Study Report

Under 'Atmanirbhar Bharat'

'Creating a Roadmap for
Substituting Chinese Imports
by Building Manufacturing Capacities'

Strengthening Domestic Manufacturing of Five MSME Cluster to Counter Imports

January 2021

Studied By - BRIEF & FISME Team

Federation of Indian Micro and Small & Medium Enterprise (FISME)

B-4/161, Safdarjung Enclave, New Delhi - 110029, India
Telephone: +91-11-4860000, 2671206, 46023157 I Fax: +91-11-26109470
Email: info@fisme.org.in I Website: www.fisme.org.in

Table of Content

Panipat - Blanket Cluster

1. Objective

The study primarily focuses on the challenges and opportunities in the blanket cluster of Panipat. It simultaneously identifies the imported items that can be substituted by Indian Products, manufacturing by the MSME cluster and enhance capacities among identified products. The purpose of the study is to identify the challenges faced by the cluster including Tariff and Non-Tariff Measures such as import duty, technology and infrastructure barriers and hence, suggests recommendations to improve the cluster's growth and capacity to compete with international standards and meet local demands.

2. Brief about Cluster

Globally the blanket market was valued at USD 17 billion in 2018.[1] Growing applicability of blankets in travel, hospitality, defence and other sector has had a positive impact on market growth. The industry is witnessing further growth due to increasing demand from the working-class population in developing countries especially India and China. The use of blankets in household accounted for a share of more than 50% in 2018[2] due to the increasing demand for blankets suitable for different seasons. In India, from March to July, a very light cotton blanket is preferable in contrast to the demand for a thick polyester blanket from November to February. Also, a new polyester blanket known as AC blanket, made for sleeping in air-conditioned rooms, has been driving the market.

Panipat is one of the largest markets for raw wool in northern India. Today the city is famous all over the country for its blankets and made-ups. It is a prominent city of Haryana known for its magnificent history and discerning industrial development. The city is located on National Highway 1 at a distance of around 90 KM from the national capital towards Amritsar. It is also known as the city of weavers. The title is conferred upon it due to the presence of handloom and textile industries in the city. The city is also popular for its heavy industries and refinery of Indian Oil Corporation along with a huge plant of National Fertilizers Limited and Panipat Thermal Power Corporation.

The city is considered a leading name in home textiles nationally and internationally for bed linens, carpets, kitchen linen, bathmats, cushions and other textiles. At the time of independence, a large

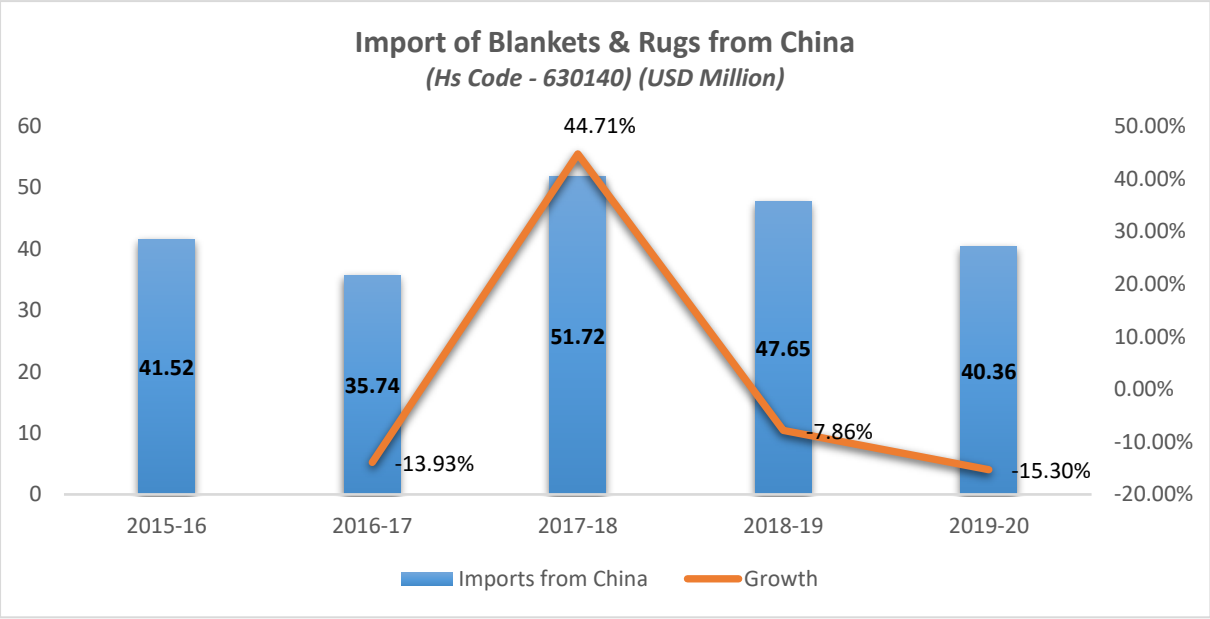
[1] https://www.grandviewresearch.com/industry-analysis/blanket-market
[2] IBID

number of professional weavers for Sindh, Jhang and Multan (now in Pakistan) migrated to India and set up their looms and established the craft weaving.

3. Imports

In the year 2019-20, India imported blankets worth USD 40.70 million[3] from the global market. However, from India's total imports of blankets, 99.17% (USD 40.36 million)[4] are imported from China. At the global level, the commercial segment of the blanket is expected to grow at CAGR of 4.7% from 2019-2025[5]. While in the Asia-Pacific region the growth is expected to increase at CAGR 5.2% from 2019-2025. The growing demand from travel (rail and airlines), hospitality, and defence industries for blankets are driving the market nationally and internationally.

In India, more than 90% of blankets are imported from China, in the year 2017-18 around USD 51.72 million worth of blankets were imported from China, which was the highest value of import during last 5 years. However, from 2018-19 onwards the imports have seen a declining trend. According to the data, in the year 2018-19 imports of blankets decreased by 7.86% which further declined by 15.30% for the year 2019-20.[6]



[3] https://tradestat.commerce.gov.in/eidb/icomxcnt.asp
[4] https://tradestat.commerce.gov.in/eidb/icomxcnt.asp
[5] IBID
[6] https://tradestat.commerce.gov.in/eidb/icomxcnt.asp

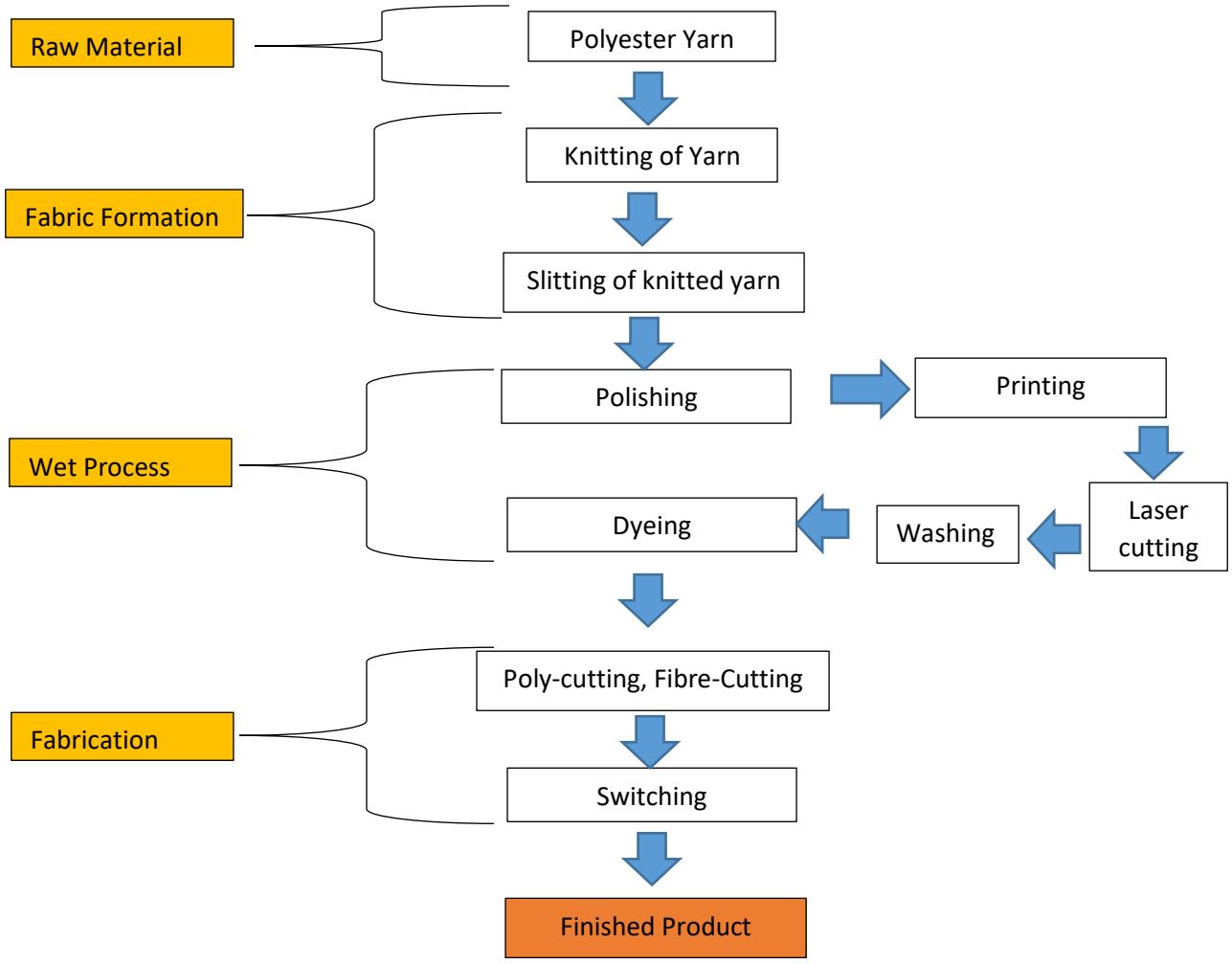
Globally, the export of blankets from India in 2018-19 stood at 29.18 million USD whereas the same in 2019-20 was 27.57 million USD. There was a slight decrease in term of value of exports which can be due to the global pandemic situation is starting to spread in the last quarter of 2019-20.

4. SWOT Analysis

The blanket is one of the prominent sectors in the Panipat cluster. Currently, of the total production of mink blankets, around 95% are sold in the domestic market, and about 5% are exported to European countries and the USA. The Blanket Market is subject to witness a substantial growth due to the growing consumer awareness, a wide range of prices and designs available in the market. An increase in the number of advantages associated with the product coupled with a growing population is one of the key driving factors for the market's sustained growth in recent years. Besides, lower and competitive pricing and improved quality of the Indian mink blankets have gained recognition in domestic as well as international markets.

Earlier, 95% of mink blankets were imported from Korea priced at Rs 3,500-4,000 per piece. These were made of acrylic, but later, China started manufacturing these blankets using polyester and the Indian market started importing these from China at Rs. 1,500-2,000 per piece. While only 5% of the same were manufactured in India. The Mink blanket manufacturing started around two years back and now there are around 60 units operational in Panipat and additional 50 units will be operational soon.

Stages involved in Blanket Production (Flow Diagram)



Strengths

The textile cluster of Panipat is concentrated around the city and its suburban villages. The industry comprises of seven-segment; handloom, woollen carpets, shoddy yarn spinning, power-loom industry, wet processing and hosiery woollen yarn industry. The cumulative turnover of all these units is estimated at Rs. 11,000 crores and employs more than 75,000 persons[7]. The cluster is keen on technological up-gradation and consequently, a large number of units operate on the latest machinery and equipment. The focus of this cluster is to respond to the buyers' needs and satisfaction on all aspects of products and services.

Handloom - At present, the handloom sector of Panipat consists of more than 25,000 handlooms working in the city. The sector employs a majority of the weaving workforce, which are migrants from

[7] https://textilevaluechain.in/2015/06/11/panipat-city-of-handlooms-international-home-textiles-hub/

Uttar Pradesh, Bihar and West Bengal. The products of handloom from the Panipat cluster have attracted demand from the international market, majorly European countries and the USA accounting for 95% of exports. With the increasing demand for exports, the focus of the cluster is to prioritise design and product innovation.

Power-Loom Sector - The power-loom sector is the largest among all other sectors. Most of the power looms are attached with Jacquard for creating a wide range of designs on bed covers, curtains, upholstery, blankets, etc. The products from the power looms are mostly to cater to the domestic market. To sustain the market competition, the sector incorporated around 900 new and second-hand shuttle-less looms. The raw materials required for this sector are art silk, polyester, acrylic and polypropylene and shoddy yarns. The shoddy yarns are available from the local shoddy spinning units and synthetic yarns are sourced through local traders.

Shoddy Industry - The shoddy industry in the city has witnessed demand in the market due to its use in making blankets. These have replaced the use of previously used thick cotton fabrics, i.e., Khes and are cheaper in the market. Apart from shoddy spinning units, the cluster also has open-end rotor spinning, which caters to the needs of handlooms and power looms units in the city. There are around 45 units of open-end rotor spinning units in the city. The unique feature of this type of spinning is that it uses up to 85% of waste cotton to spin the cotton yarn. The cotton yarn produced is used in manufacturing mainly exportable items of handlooms. Besides, the cluster has 150 dyeing and printing units and about 35 finishing units in the city. These units are for meeting the requirements of the local textile industry. Most of the equipment used in these units are locally made in the city.

Weaknesses

In the cluster, whatever skill developed is merely based on experience level; therefore, the skills of the skilled manpower have huge gaps to fill. However, most of the gaps have been taken up in the textile industry, furnishing industry and retail sector by NSDC. But skilled workforce with the technical know-how on operations of machines still lacks in the sector. Institutes such as SVPITM, NIFT, ATDC, ALT, etc., provide techno-managerial skill manpower; however, none of them is present in the city. Manpower training in skill development for shop floor level and managerial skills at middle and upper managerial level is done on an ad-hoc basis.

Opportunities

Besides, lower and competitive pricing and improved quality of the Indian mink blankets have gained recognition in domestic as well as international markets. The sector is witnessing increasing demand from European Countries and the USA. Exports from the cluster have increased and currently, it

accounts for INR 25,000 crores. Earlier the demand was less due to competition from Chinese products in terms of price variability and product quality. However, with the shift in focus and other factors like the continually increasing number of units and domestically available raw materials, the Panipat cluster can produce mink blankets at a comparatively lower price and that too by maintaining the quality.

This has significantly changed the dynamics not only at the national level but also at the international level. In addition to this, the COVID pandemic and boycott of Chinese products in the international market, foreign players have started taking an interest in India made products. The cluster with rigorous efforts has brought the cost of blankets very down. Earlier, the blankets were imported on unit cost, but now the cost has changed to Rs. 150-160 per kg. On average, the blankets weigh 3 kg and it costs around Rs. 500-600. At present, Panipat is manufacturing 12 lakh kg mink blankets in a day, i.e., 4 lakh blankets per day. At present, the price of the mink blanket offered by the cluster is INR 150-160/Kg, whereas the same from China costs INR 230/Kg. The price variation is one of the prime factors for change and shifts from Chinese product to Indian made product.

Threats

Although the blanket industry has made significant change at national and international level, the industry requires quality raw material at reasonable price – which is very fluidic as most of supplier are continuously increasing the price. This in turn effects the cost of production of the product. The demand of exports can be increased with investments from foreign player. In addition, continuous quality improvement is required as there are different patterns all over the world.

5. Challenges

Currently, the blanket cluster in Panipat faces challenges related to raw material procurement, knitting machines, testing facility and a lack of skilled labour and experts. These challenges have been discussed in considerable detail below:

Raw Material – Polyester Yarn *(HS Code -54023300[8],54024700[9], 54022090)* - Polyester yarn is the primary raw material for mink blanket. The majority of units in the Panipat cluster procure raw material from the Indian market. The high cost of polyester yarn in the market is one of the main challenges for the cluster. Another important factor – polyester yarn, which is the raw material product, has an anti-dumping duty in case of import. Whereas the blanket, which is a finished product, does not have any

[8] 100% Polyester Textured Yarn DTY 150/96, (DT18) 150/1, (T-18FC) 150/1 – majorly imported
9 100% Polyester Filament Yarn150/72

anti-dumping duty while importing. The imposed anti-dumping duty on import of polyester yarn ranges from USD 174-528 per tonne[10].

Domestically, polyester yarn production is limited, and only big players are the ones to import the yarn from the international market. According to the key relevant stakeholders, the major suppliers of polyester yarn are big players like Reliance, Indorama, Bhilosa and Wellknown Polyester Ltd. These companies are well-established players in the market and have the power to regulate the cost of raw material as per the demand.

Increasing demand in the domestic market is due to, firstly, small players cannot afford to import polyester yarn directly because there is a high anti-dumping duty levied on the import of these products from the international market. Secondly, the increasing number of units in the cluster has raised the demand domestically. With limited production and import and high demand, the cost of polyester yarn has increased. Therefore, units face challenges at the time of procuring raw material with ever-increasing prices of polyester yarn in the market.

In term of expense incurred in making a blanket, around 60-65% is the raw material cost, which is more than half of the total cost of production. Whereas cost incurred in production process majorly is in terms of energy consumption since all major processed in blanket production are carried through machines. However, labour is one of the areas where units face a challenge in term of availability and highly-expensive. In the cluster, units rarely do branding and marketing of their products as this increasing the cost of blankets.

Sr. No.	Process	Percentage of Expense
1	Raw Material Cost	60-65
2	Manufacturing of Blanket (knitting, slitting, polishing washing, dyeing, cutting & switching)	12-15
3	Labour	5-10
4	Packaging	5
5	Logistics & Transportation	3-5

<u>Lack of Availability of Required Machinery (Russian Knitting Machine)</u> - Different types of machines such as knitting machines, processing machines and printing machines are required in manufacturing mink blankets. Of these, the important one is the Russian Knitting Machine, which is an integral part of manufacturing mink blankets. Availability of Russian Knitting Machine at affordable cost is one of the challenges for units in the cluster.

[10] https://indianexpress.com/article/india/india-imposes-anti-dumping-duty-on-chinese-polyester-yarn-5253487/

Of all the machines required in the production of mink blankets, the printing machine is manufactured locally and the units use the same in the cluster. While producing mink blankets, the most important machine is the “Russian Knitting Machine”. This machine is not being manufactured in India.

According to the stakeholders, even if any company wishes to develop the Russian Knitting Machine in India, the same will not be possible. The Russian Knitting Machine development will require a collective effort from a group of companies or clusters. Even if any company in India is developing the machine, the cost will be on the higher side. This is because those foreign companies involved in the manufacturing of Russian Knitting Machine are well-established players and have machine orders in bulk. Whereas, in India, units willing to purchase the Russian Knitting Machine will, first of all, compare the cost of the machine irrespective of make and company of origin. Therefore, any Indian company willing to develop and manufacture the Russian Knitting Machine needs to ensure that the knitting machine's cost is comparatively low from the international market.

Currently, there are 1200 Russian Knitting Machines operational in the Panipat cluster. All of them are either imported from China or Korea. Looking at the current global situation and boycott of Chinese products in the international market, Korea has become the major source for these knitting machines' procurement. The same machine is also being manufactured by European companies. However, European machines' cost is 3-4 times higher compared to Chinese and Korean machines. Therefore, these machines have very low penetration in the Indian market. In terms of price, the machines procured from China cost USD 25000, whereas the same procured from Korea costs USD 45000.

Lack of Testing Facility -Mink Blanket was developed by Korea. During the initial phase, mink blankets were manufactured using cotton yarn. Due to the use of cotton yarn in manufacturing mink blanket, the cost of production was high. During this phase, only Korean manufactured it and sold it in the domestic and international market. Later on, China started manufacturing it on a large scale using polyester yarn and dominated the global market.

The Indian companies, through exposure visits, learnt to manufacture mink blankets and started production in the country. The units established their production centres using similar machines in Panipat and started manufacturing mink blanket. With multiple units established in Panipat, the cluster has become one of the largest blanket manufacturers after China. However, testing required to check the quality of these manufactured products in India is still lacking. There are no testing institutes/labs where the quality of produced mink blankets can be checked. Currently, every testing and quality checking requirement is being carried physically.

Lack of Investment in Skill Training and Development - Mink Blanket is a Korean Product and Indian companies have learnt to develop this product through exposure visits and a common understanding process. The cluster units still lack basic training on how to operate knitting machines, processing machines, and printing machines. There are no specific institutes in India from where the skilled workforce can be trained and hired. Thus there is a huge shortage of human workforce specific to this field.

Apart from the above challenges, basic facilities are still lacking in Panipat Cluster. Facilities such as proper roads, sewage facilities, common treatment plant and its maintenance. All stakeholders suggest that proper planning should be carried before development; this will help in creating common facilities such as boilers, treatment plants, etc., within the cluster with increased efficiency.

6. Action Plan

In terms of Government initiatives to make India Self-Reliant, several steps are taken to support the Indian manufacturing sector. Initiatives like Production Incentive, Quality Control Order (QCO) are brought in to meet production standards as per WTO norms. Several QCOs are applied in the manufacturing sector. According to the QCOs, the same treatment which applies to domestic manufacturing will be applied to imported products as well. Other QCOs include BIS Licensing mandatory for the manufacturing sector. Initiatives taken under Self Reliant India includes policy instruments that are useful for the manufacturing sector. One important instrument is the Anti-Dumping Policy, which is useful in supporting domestic manufacturing. Even the Haryana State Government is also proactively working to support domestic manufacturing in the state. The state government has come with several schemes under which incentives are given to the sector, and the interest subsidy is given to support the cost of manufactured products at the international level.

Some of the MSME schemes, such as Technology Upgradation Fund Scheme (TUFS), Credit Link Capital Subsidy Scheme (CLCSS) and cluster development scheme, are operational. Under these schemes, the units can benefit from up-grading technology and subsidy against machine purchases to uplift the current level of technology. In the case of testing facility or R&D centre requirements, the same can be developed under the cluster development scheme. To summarize, several schemes can be utilized for the development of the cluster and promote domestic manufacturing.

7. Recommendations

Removing Anti-Dumping Duty - As per suggestions from relevant stakeholders, the government should take the initiative and the anti-dumping duty which is applied on import of polyester yarn (raw material) must be removed. By removing the anti-dumping duty on import of polyester yarn, smaller companies will be able to import it and this would reduce the cost of raw material in the market.

Increased Investment in Research and Development - As per the stakeholders, the Russian Knitting Machine is one of the most important parts of mink blanket production. To lower the cost, the machine should be domestically produced. As per suggestion, the Government during the initial stage should be involved in R&D and designing of machine and development of a prototype. Once the initial stage is complete along with a developed working prototype, individual players/companies can take it to commercial manufacturing. It is assumed that the cost of the machine if manufactured in India, will be around USD 15,000. Currently, the imported same machines cost around USD 25000 from China and USD 45000 from Korea.

Testing Laboratory & Institutes - Currently, there are no testing facilities in India; therefore, such facilities should be developed with support from the Government. Testing institutes are required to check the quality of the product produced in India. Basic testing involves checking blanket perforation and smoothness. With the help of such a testing facility, the quality can be improved and the cluster can prepare as per the specific demand of customers.

Improving Skills through Training - The most critical skill required for Panipat Cluster is the operational know-how of the Russian Knitting Machine. There is a huge shortage of such workforce. As per the stakeholders, other than the Russian Knitting Machine, the workforce can be trained and skills can be imparted between 15-20 days. However, training human resources on operating Russian Knitting machine requires more than 6 months duration. Since this is the most important machine in manufacturing mink blankets, a skilled workforce related to this particular machine is highly required. Training Institutes such as ITIs should develop courses related to the operational know-how of the Russian Knitting Machines so that students can benefit from the course.

8. Name of the industrialists / dignitaries contacted

SN	Name	Organisation	Mob
1	Ms Kshitij Kaoor	GM, DIC	8529890468
2	Sukhbir Singh Malik, President	Textile Machinery Manufacturers Association	9812019139
3	Virender Rawal	Kambal Manufacture Association	9416001777
4	Pawan Garg	All India Woollen Mills Association,	9812039252

5	Suresh Gupta	All India Woolen & Mills Association,	9416018982
6	Preetam Singh	President, Panipat Association	9728300007
7	Siyaram ji		9416009699
8	Sidhant	Sugandha Textiles	9255663301
9	Subhasji	Vikash Textite Ind	9416032941
10	Amit Bhatia, GM	M L Textile, Panipat	8059354154
11	Rajneesh	Mehak Handloom Industries	9416008601
12	Mr Sandeep Khurana	Khurana Blankets	8037400976
13	Mr. Sumit	Sumit Textile Industries	8930093003
14	Vishal kumar	IPTT (NSDC)	9034687756
15	Vikram Juneja	TDTI	9727782662

Ceramic Cluster – Morbi & Thangarh

4. Objective

The purpose of the study is to identify the challenges faced by the ceramic cluster of Morbi & Thangarh including the Tariff and Non-Tariff barriers such as import duty, technology and infrastructure barriers such as poor condition of roads and hence, suggests recommendations to improve the cluster's growth and capacity to compete with international standards and meet local demands.

5. Brief about Cluster

The global ceramic sanitary ware market size is projected to grow from USD 32.1 billion in 2020 to USD 44.6 billion by 2025, at a CAGR of 6.8%.[11] The Indian Sanitary ware market was valued at USD 665.36 million in 2020. The market is expected to reach USD 1074.71 million by 2027 at a CAGR of 7.38% for the period of 2021-27.[12] Two of the most dynamic sanitary ware production areas in Gujarat are the ceramic clusters of Morbi and Thangarh. The key factors behind the industrial development include their proximity to highways, seaports and airports, the availability of local clay in Gujarat and neighbouring areas. Besides, easily available manual and skilled labour. These advantages are enhanced by the typical characteristic of an industrial cluster, which facilitates sharing of resources, knowledge, infrastructure, logistic and suppliers, creating a highly efficient and cost-effective network and production hubs.

Morbi and Thangarh are two cities apart by 56 KM in the state of Gujarat. These two cities are considered the heart of the Indian Ceramic Industry. Morbi is about 250 KM from Ahmedabad in the Rajkot district of Gujarat. The main product of the cluster is wall tiles, floor tiles, vitrified tiles and sanitary ware. The cluster commands about 70% of the market share of these ceramic products. The ceramic industry's location in Morbi is based mainly due to the availability of raw material for making ceramic products such as various type of clays, red and black soil, and minerals such as calcite/wollastonite, frits and glazes. These raw materials are readily available either locally or from neighbouring Rajasthan. Besides, the Thangarh cluster is mainly engaged in the production of sanitary ware. Here also the basic raw material such as fire clay is locally available.

In Morbi around 459 industrial units are operating in the cluster, of which 178 produces wall tiles, 52 produces floor tiles, 26 produces vitrified tiles and 43 produces various kind of sanitary ware. Besides, 120 units are involved in producing roofing tiles. On the other hand, the Thangarh cluster has about 225 ceramic units engaged in the production of sanitary ware, wall tiles and art tiles. The Morbi cluster produces around 5.28 million tonnes per year (tpy) of ceramic products. Of these, tiles unit account for about 5.10 million tpy, sanitary ware 0.18 million tpy. The Morbi cluster provided direct employment to about 68,000 people and the Thangarh cluster employs about 15,000 people.

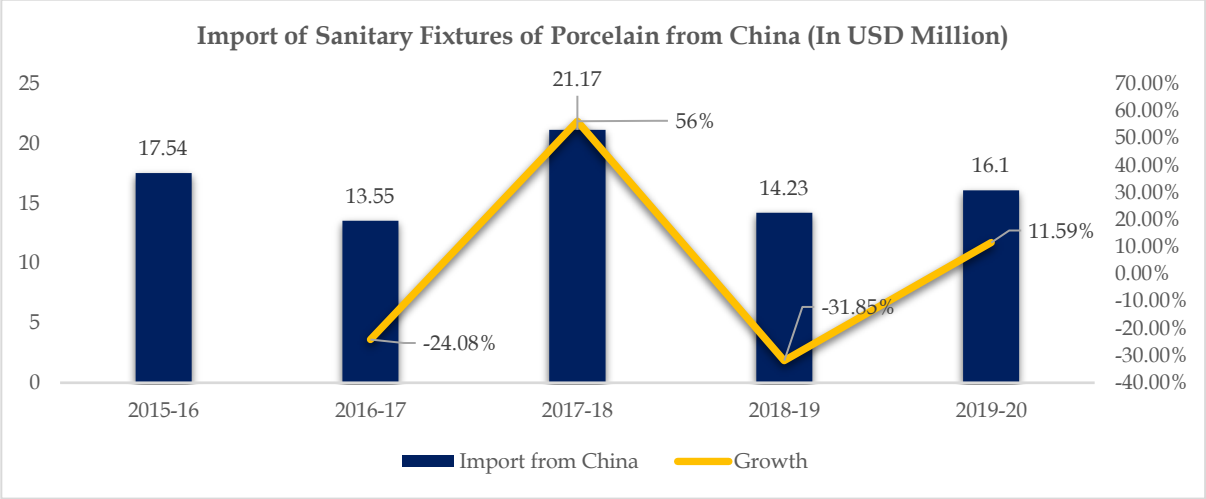
6. Imports

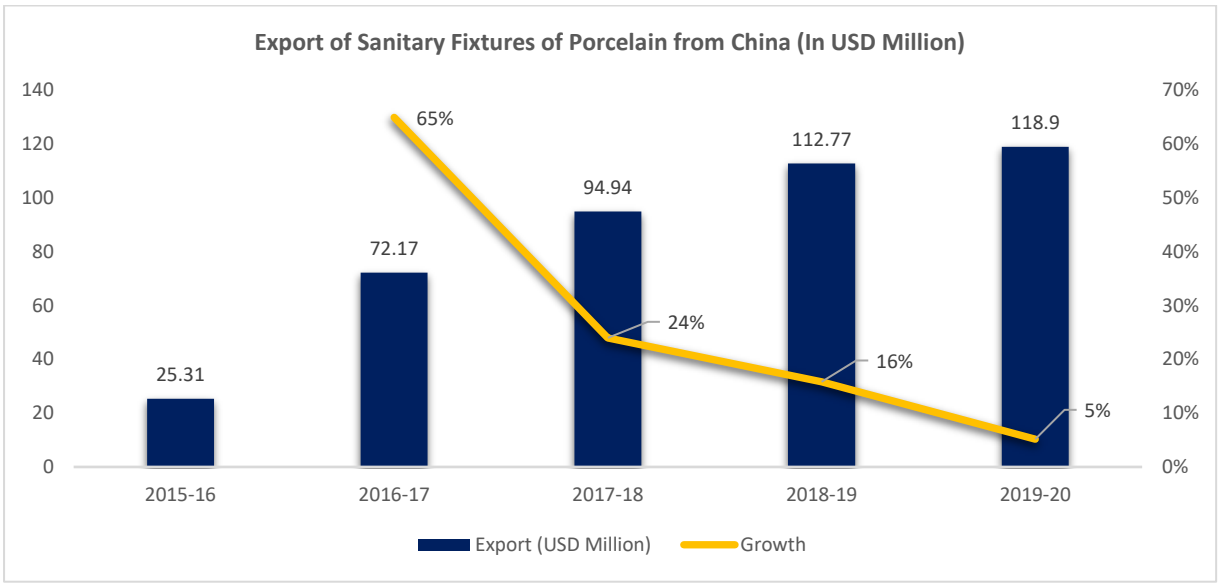
The ceramic sanitary ware industry comprises a variety of products such as washbasins, water closets, bathtubs, faucets, cisterns, seat covers, sinks, bidets and other accessories. The Indian sanitary ware market is divided into two sub-categories: organised and unorganised markets, both in terms of value

[11] https://www.businesswire.com/news/home/20200615005245/en/Global-Sanitary-Ware-Market-2020-to-2025---Technological-Advancements-Present-Lucrative-Opportunities---ResearchAndMarkets.com
[12] https://www.blueweaveconsulting.com/india-sanitary-ware-market-bwc20088

and volume. The unorganised players in the industry manufacture sanitary ware largely with the use of conventional technology and cater mostly to the mass market with a focus on low-income strata group. Whereas, the organised players employ the latest world-class technology for production and mainly serve the people with mid-income, premium market and super-premium segment.

Globally, India's import of Sanitary Fixtures of Porcelain (HS Code – *691010*) in 2019-20 was USD 24.29 Million. Of these imports from China was USD 16.1 Million. The imports from China were highest in 2017-18 with a valued import of around USD 21.17 million. In the year 2018-19, the imports drastically dropped to USD 14.23 million.



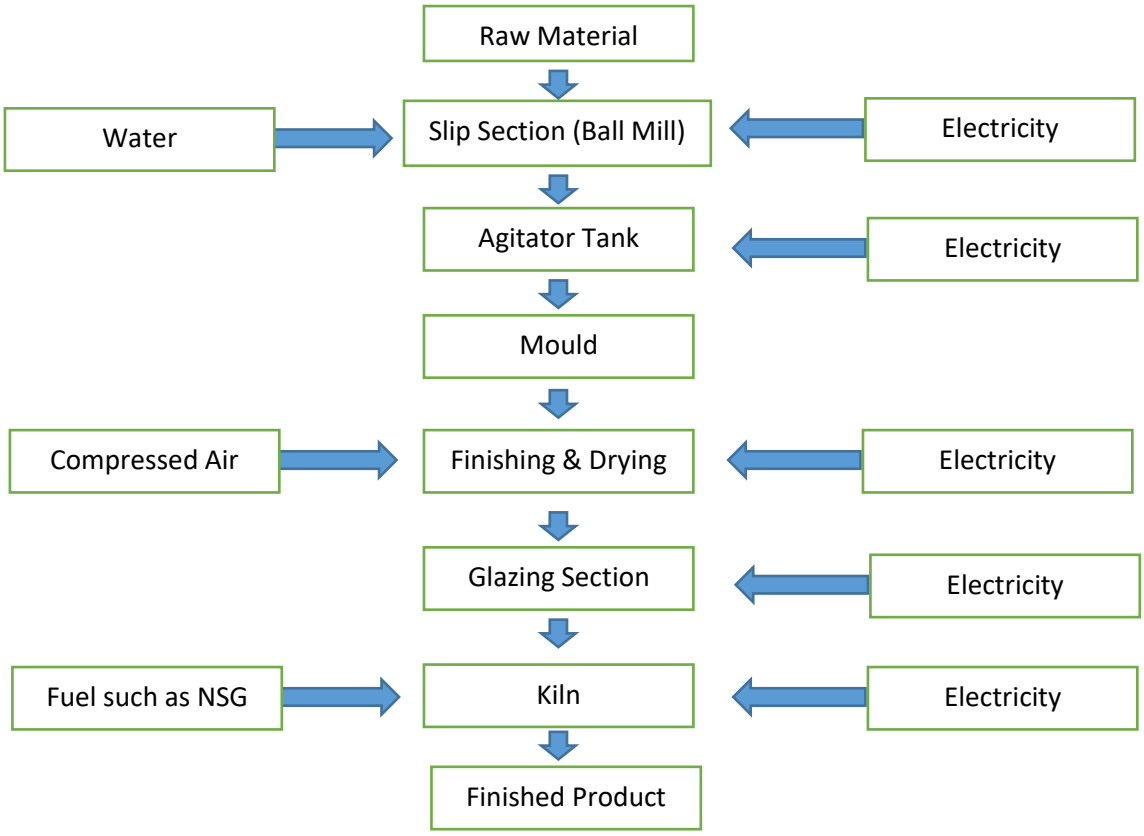


4. SWOT Analysis

Ceramic products have varied usage from bathrooms and kitchens in average Indian households to medical centers, labs, milk booths, schools, public conveniences, shopping malls and numerous other centres. The heart of the Indian ceramic industry is in the clusters of Morbi and Thangarh of Gujarat.

A large number of medium scale ceramic manufacturing units are located in these clusters and the main products are wall tiles, floor tiles, vitrified tiles and sanitary ware.

The flow diagram of the sanitary ware production process:



Strengths

The ceramic clusters have good infrastructure and accessible quality raw material for producing and catering to the huge market in India and abroad. The Morbi & Thangarh sanitary ware cluster exports around 200-250 crore and 300 crores of sanitary ware respectively. India's export of sanitary ware from 2015-16 has growing trend. In 2016-17 the exports of sanitary ware registered 65% growth from previous year (2015-16). The exports are increasing year on year. In 2019-20 the India's sanitary ware exports was valued at USD 118.9 million[13].

Indian Tiles, Sanitary Ware and Indian Bathroom Fittings Market – Trends

- An increase in the budget of drinking water and sanitation programs, like the Swachh Bharat Abhiyaan, by the Indian Government has given impetus to the construction of toilets in rural regions.
- The introduction of nanotechnology has revolutionized the market as it helps in enhancing the shelf-life of tiles and making them resistant to dirt and bacteria especially in clinics, hospitals, laboratories and food processing plants, where hygiene plays an important role

[13] https://tradestat.commerce.gov.in/eidb/ecom.asp

- The real estate sector in India is undergoing a phase of revival catalyzed by improved buyer sentiment, restricted new launches, improving sales, declining unsold units and consolidation in the Indian real estate sector

Weaknesses

The products in the clusters are largely marketed through intermediary companies who ultimately sell it in their own brand name. The production process of sanitary ware involves – wet grinding, moulding, drying, glazing and firing. The process is more or less similar to tile manufacturing, however in sanitary ware manual moulding is carried out whereas in case hydraulic press is used to form the biscuits. Though the clusters have created a reputation for itself as the leading destination for low cost products in the Indian market, however, they still need to work on creating a formal brand in the market. Weak visibility and lack of appropriate stakeholder driven vehicle for common marketing and branding are the major reasons for not being able to evolve as a differentiated product in the market. Huge diversification of products in each unit and infrastructural bottlenecks also hampers the growth of the cluster.

Opportunities

Macro factors such as increasing urbanisation, nuclear family concept, rising disposable incomes, and the government's push for housing for all, smart cities and improvement of sanitation are further expected to drive this market. The government is aiming to ensure habitable conditions for the poor and has launched several new flagship programs such as Pradhan Mantri Awas Yojana (PMAY) and Swachh Bharat Mission. The Smart City project plan to build 100 smart cities and offers a prime opportunity for the real estate sector with an investment of INR 1,911.55 billion and is focused on revamping the identified area with an investment of INR 1,525 billion.[14]

Threats

The impact of COVID-19 resulted in a global pandemic and developing countries particularly were at risk due to a reduction in the labour force, which affected the economic and livelihood growth with a reduction in production operations. Due to the adverse impact on public health systems, the various government have enforced national lockdown which significantly impacted manufacturing supply chains, trade and related services. A number of units in the country's ceramic industry are on the verge of closure due to the pandemic. Other challenges such as increased freight, costlier raw materials, and supply of power and gas are other factors impacting Indian ceramic industry.[15]

However, due to the pandemic, there is also a rise in demand for sanitary ware for better cleaning and maintaining proper hygiene across the surrounding. In February 2018, there was a creation of the National Urban Housing Fund, which approved an outlay of INR 600 billion. The Indian government has fixed the housing targets for more than 10 million houses in rural and 3.7 million houses in urban areas by 2022.[16]

[14] https://www.televisory.com/blogs/-/blogs/growing-market-demand-for-sanitaryware-in-india
[15] https://www.thehindubusinessline.com/economy/chinese-imports-ruining-ceramic-sector-assocham/article23116839.ece
[16] https://www.televisory.com/blogs/-/blogs/growing-market-demand-for-sanitaryware-in-india

5. Challenges

Based on stakeholders' discussions, some of the major challenges faced by the industry and reforms to address those are listed below:

Raw Material - In the sanitary ware cluster, the basic raw material required is clay. There are several small units involved in the mining of clay in and around the cluster. They directly unearth the clay and transport the same to the units as per the amount required. No processing activity is done on the clay which is unearthed. Therefore, the composition of minerals (alumina, plasticity etc.) is as it was extracted. The challenge is that every mining unit digs the ground and delivers the raw material to the manufacturing unit. The raw material is natural extract no processing is done. Because of this, units ordering raw material next time may probably receive different raw material in term of the chemical composition of raw material. This, in turn, impacts the quality of the product. In comparison to China, the raw material is taken to processing units which process the extracted clay and maintain the required chemical composition by manufacturing units. This helps the units maintain the quality of the product. Feldspar- one of the important components in the ceramic industry is locally available from Rajasthan. Most of the extracted feldspar from the mining units are majorly exported to other countries.

High Fuel Prices - Units in the ceramic cluster have to regularly deal with the increasing prices of fuel (Natural Gas). Recently, around INR 11-12 per cubic meter was increased within a month. With such an increase, units find it difficult to keep with customers demand. This reduces their profit margin and also is one of the factor adversely impacting the sales.

Technology & Automation in Manufacturing - In terms of technology, Indian units use conventional technology. Whereas other countries use more advance and latest technology in manufacturing sanitary ware. Since the cluster majorly consists of smaller units it is difficult for any one of them to procure the latest advance technology and use it to their benefit. However, in China, the latest technology is procured by the government and are given to units with help and support from the government, the units in China can manufacture quality sanitary ware at affordable prices.

Lack of Product Specialization - Most of the units in the cluster are small units. These units are manufacturing various sanitary products ranging from a single piece to smaller items. Such diversified product range is because of the mentality of consumers and manufacturers are the same. For example – one customer who is buying a single piece from a unit also wishes to have smaller and other items from the same unit. As a result, units tend to manufacturers various products to retain their customers. Whereas, in China, if a unit is involved in producing single pieces, they only manufacturer a single piece. Such type of production provides units with product specialization and better usability of machines and technology. Due to this, the units in China use technology in terms of automation in the production process. Whereas in Indian units the same will not be possible.

Lack of Awareness of the Export Market - Units in the cluster are exporting to other countries. Morbi exports around INR 200-250 crore of sanitary ware whereas around INR 300 crore are exported from Thangarh. However, the challenge arises for the units to know the process and documents required for exporting to a particular country. For every country, there are a set of documents, certification, fees and other necessities. At many times, the units leave the export options due to difficulty in

gathering information and from where to avail the information. The process is time-consuming and involves huge expenses.

Development of Allied Plastic Industry - Sanitary ware is incomplete unless plastics and fittings are attached. The closer plastic industry is in Rajkot and Ahmedabad. As per the clusters suggestion, plastics and fitting are one of the most important accessories when it comes to sanitary ware. This cluster should be supported in turn to boost the sanitary ware cluster.

Roads Infrastructure - The clusters in Morbi and Thangrah face high risk while using the road for transportation of products. Sanitary ware is a fragile product for transportation. The road condition in the ceramic ware cluster is currently very poor. Road condition especially in Thangarh cluster is very rough, due to which units always have to endure damage while transporting.

6. Action Plan

A holistic approach needs to be adopted to improve energy efficiency and overall productivity in the small-scale ceramic tile and sanitary ware units at Morbi, and Thangadh. The main objective is to focus on technology upgradation in the ceramic units at the clusters—Morbi, and Thangadh—by adopting energy-efficient technologies and processes, and improving their competitiveness by enhancing productivity, achieving economies of scale, introducing new designs, encouraging quality controls, and adopting international standards. In addition, it aims at capacity-building and strengthening of institutional structures together with promotion of the brand image and improving the quality of ceramic products. Based on the suggestions made in the study, it is expected that the clusters will be able to promote energy efficiency, quality of raw materials, and exports.

7. Recommendations

Clay processing units for Standardized Raw Material Quality - The cluster units requires a constant supply of raw material of the same composition. Whereas, the situation is different since the cluster lacks clay processing units due to which the chemical composition of raw material are not always the same. Lack of standardized quality of raw material (Clay) by the cluster units adversely impacts the product quality. It is suggested the cluster should have raw material processing centres that will check the quality of clay supplied to units and maintain constant chemical composition. With such support, the cluster will be able to manufacture similar products with the same quality.

Import Duty - The import duty on import of sanitary ware should be increased to protect the domestic market. At present the import duty on import of sanitary ware is Basic Custom Duty – 10%, Integrated Goods & Services Tax (IGST) – 28%.

Lower Fuel Price - The units in the cluster are constantly impacted by ever-increasing fuel (natural gas) prices. In December 2020, the fuel prices were increased by INR 10-12 per cubic meter. Due to the sudden increase in fuel prices, the cost of production increased making it difficult to market the product. To reduce the impact of increasing fuel price, subsidies can be given to units based on fuel usage/consumption. For availing the subsidy the units must be registered with the Ministry of MSME or any Government Organisation.

Use of Advance Technology & Automation - Globally the technology used in sanitary ware manufacturing is much more advance than that used in Indian Clusters. Automation is one of the

advance technology systems used by many global units to enhance manufacturing process. With use of automation technology units are able to reduce the cost of production and quality is well maintained. As per the suggestions, Government intervention is required to bring in advance technology in the cluster. The process may be taken forward by interacting with the respective embassies in India. Since the latest technology available is expensive. Single units in the cluster are unable to avail of the technology independently. Therefore, the initiative should be taken by the government and once the technology/machine is brought it can be established at a common facility centre that is suitable and identified by the Cluster Association. Other units can use the facility and can learn and develop their product.

A Common Portal - Every country has a specific set of documents, certification and fees which are required before exporting. The units in the cluster lack information on required documents, fees certification etc. to export to different countries. As per suggestions from stakeholders, there should be a common portal, wherein the units can avail necessary information for the required export destination. This will reduce time and energy in looking for information and will boost exports.

Improvement in Infrastructure - Logistics in cargo movement is a national issue for exports and the domestic market. Roads are basic necessities for a unit. Morbi & Thangarh are no different. Roads connecting units to the National/State Highways are in poor condition. Specially, the roads in Thangarh cluster are very rough. Because of improper road condition units transporting fragile item such as sanitary ware always endure extra time and damage. It is suggested that roads conditions should be improved so that units can transport their goods easily. Sanitary ware is a fragile item for transport, therefore proper road and its connectivity till manufacturing units is a must.

Develop Dry Port near Cluster - For exporting every unit has to transport their goods in trucks to Mundra Port. Due to the lack of proper road condition in the cluster, all units face the issue with transportation. Based on suggestions from the stakeholders, a rail freight should be developed with units having permission for container loading. Containers from the unit will be unloaded at freight stations and from there railway will carry it forward to the respective port, for ceramics Mundra Port.

8. Name of the industrialists / dignitaries contacted

Sr. No	Name	Organistaion	Contact Number
1	Kirit Patel	President, Morbi Ceramics Association	9825269979
2	Sureshbhai	Sompura Sanitaryware, Thangarh	9825218177
3	Prashant Patel	Executive Member, FISME	9825095191
4	Hiren	Conffi Sanitaryware Pvt. Ltd., Morbi	9099455255
5	Milan Bhoraniya	M.K. Ceramics, Thangadh	9879457995
6	Sanjay	Eagle Ceramics	9825222864
7	Mitesh Bhai	Gem Sanitaryware	9824219371
8	Mahesh Duggal	Sunline Ceramics	9824298818
9	Piyush Patel	Vishva Sanitaryware	9974660000
10	Jagdish Bhai	Sonica Ceramic	9825079309

11	Hitesh Naran Bhai	Sun Ceramics	9909940989
12	Abhishek Arvadia	Swede Sanitary Wares	9825223279
13	Piyush Bhai	Nexgen ceramics	9512477000
14	Ankit Soni	Suryadeep Ceramics,Thangadh	9825011623
15	Milan Patel	Delphi Ceramics	8045335880
16	Dharam Bhai	Devdoot Sanitarywares	9925044844
17	Shantilal Karshan Bhai Sengani	Navjivan Ceramic & Sanitrywares, Thangadh	8048802275
18	Parth Chavd	Classy Ceramic, Thangarh	8048846457
19	Bhavesh Bhai	Lalpar Potteries	9825338674
20	Sunil Adroja	Neo Ceramics	9825649990
21	Amu Bhai	Appolo Sanitaryware, Morbi	9825222978
22	Kalpesh Patel	Priya Ceramics	9033977065
23	Suman Patel	Rameshwar Sanitaryware	9427381619
24	Ketan Bhai	Sanitech Sanitaryware	9825880800
25	Dilip M Kagathara	Samay Sanitaryware	9979133300
26	Mukesh Patel	Sifon Ceramic	9825398450
27	Ramesh Bahi Dharodiya	Avsar Ceramic Thangadh	9712388608
28	Jitu Bhai Patel	Soyo Ceramics Pvt Ltd	9904218899
29	Jayanti S. Patel	Sun Gold Sanitary	9727521482
30	Kavar Bahi	Sunsilk Ceramic Pvt. Ltd	9825225805
31	Bhadresh Panchotiya	Wideangle Sanitary Wares	8042967751
32	Krunal Shah	Smruti Ceramic Industries Pvt Ltd	7405050504

Ludhiana – Knitwear Cluster

7. Objective

The study primarily focuses on the challenges and opportunities in the knitwear sector of Ludhiana. It simultaneously identifies the imported items that can be substituted by Indian Products, manufacturing by the MSME cluster and enhance capacities among identified items/products. The purpose of the study is to identify the challenges faced by the Ludhiana Knitwear cluster including Tariff and Non-Tariff Measures such as import duty, technology and infrastructure barriers and hence, suggests recommendations to upscale the existing capacity of the cluster to compete with international standards and meet local demands.

8. Brief about Cluster

The global knitwear market is of about 200 billion USD. In India, knitted fabrics contribute to 27 percent of the total fabric production and 15 percent of the knitted fabric is being exported from the country.[17] The country has an installed capacity of nearly 12,000 knitting machines under Small Scale Industries (SSI) fold and nearly 4,600 knitting machines under non-SSI fold, besides a number of household knitting machines.[18] Some of the major clusters in the knitted garment sector are Tirupur in Tamil Nadu, Ludhiana in Punjab, Kanpur in Uttar Pradesh and Kolkata in West Bengal. Tirupur is the most important export cluster, followed by Ludhiana.

Ludhiana is an important knitwear centre located in the Northern state of Punjab, around 300 kms from Delhi. The city is known as the Manchester of India, accounting for 95 percent of the country's woollen knitwear, 85 percent of the sewing machines and 60 percent of the bicycle and bicycle parts. The knitwear cluster of Ludhiana is more than a hundred years old. The industry is highly decentralized with the presence of different sizes of units. The small knitwear units are located in the residential areas around Sunder Nagar, Madhopuri, Brahmpuri, Shivpuri, Purana Bazar and Bahadur road. The medium and large units are located in the outskirts of Ludhiana in the Industrial Area, Focal Point, and Chandigarh Road or Jalandhar road.[19] A wide range of summer and winter wear products are manufactured in the cluster. The main products for winter wear include sweaters, socks, pullovers, cardigans, thermal wear, gloves, muffler, caps, shawls, jackets, jersey, and blankets. For summer wear

[17] Study on Brand Building in Clusters to Improve Competitiveness of MSMEs. SIDBI
[18] Development of Knitting and Knitwear Sector. 2019. https://textilevaluechain.in/2019/03/11/srtepc-lauded-the-honble-textiles-minister-for-launching-the-scheme-for-development-of-knitting-and-knitwear-sector/
[19] Study on Brand Building in Clusters to Improve Competitiveness of MSMEs. SIDBI.

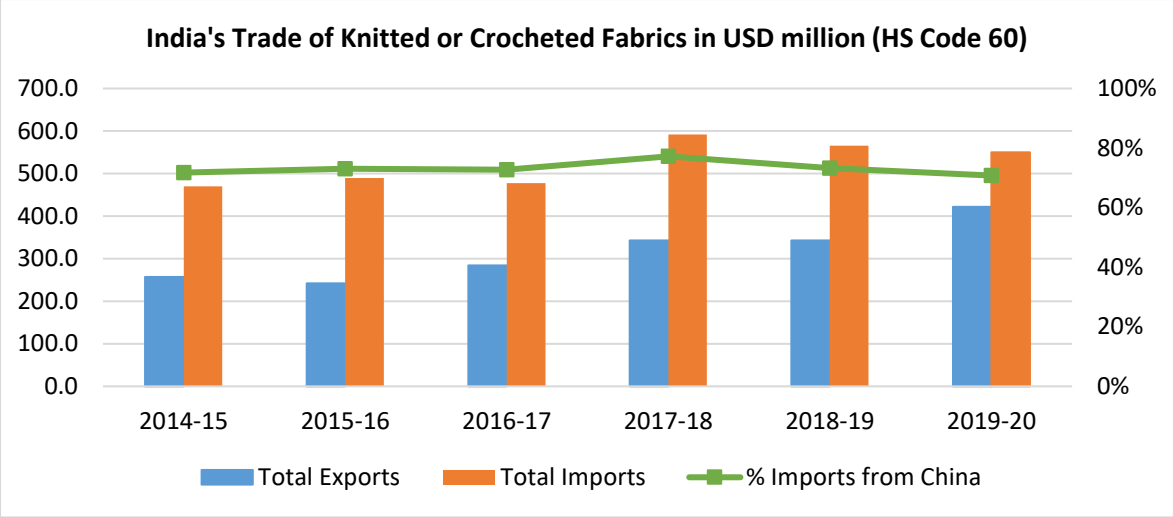
the main product are T-shirts, cotton and blended socks, under garments, bed sheet, skirts, tops, sportswear, night suits etc.

9. Imports

Knitting and knitwear sector is predominantly a decentralized sector comprising of large number of micro, small and medium enterprises. India faces severe competition in this segment from global textile majors such as China, Bangladesh, Vietnam, Indonesia, Pakistan and Sri Lanka. According to studies, availability of large variety of designs, material quality and cheap prices of Chinese products (which are 15 to 20 per cent less than locally made products), they have occupied around 20 per cent of the Ludhiana market.[20] The availability of advanced machinery and latest technology makes China a global leader in the textile sector. Majority of the polyester yarn in India is imported from China. In addition, synthetic based knitted fabric, lycra, super poly, winter fabric etc. are also imported from China.

The main export destinations for the knitwear products from India include the USA, Europe, Sri Lanka, Bangladesh and Nepal. Export of finished knitwear products from Ludhiana is about 0.23 billion USD.[21] Whereas, the country imports more than 70 percent of the Knitwear fabrics from China (see figure below). India's major exports to China include cotton and cotton yarn, accounting for 40 per cent of its total cotton yarn exports.[22] However, it massively imports synthetic yarn and synthetic fabric from China. In addition, India's imports of pigments, chemicals and colours from China are also significantly high. The outbreak of the COVID-19 pandemic has disrupted the supply of raw materials such as polyester, chemicals for dyes etc. from China and has propelled the prices for many industries including the knitwear industry of Ludhiana.[23] The share of China in the world knitwear market is 25 to 40 percent while that of India is only 3 to 5 percent.

[20] Ludhiana Hosiery Industry Fighting for Survival. https://pcte.edu.in/blog/2019/11/11/hosiery/
[21] Study on Brand Building in Clusters to Improve Competitiveness of MSMEs. SIDBI.
[22] Indian Textile Industry Post Covid-19 outbreak: An Analysis. https://www.fibre2fashion.com/industry-article/8653/indian-textile-industry-post-covid-19-outbreak-an-analysis
[23] Ibid.



Source: Ministry of Commerce and Industry, Government of India

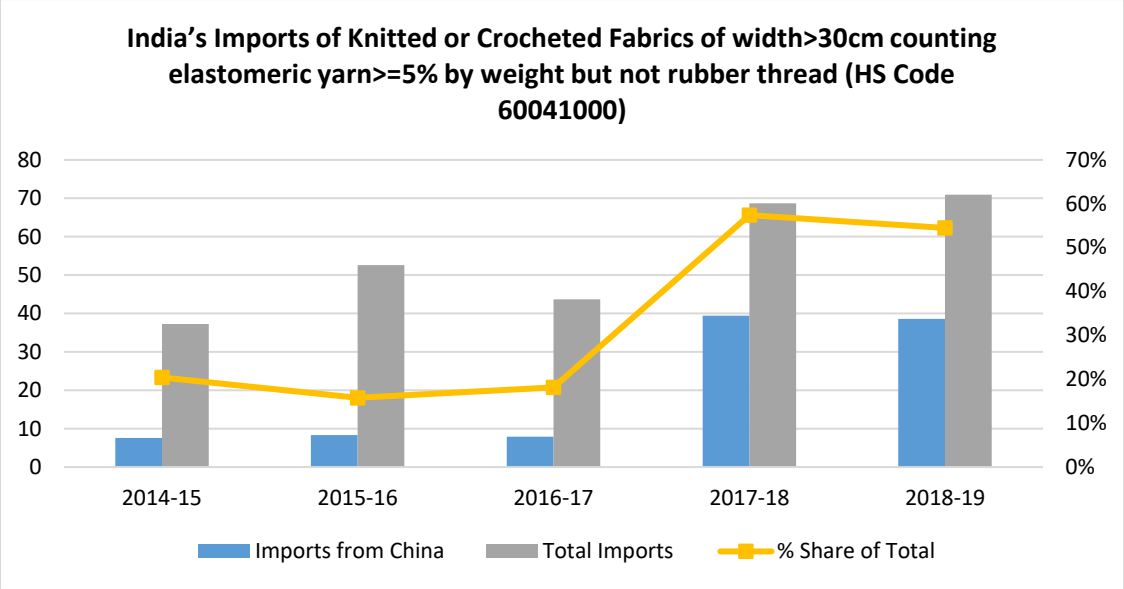
Some of the major knitwear fabrics imported by India from China are discussed below:

Knitted or Crocheted Fabric of Synthetic Fibres (HS Code - 600410)

India's total imports of knitted or crocheted fabric of synthetic fibres in 2019-20 stood at USD 53.1 USD million, of these imports from China accounted for 73 percent.[24] The imports from China for the knitted and crocheted fabric have been increasing significantly over the last few years. A specific product under knitted synthetic fabric which is largely imported from China is the ***Zurich four Way Lycra Fabric*** **(HS Code 60041000)** ***used for track pants, yoga pants and shorts***. It is high quality Lycra with great strength and stretch. The fabric has gained significant share in the Indian markets due to its lower cost and good quality. Based on stakeholders' discussions it is estimated that there is a difference of INR 10-15 per Kg in the production cost of this fabric between India and China which roughly accounts for ~10 percent of the total cost. The cost of dyeing the fabric is also high in Ludhiana as compared to other cities such as Panipat due to which the dyeing process is gradually slowing down in the city.

The below graph shows that the import of Lycra fabric from China has increased from USD 7.6 million in 2014-15 to USD 38.63 million in 2018-19, an increase of more than 400 percent in the last five years, accounting for an increase in China's share from 16 percent to 54 percent of India's total imports for this product category.

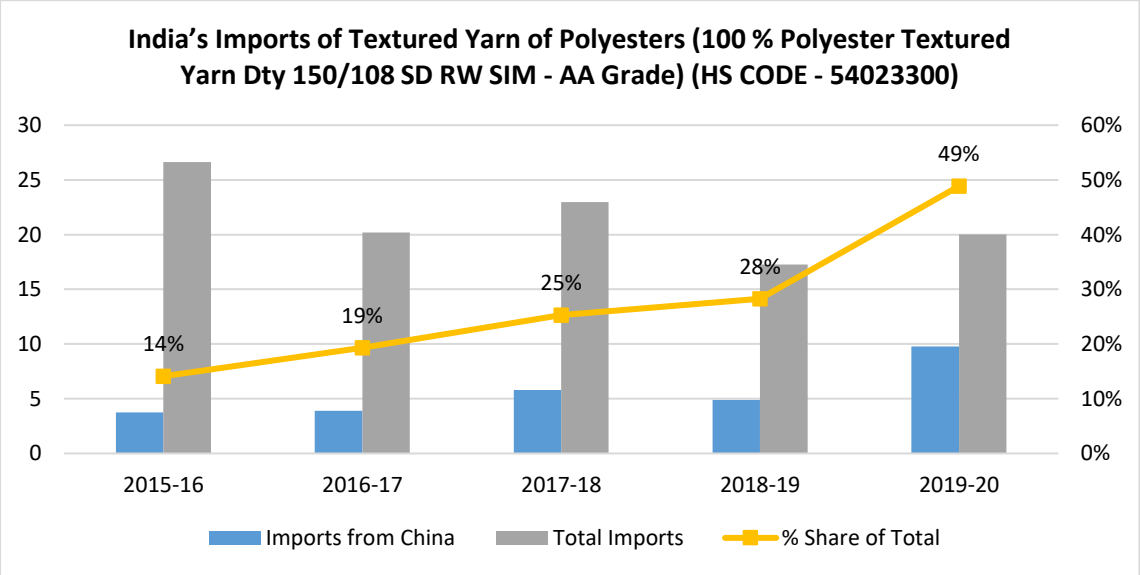
[24] The import custom duty levied on knitted or crocheted fabric of synthetic fibres products is 25 percent.



Source: Ministry of Commerce and Industry, Government of India

Textured Yarn of Polyesters (Grade 105/108) (HS CODE - 54023300)

Imports of polyester of grade 150/108 has increased from USD 3.76 million in 2015-16 to USD 9.78 million in 2019-20. China's share accounted for around 50 percent of India's total imports of the product. With a price difference of 10 to 15 percent for the polyester based products, the low price Chinese fabrics are flooding the Indian markets. However, a similar quality of polyester is also made in Surat at a lower price compared to Ludhiana mainly because the unit size in Ludhiana is small. Each unit has around 2 to 5 machines making it difficult to produce in bulk and achieve economies of scale. Hence, the impact is reflected on the final price of the production cost.



Source: Ministry of Commerce and Industry, Government of India

The industry has taken a hit by the pandemic resulting in an increase in the cost of raw material. An increase in crude oil prices has impacted the polyester prices not only in India but globally as well. *Lycra's price before the pandemic were INR 410 per kg which have doubled and reached at INR 800 per kg in the recent times.*

4. SWOT Analysis

Ludhiana has around 14,000 industrial units of which 9,800 are micro, 2,800 are small and 1,400 are medium units.[25] Majority of the production from the cluster is consumed domestically by different states of the country, while only 20 to 30 percent is exported. The garment manufacturing process involves conversion of fibre into yarn, then yarn into fabric. The next stage involves dyeing or printing of the grey fabric which are then fabricated into garments. Main raw materials used in the knitwear industry include fibre/yarn such as cotton, wool, acrylic, polyester, nylon and viscose, chemicals for dyeing, softeners, colours etc.

Garment Manufacturing Process

Strengths

Ludhiana knitwear cluster is the 2nd largest cotton and blended yarn producer in the country and the biggest manufacturing cluster for textiles in North India. The cluster caters majorly to the domestic market and has availability of rich resource base and a robust spinning capacity.[26] The Ludhiana knitwear industry manufactures the entire range of winter and summer wear for men, women, and children. Knitwear manufacturers (including manufacturers-cum-traders/exporters) form the core of the cluster. The products include high-fashion garments, T-shirts, sweat shirts, pullovers, jackets and grey fabric. Spinners, dyers and sub-contracting knitting units provide backward process support. The industry is highly labour intensive and provides direct and indirect employment to about 400,000 people. There are around 70 industry associations in the cluster representing various interest groups such as exporters, dyers, readymade hosiery manufacturers, spinners, knitters etc. For example, Apparel Exporters Association of Ludhiana (APPEAL), Knitwear and Apparel Manufacturers Association

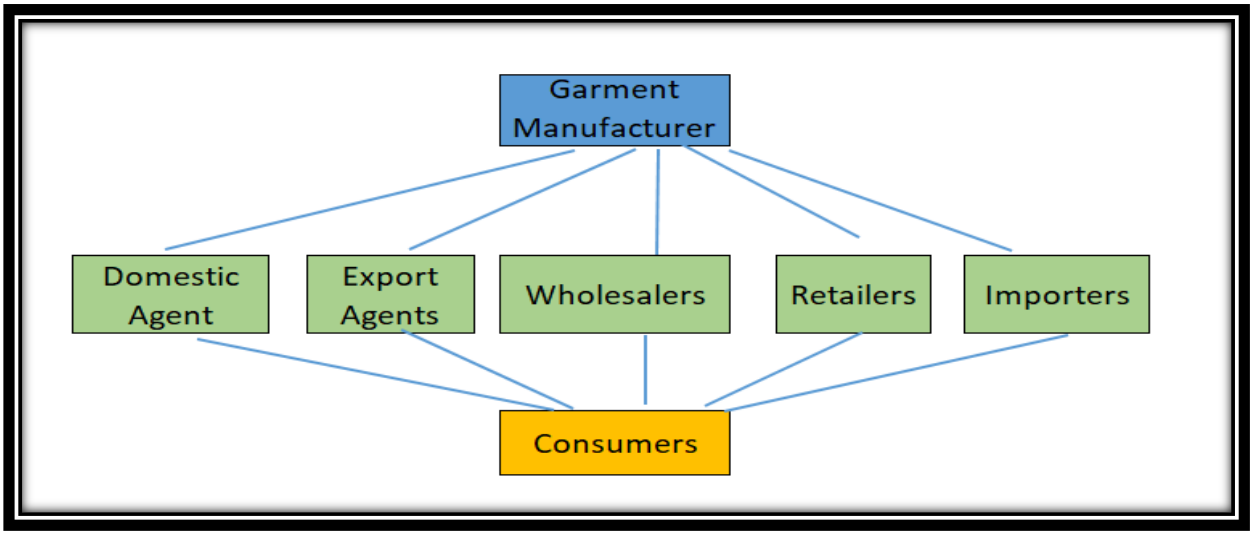
[25] Ludhiana Knitwear Cluster Profile. http://sameeeksha.org/pdf/clusterprofile/Ludhiana_knitwear_cluster.pdf
[26] Apparels and made-ups, technical textiles. https://pbindustries.gov.in/static/manufacture_industry;Key=Apparels_and_Madeups

(KAMAL) etc., focusing on exports, skill development, product introduction, technical upgradation, quality improvement etc.

Weaknesses

The cluster contributes about 90 percent of India's output of woollen/acrylic knitwear. However, the industry is highly unorganized and lacks the advanced machinery and knowledge about latest fashion technology and trends. The units are facing an increasing raw material costs, costly power and difficulties in getting requisite financial support from financial institutions. Presence of large number of small units makes it difficult to achieve economies of scale. The marketing channel of the cluster is based on horizontal networking among units specializing in different parts of the production process and information on market is shared among producers through intermediaries such as wholesalers, retailers and other marketing agents. The knitwear sub-sector has five core distribution channels (see below), the marketing agents take away some portion of the sales as commission of the entrepreneur and the indirect link limits the opportunity for receiving feedback from the costumers, which lowers loyalty and reduces profit margins.

Distribution Channel in the Knitwear Manufacturing



Source: Diagnostic Study Report, SIDBI, 2010

Opportunities

While the domestic apparel market of the country is around 9 billion USD in which the knitwear segment share is only 15 percent share. Based on research on the per capita consumption of fabrics, the per capita consumption of knitted fabrics is 31 kg in the US, 20 kg in the EU and 24 kg in Japan, whereas in India the per capita consumption is 0.2 kg per annum.[27] This shows that there is huge scope for growth of knitted fabric in India on export market. The cluster misses out on many opportunities

[27] Study on Brand Building in Clusters to Improve Competitiveness of MSMEs. SIDBI.

to cater to the global market due to absence of advanced machinery, for example, the units in the cluster could easily capture the fabric market for automobiles in Greece with the availability of specific machinery. There is a huge scope in investment and exports of man-made fibres which can unleash the cluster's growth together with technical textiles and blends.[28]

Threats

The knitwear industry of Ludhiana is facing several challenges to compete with the global manufacturers. High cost of raw materials is the leading cause for India's knitwear industry losing advantage to other countries primarily to China. The manufacturers in Ludhiana's dyeing and knitwear industry are worried over the ever-increasing prices of yarn. The COVID-19 pandemic has taken a toll on various processes of the industry – the rate of dyeing fabrics has increased significantly. This has resulted in an increase of 20 to 25 percent in prices of raw material.[29]

The industry is facing an acute shortage of labour and an increased labour cost. Additionally, the easy availability of low price Chinese fabric is impacting the share of Indian suppliers. *For example, the demand for polyester fabric in sportswear and ladies nightwear segment is significantly high. But the export surplus fabric from China is available at lower prices than the Indian manufactured polyester fabric. The cost difference is at least 10 to 15 percent. Despite the superior quality of Indian fabric the demand for China's fabric is high in the domestic market owing to its lower price and easy availability.*

5. Challenges

Based on stakeholders' discussions the major challenges faced by the industry are listed below:

High Raw Material Cost - One of the major issues faced by the SMEs in the knitwear cluster of Ludhiana is the increasing raw material price. The prices of raw materials for various types of yarn such as cotton, polyester, acrylic, blended and also the chemicals used for dyeing the fabrics (majorly imported from China) have been increasing frequently. The yarn is produced in mills and the knitwear SMEs of the cluster obtain these from sub-agents or traders. Based on stakeholders' discussion, due to the constantly changing prices of the raw material, the small and medium enterprises of the cluster are unable to stand by their quotations to the client. This is accompanied with an increased imports of various yarns and fabrics from China, for example, as shown in charts above, India's imports of textured yarn of polyester has increased from 14 percent in 2015-16 to 49 percent in 2019-20 from

[28] Industrialists Demand Mega Textile Park in Punjab. TribuneIndia. https://www.tribuneindia.com/news/business/industrialists-demand-mega-textile-park-in-punjab-48710

[29] Ludhiana Dyeing Industry Bears the Brunt of Rise in Raw Material Rates. https://www.hindustantimes.com/cities/ludhiana-dyeing-industry-bears-the-brunt-of-rise-in-raw-material-rates/story-gIqk4lHDtfOxkWZj9bDbOK.html

China. Imports of lycra fabric has increased by more than 400 percent in the last five years – from USD 7.6 million to USD 39 million.

Source: Stakeholders' Discussion

Lack of Advanced Machinery - In addition to the high raw material price, lack of advanced machinery lowers the quality and quantity of production in India. Majority of the units in the cluster use second-hand machinery imported from China due to which the sales of domestic machinery manufacturing units has drastically reduced. Use of old machinery hampers the production of the units, where 80 percent of the knitwear MSMEs use outdated and second-hand machines which are scraped or discarded by the Chinese firms.

A knitwear machinery in India produces 350 kg of fabric in 24 hours while China's machinery produces 500 kg in the same time. The major gap between the two is in the fabric processing stage where India lags behind China.

Limited Skill Development and design Innovation - In the fast fashion industry there is a constant pressure to introduce new products and new designs. Skill development and introduction of innovative designs is a challenge as the cluster employs outdated machines and is not up to date about the changing trends. Manufacturing the internationally demanded and trending designs requires good quality yarn dyes, chemicals, softeners etc. Also, the cluster lacks in introducing new designs due to lack of investment and low efforts in R&D. A large number of units rely on the overseas buyers and large players in the market to develop designs.

Lack of Financial Support – Stakeholders' discussion reveal that there is a lack of adequate financial support by the government for the growth of MSME cluster of Ludhiana. For example, majority of the polyester yarn in India is imported from China. To manufacture the same fabric in India, it would require to import machinery worth INR 30 lacs and raw material cost would be INR 10 lacs – which would be a costly for the small and medium units of the cluster in the absence of adequate financial support. In addition to the high taxes which the manufacturers have to pay on yarn, raw-material etc., high duty on import of machinery is also hampering the growth of the cluster. Increased electricity cost in the region is also a huge component of overall cost in the industry restricting it to compete with the global majors.

Lack of Awareness about Financial Support – In addition to lack of adequate financial support from the government there is lack of awareness about the various credit and loan schemes available for the MSMEs to avail loan, purchase machinery etc. An information gap between the firms and the government on the various schemes such as collateral free loans needs to be filled in for the progress of the cluster.

Lack of Textile Testing Laboratory – The absence of textile testing facilities in Ludhiana particularly for exports is a major challenge faced by the industry.[30] For the exporters it is essential to meet the dyeing related and other benchmarks of the destination country. In the absence of such a facility in Ludhiana, the manufacturing unit have to send the samples to laboratories in Delhi, Mumbai and Bangalore to get the certification for exports which takes approximately 7 to 8 days. Besides, adding up to the time, the testing charges in these labs are also high.

High Logistics Cost - In Ludhiana, some of the raw material and fabric is imported from various parts of the country such as Surat, Mumbai and Panipat. The high cost and time involved in importing the raw material increases the cost of production for the units. For instance, it takes approximately 3-4 days to transport material from Surat or Mumbai to Ludhiana. The poor condition and congestion on roads delays the transit time. On the other hand, imports from China also consume a lot of transit time but importers believe that the overall timing of locally produced fabric is roughly the same. Rather, the advantage with Chinese fabric is that it is of superior quality and can be procured at a lower cost.

6. Action Plan

The MSME sector is the backbone of the Indian national economy. The sector is the strongest driver of economic development, innovation and employment - contributes 31% to India's GDP (2019-2020) and provides employment to 114 million people of the country.[31] The knitwear industrial cluster of Ludhiana accounts for about 90 percent of the nation's output of woollen and acrylic knitwear. However, there is a need to improve the cluster's competitiveness and gain reputation in national and international market, and promote cluster level brand through a common platform.

A common platform comprising of a group of stakeholders with a common vision which aims to make the branding process more effective and sustainable. Ludhiana knitwear industrial cluster is known domestically for their design catering the needs of both high-end and low-end customers, however,

[30] Textile Testing Lab at Ludhiana. https://www.business-standard.com/article/sme/nod-to-textile-testing-lab-at-ludhiana-108072101041_1.html
[31] MSME sector is the backbone of India Economy. https://pib.gov.in/PressReleasePage.aspx?PRID=1591650

the cluster is still lacking in new designs because of no efforts being put on R&D. Through skill development, training and continues innovation, the cluster will be able to offer differentiated products. The cluster lacks certain market infrastructure facilities such as an international level exhibition centre for buyer-seller meets is needed so that it is easier for the buyers from abroad to visit Ludhiana. Replacement of old machinery with new machinery will help in improving the scale of production and quality of the product in garment manufacturing.

7. Recommendations

A Regulatory Body to Keep a Check on Raw Material Prices - A constant increase in the prices of raw material, such as yarns - cotton, polyester, poly cotton and spandex yarn, and packing material causes a rise in the overall product cost. The high cost of raw material is a major cause for India's knitwear industry losing advantage to other countries primarily to China. Due to high cost of raw material (domestic and imported) the price of the final product increases and the manufacturers earn less profit. For example, import duty on synthetic fabric (HS code 6004) includes 25% Basic Duty, 5% CVD and 10% Special CVD.

Stability in raw material domestic price and lower import duty from other countries is crucial for the success of the sector. Establishing a regulatory body by the associations such as Northern India Textiles Mills Association (NITMA), Apparel Exporters Association of Ludhiana (APPEAL), Knitwear and Apparel Manufacturers Association (KAMAL) to keep a check on the irregular movement of price of raw material like yarn is important for the growth of the cluster.

Establishing a Dyeing Zone in Ludhiana - Due to the pandemic the price of dyeing polyester fabric has increased by INR 3/kg, while that of dyeing cotton fabric has been hiked by INR 5/kg. Lack of dyeing centres in Ludhiana impacts the overall cost of garments. High input cost and lack of infrastructure hampers the growth of the dyeing units. The dyeing units are struggling for business due to increase in input cost. The dyeing cost of Zurich four way lycra is INR 80 per kg in Ludhiana while the same costs INR 40 per kg in Surat. Currently, majority of the fabric manufacturers from Ludhiana send their fabrics to Panipat for dyeing. MSMEs should be supported by local associations to provide with infrastructure for setting up a dyeing zone. A well-equipped dyeing zone in Ludhiana (similar to Panipat) will save significant cost and time of the manufacturing units.

Increased Investment in Advanced Machinery - Majority of the industries in the cluster use outdated and second hand machines impacting the quality of final product. Increased investment in advanced machinery for improving the scale and quality of production. A reduction on import duty on import of machinery parts or provision of subsidies to import from other countries will help in strengthening the

manufacturing base of the cluster. For example, the garment and knitwear industry of Bangladesh has the facility for tax free import of advanced machinery from other countries, which gives the country a competitive advantage in the sector.

The cluster misses out on many opportunities to cater to the global market due to absence of advanced machinery, for example, the units in the cluster could easily capture the fabric market for automobiles in Greece with the availability of specific machinery. Tax free imports of machinery such as *Jersey machine, Double jersey circular interlock machine, Interlock Open ware Machine, Flat knitting machine and Warp knitting machine (HS Codes - 84471190, 84471290, 84472090), costing between INR 13 lac to 28,* will help in improving the scale of production and quality of the product in garment manufacturing.

Machinery Suggested by Stakeholders'

- *Jersey machine*
- *Double jersey circular interlock machine*
- *Interlock Open ware Machine*
- *Flat knitting machines*
- *Warp knitting machines*

Skill Development Institutes and Collaboration with leading Fashion Training Centres - Lack of skill development and introduction of innovative designs as the cluster employs outdated machines and is not up to date about the changing trends. Lack of fashion forecasting and low availability of high demand fashion fabrics remains a challenge to compete with global majors. To strengthen Ludhiana's MSME cluster, the government should take necessary steps to promote local manufacturing of fabrics, garments and value addition in fabrics.

Establishing skill training centres to train labours on new designs, use of machinery etc. by increased efforts from the local associations with institutes such as the Apparel Training and Design Centre (ATDC) to increase share of the cluster in domestic and international markets. Weekly workshops could be organized for this purpose. Students from fashion institutes should be given practical training of machineries, designs and fabrics through internship programs with the manufacturing units. Women should be encouraged to take active part in the industry.

A Certified Textile Testing Facility in Ludhiana - Textile testing in labs takes around 7-8 days for manufacturers in Ludhiana. In the absence of textile lab testing facility in the city, the exporters have

to send the samples to labs in Delhi, Mumbai and Bangalore. Since the trends are changing rapidly absence of a textile testing lab impacts the textile units. Conducting dyeing tests is difficult for the MSME units of the cluster, therefore, the required tests are carried out in labs located in Delhi and other areas. There is a need to set up a fully equipped lab for textile testing in Ludhiana such as yarn, chemicals, colours, fabrics etc. In addition, a Research and Development unit could significantly improve the working of the industry. This will help in reducing the cost and time and increasing exports from the cluster.

Increased Financial Support - There is a lack of adequate financial support by the government for the growth of the cluster. In addition, a lack of awareness about the various credit and loan schemes available for the MSMEs restricts industry expansion. To compete in the global market, the industries in the cluster need increased financial support from the government such as increased funding, lower electricity cost, high subsidies on import of raw material and machinery, reduction in import duty.
Workshops organized by local associations with Small Industries Development Bank of India (SIDBI) to increase awareness amongst the manufacturers on various credit schemes such as *Technology Upgradation Fund Scheme, Credit Linked Capital Subsidy Scheme, Women Entrepreneurship and Cluster Development Scheme etc.* should be organised frequently.

Improvement in Infrastructure and Enhancing Operational Efficiency - The high cost and time involved in importing the raw material from other parts of the country increases the cost of production for the units. For instance, it takes approximately 3-4 days to transport material from Surat or Mumbai to Ludhiana by road. The high logistics cost for domestic movement of goods is a challenge faced by firms at a national level. Poor condition of roads, lack of first and last mile connectivity issue in railways etc. adds up to the cost and transit time. Strengthening the logistics infrastructure is important for smooth movement of goods. Increased role of private sector and third party logistics players will make the domestic logistics more competitive and efficient.

A common platform to conduct buyer-sellers meet - There is a lack of a common portal to generate export queries, discussion about new designs, raw material and fabrics. A common platform is needed to conduct regular buyer-seller meets. Infrastructure for an international level exhibition centre for marketing of products for international buyers is critical for the success of the cluster.
The portal could be developed in collaboration with the associations to generate export enquiries from countries across the world. This would help the manufactures in getting international orders easily and at lower cost; unlike the already existing portals which charge high fees for generating

export queries. This portal could also be used for discussion on new designs, fabrics etc. - awareness among the manufacturers about the latest trends in the international markets and customer-oriented designs and value addition to the products.

8. Name of the industrialists / dignitaries contacted

Company Name	Mobile no
Atul SAS Knit	98156-14494
Chiraag Jain Parago	97813-99555
Kay Pee Knitwear	9815183688
Knit Abhinavdan	99144-00699
Knit Ankit Jain	99142-09070
Knit Ashish Jain	788491220
Bladev Raj Gabba	9216225885
Knit Bhatia	9915970007
Knit Bhawna Fabrics	7986711558
Knit Bittu R.R Knit	9814319112
Knit CK Fab	9501859994
knit CTM	9876301817
Deepu Jain	7508499000
Knit Friends Fabrics	9855366974
Knit Gaurav	98145-45883
Gautam Jain	9814007540
Gc Fabric	9814656008
Guddu Master	8054255257
Gurcharn Singh	8270000008
K.S. Darhan	9814002723
Kesaia Adiya	9719205340
Kunal Gupta	9915663344
Manish	9915870007
Knit Manjit	9888098680
Manu Sharma	9815680008
Mintu Bansal	77173-70324
Mukesh Ji KRP	9356703705
Mukesh Ldh	92166-32611
MunishKashmir	9814920910
Naresh Fabric	9855233160
Orca Fabric	9501206760
Prateek Jain	9814584892
Rajan Fabric	98150-74956
Rajnesh Khanna	98721-55558
Rakesh Kappor	98140-26080
Rakesh Uppal	9988358431
Rama Vallabh	9464280313
Rinku Kali Sadak	98142-05797
Rippy Gupta	9814825378
CTM	9876301817
Deepu Jain	7508499000

Friends Fabric	9855366974
Sahil Abhinadan	9814007672
Sunny Girnar	8196076000
Umapati Shartri	9779561995
Waheguru Harsh	9914323238
Yashpak prince	9872872051
Davinder Singh	9814834021
Deepak	9988889403
Lucky Khanna	987215557
Navneet Gupta	9888880499
Rokey	9815000457
Boby Stallion	7814511799
Hitesh Anand	9814111337
Hitesh Jain	7888695959
KS Fabric	9216572052
Munna Yadav	7087444565
Paramjit Wah	9872800620
Preet Bedi	7888895401
Pritpal Singh	9872075444
Raj Kumar	8558089310
Rajat	7009712748
Raju HC Knits	9876020121
Rohit Mohindru	9915006645
Ruchit Jain	9815511233
Shiva Fabric	9815000243
Sumit Kumar	7087777843
Vinod Kumar	9316057982
Dhillon	9878921801
Moti Knit Fab	9023091924
R.P. Knitwear	9815937778
Radhka Knitter	8196003000
Rajan Ji Shoshi	9781300990
Rajesh Bhaiya Radhika	7837140007

Firozabad - Glass Cluster

10. Objective

The study primarily focuses on the challenges and opportunities in the glass cluster of Firozabad. It simultaneously identifies the imported items that can be substituted by Indian Products, manufacturing by the MSME cluster and enhance capacities among identified products. The purpose of the study is to identify the challenges faced by the Firozabad glass cluster including Tariff and Non-Tariff Measures such as import duty, technology and infrastructure barriers and hence, suggests recommendations to improve the cluster's growth and capacity to compete with international standards and meet local demands.

11. Brief about Cluster

The global glass manufacturing market size was valued at USD 127.1 billion in 2019 and is expected to grow at a compound annual growth rate (CAGR) of 4.1% from 2020 to 2027. The industry generates yearly revenue of ~USD 90 billion.[32] Increasing demand from the residential and commercial infrastructure projects, growth in the automotive and transportation sector, electronics and semiconductor industry, and infrastructure development in emerging economies are some of the factors that have driven the demand for glass in recent years.

India's glass industry is more than 200 years old. The first glass plant in India was set up in 1908. The industry is largely unorganized, consisting of many micro and small players, while the organized sector is dominated by a few large players. The growth in the industry is led by the container glass segment as it constitutes a large part of the total production. The glass industry is highly energy-intensive, and the average energy cost as a percentage of total manufacturing cost is about 40 percent in the Indian glass industry. The major glass-producing states are Uttar Pradesh, Maharashtra, Gujarat, Andhra Pradesh, Tamil Nadu, and Karnataka.[33]

In India, Firozabad is the central hub for many glass manufacturing units and one of the leading manufacturers and exporters of glass products. Firozabad, popularly known as the glass city of India, is located near Agra in Uttar Pradesh. The city is famous for the production of exquisite glassworks. The glassware industry has existed since the Mughal Empire and till the present, it is categorized as one of the major economic activities in Firozabad. The industry started with the melting of rejected

[32] Glass Industry Market Analysis Report. https://www.grandviewresearch.com/industry-analysis/glass-manufacturing-market
[33] Glass Industry Research. CARE Ratings. 2018

and disposed of glass items, brought in by international travellers, in a locally manufactured furnace. The discarded items were melted to create bangles and small bottles and subsequently, bottles for scents, cosmetics, and other products also began to be manufactured and exported from the city. For many years, the industry remained a cottage industry, but it transformed and developed gradually. From basic mouth-blown and hand working processes, the industry has evolved to adapt to modern processes and automation. However, traditional methods continue to play a large role in the manufacturing of products such as decorative items and tableware that are exported globally.

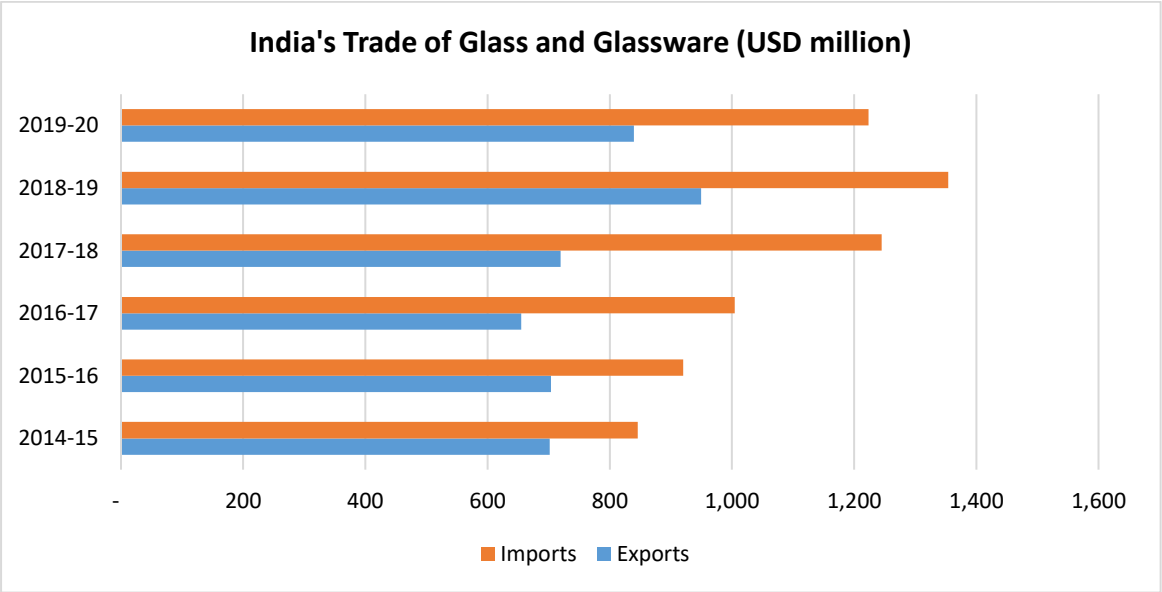
12. Imports

Glass is an inorganic product that is produced by melting a mixture of silica, soda ash, and calcium compound with the desired metallic oxides that serve as colouring agents. Glass products are used widely in households, construction, laboratories, and consumer items such as bangles, jars, bottles, tableware, beads, chandeliers, etc. The glass industry consists of four segments: Container, Specialty, Flat, and Fibre.[34]

Container Glass	Specialty Glass	Flat Glass	Fibre Glass
It the largest segment in the glass sector and comprises glass packaging for drinks, food, perfumes, and pharmaceuticals.	Specialty glass constitutes one-third of the total global glass production. It is mainly used for technical applications such as optics, electronics, lighting, engineering, ophthalmic lenses, etc.	Flat glass accounts for 16 percent of the total global glass production. It comprises float glass, rolled glass, cast glass, and other flat glasses used mainly in the construction industry, automobile, and solar panels.	Fiberglass consists of thin filaments of glass fiber that are used primarily as reinforcement material in polymer products. Used mainly in aircraft, boats, automobiles, bathtubs, swimming pools, septic tanks, etc.

Due to a lack of advanced techniques and innovative designs, India remains a net importer of glass and glassware. India exports mainly to countries such as the USA, UAE, Nepal, UK, and Germany. On the importing side, China remains India's main importing partner, followed by the USA, and Malaysia among others. In 2018-19, the country's imports stood at USD 1,354 million while the export value was USD 949 million. The imports for glass and glassware have increased by 45 percent from 2014-15 to 2019-20, while exports have increased by only 20 percent in the same period.

[34] Glass and Ceramics Market and Opportunities. IBEF



Source: Ministry of Commerce and Industry, Government of India

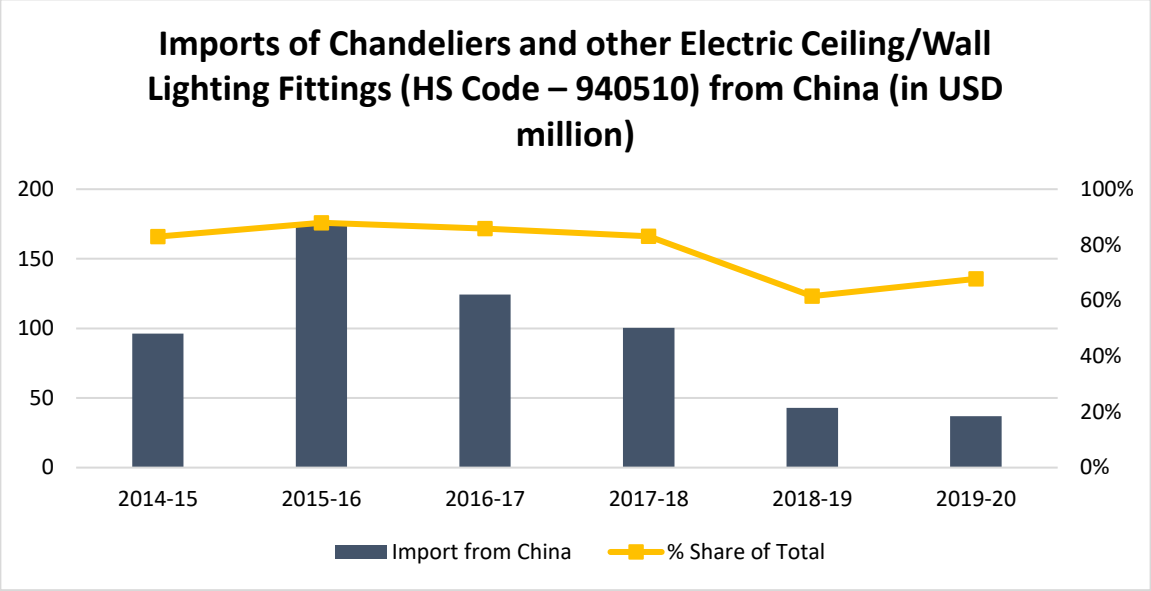
Some of the major glassware products imported by India from China are discussed below.

Chandelier and Electric Ceiling/Wall Lighting Fittings (HS code 940510)

The global lighting fixture market size was valued at USD 99.36 billion in 2019 and is expected to expand at a CAGR of 4.5% from 2020 to 2027. Increasing demand for energy-efficient products in the residential and commercial sectors is expected to drive the market in the forthcoming years. India accounts for almost 3% of the world's consumption of lighting fixtures, in 2016 the lighting fixtures market was worth approximately USD 2.5 billion. The Indian market has grown at an average rate of 7.1% per year.

The Indian lighting fixtures market is dominated by few major manufacturers, however, there are more than 1,000 medium and small manufacturers in the sector. India's total imports of chandeliers and electric ceiling/wall lighting fittings in 2019-20 stood at USD 54.5 million, of these imports from China accounted for 68 percent. A wide range of chandelier designs offered by China is incomparable with a few products and designs manufactured in India. For instance, there are around 400 designs of chandeliers in Indian markets, of which only 10 are made in India. Chandeliers from China offer a high value for money compared to Indian chandeliers. Their prices are lower and the quality is better and it is easy to import the products from China.[35]

[35] https://www.thedollarbusiness.com/magazine/chandelier---all-that-glitters-can-be-worth-gold-/29272



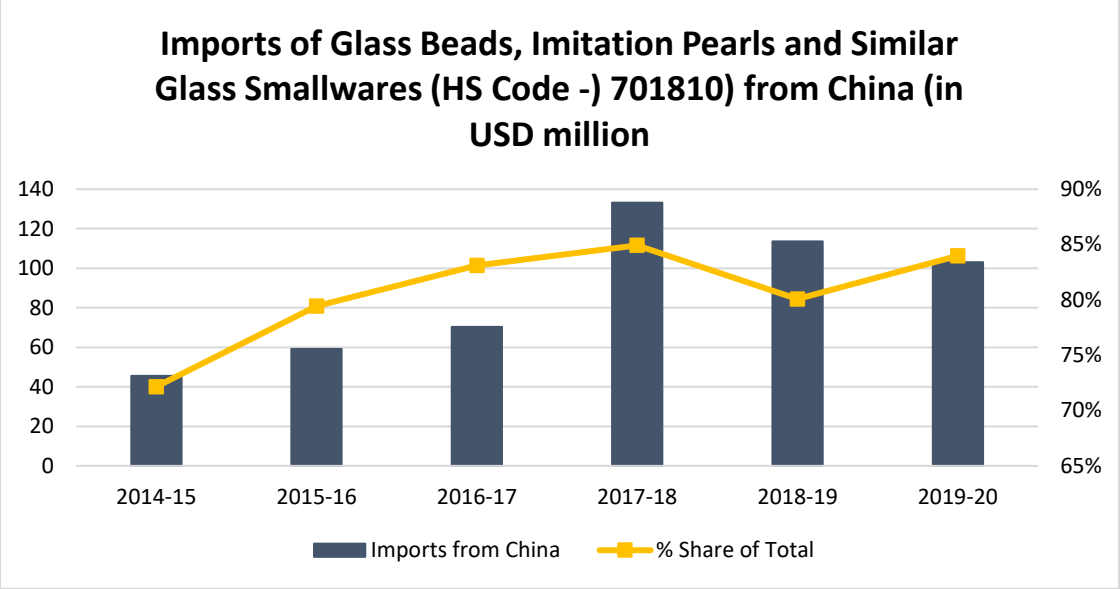
Source: Ministry of Commerce and Industry, Government of India

Crystal chandeliers from China are particularly popular in Indian markets made by fusing intricate glass parts at very high temperatures and milting silica sand in a furnace along with lead, hot ash, and other ingredients. Combining these materials, especially lead oxide, makes crystal heavier and sparkling. The addition of lead oxide improves the quality further, as the glass becomes better at reflecting the light.

Chandelier manufacturing has been completely stopped in Firozabad due to reasons such as inability to keep pace with the changing market trends, lack of good quality raw material, lack of investment in machinery, energy crisis, and lack of technology. China's chandeliers are metal-based which are easy to maintain, while those made in India are steel based which are not in demand anymore. Besides, the margins for importing from China revolves around 10-15%, descent enough for traders in India to import from China rather than manufacturing domestically.

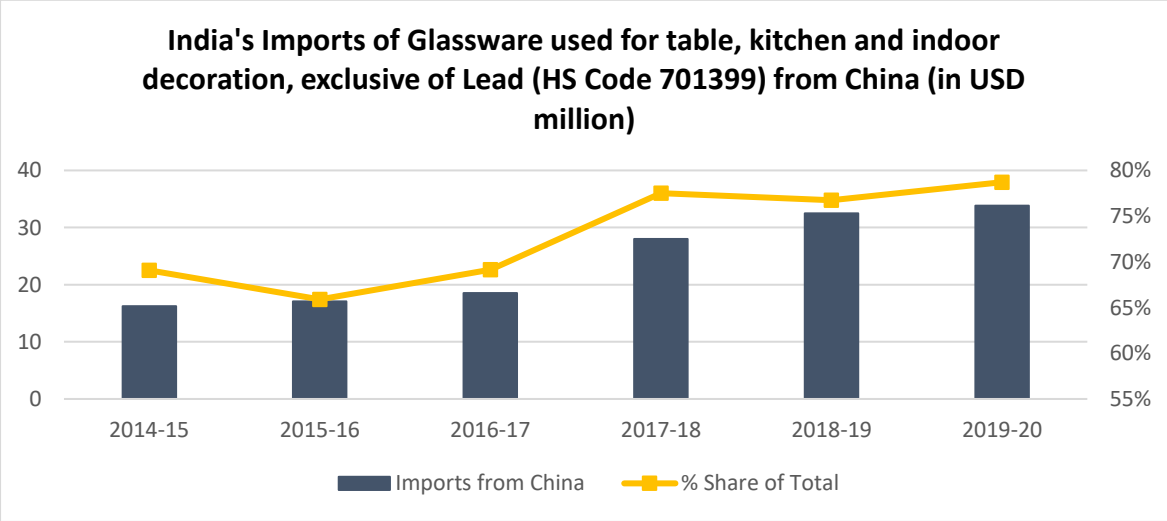
Other Glass Products Imported from China

Other small glassware items such as glass beads used on garments, which were once a Firozabad specialty, are now imported from China. In 2019-20, India's total import value of glass beads was USD 123 million of which USD 104 million was imported from China, accounting for 84 percent of total product imports. The biggest jump in imports was witnessed in 2017-18 from 2016-17 witnessing a growth rate of approximately 90 percent.



Source: Ministry of Commerce and Industry, Government of India

Similarly, India's imports of glassware such as tableware, kitchen products (glass tumblers) have increased significantly from China. In the last few years, more than 65 percent of India's imports of table and kitchen glass products were from China, the share increased from 69 percent in 2014-15 to almost 80 percent in 2019-20. This is mainly due to absence of advanced machinery, lack of innovative designs, high prices, and low-quality glass produced in the cluster.



Source: Ministry of Commerce and Industry, Government of India

4. SWOT Analysis

Majority of the population of Firozabad has been engaged in the culture of making utility and decorative glass items such as coloured bangles, jars, tumblers, signal lamp covers, and headlight covers for automobiles, and laboratory wares, chandeliers, glass toys, among many other products.

The glass cluster forms a significant part of the country's small-scale production units in Firozabad. The city is home to many unorganized units in the surrounding areas as well, run by families or individuals as traditional businesses. There are more than 6,000 units associated with the manufacturing of glass products, however, less than 10 percent of units are registered officially. The industry provides direct and indirect employment to a majority of the population in the area. The city has a marked global presence with its wide range of glass products, generating an annual business of more than INR 2,000 crore.[36]

Majority of the energy requirement of the district is met through natural gas supplied through GAIL. The units with either pot or tank furnace have been allocated the natural gas quota priced as per the Administered Pricing Mechanism (APM). The additional consumption above the allocated quota by an individual unit is charged based on the price of Re-gasified Liquefied Natural Gas (RLNG) which is higher than APM pricing. More than 50 percent of units in the cluster run on gas as fuel to fire the kilns.

Strengths

Accounting for about 70% of the total glass production in small and medium sector in India, the Firozabad glass industry is India's biggest glass industry cluster with the majority of the people employed directly or indirectly in this sector. The units in the cluster have fundamental knowledge of glass manufacturing process. Centre for Development of Glass Industries (CDGI) set up with a focus on improving the performance of the Firozabad Glass Industry and assisting the MSMEs in the design, development, and adoption of new technologies and products for the glass industry. The Technology Centre in Firozabad has a good infrastructure to cater to local glass industry requirements. The main focus of CDGI includes R&D such as chemical analysis of raw materials, refractories, glass chemistry, and glass defects. The other services include consulting services and tip designs for improved energy consumption, stack monitoring for Pollution Control Boards.

Major products manufactured in the Firozabad cluster include bangles, tableware, and containers.

- **Bangles** – The cluster has around 121 bangle manufacturing units, which uses a pot furnace. These are mainly household-operated units and employing around 70 to 100 workers. The methods of production deployed in the units are usually old with minimum modernization such as the use of gas-fired pot furnaces and semi-automatic bangle spiral machines.

[36] Inclusive development of Firozabad glass industry. http://www.aigmf.com/International-Seminar-Firozabad.pdf

- **Tableware** – The cluster contains 20-25 tableware semi-mechanized tableware units serving the domestic and international markets. These units deploy both pot-based and tank-based furnaces for the production of glassware and each unit employs around 100 to 150 workers.
- **Containers**– A total of 15 to 20 container manufacturing units are present in Firozabad, involved largely in the production of liquor and beverage bottles. The container units generally use a tank furnace and semi-automatic processes for the production of final glass, serving the domestic and international markets. The majority of container exports are destined to the US, Europe, and Southeast Asian countries.

Glass and Glassware Producing Units in the District[37]

Unit	Number
Automatic Plant Glass Bottle Manufacturing	18
Mouth Blowing Units	60
Glass Bangle Manufacturing Units	121
Units Installed through MSME	350

Weaknesses

The style of production adopted by the manufacturing units in the cluster has not changed much in the past years. Though many units in the cluster have switched to using gas-fired furnaces, but they use furnaces that have not been replaced over the years and have poor insulation. The glass manufacturing units in this district that form part of the Agra-Tundla-Firozabad manufacturing belt had migrated to use of gas as an energy resource on environmental concerns from 2002 onwards since the emissions from the glassworks were affecting the infrastructure of the Taj Mahal.[38]

The manufacturers obtain raw materials such as soda ash, silica, calcium carbonate, etc. from local suppliers and dealers mainly from Gujarat and Rajasthan. The chemicals and pigments used as raw material are largely imported from other countries. The process for manufacturing is largely labour intensive with techniques ranging from mouth blowing in moulds, machine-blown and press moulding methods.[39] The cluster lacks skilled manpower, accredited testing labs and modern lab and manufacturing equipment.

Opportunities

[37] Firozabad's Bangle Industry May Start amid Lockdown. https://www.patrika.com/firozabad-news/firozabad-glass-industry-start-in-lockdown-6072578/
[38] For Firozabad Glass units, Gas Price Hike is a Real Worry. https://indianexpress.com/article/business/economy/for-firozabad-glass-units-gas-price-hike-a-real-worry-2/
[39] https://issuu.com/shahdhwani/docs/s3_pub_for_issuu

A framework of multiple stakeholders and institutional bodies such as MSME Development Institute Agra, UP Glass Manufacturers Syndicate, and Centre for Development of Glass Industries (CDGI) have been working towards the growth and development of the cluster. CDGI, set up in collaboration with UNDP/UNIDO and the Government of UP, aims to assist the glass industry in improving its overall performance particularly in the areas of technology upgradation, energy conservation, the introduction of value-added glass articles, and skill development.[40] It is equipped with chemical and physical testing of raw materials and finished products, measurement, and control of pollution.

Various initiatives have been taken to promote the development of the cluster such as providing training to workers for the usage of new machines, helping the MSME units to expand their business in new directions, programs for skill development, technical consultancy services, and participation in international spheres. The cluster has potential for a NABL certified body that ensures safety and quality in production process.

Threats

The glass industry of Firozabad is slowly losing its competitive edge over imported goods from China. Currently, the cluster is facing several challenges such as shortage of investments in machinery and technology, lack of good quality raw material, testing facility and a lack of training and expert guidance, limited designs offered by artisans, tariff barriers on import of machinery and raw material, and bureaucratic hassles. Due to lack of innovations, access to advanced machines, and the inability to compete with Chinese dumping and rapidly falling prices, the local manufacturers are leaving their handicrafts in favour of goods imported from China.

Manufacturers in the cluster are struggling with higher costs as compared to their Chinese counterparts on account of having to import many raw material inputs, lack of economies of scale, and shortage of investment. [41] The manufacturing units face several challenges which impede their growth, and the cluster lags behind the global majors in the glass industry. Based on stakeholders' interviews, the Chinese products have overtaken the Firozabad market for many products such as chandeliers, glass beads, tumblers, vases, bulbs, and tableware among others. [42] The units in the cluster are not able to match the prices of the Chinese products. Resulting which many industries have shut down and the glass exports have been witnessing a decline over the years.

[40] Cluster Diagnostic Report and Action Plan Glass Cluster, Firozabad.
[41] Inclusive development of Firozabad glass industry. http://www.aigmf.com/International-Seminar-Firozabad.pdf
[42] https://www.business-standard.com/article/beyond-business/a-requiem-for-firozabad-107020301003_1.html

5. Challenges

Based on stakeholders' discussions, some of the major challenges faced by the industry and reforms to address those are listed below:

Insufficient testing laboratories and lack of efficient operations through CDGI - Though CDGI has an inbuilt facility for providing the essential services generally required at the base level for providing technical support and consulting services to the glass industries in and around Firozabad, the institute suffers from various challenges such as shortage of manpower, lack of maintenance of equipment, and non-functional instruments. Also, the turnaround time in lab testing services is 50-60% more than an average private lab. In the absence of NABL (National Accreditation Board for Testing and Calibration Laboratories) accredited laboratories, the glass units are forced to send the raw materials/samples/ other equipment to facilities in cities such as Delhi, and Mumbai. In the absence of the accreditation, the testing certificate by CDGI is not of any use for the export-oriented unit. The CDGI is losing revenue generation opportunities due to non-functional furnaces, insufficient lab testing facilities and limited skills and designs.

Shortage of Investment in Advanced Machinery and Technology - As per discussions with stakeholders, lack of investment in machinery and technology is one of the key bottlenecks that the manufacturing units in the cluster are facing to produce goods that are demanded globally. Even today, the glass industry in Firozabad is highly labour-intensive, while China follows mass production using advanced machinery and technology. The Firozabad industry follows a long traditional method of making glass melting pots by hand moulding and hand pounding with clay and refractory and grog digested in water, the entire process takes around 3 months.

For example, the crystal for chandeliers sold in India is imported from China because of the unavailability of crystal-cutting machines in the country. Similarly, high quality plating on metal and steel base on Chinese glass products is not available in India. The specific plating machines used in China enhances the quality of the product and gives the impression that the product is made-up of brass which is actually made of iron.

Limited Skill Development and Design Innovation - Skill development and introduction of innovative designs is a challenge as the cluster employs outdated methods and follows old processes. The designs and products made by the artisans are old and do not match the domestic and international market

demand. The need of the hour is to provide training to the artisans at regular intervals to produce market-oriented products.

Lack of Good Quality Raw Material -The manufacturers obtain raw materials such as soda ash, silica, calcium carbonate, etc. from local suppliers and dealers mainly from Gujarat and Rajasthan. The chemicals and pigments used as raw material are largely imported from other countries. Firozabad glass industry manufacturers' uses substandard raw material due to which the quality of glass produced is also low. For example, China's crystal chandeliers are superior in quality and are produced at a lower price. However, the Indian units are unable to match the same level of quality because of lack of raw material which greatly increases the gap in the cost of manufacturing.

Restrictions by Authorities as the Industries fall under TTZ Zone - In the last few years, environmental constraints have increased continuously, requiring a constant reduction of furnace pollution, however, significant financial investment to achieve the target of clean manufacturing. The manufactures have been facing pressure from the authorities to shift factories that fall under the Taj Trapezium Zone (TTZ), a defined area of 10,400 sq km around the Taj Mahal to protect the monument from pollution covering the districts of Agra, Firozabad, Mathura, Hathras and Etah in Uttar Pradesh and Bharatpur district of Rajasthan. [43]

6. Action Plan

To improve productivity of the cluster, there is a need to upskill the workforce with new techniques for designing and operation of the furnaces and pots. For this purpose, there is a need for CDGI to collaborate with other bodies to come up with solutions. Existing facilities of CDGI can also be used to set up new labs that can be used to demonstrate modern technologies focusing on best-operating practices. Usage of old methods has impacted the overall efficiency and productivity of the units. The lack of access to new technology is one of the major challenges faced by the units in the cluster. Restructuring of CDGI and collaborate with other bodies to improve efficiency, establishing NABL certified labs in the region, focus on improving skills of the workforce and introduction of modern technology and machines in the cluster will help in increasing capacity and quality of products.

[43] https://www.hindustantimes.com/india-news/facing-closure-firozabad-s-glass-artists-blame-the-taj-mahal-for-ruining-business/story-LVOsKxGtw5zLJK3y7HWEDK.html

7. Recommendations

A certified testing Facility in Firozabad - In the absence of NABL accredited testing facilities, the majority of the units are forced to send their raw material and other production equipment to places such as Mumbai and Delhi. This process adds up to the approval time and cost of launching the product. A NABL certified testing facility in the region is essential for a faster testing process. A certified laboratory for testing in Firozabad will help in reducing the cost of testing by 40 percent. CDGI can collaborate with EPCH to identify potential testing facilities, purchase of equipment, and setting up the lab.

Increased investment in advanced machinery - Continued use of traditional methods and technology in glass melting, forming, and shaping. The industry is struggling with a lack of investment. Lack of awareness about low efficiency from using old furnaces. Increase investment in automated machinery for improving the scale of production. A reduction on import duty (presently between 10 to 20 percent) or provision of subsidies to import from other countries will help in strengthening the manufacturing base of the cluster. CDGI should conduct workshops to increase awareness about the benefits of updated furnace designs and advanced machinery.

Based on our discussion with industry players, **some of the machines suggested for the glass industry include IS machinery for glass bottles, machinery for plating, and press-blow for containers.** Alternatively, investment in strengthening the R&D facility in the cluster to study the international markets and develop machines that can help the manufacturers compete with international players.

Following machines can be added for improving efficiency of the technical facility (CDGI)

- **Thermal Imaging Camera** – The camera will provide an immediate picture of thermal radiation that can help to recognise the weak areas in the refractory and steel due to corrosion
- **Endoscope** – A portable endoscopic camera to inspect the inside of the furnace, distributor, regenerators etc. without disrupting the process. It will help in taking preventive action against machinery failure and other technical issues.
- **Glass melting pot by slip casting –** Instead of following the traditional method slip casting method can be adopted. In this method the refractory mix is made into a slip which is basically a slurry with adequate water which is then poured into plaster of Paris moulds, dried in air and fired to sintering temperature. The slip casting method is a more consistent process of shorter duration.
- **Advanced Mini melter to replace pots –** replace the pot by a mini melter which is a small day tank furnace and it is driven electrically. The industry can gradually move from pot based furnaces to small day tank furnace.

Restructuring of CDGI - The MSMEs in the cluster face several challenges which impede the growth of the individual units and the cluster as a whole due to lack of active participation of the relevant bodies/stakeholders. To strengthen the manufacturing and promote exports from the cluster, a greater role by the Export Promotion Council for Handicrafts (EPCH) can help in resolving some of the issues. The body is well-connected with various exporters and has established global linkages in the segment. Collaboration between CDGI and EPCH can be constituted at the local level and play an increased role in the development of the cluster.

To enhance its efficiency, CDGI could collaborate with a government body such as the EPCH. The EPCH works with an object to promote, support, and increase the export of handicrafts from the country and has established links with various countries which can help to strengthen the exports of glassware products from Firozabad.

A committee at the local level can work towards understanding the challenges of the cluster and introduce measures towards enhancing exports from the cluster. They can jointly work towards revamping the existing facilities at CDGI to set up new labs that can be used to demonstrate new technologies and operate and run laboratories focusing on best-operating practices. Development of well-established and recognized lab testing units can be a significant source of revenue for the CDGI and also boost production of the cluster. Besides, subsidies and reduction in import tariffs on the import of machinery from other countries will help in the advancement of the cluster.

CDGI can play a significant role in strengthening of the Firozabad Cluster through:

- Developing new testing labs in the region which are NABL certified
- Introduction of advanced furnaces and insulation techniques for improving productivity and reducing operational cost
- Setting up a skill development cell to enhance skills and design innovation
- Expanding the market outreach through marketing, brand building and increasing penetration through online market platforms

Collaboration with leading Training Institutes - There is a dearth of indigenously designed glass products and a lack of product innovation in the cluster. Investment in skill-based training and product variation is important to increase their awareness about the market trends and new techniques. There is potential to improve the skill gap of the artisans by introducing better technology and process improvements. Specialized design development practice should be followed for product development and the value addition should be turned into market demand. Enhancing skills such as material

management, heat utilization, design development, and machinery awareness. CDGI should collaborate with leading glass institutes for skill training and product development. Design innovation and quality improvement in the utility and decorative items will benefit the industry to cater to the increasing demand in the domestic and international markets.

Marketing and Brand Building for business development - There is a lack of awareness of products and designs which are in global demand/trend. Lack of market and brand building reduces the visibility of the items produced in the region. Awareness among the artisans about the the latest trend in the international market and customer-oriented design and product development. There is a need to undertake more rigorous marketing and brand-building activities. A separate cell to focus on business development, schemes and initiatives can be formed by the CDGI.

Reduction in tariff on imports and increased awareness on the use of better quality raw material – The substandard quality of raw material used in manufacturing is reflected in the final product resulting in increased imports from other countries. Hence, training on quality assurance of raw material is essential to improve the quality of glass produced in the cluster. Phased reduction on import duty on raw materials and chemicals (from 25 percent at present) used in the manufacturing of glassware such as silica sand, soda ash, etc. will help in easy procurement of better quality raw material. Increased awareness amongst the manufacturing units on the quality of raw material should be undertaken by the CDGI.

Reduction in Gas Price - The Prospect of a rise in the price of natural gas is a major concern for the MSMEs in the region. Manufacturing units are paying a certain amount for natural gas, irrespective of their actual usage. Glass industry is highly energy-intensive, and the average energy cost as a percentage of total manufacturing cost is about 40 percent in the Indian glass industry. Gas prices are a major determinant of the cost of products in these units. High fuel cost increases the production cost. Provision of natural gas at lower rates will help in reducing the cost of production.

A Balanced Solution to Sustain the Industry - As per the directive order of the Supreme Court of India, glass units under the TTZ are banned from using coal/coke in their units and are mandated to switch over to natural gas. The Government should come out with a solution that serves the dual purpose of pollution control and provide low-cost fuel to the MSMEs in the sector.

8. Name of the industrialists / dignitaries contacted

Company Name	Mobile No
The All India Glass Manufacturers' Federation	
Mukesh Bansal Toni, (Chairman, Glass Manufacturers and Exporters Association)	9837095756
Vinit Kapur (Secretary, AIGMF)	9811921633

Bahadurgarh Footwear Cluster

1. Objective

The study primarily focuses on the challenges and opportunities in the footwear cluster of Bahadurgarh. It simultaneously identifies the imported items that can be substituted by Indian Products, manufacturing by the MSME cluster and enhance capacities among identified products. The purpose of the study is to identify the challenges faced by the Bahadurgarh footwear cluster including Tariff and Non-Tariff Measures such as import duty, technology and infrastructure barriers and hence, suggests recommendations to improve the cluster's growth and capacity to compete with international standards and meet local demands.

13. Brief about Cluster

Indian footwear industry is the second-largest global producer of footwear after China, which produces around 60% of the total global footwear production. India accounts for 9%[44] of total footwear production globally. The domestic market in India consumes around 90%[45] of total production whereas the remaining are exported to other countries. The sector employees around 3 million out of which 30% are women. According to estimates, the Indian footwear industry is approximately nearly Rs 40,000 crore[46]. The domestic market is highly fragmented between organized and unorganized players.

The organized segment (non-leather) caters to one-third of the market and around 70-75%[47] of the market falls under micro, mini, small and medium enterprises. The changing lifestyle and rising disposable income, advent of globalization, improved employment and living standards are factors for the expansion and size of the market. Government initiative "Make in India" has been beneficial in boosting manufacturing in India. The ever-increasing internet penetration and adoption of the internet for e-commerce platform are major factors supporting the expansion of the footwear industry. In term of consumption, India's annual footwear consumption is at approximately 2.1 billion

[44] https://www.indianretailer.com/article/launch-pad/fashion-and-accessories/India-s-footwear-industry-stepping-towards-a-bigger-and-brighter-future.a5880/
[45] IBID
[46] IBID
[47] IBID

pairs and is the third largest after China and the USA. The growth in the Indian fashion industry and lifestyle market has provided a thrust to the footwear industry.

The footwear cluster in Bahadurgarh is around 20 years old and it houses more than 500 small, medium and large units. However, the footwear park was established around 5 years ago in Bahadurgarh. The annual turnover of Bahadurgarh Footwear Park was around INR 10,000 crore[48]. The footwear production from the cluster are also export to countries like UAE, Oman, South Africa and several Asian nations every year[49]. The footwear production from the cluster majorly caters to the domestic demand within the country whereas the cluster also exports to other countries. Most of the technology and machines are imported from China by the units in the cluster. While around 50% of the raw material required for the cluster is also imported from China.

The sector contributes around 2%[50] of the country's GDP employing millions. The footwear market in India is dominated by men's footwear, which contributes around 58% of the total footwear retail market[51]. In the past couple of years for men's footwear market has been growing at a CAGR of 10% while the women's footwear market has grown at a CAGR of 20% during the same period. In term of product type, casual footwear is the largest product segment in India's footwear market contributing around 67% of the total footwear retail market. The current market size of the footwear industry is estimated at 10.6 billion in 2019. The market is expected to grow to USD 15 billion by 2024, with a CAGR of 13% from 2018-19.

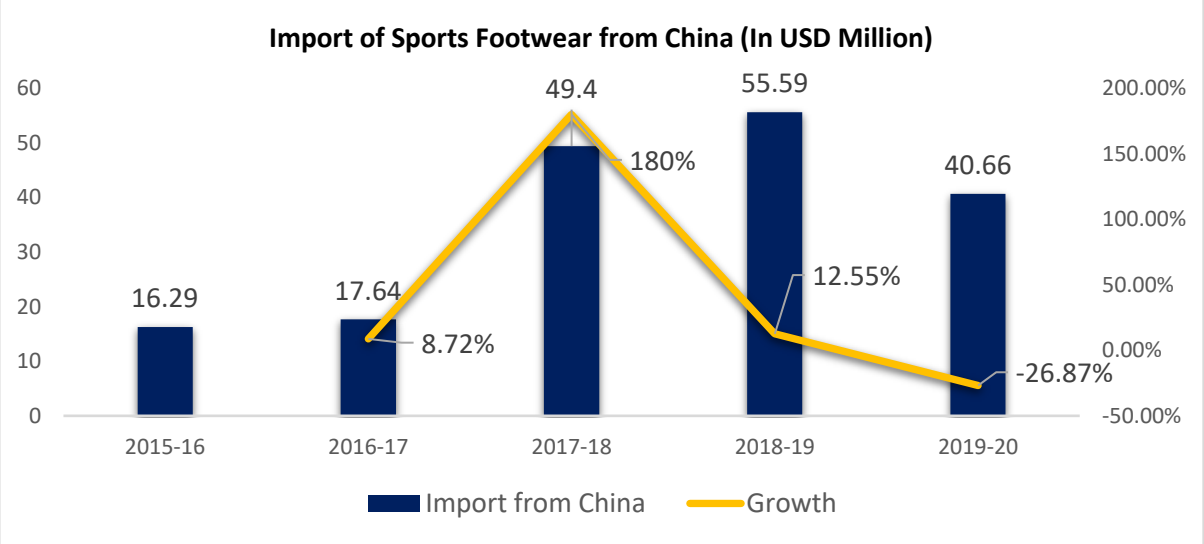
The Indian athletic footwear segment has witnessed a steady rise in the market. According to product type, non-leather footwear accounts for 59% of the overall footwear market in India. Textile and other footwear markets in India is expected to grow annually by 12.9% from 2020-2023. The revenue from the athletic footwear segment in 2018 was USD 3,232 million[52]. During 2020-23, the overall expected growth by the athletic footwear segment will be around CAGR 14.3%[53]. The athletic footwear market in India has been traditionally dominated by international brands. Most of these international brand entered the Indian market in the 1990s. Along with changing lifestyle and fashion trends, Indian consumers are more focused on their health and are adding new health and wellness routines to their hectic lifestyle. This growing awareness of being fit, healthy and need to exercise has been

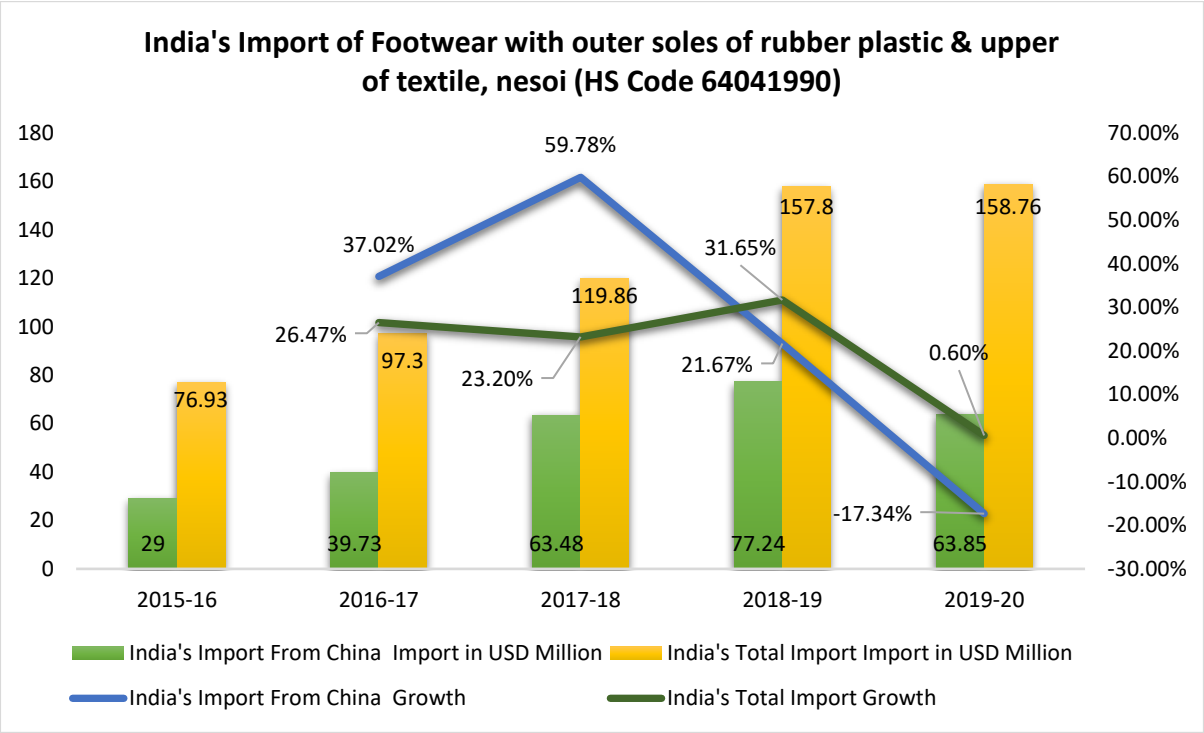
[48] https://www.tribuneindia.com/news/haryana/indias-biggest-footwear-industry-reluctant-to-resume-operation-in-bahadurgarh-75402
[49] IBID
[50] https://www.investindia.gov.in/siru/non-leather-footwear-industry-india
[51] IBID
[52] https://www.indiaretailing.com/2019/03/05/fashion/a-step-in-the-right-direction-the-booming-sports-footwear-market-in-india/
[53] https://www.investindia.gov.in/siru/non-leather-footwear-industry-india

instrumental in pushing boundaries of athletic sportswear in the market. Due to these factors, the market has witnessed a massive increase in the segment and stiff competition compelling brands to continuously adopt new strategies, shell out new products to maintain themselves in the market.

14. Imports

Globally, India imports of sports footwear (HS Code – 640411) in 2019-20 was USD 120.11 million. Of these imports from China was USD 40.66 million. During 2016-17 the imports of sports footwear from China was 17.64 million USD whereas the next year, 2017-18 the imports increasing by 180%. In 2019-20 the imports declined to -26.87% as compared to the previous year.



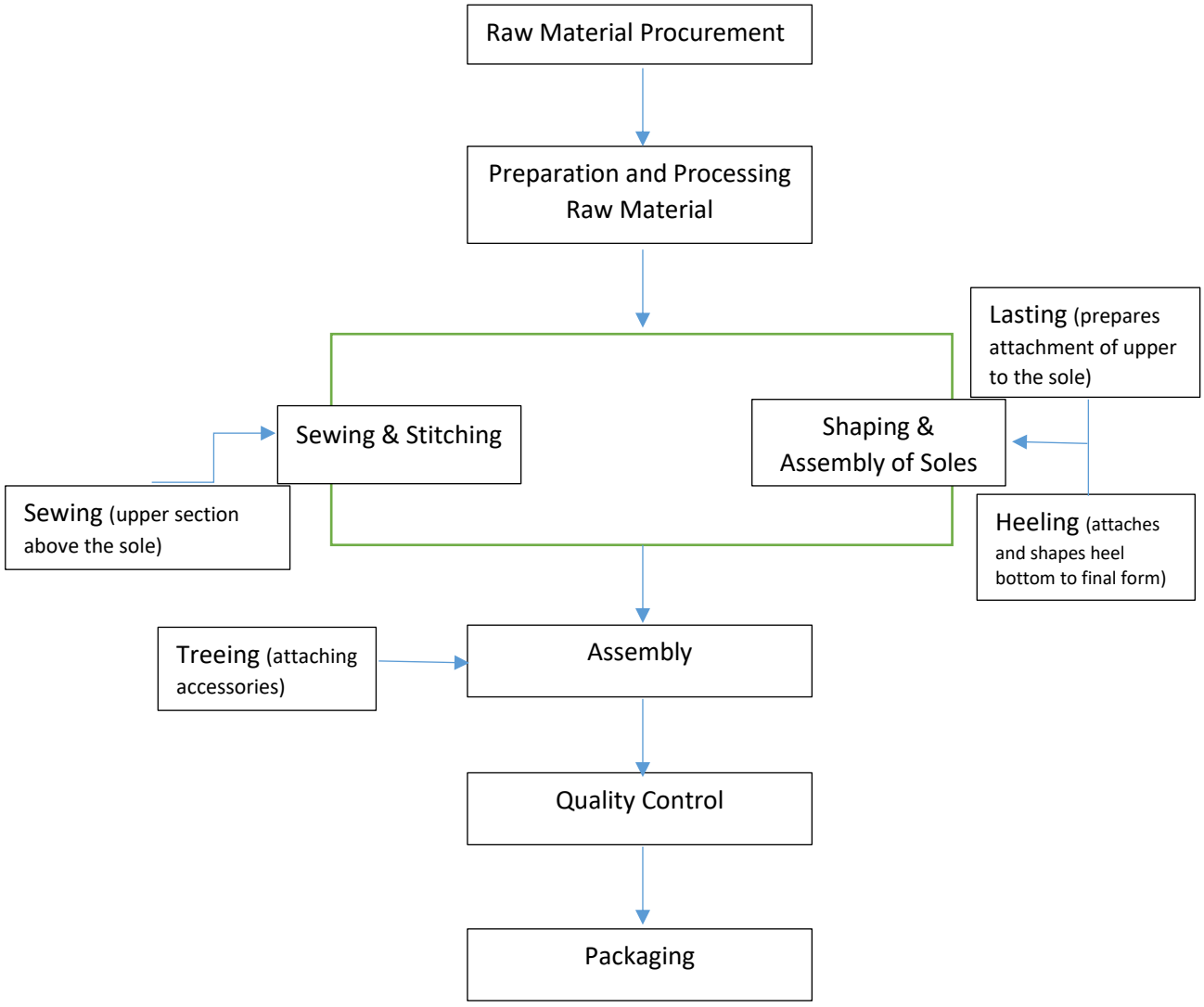


India's imported footwear with outer soles of rubber plastic & upper of textile, nesoi etc. (HS Code 64041990) from China and other countries. In 2015-16, the import from China amounted USD 29 million which grew to 39.73 million in 2016-17. In 2016-17, the registered growth in imports from China was 37.02%. Whereas, in 2017-18 the imports from China grew by 59.78% which is the highest growth in last five years. However, imports decreased from 77.24 million USD in 2018-19 to 63.85 million USD in 2019-20. For the same product, similar trend is seen –imports increasing from 2015-16 to 2019-20. This clearly indicates that dependency on single country from imports is decreasing from India. The Indian footwear industry is clearly looking for best possible alternative to substitute Chinese import.

15. SWOT Analysis

The Indian footwear industry mainly caters to its domestic market, whereas around 10% of its footwear production are exported to other countries. Currently, the Bahadurgarh cluster manufactures non-leather shoes. Most of the raw material (more than 50%) required for manufacturing the non-leather shoes are imported from China. All the technology and know-how of shoe manufacturing is learnt from China. This is due to the lack of research and development facility among the units in the cluster. The price of imported products such as PU Sole (Polyurethane) and machinery (example - sole injection moulding) is very high and this makes the domestic manufactured shoes costlier than the same imported from China. The footwear manufacturing process is shown below:

Flowchart – Footwear Manufacturing



Strength

Traditionally being a labor-intensive sector, the footwear industry in India is currently transforming towards a more technological and innovative drive sector. The increasing number of small and big footwear manufacturers focused on developing newer technologies and introducing better products for Indian consumers. At present, the Indian footwear industry has evolved into a highly specialized industry, where machine production with a systematic labour flow presently the industry to an international level. In addition, the advantage with India is the rapid growing industrial economy capitalizing on its strengths of ready availability of key resources such as land, power, water, work

force and conducive regulatory framework for footwear industry especially non-leather to succeed. The footwear segment being labour intensive mainly factors in the cost effectiveness in terms of man-power. The country not only offers the most cost competitive labour costs worldwide but has a ready pool of large, young trained workforce based on current demographics of India.

Comparative Factors of Production					
Countries	**Labour Wages**	**Power Cost**	**Water Cost**	**Lending Rate**	**Corporate Rate Tax**
	USD/month	*USD/kWh*	*USD/m^3*	*Per cent*	*Per cent*
China	550-600	0.15-0.16	55-60	6-7	25
India	160-180	0.10-0.12	16-20	11-12	17
Vietnam	190-200	0.08-0.10	50-80	7-8	20
Source: *investindia.gov.in*					

Weaknesses

The Indian footwear industry is highly labour intensive and employs nearly 3 million people. However, the industry faces a major shortage of skilled workforce. Lack of a skilled workforce is seen major hurdle hindering the footwear industry. According to market demand, consumers are constantly demanding more and more designs and variations in footwear. However, there are only a few institutes for footwear studies resulting in a lower skilled workforce whereas the demand for the same is very high.

Opportunities

Increasing FDI in the countries footwear manufacturing sector has helped in increasing the global market share of Indian footwear. Constant support with beneficial policies from the government has driven footwear manufacturing in India. In 2016, the total exports of footwear were over USD 2.7 billion[54], with an annual growth rate of 8% from previous years (2016). Currently, India is among the top 10 largest footwear exporters and the market shares are still increasing. Main importers from the Indian footwear industry includes the USA, UK, Germany, France, Italy and UAE.

Domestic Overview				
Indian Footwear Industry Overview (2018)	**Production**	**Consumption**	**Exports**	**Imports**
Percentage of World Share	10.7	11.7	1.8	2.2
Rank	2	2	6	10
Million Pairs	2.579	2.606	262	289
Source: *investindia.gov.in*				

[54] https://blog.bizvibe.com/blog/fashionaccessories-footwear-supplies/economic-rise-footwear-industry-in-india

During the pandemic, footwear and sportswear observed a negative impact from measures introduced to curb the spread of COVID-19. This included the prohibition of sales for non-essential items both online and in physical stores during the initial phase of lockdown. Currently, consumers are inspired and are actively participating in regular exercise. As a result, consumers are more health-conscious and are changing their sedentary lifestyle. Such a change in society and community level has further provided a boost to the Indian footwear industry.

Threats

The footwear industry as a whole comprises 85%, unorganized players. This unorganized segment markets their products at low prices and have benefits such as lower sales tax, over cost, lower labour cost and absence of research & development (R&D) expense. As compared to organized players the price benefits allows unorganized players to enter the organized domain. Further, imports from china are disturbing India footwear manufacturing as the Chinese products are cheaper and are sold in the unorganized retail markets without taxes, thus creating loss form the economy.

5. Challenges

Based on stakeholders' discussions, some of the major challenges faced by the industry and reforms to address those are listed below:

Raw Material - Polyurethane (PU) (*HS Code 392690)* and Ethyl Vinyl Acetate (EVA) *(HS Code 390130)* are the most required raw material in insole preparation. PU is not manufactured locally due to environmental constraints. The product PU is highly polluting. Thus all of it is imported from China. However, around 1-2% of imported are used in sole manufacturing, and then it is an important component in shoe manufacturing. Majority of units in the cluster are importing prepared soles. The units use the built-in soles for shoe manufacturing. This makes it simpler for units and is as per environmental protocol. As PU is imported, there is an import duty of around 20% on this product.

Machinery (*Sole injection moulding machine, EVA sole making machine*) - Majority of units in the cluster are MSME units and these units procure complete soles for shoe manufacturing. Other machines required for shoe manufacturing are imported from China. These machines are for cutting, stitching, finishing of upper part of the shoes. According to cluster units, new designs are innovations are mostly launched in Italy. Even machine innovation is from Italy. These machines are very expensive and therefore they are copied by industries from other countries. Most of the machine are copied in Taiwan. China procures these machines and produces them for their market and export. The price of

such machines from China is relatively cheaper as compared to machines from Taiwan or other countries. These machines are not manufactured in India as they will not be competitive in terms of price. Therefore all of such machine is imported from China. As per the industry, the machines imported from China are 2-3 times cheaper than machines from European countries.

Taxation - Currently, the uneven GST rates in the footwear value China have led to an inverted duty structure where lower duties are levied on the finished product while duties on raw material are higher, discouraging the domestic value addition. The existing challenge in respect to taxes is such that, footwear below Rs 1000 is taxed at 5% and anything above Rs 1000 is taxed at 18%. This has been discouraging value addition as the tax increase is steep. Since the demand for higher value product is less in the market, manufacturers don't get the incentive to produce larger volume and increase their scale of production. This in turn affects the demand from the manufacturer's side to set up a supply chain in India.

Subsidy - The state government provides subsidies on various facilities and services such as – solar subsidy, electricity subsidy, lab subsidy, export freight subsidy (1%) etc. Most of the units are only availing export subsidy, which is 1%. These are all important initiatives from the government, but availing of these subsidies is what makes it difficult. Usually, units availing these subsidies need to prepare a different set of documents and then submit it to the respective offices. The process requires around 1-2 years to get the subsidy amount. As a result of this most of the units constantly lose energy and time in availing these benefits.

6. Action Plan

Government support is a vital factor for the future development of the Indian footwear industry. During 2017-18 to 201-20, the government announced a Rs 2600 crore package for supporting the leather and footwear industry. This package includes the implementation of the central sector scheme "*Indian Footwear, Leather & Accessories Development Programme (IFLADP).* Under this scheme, a further three lakh workers will be trained and a 20-30% subsidy/grant will be offered to MSMEs on the capital expenditure for building a plant and machine purchases. Under the National Skill Certification & Monetary Reward Scheme, around 60,000 youths have been trained for various positions in the leather and footwear industry since 2015[55]. To support local medium and small enterprises involved in footwear manufacturing, the union budget has pushed to increase the customs duty on footwear from 25% to 35%. In future, the government needs to incentivize the manufacturing

[55] https://www.netscribes.com/footwear-market-in-india-growth-drivers-challenges-and-key-trends/

of raw materials and footwear components through changes in policies for reducing import dependence and help in reducing the overall manufacturing cost. The cluster requires investment in improving the inland logistic through infrastructure development in roads and ports. Additionally, undertaking Skilling initiatives and dedicated course on footwear manufacturing, design and retailing and creating an ecosystem for innovation and development.

7. Recommendations

Reducing Import Duty on Raw Material - Polyurethane (PU) and Ethyl Vinyl Acetate (EVA) are important raw material required in shoe manufacturing. These materials are required in sole (insole and outsole) manufacturing. PU is one of the materials which is considered to be a highly polluting material. Thus, it cannot be manufactured locally. As per the cluster, the duty levied on import of raw material such as PU should be lower and below 10%. Currently, the duty levied on import of PU is 20%. Besides, the duty levied on import of finished product should be increased to 20-25%. This would help domestic manufacture in being at par with the imported products.

Availability of Advanced Machinery - The majority of the sole making machine is imported from China. These machines are not manufactured in India as the domestic manufactured machine are expensive than the ones imported. It is suggested that these machines should be manufactured domestically which in turn would help in reducing the cost of production. For achieving local manufacturing government intervention is required and proper research and developed along with specifications of the machine. Subsidy of around 25-30% should be given on purchase of European Machine to improved quality of manufactured product.

Change in Taxation Structure & Increase Subsidy - Currently, the uneven GST rates in the footwear value China have led to an inverted duty structure where lower duties are levied on the finished product while duties on raw material are higher, discouraging the domestic value addition. It is suggested, that such a type of dual GST structure should be replaced with a single structure with GST rates between 5-10%. There are various subsidies by the Haryana State Government to support the footwear cluster. Subsidies such as solar subsidies, electricity subsidy, lab subsidy, export freight subsidy (1%) etc. Availing these subsidies requires documentation and consumes a huge amount of energy and time.

As per the discussion, availing subsidies consumes a lot of energy and time of the respective units. As a result, the energy and time which could be utilized for other facilities, development, value addition etc. get sidetracked. Therefore, units are hardly benefiting from it. The government is giving subsidy,

rather than giving them as reimbursement, the same should be given up-front. This will save a lot of time, energy and documentation involved in it.

Reducing Dependency on Chinese Market - Currently, China is a one-stop centre for raw material procurement, machines, and other supply chain items. To strengthen the supply chain, Indian importers need to diversify risks and reduce dependency on one single market to meet 70-80% of their sourcing demand by exploring other markets for footwear components. Reduction on duties of footwear components (at present 20%) could cushion the impact as Indian manufacturer explore other markets to import from.

Export Freight Subsidy (1%) - At present, the state government for promoting exports is providing a 1% subsidy to Cluster units. To support the export, the subsidy amount which the units avail should be removed. Along with this, the state government should provide containers loading permissions to the units. Identify common loading points where all units will deliver their containers. From these common loading points, the Railways will be responsible for further transporting it to its respective ports for exports. The subsidy which is to be reimbursed by the state government should be paid to railways as freight charges.

8. Name of the industrialists / dignitaries contacted

SN	Name	Name/Organisation	Contact Number
1	Rakesh Chawada	President, Rai Industry Association	9313208022
2	Raj Kumar Gupta	President, Footwear Park Association	9810010069
3	Vipin Bajaj	President, Bahadurgarh Chamber of Commerce & Industries	9811154599
4	N L Narang	General Secretary, Bahadurgarh Chamber of Commerce & Industries	9811207239
5	Narendra Chhikkara	Senior VP , Bahadurgarh Chamber of Commerce & Industries	9416055222
6	Subhash Jagga	Footwear Park Association	9873301767
7	Pardeep Goyal	President, Bahadurgarh Industries Association	9315877241
8	U S Pawar	General Secretary, Bahadurgarh Industries Association	9416055258
9	Raj Kumar Gupta	Bahadurgarh Footwear Development Service	8527089191
10	Kamal Garg	Supreme Shoe Industries	9999414547
11	Ayush Mangal	Everest Footwear Industries	9992929292
12	Sachin	Hillson Footwear Pvt. Ltd	9811364346
13	Rahul	Marcopolo Footwear	9810777568
14	Nalin Gupta	Xo Footwear	9810041230
15	Jatin Rathi	Veestar Footwear	8950512566
17	Sailash Poddar	Mein Footwear	9999599994