

IMPLICATIONS OF COVID-19 ON TEXTILES INDUSTRY IN INDIA - DISCOVERING ISSUES AND CHALLENGES ON DEMAND AND SUPPLY SIDES

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Abstract: *The unexpected COVID-19 outbreak has threatened the world and derailed the socio-economic lives of people. In this context, this study is aimed to discuss the implications of COVID-19 in textiles sector in India along with major issues and challenges on demand and supply sides. This study determines the impact of crisis which affected demand and supply in textiles and fashion industry. COVID-19 has several implications for this industry, be it from demand or production. Its presence is observed in different aspects of the industry. This study uses secondary data collected from various sources like studies published in peer-reviewed journals. This study focuses on the need to think differently to deal with this unexpected crisis. Relaxation of tax compliance rules and deadlines, especially for small-scale segments is one of the potential solutions, so that the conditions of customer demand are not affected directly. In addition, more comprehensive financial relief package could be announced for textiles sector, considering the export- and labour-intensive processes to stem the adverse effects of pandemic. Rebates on exporters could be the next major step against the remission of taxes or duties on exports. This study was conducted during the COVID-19 crisis. More studies would be needed in post COVID era to generalize the findings. The combative measures and actual impact may be evolutionary and dynamic. The analysis focuses on the “out of the box” thinking to deal with unexpected crisis, but it may have different aspects to be discussed as the crisis unfolds. There is a lack of significant research on the impact of COVID-19 on textile industry in India. This study could be the steppingstone for researchers to study the impact on textiles sector and help policymakers to prepare for unexpected crises in future.*

Keywords: *textiles sector, COVID-19, textiles and fashion industry, demand and supply sides, textiles industry in India*

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Introduction

Textiles sector in India has been one of those industries which were worst hit by COVID-19. In terms of socio-economic prominence of textiles sector, it is second to agriculture in Indian economy and it deserves ample attention in policymaking and academic circles. This study is the novel attempt to fill the gap in academia on the issue of relationship between COVID-19 and textiles sector in India. Given the depth and multifaceted impact of

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such influences, it has been important for the industry, government, and other stakeholders to develop important and innovative ways to contain the adverse effects of crisis.

Failing to do so could affect millions of jobs and livelihoods and affect economic growth of the nation. Though the actual effect and preventive measures may be active whenever needed, the study discusses the different effects of COVID-19 crisis. The rapid spread of COVID-19 has affected the world and posed enormous economic, environmental, health, and social implications to the population. This pandemic can be responsible for posing most extreme effects that mankind has faced in recent years (Chakraborty & Maity, 2020). This outbreak has disrupted the supply chain across Southeast Asia. The economic depression can be seen across the world but developing countries are facing deepest effect.

Like other countries in the world, India is constantly reeling under the crisis on an unexpected scale. The virus has affected more than 2,836,925 people across the nation and killed up to 53,866 people till August 2020. When it comes to global figures, over 22.41 million were infected and 787,701 people were killed by the infection (Khurana, 2022). These figures show the gravity of this pandemic. Even though it was not the first pandemic that affected mankind, it was supposed to be the worst in terms of socio-economic effect and its health impact in India and across the world, especially due to globalization. The COVID-19 outbreak is a threat that has derailed the commercial and trade activities for several years and also caused the loss of jobs for millions. In this context, this article discusses some of the implications, issues, and challenges of COVID-19 in textiles industry in India, which is one of the key industries for trade and jobs in India.

Textiles and fashion industry has been put into a total standstill due to a series of lockdowns in India. Trade deficits, unemployment, slow growth patterns, poverty, shutdowns of factories, shutdown of retail stores, shortages, and labor migration are some of the biggest challenges for textiles sector (Sen et al., 2020; Sahoo & Ashwani, 2020). Production may decline up to 20% from 5.5%, imports to 25% from 17.3%, exports up to 20.8% from 13.7%, and net value of MSME up to 5.7% from 2.1%, if COVID-19 affects constantly (Sahoo & Ashwani, 2020). The industry has never imagined such a long shutdown during the initial days of pandemic. Even worse, demand had also declined steeply for the first time.

1. Literature review

COVID-19 has caused a huge economic distress, derailed several systems, and left the world out of breath. Kaur (2021) has done an exploratory study to reveal the issues related to business that textile businesses face in Punjab during the pandemic. The data was gathered from 123 textile entrepreneurs in Punjab. It is observed that entrepreneurs faced some of the serious business issues like radical impact on future marketing programs to get new orders and working capital. However, most of the businesses were digitally capable to have online orders and digital knowledge to grab opportunities, such as manufacturing PPE (personal protective equipment) kits and N95 masks. It is probably the first attempt to determine the early effect of pandemic on textile sector in Punjab.

Being asylum seekers and poverty have two-fold impact on migrants. A lot of programs cannot help the poor because they don't have residential and identity proofs. Despite the fact that they are citizens, they cannot achieve their social, economic, and political rights, which is a serious matter as they are deprived of their basic citizenship rights. Sudden eruption of crisis due to migration is the result of COVID-19 outbreak which reminds of the seriousness of the matter. Bhagat et al. (2020) explains how acknowledgement of livelihood and migration can help form a mitigation strategy to deal with social and economic effect of the pandemic.

During COVID-19, the education status of India has been standstill and will constantly be in the matter of doubt until it becomes a serious threat to mankind. During the state of chaos and doubt, several factors along with classroom teachings like placement/employment rates at several institutions, organizational routines and other factors might be affected in the pandemic. Currently, "Availability and Accessibility" are two golden A's which are disrupted. Almost all educational institutions will face adverse effects of COVID-19 calling for revolutionary policies to stabilize the nation. Dhanalakshmi et al. (2021) conducted a study to bring ahead the problems and impacts while solving the problems which can be helpful for future studies.

Novel COVID-19 pandemic led to the nationwide lockdown. Gopalan & Misra (2020) discussed health, socio-economic and national healthcare issues after lockdown while focusing on low "socio-economic stratum (SES)" population. Though the nationwide lockdown has affected all social segments and caused financial losses, the domino effect could result in huge setbacks on healthcare, health, and nutrition to achieve success. There is a need to rebuild all "National Health Programs" along with economic measures to avert the surge of airborne diseases.

COVID-19 pandemic has drastically affected the economy of India and across the world. It has affected the nation significantly, especially with serious issues due to lockdown on several sectors of the country. MSMEs are the worst hit sectors in India. Some of the worst-hit sectors were food processing, textile, hotel, exports, and furniture. Hariharan et al. (2021) determined the effect of COVID-19 on MSMEs in Kerala from five different sectors which are significantly affected to know the effect of quick responses from the governments and relief funds it has announced. Data was collected from 26 MSMEs in Kerala with telephone and direct interviews. Case study was used to analyze the data. It is observed that all sectors had financial crunch and they were extremely affected by the challenges due to pandemic and it will constantly face a lot of issues. It is important to plan the activities strategically to gradually bring back the operations and plan for changes.

The business model of India relies on growth on the basis of exports (Mishra, 2020). And it could face a huge effect on growth because of country-wide lockdowns. This paper delves deeply into the implications of COVID-19 and demand-side factors and supply-side factors and their combined effect on textiles industry. A huge body of literature focused on the impact of COVID-19 on various sectors (Sahoo & Ashwani, 2020; Sen et al., 2020;

Panigrahi et al., 2020). This study goes a step ahead with issues and challenges on demand-side and supply side.

Research Objectives:

- To analyze the impact of COVID-19 and issues and challenges on demand-side and supply side
- To discuss how digitalization can be helpful for textiles industry during COVID-19

Research Questions:

- How COVID-19 affects textiles sector and what are its challenges on demand and supply sides?
- How digitalization can be helpful for textiles industry during COVID-19?

2. Data and Methodology

In order to fulfil the above research objectives, evidence have been compiled in research academia to deliver some managerial solutions to the stakeholders. This study is conducted using secondary data to know the impact of pandemic in textiles industry. The researcher has performed literature search to analyze the impact of COVID-19 outbreak in textiles industry. The secondary data was collected from documents of various government organizations like Ministry of Textiles, AEPC, etc. and scientific databases like Web of Science, ScienceDirect, and Scopus.

Proper literature survey was conducted to find relevant studies published in peer-reviewed journals like EEJRS. A total of 97 studies were found with relevant keywords like COVID-19, textiles industry in India, textile industry challenges, implications of COVID-19 on textile sector, etc. Out of these studies, 57 studies were sorted, which are relevant. The inclusion criteria include relevant studies, English language, complete research papers, and studies without grammatical mistakes.

3. Data Analysis

4.1. Impact of COVID-19 and Issues and Challenges on Demand-Side and Supply Side

The slump of sales because of mandatory nationwide lockdown is probably one of the significant impacts of COVID-19. Though potential customers and businesses were following social distancing rules, the overall sales of clothing and textiles were seriously affected, which was the most common impact. Efficacy of online retail has been the matter of arguments over a period of time for affecting textile business. However, online retail was also not possible because non-essential goods and services were restricted for online delivery. Hence, the online trades were also not possible as an alternative to save the sector from the economic crisis (Majumdar et al., 2020).

The production segment of textiles industry in India is another segment which was hit by COVID-19. With nationwide closures of textile factories as mandated by the government as they don't fall under "essential" categories of services and goods, textiles industry has

been through the worst crisis in history. Textile industry faced huge disruptions in supply chain also in China, Vietnam, and Bangladesh, due to cancelled orders and challenges in ordering raw materials from the source countries (Javorcik, 2020; Bown, 2020).

Reduced import and export transactions with the rest of the world is another fallout on the textiles sector. With reduced demand across the world, a lot of clothing brands have witnessed a rise in inventories as well as low values and volumes of trade. Although the supply of input may improve from China over the mid-term, major export countries for India, including the likes of the EU and US are also not exempted from the crisis. It has significantly affected their required orders for clothing, especially from large-scale global exporters, such as India (ILO, 2020).

When it comes to falling global sales and production, it is possible that wage and employment status of textiles sector had a negative impact for employees. Failing to pay wages and closures of factories are possibly the serious threat to socio-economic health of textiles staff. In addition, textiles sector is a major source of employment for women. When it comes to socio-economic growth, the government might not be able to afford to ignore it, given its value for women empowerment. There is also a lack of proper social security, which is another problem for the worsened and deprived communities working on the textiles sector, as most of these people are employed directly or indirectly in an unorganized sector (Majumdar et al., 2020; Anner, 2020; Narula, 2020).

Table 1 and Table 2 explain such challenges briefly. Table 1 illustrates the triple effects of consumer demand, social distancing, and exports, which are major implications for textiles industry in India (demand-side). On the other side, Table 2 explores the impact of pandemic on textiles sector (supply-side).

Table 1. Impacts as well as Issues and Challenges on Demand-side

Factors	Impacts	Issues and Challenges
Social Distancing	Lockdown of key market areas like retail stores and malls	Declining interest of consumers in shopping textiles due to fear of risk and high safety concern
Demand	Social distancing, lower employment, and government restrictions and wages on non-essential items	Complete effect lasted several months.
Exports	Vast economic fallout for textiles and other sectors which depend heavily on exports	Significant impact on export side because of export restrictions on important raw materials used and depressed conditions of global demand

Source: Tareque & Islam (2020)

As mentioned in Table 2, the factors related to impact of COVID-19 on supply side like employment, production, inflation, and supply chain have been major implications for textiles sector in India. Combined with the factors on demand side like consumer demand/behavior, social distancing, and exports, COVID-19 has multiple effects in textiles sector as these factors are interconnected.

Though social distancing has been known as the factor on demand side for this paper, it has consequences in supply for its effect on production like manufacturing activity was suspended because factory workers were staying at home. In addition, employment was affected because employees were ordered to stay at home because of social distancing or even fired. Supply chains were affected because of disruption coming with social distancing and lockdown. Prices were increased of raw materials and imports because factories were closed due to social distancing, resulting in disruptions in manufacturing and supply chain in source nations. It ultimately increased the price of raw materials for destination countries. These relations are observed in various other factors and textiles industry in India. Due to reduced demand in export countries, tough competition from other textiles companies, and existing challenges due to technological backwardness, COVID-19 has had manifold negative impact on the sector, which calls for the right policy measures.

Table 2. Impacts as well as Issues and Challenges on Supply-side

Factors	Impacts	Issues and Challenges
Employment	Labour welfare was significantly affected due to factory shutdowns.	COVID-19 has worst hit employee welfare because of losses of jobs on a large scale and wage cuts in textiles and other sectors because of reduced economic outlook.
Production	Production activities halted because of strict norms of social distancing.	Indian textiles sector doesn't sustain well because of halted manufacturing as it affects domestic stocks in commodity, exports, and employees significantly.
Supply Chain	Closures of manufacturing have disrupted supply chain for various textiles manufacturers like China.	Garment manufacturers must especially look for alternative sources.
Inflation	Prices of "manmade fibre (MMF)" and other vital raw materials have been hiking.	Price hike of key resources dampens the cost effectiveness of vital importers of input like India and also its competitiveness in garment exports across the world.

Source: Pandey & Pal (2020)

From being a net importer in value of Rs. 1058 Cr in technical textiles in Financial Year 2020, India has transitioned to become the net exporter of textiles valued Rs. 2998 Cr in Financial Year 2021. 207 HSN Codes have been notified and classified in January 2019 for ease of doing business in textiles, according to the report "Textile Industry: Trends and Prospects" by an RBI and SEBI recognized credit rating organization, "Infomeric Valuation and Rating Pvt Ltd". Since COVID-19, textile industry in India has been on the verge of recovery. In FY2020, textiles industry peaked to \$106 billion, while it fell to \$75 billion in FY2021 (Figure 1).

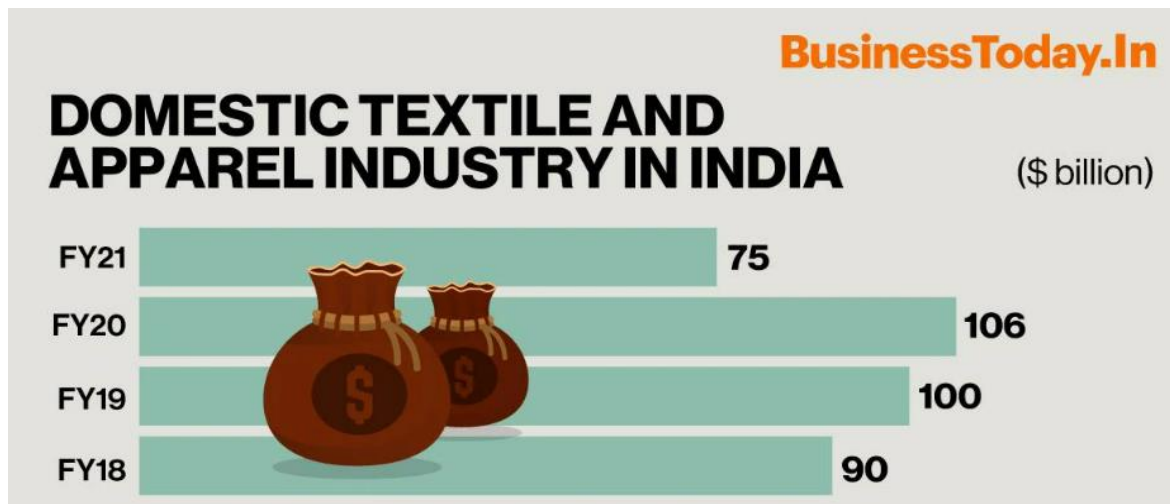


Figure 1. Domestic Textile Industry Before and after COVID-19

Source: “India Brand Equity Foundation (IBEF)”

4.2. How Digitalization can be Helpful for Textiles Industry during COVID-19?

There has been a significant rise in demand for digitalization during the pandemic in the value chain. When companies have suffered lockdowns, digitalization has boosted some of the online firms like Amazon, Netflix, and Google to grow rapidly and move at the center stage (Klein, 2020). According to Pandey & Pal (2020), companies should adopt digitization in their innovation strategies. While education, banking, and healthcare industries are rapidly adopting digitalization, why should textile and fashion industry be left behind? Digital technologies have disrupted the traditional methods of selling clothes (Sun & Zhao, 2018).

Lead time could be reduced by digitizing the process of manufacturing. It can reduce constant maintenance, manufacturing cost, machine breakdown, and lead to a synergetic effect of production (Tareque & Islam, 2020). A business model has been developed to digitize this process named “value chain digitization” to digitize each level with best investments (Figure 2).

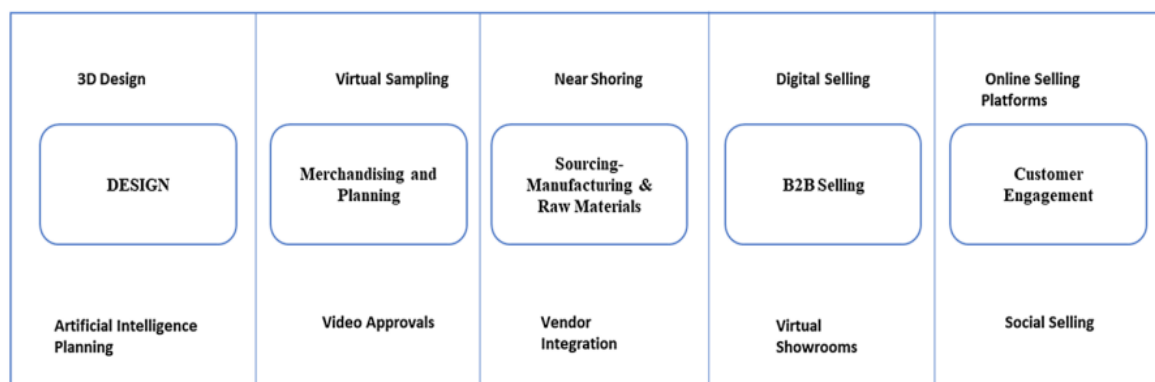


Figure 2. “Value Chain Digitization” model

Source: Tareque & Islam (2020)

There are several stages involved in fashion product manufacturing and supply chain requires a strong integration (Ha-Brookshire, 2017). From the design level, computer-aided design has been helpful to save the lead time. However, this 2D process should be turned into 3D design. A garment is divided into two zones – fashion and fit (Kim & Park, 2007). In the “fit zone”, body scan data is digitized for optimum fit and best silhouette. In the “fashion zone”, the aesthetic appeal of the garment is determined for the users to design garments with several silhouettes.

Machine learning or AI could predict fashion trends to ease the design process with greater smoothness and precision with the collection of market and user data. It is also possible to develop virtual models on the basis of generative algorithm (Sun & Zhao, 2018). Planning and merchandizing are very time-consuming and critical processes. This way, 3D model of fit and design on avatar or model can avoid the tedious process of generating physical sample, travel cost, pollution, and wastage of fabric for sustainable production (Jhanji, 2018; Lee & Park, 2017; Hwang Shin & Lee, 2020). Since online sales is tremendously rising in India, 3D try-on can boost buying process and ensure fitting of the garment (Song & Ashdown, 2015; Liu et al., 2017). A lot of 3D try-on applications like “Lectra 3D Prototype”, “Clo3D”, OptiTex”, etc. could be the part of value chain (Sayem et al., 2010).

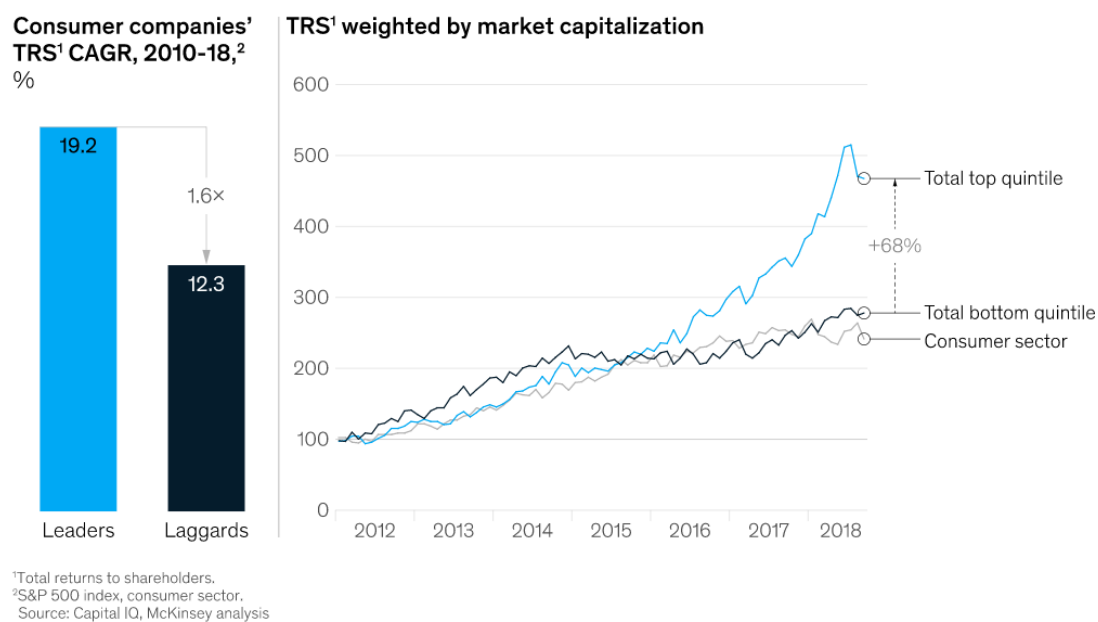


Figure 3. Digital and Analytics Leaders Beating Competition

Source: McKinsey & Co.

According to McKinsey, companies which were analytically and digitally leaders before the COVID-19 crisis outperformed their competition which failed to build strong analytics and digital presence (Figure 3). Companies with online sales of 30% to 40% of total sales are analytics and digital leaders which have significantly digitized their value chain. They have competitive edge today, while companies below 20% of total sales from online sources are laggards with low digitization. They can make “all in” bet on analytics and digitization and gain market share.

5. Results

Manufacturers were importing finished goods and raw materials from China and other neighbouring countries. Lockdown disrupted the entire supply chain for textile sector. There was a lack of raw materials as the stores were going out of stock. Fashion industry is highly unpredictable due to rapidly changing trends and consumer demands, leading to lack of sales probability (Brusset & Teller, 2017). Sourcing finished products and raw materials have been the vital aspect of final profits and cost advantages are very important for low-cost economies (Baraldi et al, 2018; Macchion & Fornasiero, 2020; Tate & Bals, 2017). Most of the production in India moved out to neighbouring countries for higher profits. Medium and small vendors suffered heavily during the pandemic due to lack of orders and lockdown restrictions.

It is the right time to mix local vendors in the value chain and secure the cash flow in the country. Large manufacturers must work with local vendors with improved IT infrastructure (Liu et al, 2016), supply chain (Huo et al., 2018) and relationship management (Wagner et al., 2018). It will help in circulating the money internally in the economy to stabilize financial crisis. Indian textile manufacturers should switch to virtual offices for buyers to choose the product with visual presentation (Sharma & Narula, 2020).

At the end of value chain, the consumer in India is very important especially during COVID-19 crisis. If companies target Indian customers with the right products, it is possible to handle the crisis as India is a densely populated country. India has over 4000 towns and cities and buying clothes is very common in tier-3 cities. Currently, only Amazon has managed to build the largest transportation network for common products in India. It presents a great opportunity for new ecommerce portals to make the most of local suppliers and reach untapped segment. Companies should further ease the process of buying decision to speed up their sales (Kim, 2020).

Online portals and social media influencing are the best fit when it comes to sell clothing. Social media may not be useful around a few years ago. These days, online purchases are made with interactions on social media (Das & Mandal, 2016). The trend of social media doesn't just provide a great shopping experience, but also leads to a great impact in aesthetic experience (Silvestri, 2020). India has a huge population of Gen Y and Gen Z. So, they are more likely to adopt social media and online shopping. According to Shen et al. (2017), there is a great impact of social influence and supply chain delivers great online shopping experience in fashion industry. The value chain in India should work in that direction to boost its presence in India.

However, digitization never means abandoning existing business models for Indian companies. On the other hand, they should combine their traditional models with latest digital business models to fulfil their future goals. India leads other emerging economies in technological advancement and competitive edge. Hence, digitizing the value chain is recommended to deal with this crisis.

Conclusions

COVID-19 crisis took too longer time to end than predicted and has almost hit the developing economies very hard. This study was aimed to analyze the challenges posed by COVID-19 on textile industry in India while discussing the sectoral connections, effects, and possible measures to cope up with this crisis. The textiles industry in India has been the worst hit industry by the pandemic. Even in pre-COVID era, textiles sectors suffered from both supply and demand-side challenges. Additionally, textiles sector stands second to agriculture in socio-economic contribution to the Indian economy. Hence, it deserves a comprehensive support to cope up with distress. Failing to do so can affect millions of livelihoods and employment, which will ultimately affect the economy.

Recommendation for Textile Industry in the Future

Fashion industry is highly unpredictable and several small and medium enterprises have heavily suffered due to COVID-19. Apart from seeking government support, businesses in textile industry should look for innovative solutions to stand out in competition with online players.

Digitization brings great opportunities for many industries, and textile is not an exception. This way, businesses in textile sector should adopt various digital mediums to attract customers and solve their problems.

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