

Others include Spain, France, Saudi Arabia, Italy, Australia, Poland, Canada, Denmark, Japan

India's readymade garment (RMG) exports in FY2024–25 totaled Rs 1,354.7 billion, with the United States leading as the top destination, accounting for 33% of total exports. The United Kingdom and the United Arab Emirates followed, contributing 9% and 8%, respectively, to the export value. Germany and the Netherlands each represented 5% of the total RMG exports. The United States' dominant share is attributed to its large consumer market and sustained demand for Indian apparel. The UK's share has been bolstered by the India-UK Free Trade Agreement (FTA), which is expected to further enhance trade relations and reduce tariffs, making Indian garments more competitive in the UK market. The UAE's significant contribution is due to its role as a re-export hub, facilitating trade across the Middle East and North Africa. Germany and the Netherlands have consistently been key markets for Indian apparel, with steady demand driven by fashion trends and trade agreements within the European Union. Overall, these country-wise export figures highlight India's strong presence in major global markets, supported by strategic trade agreements and a reputation for quality apparel manufacturing. Although, US tariffs can significantly impact the Indian Ready-Made Garment (RMG) industry. Increased tariffs on Indian textile exports to the US will likely make them less competitive compared to products from countries with lower or no tariffs, potentially leading to reduced demand and revenue for Indian exporters. This could also affect related sectors like apparel and accessories, which are also part of the consumer cyclical sector.

Bangladesh has recently restricted imports of Indian cotton yarn via land ports, allowing shipments only through seaports. In response, India will impose similar restrictions on ready-made garment imports from Bangladesh across all land ports, including LCS and ICP, requiring these goods to enter only via seaports. This reciprocal move aims to encourage Bangladesh to reconsider its restrictions, address trade imbalances, and protect Indian textile exporters by ensuring fair and consistent trade terms.

**Table 6: Segment-wise RMG exports from India (Value in USD Mn)**

<b>Segment</b>	July 2024 (USD mn)	July 2025 (USD mn)	Growth (%)	Apr–Jul 2024 (USD bn)	Apr–Jul 2025 (USD bn)	Growth (%)
<b>Readymade Garments (RMG)</b>	1.28	1.34	4.75%	5.13	5.53	7.87%
<b>Cotton Textiles (yarn, fabrics, made-ups, handlooms)</b>	0.9705	1.02	5.17%	3.89	3.88	-0.26% (nearly unchanged )
<b>Man-made Fibre (MMF) Textiles</b>	405.6	422	4.05%	1.57	1.59	1.13%
<b>Jute Manufacturing (incl. floor coverings)</b>	25.6	32.4	26.35%	108.9	126.1	15.78%
<b>Carpets</b>	123.1	133	8.05%	486.5	503.9	3.57%
<b>Handicrafts (excl. handmade carpets)</b>	139.4	153.4	10.01%	546.9	552	0.92%

Source: PIB

Overall, textile exports in July 2025 showed moderate growth across most segments, supported by steady global demand and improved shipment flows. RMG exports grew due to stronger orders from key Western markets and competitive pricing. Cotton textiles saw only marginal cumulative growth because of subdued demand for yarn and fabrics amid cheaper synthetic substitutes. MMF textiles recorded modest gains as man-made fibres increasingly replaced cotton in global sourcing, though price competition kept growth limited. Jute exports posted strong double-digit growth, driven by rising demand for eco-friendly packaging materials. Carpet exports improved on the back of higher demand in the U.S. and Europe for premium home décor products. Handicrafts registered slight cumulative growth as niche demand remained stable but not strong enough for significant expansion. Overall, the sector benefited from recovering global consumption, though price competition and uneven demand across product categories kept growth moderate.

#### 9.4 Outlook

The apparel industry's growth is closely intertwined with advancements in textile processing, which serves as a critical link between raw materials and finished garments. As consumer preferences evolve towards fast fashion, performance wear, and sustainable clothing, the textile processing technologies have adapted to meet these demands.

Innovations in dyeing, printing, and finishing techniques have enabled manufacturers to produce fabrics with enhanced aesthetics, functionality, and durability. The adoption of waterless dyeing methods and the use of biodegradable chemicals reflect a shift towards more environmentally friendly practices in textile processing. These advancements not only improve the quality of apparel but also align with global sustainability goals.

Government initiatives, such as the Production Linked Incentive (PLI) scheme and the establishment of Mega Integrated Textile Region and Apparel (MITRA) parks, aim to modernize the textile sector by integrating the entire value chain from spinning and weaving to processing and garment manufacturing at single locations. This integration enhances efficiency, reduces logistics costs, and fosters innovation in textile processing, thereby supporting the apparel industry's expansion.

Furthermore, the growing demand for synthetic and blended fabrics in activewear and other apparel categories has spurred the development of specialized processing techniques to handle these materials effectively. By embracing such

advancements, the textile processing sector plays a pivotal role in enabling the apparel industry to cater to diverse consumer needs and expand its global footprint.

The global shift towards sustainable and ethical sourcing practices has further bolstered India's RMG sector. International buyers are increasingly diversifying their supply chains, moving away from traditional suppliers like China and Bangladesh, and turning to India for its reliable production capabilities and adherence to sustainability standards. This trend, combined with India's efforts to enhance its manufacturing capabilities and export potential, positions the RMG industry for continued growth and global competitiveness. With ongoing investments in technology, infrastructure, and workforce development, India's RMG sector is well-positioned to meet the dynamic demands of the global apparel market.

India's RMG sector is well-positioned for sustained growth due to its large skilled workforce, improving infrastructure, and rising global relevance. With effective execution of policies and sustained investment, India has the potential to emerge as a global apparel manufacturing hub.

## 10 Competitive Landscape

### 1. Sonaselection India Limited

Sonaselection India Limited, incorporated on February 11, 2022, is engaged in the manufacturing of textile fabrics, with its operations based in Bhilwara, Rajasthan. In March 2023, Sonaselection initiated the establishment of a fabric manufacturing and processing plant at its facility on Chittor Road, Hamirgarh, which became fully operational in July 2024. The plant is equipped to handle end-to-end manufacturing, including dyeing, processing, and finishing of fabrics.

With this expansion, the company transitioned from job-work services to the manufacturing and direct sale of its own finished fabrics, allowing for greater value addition and market flexibility. The facility has an installed capacity of 82.44 million metric per annum for fabric manufacturing and processing. Sonaselection uses advanced textile machinery such as stenters, drying ranges, jet dyeing machines, jiggers, weight-reduction machines, zero-zero finishing machines, calenders, singeing machines, mercerisers, Lafer machines, continuous washing and bleaching ranges, PAD dry/steam ranges, and folding machines for large-scale fabric dyeing, finishing, and processing.

Particulars	FY23	FY24	FY25	Q1'FY26
Revenue from Operations (Rs. Million)	939.12	1,209.79	3,159.52	1,042.35
EBITDA (Rs. Million)	180.76	284.87	581.19	163.43
EBITDA Margin (%)	19.25%	23.55%	18.39%	15.68%
PAT (Rs. Million)	25.09	130.95	185.63	47.98
PAT Margin (%)	2.67%	10.82%	5.88%	4.60%
Return on Net Worth (%)	14.96%	40.46%	34.08%	6.62%
Return on Capital Employed (%)	32.69%	16.18%	16.97%	3.79%
Debt-Equity Ratio	1.75	3.72	2.96	2.81
Sale of Services (%)	97.47%	88.72%	30.12%	21.79%
Sale of Goods (%)	2.53%	11.28%	69.88%	78.21%
Working Capital Days	103	104	122	104
Inventory Days	129	127	115	165
Debtors Days	58	44	48	70
Creditors Days	50	54	57	96

Source: Industry Sources

### 2. Nitin Spinners Limited

Founded in 1992 in Bhilwara, Rajasthan, Nitin Spinners Ltd is a mid-sized textile manufacturer producing cotton/blended yarn, knitted fabrics, and woven/finished fabrics. Its facilities, located in Bhilwara and Chittorgarh, have capacities of 1,10,000 MTPA yarn, 11,000 MTPA knitted fabric, and 40 million meters of woven fabric. In Q3FY25, yarn contributed 72.6% of revenue, fabrics 22.3%, and others 5.1%. Around 65% of revenue comes from exports to 50+ countries, including the USA and China.

Particulars	FY23	FY24	FY25	Q1'FY26
Revenue from Operations (Rs. Million)	24,067.07	29,056.49	33,056.54	7,933.13
EBITDA (Rs. Million)	3,003.66	3,793.08	4,750.15	1,130.27
EBITDA Margin (%)	12.48%	13.05%	14.37%	14.25%
PAT (Rs. Million)	1,648.11	1,315.18	1,754.26	409.86
PAT Margin (%)	6.85%	4.53%	5.31%	5.17%
Return on Net Worth (%)	17.33%	12.11%	14.29%	NA

Particulars	FY23	FY24	FY25	Q1'FY26
Return on Capital Employed (%)	11.28%	11.11%	12.61%	NA
Debt-Equity Ratio	0.95	1.17	0.89	NA
Sale of Services (%)	0.01%	0.00%	0.00%	NA
Sale of Goods (%)	99.09%	99.15%	99.31%	NA
Working Capital Days	104	110	109	NA
Inventory Days	101	101	102	NA
Debtors Days	35	34	41	NA
Creditors Days	14	12	14	NA

Source: Industry Sources

### 3. Sangam India Limited

Sangam (India) Ltd is a textile manufacturer engaged in producing synthetic blended, cotton, and texturized yarns, fabrics, denim, and seamless garments. It is a leading player in PV dyed yarn and denim, with a presence in over 50 countries. The company's product portfolio includes PV and cotton yarns, woven PV fabrics, denim fabrics, and seamless garments under the C9 Airwear brand. Manufacturing operations span across three spinning mills and two weaving, processing, and garment plants in Rajasthan, with over 3 lakh spindles and denim capacity of 60 million meters annually. Sales are split between domestic and export markets, and the company operates solar and wind energy units with a combined capacity of 21 MW.

Particulars	FY23	FY24	FY25	Q1'FY26
Revenue from Operations (Rs. Million)	27,123.00	26,280.60	28,569.50	7,897.70
EBITDA (Rs. Million)	3,187.10	2,282.70	2,600.10	703.70
EBITDA Margin (%)	11.75%	8.69%	9.10%	8.91%
PAT (Rs. Million)	1,305.40	408.20	318.00	21.30
PAT Margin (%)	4.81%	1.55%	1.11%	0.27%
Return on Net Worth (%)	16.57%	4.43%	3.23%	NA
Return on Capital Employed (%)	15.52%	6.91%	6.85%	NA
Debt-Equity Ratio	0.95	1.10	1.14	NA
Sale of Services (%)	3.60%	3.52%	3.00%	NA
Sale of Goods (%)	94.34%	93.52%	94.08%	NA
Working Capital Days	85	98	75	NA
Inventory Days	124	139	132	NA
Debtors Days	49	56	62	NA
Creditors Days	NA	NA	NA	NA

Source: Industry Sources

### 4. Vishal Fabrics Limited

Vishal Fabrics Limited is Incorporated in 1985. It is a part of the Ahmedabad-based Chiripal Group. The company manufactures denim fabric and is also engaged in the processing of fabric on a job-work basis, where it procures mainly grey fabric and dyes and prints as per the customer requirements. It has entered into the denim processing business by setting up 8 units in Dholi Integrated Spinning Park (DISP) situated at Dholi near Ahmedabad.

<b>Particulars</b>	<b>FY23</b>	<b>FY24</b>	<b>FY25</b>	<b>Q1'FY26</b>
Revenue from Operations (Rs. Million)	15,478.60	14,501.30	15,198.30	3,971.68
EBITDA (Rs. Million)	1,397.00	1,021.20	1,229.30	295.47
EBITDA Margin (%)	9.03%	7.04%	8.09%	7.44%
PAT (Rs. Million)	528.20	211.30	290.10	91.64
PAT Margin (%)	3.41%	1.46%	1.91%	2.31%
Return on Net Worth (%)	14.57%	5.27%	6.51%	NA
Return on Capital Employed (%)	14.87%	9.15%	11.25%	NA
Debt-Equity Ratio	0.81	0.92	0.61	NA
Sale of Services (%)	12.39%	0.95%	0.41%	NA
Sale of Goods (%)	86.71%	97.71%	98.50%	NA
Working Capital Days	101	134	127	NA
Inventory Days	25	24	28	NA
Debtors Days	100	122	125	NA
Creditors Days	36	29	29	NA

Source: Industry Sources

## 11 Abbreviation

Abbreviation	Definition	Explanation
ASEAN	Association of Southeast Asian Nations	A regional intergovernmental organization of Southeast Asian countries promoting economic, political, and trade cooperation.
ATDC	Apparel Training & Design Centre	Institution providing skill development and design training for apparel and textile industry professionals.
ATIRA	Ahmedabad Textile Industry's Research Association	A research and development organization supporting technological advancement in textiles.
ATUFS	Amended Technology Upgradation Fund Scheme	Government scheme providing financial support for modernization and technology upgrades in textiles.
CAD	Computer Aided Design	Software used to design products digitally, widely applied in textile pattern and apparel design.
CAM	Computer Aided Manufacturing	Software and systems that automate manufacturing processes.
CCI	Cotton Corporation of India	Government body ensuring price support and procurement of cotton
CETP	Common Effluent Treatment Plant	Facility for treating industrial wastewater collectively to meet environmental norms.
CEPA	Comprehensive Economic Partnership Agreement	Free trade agreement covering trade in goods, services, and investment between countries.
COVID	Coronavirus Disease of 2019	Global pandemic affecting public health and economic activities.
CPI	Consumer Price Index	Economic indicator measuring changes in retail prices, reflecting inflation.
CSP	Count Strength Product	Metric used in textiles indicating yarn quality based on count and tensile strength.
CY	Calendar Year	Standard 12-month period from January to December used in reporting.
D2C	Direct to Consumer	Business model where manufacturers sell products directly to end-users without intermediaries.
DoCP	Date for Commercial Production	The official start date when a manufacturing unit begins production for sale.
DTA	Domestic Tariff Area	Part of a country where standard customs duties apply, contrasted with SEZs.
eFCI	Eligible Fixed Capital Investment	The portion of capital investment is eligible for government incentives or schemes.
EU	European Union	A political and economic union of European countries for free trade and movement.
F	Forecasted	Projected values or estimates based on predictive analysis.
FE	Final Estimates	Officially published finalized data or statistics.
FDI	Foreign Direct Investment	Investment made by foreign entities into domestic companies or assets.

Abbreviation	Definition	Explanation
FMGC	Fast Moving Consumer Goods	Products sold quickly at relatively low cost, including apparel accessories in textiles.
FOB	Freight on Board	Export/import term indicates the seller's responsibility until goods are loaded onto transport.
FRE	First Revised Estimates	Initial revision of previously published statistical estimates.
FTAs	Free Trade Agreements	Agreements between countries to reduce tariffs and trade barriers on goods and services.
FY	Fiscal Year	Accounting period used for financial reporting, e.g., April–March in India.
GIST 2.0	Grant for Internship Support in Technical Textiles	Government initiative providing internships to build skills in technical textiles.
GNDI	Gross National Disposable Income	Total income available to residents for consumption or saving.
GDP	Gross Domestic Product	Total value of goods and services produced within a country.
GVA	Gross Value Added	Measure of contribution of a sector to the economy, subtracting intermediate consumption.
GREAT Scheme	Grant for Research & Entrepreneurship across Aspiring Innovators in Technical Textiles	Support for R&D and startups in technical textiles.
HS codes	Harmonized System Codes	International standardized codes for identifying traded goods.
IIP	Index of Industrial Production	Measure of industrial output in sectors including textiles.
IMD	India Meteorological Department	Government agency providing weather forecasts relevant to agriculture and industry.
IMF	International Monetary Fund	Global financial institution providing monetary support and policy guidance.
IoT	Internet of Things	Network of connected devices used for automation and monitoring in textile manufacturing.
IPDS	Integrated Processing Development Scheme	Government program for modernization of textile processing units.
Itema S.p.A.	Italian business designation	Italian textile machinery manufacturer.
JLGs	Joint Liability Groups	Groups of borrowers, usually in MSMEs, are jointly responsible for loan repayment.
Kva	Kilovolt Amperes	Unit of electrical power used in machines and plants.
KWH	Kilowatt-Hour	Measure of electricity consumption.
LED	Light Emitting Diode	Energy-efficient lighting technology is used in factories and offices.

Abbreviation	Definition	Explanation
MEIS	Merchandise Exports from India Scheme	Export incentive program to promote Indian products abroad.
MITRA	Mega Integrated Textile Region and Apparel	Government initiative creating large integrated textile parks.
MMF	Man Made Fibers	Synthetic or cellulosic fibers are produced artificially.
MSMEs	Micro, Small, and Medium Enterprises	Small-scale enterprises are critical to textiles and apparel sector.
MSP	Minimum Support Price	Price floor for agricultural products like cotton to support farmers.
MUDRA	Micro Units Development and Refinance Agency	Government program providing loans to small enterprises, including textile units.
MW	Megawatt	Unit of electrical power capacity.
NID	National Institute of Design	Design institute contributing to textile and apparel design innovation.
NIFT	National Institute of Fashion Technology	Institution for fashion and textile education.
NTTM	National Technical Textiles Mission	Government mission promoting technical textiles sector.
OE	Open End (spinning method)	A type of rotor spinning used for yarn production.
P	Projected	Estimated value for future periods.
PE	Provisional Estimates	Preliminary published data subject to revision.
PFCE	Private Final Consumption Expenditure	Measure of household consumption expenditure.
PLI	Production Linked Incentive	Government incentive for manufacturing growth in key sectors.
PM MITRA	Prime Minister Mega Integrated Textile Region and Apparel	Flagship initiative for integrated textile clusters.
PPE kits	Personal Protective Equipment kits	Safety gear used in healthcare and industrial applications.
PSF	Polyester Staple Fiber	Type of man-made synthetic fiber widely used in textiles.
PVA	Polyvinyl Alcohol	Synthetic polymer used in textile finishing and coatings.
R&D	Research and Development	Activities for innovation, product improvement, and process efficiency.
RC	Ranchhodlal Chhotalal Technical Institute	Textile-focused technical institute in India.
RBI	Reserve Bank of India	Central bank regulating currency, credit, and financial stability.

<b>Abbreviation</b>	<b>Definition</b>	<b>Explanation</b>
RMG	Ready Made Garments	Finished garments ready for retail sale.
RoDTEP	Remission of Duties and Taxes on Exported Products	Scheme reimbursing taxes and duties to exporters.
RoSCTL	Rebate of State and Central Levies and Taxes	Export incentive scheme replacing MEIS for apparel and textiles.
SAMARTH	Scheme for Capacity Building in Textile Sector	Government initiative providing training to improve workforce skills.
SDP	State Domestic Product	Measure of economic output at the state level.
SEZ	Special Economic Zone	Designated area with tax and regulatory benefits to promote exports.
SHGs	Self Help Groups	Community-based organizations for small enterprise financing.
SITP	Scheme for Integrated Textile Parks	Government program developing textile clusters with infrastructure.
SMEs	Small and Medium Enterprises	Medium-scale enterprises contributing to manufacturing and employment.
TCDS	Textile Cluster Development Scheme	Initiative to strengthen and modernize textile clusters.
TPI	Twist Per Inch	Yarn property indicating twist level affecting strength and texture.
TUFS	Technology Upgradation Fund Scheme	Earlier government programs supported textile machinery modernization.
USD	United States Dollar	International currency used in trade and exports.
US	United States	Major trade partner for Indian textiles.
VSF	Viscose Staple Fiber	Semi-synthetic fiber produced from cellulose, used in fabrics.
ZLD	Zero Liquid Discharge	Environmental practice ensuring no untreated effluent is discharged.