INDUSTRIAL DYNAMICS OF INDIAN TEXTILE SECTOR WITH SPECIAL REFERENCE TO BANGLADESH

A Thesis

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in

Commerce

By

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DECLARATION

I declare that the thesis entitled 'Industrial Dynamics of Indian Textile Sector with Special Reference to Bangladesh' has been prepared by me under the guidance of Dr. Mahesh Kumar Sarva, Associate Professor, Mittal School of Business, Lovely Professional University, Phagwara. No part of this thesis has formed the basis for the award of any degree or fellowship previously.

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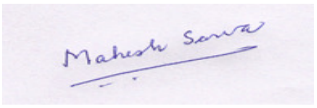
I certify that Gaganjot Singh has prepared his thesis entitled 'Industrial Dynamics of Indian Textile Sector with Special Reference to Bangladesh' for the award of Ph.D. degree of the Lovely Professional University, under my guidance.

He has carried out the work at the Department of Commerce, Mittal School of Business, Lovely Professional University, Phagwara.



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ABSTRACT

Textile industry occupies a prominent position in the in the Indian economy. It plays a significant role in the economy as far as the GDP Share, job creation and foreign exchange earnings are concerned. During 1970-2004, a very famous trade instrument that is known as MFA was imposed by European Union and other developed countries. Multi-Fiber Arrangement was to allow time for the adjustment of developed countries to competition from developing countries, which could manufacture far cheaper the same textile goods. It heavily regulated the textile industry. It was brought to an end through the Agreement on Textile and Clothing which provided for its integration under the General Agreement on Tariffs and Trade rules. Competition has risen manifold with countries like Bangladesh, Vietnam, etc. vying for a larger share in the total world textile export business, particularly after the grant of the preferential access to such countries by EU, USA, etc. The study seeks to address the effect of such preferential access on the Indian textile industry of such trade arrangements. It analyzes the dynamics that enhances industry's export performance in the post MFA period. To review the impact of post quota era on Indian textile sector Revealed Comparative Advantage, CAGR and data obtained through primary and secondary data sources have been utilized to achieve the objectives. The results show that the competitiveness of the Indian Textile Sector has since the abrogation of Multi Fibre Arrangement been declining while that of Bangladesh has been continuously increasing. Important factors that contributed to Competitiveness on exports of apparel over the period after the Multi Fibre Arrangement includes cheap labor, size of company, prices, foreign ownership, local raw material available, the manufacture of new products, preferred working conditions & market access. The observations of the study offer policymakers and business managers fresh insights into designing and implementing suitable policies to make textiles exports competitive. Chapter 1 of the study provides the information of the textile sector with brief information on the background of the industry and the role the textile sector plays in the Indian economy. It provides a brief analysis of the share of Indian Textile sector in the global economy. Besides, post Multi Fibre Arrangement era has been discussed in detail along with the present scenario of the Bangladesh textile industry. The impact of the new indirect taxes system i.e. the goods and services tax on the Indian textile industry has also been discussed along with the applicable tax rates on the various textile goods. Further, the statement of problem has been discussed in this chapter. Also, the aims and objectives of the study have been discussed with along with the research questions which are made

to provide a way for the achieving of the desired objectives of the study. The various variables having a bearing on the competitiveness of the textile sector such as the banks interest rates, foreign currency exchange rates, labor costs, tax rates have been discussed for the India's and Bangladesh's economy. Chapter 2 of the study provides a detailed literature review of the existing studies which have been done by various researchers. The studies related to various trade barriers, studies providing for the favorable and the unfavorable expectations of the textile industry post MFA abrogation. The studies relating to the impact of government policies on the Indian textile industry has been discussed. Also, the studies relating to strategies for enhancing the Indian Textile industry and the research gap has been discussed. Chapter 3 of the study provides detailed research methodology undertaken for the study. The research approach and the research design adopted has been discussed. The chapter discusses the collection of data from the primary sources and the secondary sources. Selection of textile sector companies from different regions of the country and whose exports form a majority of their turnover share has been discussed. The techniques and the methodology adopted along with the ethical considerations taken into account while conducting the study has been elaborated. The reliability and validity of the data collected for the study has been discussed. Chapter 4 of the study provides a detailed discussion on the results obtained using the primary and the secondary data. The various techniques and methodology which have been defined in the study has been implemented in this chapter to achieve the results and desired objectives. The application of various tests such as the Chi Square test, calculation of compound annual growth rates, application of statistical package for the social sciences has been discussed in this chapter. Chapter 5 of the study provides a detailed information on the conclusion and findings obtained from the study. The chapter provides for the detailed findings of the study along with the achievement of the desired objectives and the conclusions drawn therefrom. The study provides the way ahead for the textile sector of the country and the steps required to achieve better and higher growth in the sector. Various means to achieve it viz. ease of labor laws, lower interest rates, reduction in taxation rates, negotiation of free trade agreements, etc. have been discussed. At last, the limitations of the study has been discussed. The limited sample size also formed the limitation of the study. Besides, the future of the study by taking into account other variables such as labor can be carried out has been discussed. The possible impact of the free trade agreements under negotiation with the various countries on the Indian textile sector can be studied. Also, the studies can be conducted in the light of the more recent data and with taking into account the detailed HS codes which shall provide a comprehensive discussion on the Indian textile sector. Future researches may also be carried out in the light of the expected demographic dividend which shall be availed by India along with factors such as the productivity of labor, etc. can be carried out.

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CHAPTER ONE

1. Introduction

1.1 Introduction

India's Textile Sector occupies one of the highest position in the world's textile sector strengthened by an enormous raw material availability and manufacturing facilities across the entire textile sector. After China, India's textile sector is the second largest manufacturer in the global arena. As of Year 2019, the textile sector contributes to around 11 percent to the total exports of India. India accounts for around 5 percent share of global textile trade. The unique feature of the sector is its dominance in the hand-woven and capital-intensive milling sectors. It is the world's 2nd largest milling sector. It forms one of the main sources of livelihood for over a million people residing in the rural and semi-urban zones. The major job source is traditional sectors like manufacturing and small-scale units which contribute to over 75 per cent of the total textile production of the economy.

The Indian textile industry has a relation with farming and the culture and traditions of the country, making them suitable for both Indian and international markets for its versatile spread of products. The textile industry contributes in terms of value to 7 percent of the India's industrial output, 5 % to the GDP of the country, and 13 % to the forex earnings of the country. The textile sector is among the highest ones' jobs generating avenues throughout the world, and in India it employs over 45 million people directly while over 60 million people indirectly working in allied industries including many women and rural people. It is matched well with the key government programs particularly the Make in India program, Skill India, Empowerment of Women and Rural Youth, etc. Textiles and clothing are one of the most wholly and reliably covered industries in the world.

Since 1961-62, textiles trading has been limited by restrictions on the quantity (QRs) of the goods that can be exported by the developing countries. In the 1961-62, developed countries submitted QRs to the cotton product export under the pretext of a' market disturbance,' through Short-Term Arrangement (STA). The Long-Term Agreement (LTA) was introduced from 1962 to 1972 and considered even more restrictive than STA. The Multifiber Arrangement (MFA-I 1974-77) was also signed, expanding the scope to all wool, cotton and synthetic fibers textiles and clothing. The next moves were MFA-II from the year 1978 till the year 1982, MFA-III starting from 1982 and ending in 1986 and MFA IV from the year 1986 and ending in 1991 to cover the vegetable fiber and silk blends. From June 1991 to December 1992, MFA-IV was extended for 17 months. By 1993, the textiles and clothing quotas were negotiated bilaterally till the end of the negotiations held in the Uruguay Round, according to the laws of the Multifiber Arrangement (MFA). The MFA was a negotiated and signed legal agreement between participating countries. The MFA was characterized by its requirement that textile exports for developed countries use quantitative restrictions. This set the groundwork for imposing limits on shipments to industrialized nations, namely the USA, European Union and Canada of wool, textiles and garments from developing world. Consequently, a considerable part of foreign textiles produce exported by the developing nations into developed nations were subject to different restrictions. Selective quantitative restrictions were often defined in the importing countries when importations of textiles produce were likely to result in, significant harm to the textile industries of the country importing such goods (Shui, 1993).

Non-discriminatory tariffs on imports of textiles products clothing have also been introduced in addition to the bilateral quotas, though they were subject to the MFA. Differing from the General Agreement on Tariffs and Trade guidelines and laws, the MFA, in particular its non-discrimination clause, was criticized. Bilateral quotas and tariffs have contributed to significant trade deficits leading to loss of employment opportunities and jobs. In importing countries, the MFA led to an increase in the prices of

textiles and equipment, mostly in the industrial countries and a reduction in costs, particularly in developing and exporting countries. Textiles and clothing quotas from 21 nations, including five non-WTO countries, had been set by the EU. The quota system led to the textile trade being diverted to preference trading partners from developed countries. During the 1990s, a significant share of the MFA's bilateral trade in textiles was heading towards preferential sources such as the Mexican and the seventeen Caribbean Basin Initiative (CBI) countries besides including countries such as the India, China, Pakistan, Korea and Taiwan. Around 42.5% of clothing and textiles were obtained from MFAs in 1990 (Elbehri, 2004). The quota system led to the dispersal of the textiles and apparel industry across several economies.

Table 1: Fabric Production in India

Financial year	**Fabric production (Mln square metres)**		
	Cotton	**Non-Cotton**	**Blended**
2011-12	31718	21675	8278
2012-13	30570	20567	8468
2013-14	33870	18797	9282
2014-15	35513	17094	10062
2015-16	36959	16924	10449
2016-17	38440	15335	10809
2017-18	38837	13563	11080
2018-19	39894	15136	11384

Sources: Annual report of Textile Ministry, 2019

The above table shows the fabric productions of the financial years 2011-2018. Fabric production in the India's Textile sector increased to 66,514 million square metres in FY 2018-19 from 52,665 million square metres in FY 2006-07. Cotton yarn, a significant segment in FY 2010-11, contributed over 51.43 per cent in the fabric production, with its share reaching to 60.07 per cent in FY 2018-19.

Table 2: India's Textile Trade –Exports and Imports (US $ Billions)

Financial Year	Exports (US $ billions)	Imports (US $ billions)
2011	27.80	4.20
2012	33.30	5.20
2013	33.05	5.40
2014	37.57	5.30
2015	37.66	6.01
2016	36.75	5.85
2017	39.00	6.30
2018	39.20	7.30
2019*	21.95	4.60

Source: IBEF, 2019

The above table shows the exports and imports of India for 2011-2019. Exports feature as one of the core competencies of India's textile and apparel sector which is well supported by the trade figures. Indian textile exports reached USD 39.20 billion during FY2018-19. The Goods and Services Tax that replaced the erstwhile indirect taxes would provide for lower cost of procuring the imported garments by around five percent since in this tax scenario. 5 percent tax will be levied for both the domestic textile manufacturers and the importers of the readymade goods.

The trade negotiations held at the Uruguay Round under the World Trade Organization (WTO) introduced major changes to the apparel industry in 1995. The Uruguay Round was a success with the decision that restricted MFA goods were regulated by GATT. The cycle of liberalization has been carried out very steadily over a span of ten years and in 10 years the ATC has more and more restored restricted MFA items with the implementation of the Agreement on Textiles and Clothing (ATC) as part of the normal GATT scheme (e.g. export quotas). The ATC's primary aim was to involve the textile & apparel sector in the WTO, which will conclude on 1 January 2005, in four stages, during a 10-year adjustment span (WTO).

The ATC authorized countries to determine which goods are incorporated at each level, providing that the list of goods from each of the four sub-groups must be included at each

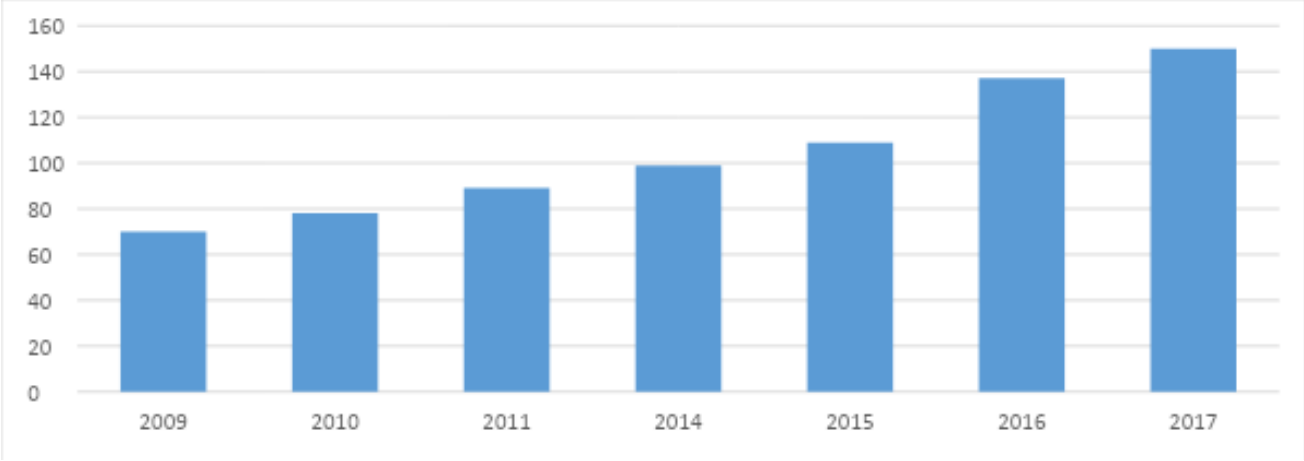
level. According to the deal, import tariffs on textiles and clothes, as well as on various other products, were also being reduced. However, tariff reductions rates differed greatly among commodities, with the tariff reduction rates for textiles significantly lower than those for most other commodities. Although the ATC was intended to eliminate quotas, some provisions affected developing countries interests, especially India. Within the quota-restricted countries class, ATC complied with different steps in the form of trade restrictions for the least developed (LDCs), small producers, newly industrialized (NICs), and other developing countries. For example, the EU has increased access to Sri Lanka, Bangladesh and Pakistan for quota and duty-free market purposes. Mexico, the Bangladesh General Scheme (GSP) and Assured Access Rates (GALS) for small providers had been introduced in the USA through the NAFTA agreement. Although GSP provides quota and rate favors, GALS allows duty-free admission in the United States for goods with value-added either in the United States or in the Caribbean. The net result of this is that it favored community of restricted countries which increased apparel exports to the United States much faster (Soumya Kanti Ghosh, 2004); quotas were abolished in the 10-year transformation phased time frame on 31 December 2004 and MFA free era of textiles and clothing is observed in the trading region. While the exports of textiles produce from the developing economies had declined under the quota system, an improved exchange in textiles and clothing, in particular textiles and clothing exports from developing countries is expected by the phasing of quotas. The abrogation of the MFA quotas will radically reorient entire manufacturing of textile goods and its trading across the globe. The output from developing countries, including India, Pakistan and China, is booming as the quotas are removed; many higher-cost suppliers remain protected by tariffs, while others will continue to prorogate. India hoped that exports of textiles and clothing would expand rapidly when quotas expired. Nonetheless, the advantages of eliminating quotas in the first three stages may not have been entirely shown as actual results, as the policy of backloading by developing countries has culminated in many significant garment and apparel products left for quota elimination in

the last step of the phased quota reduction planned by the end of the year 2004. (Rameshan, 2004). Consequently, after 31 December 2004, exports to developed markets, for example the USA, EU, from quota restricted countries like China and India predicted a big export boom.

Indian textile industry is one of the earliest sectors of the country and was established since many eras. India's exports of textile produce for the Financial Year 2017-18 stood at USD 39.2 billion and is anticipated to increase to USD 82 billion the end of 2021. With spinning and woven textiles industries on the one hand and the capital-intensive advanced milling industry on the other, the textile industry in India is highly complex. The textile industry in India has very diverse histories. Decentralized power looms / housing and knitting are the most important component of the textile industry. The near ties between the textile sector and the agriculture sector and ancient country culture and textile heritage makes India's textile sector stand apart from those of the other countries textile sectors. The Indian textile industry produces a broad variety of goods for various consumer segments across the India and the world. As a result of its important contribution to overall exports, production and employment, the Textile Sector and its industry is historically significant for the Indian economy. The Indian demand for T&C in 2017 increased to USD 150 billion, up from USD 70 billion in 2009 (Figure 1.1); according to the India Brand Equity Foundation. This sector's share of total exports in India was 12.4 per cent in 2017 from April to November.

In the Indian Textile Sector, the MSME, particularly the Micro and small sized enterprises, are more when compared with other sectors of the economy. More than 20 percent of registered MSMEs are operating in the Textile sector, according to the 4th MSME census (Ministry of Micro, Small and Medium Enterprises Report 2009). As per the census report 66 percent of MSMEs reported in the manufacturing sector, along with service sector where 73 % units, are unregistered MSMEs, according to the report.

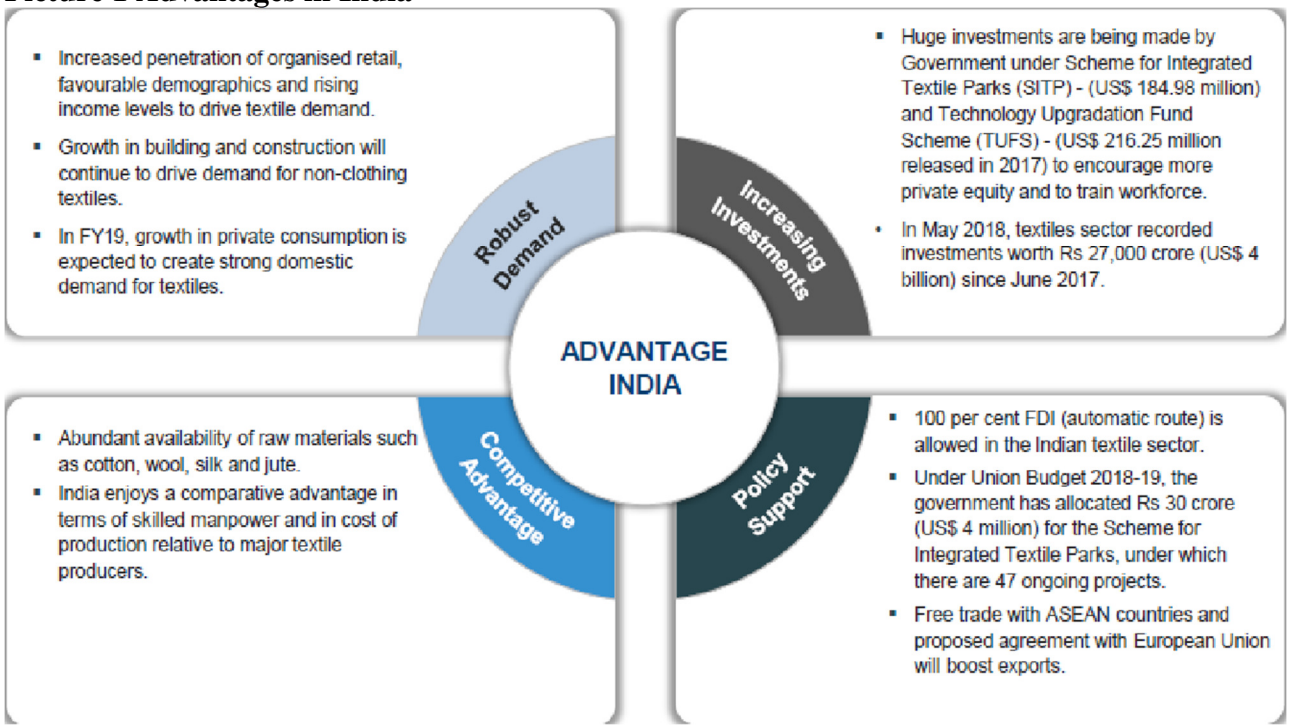
Figure 1: Market Size of Textile and Apparel Sector in India



Source: Indian Brand Equity Foundation, 2019

The textile industry of India, is estimated at USD Billion 150 in the year 2017, is anticipated to reach USD 250 billion by the year 2019. In the Financial Year 2018-19, they accounted for 7% share in the India's production in the value-added sector. It added around 2 % to India's GDP and in 2018-19. In 2018-19, India's export sales accounted for 15% of the market.

Picture 1 Advantages in India



Source: IBEF Report, 2019

The T&C industry of India is competitive globally because India is full of raw materials coupled with cheap labor and manufacturing facilities which are vertically integrated (Anthony & Joseph, 2014). Since T&C is an industry of high labor intensity, the cost of labor is a critical factor in the overall competitiveness of the textile produce. Labor costs for India are higher, rendering India's T&C less competitive than Bangladesh. In India, manufacturing insurance rates were US$ 1.59 an hour in 2011, far lower than the cost in the US and Korea. Chinese hourly wage rates were US$ 2.62 for production in 2011, and US$ 2.02 for the Philippines. Ginning processing in India is well established as good quality cotton has been grown in India (Begum and Das, 2018). In India, spinning is also advantageous in demand and range.

Investment

The textile industry has experienced an increase in production in the past few years. From April 2000 to June 2019, foreign direct investment (FDI) in the textile sector amounts to USD 3.19 billion.

Government Initiatives

The Government of India has initiated several policies providing for the promotion of exports in the textile industry.

Some of the Government of India's programs:

- The DGFT has updated opportunities for two sub-sectors of Textile-Industry-Ready-Made and Made ups-2% to 4%, according to the Merchandise Exports from India system (MEIS).
- 100% FDI in the Indian Textile Sector is permitted without any prior approvals through the automatic route.
- For increasing demand in India for manufacturing of the textile products, it has provided for increase in the rate of the basic customs duty to 20% on over 500 textile products.
- To boost exports by USD31 billion and create a unique potential for jobs, the Government of India has declared a special programme for the investment of Rs 80,000 crores (i.e. USD 11.93 billion) in the years 2018-2020.
- Revised A-TUFS scheme providing for increase in the investments in the manufacturing facilities of the textile sector has been approved.
- In order to improve productivity and raise production in 2017-2018 and 2019-20, the Integrated Wool Development Plan (IWDP) of the Indian Government is supporting wool sectors across the entire wool value chain.
- A new skill creation system called' Textiles Industry Capacity Building System (SCBTS), with an outlay of Rs 1300 cr (USD 202.9 million) between 2017-18 and 2019-20, has been cleared by the Govt. 16 states of the country has entered

into agreement with the Textile Ministry to collaborate with the Ministry for expertise under the program for about 4 lakh jobs.

Achievements

The Government policies have led to the following results over the past four years:

- On April 21, 2016, I-ATUFS, an internet portal for online monitoring of the claims under the scheme was started.
- It has sanctioned 381 new block-level clusters.
- Fifty-Nine textile parks, of which 22 have been completed, were sanctioned under the Integrated Textile Parks Scheme (SITP).
- Employment increased to 45 million in FY19.

For the Textile Industry in India, the future looks bright, backed both by vital domestic and export requirements. The retail sector has proliferated with higher disposable incomes in the last decade with many international brands, such as Marks & Spencer, etc. joining the Indian market. Strong economic growth has led to higher wages leading to an increase in demand for textile products.

1.2 Background of the Industry

India recognized export value as it implemented selective liberalization reforms for the growth of the economy in the 1980s and 1990s. From independence in the year 1947 to 1980 the national economy had been controlled by a structured socialist system of import replacement and industry licenses (Kim, 2018). This induced weak productivity and efficiency in India and produced an Indian economy annual growth rate of three and a half percentage, that was largely called as the Hindu growth rate from 1950 to 1980, (Ahluwalia, 1995). In 1991, the economy of India underlined liberalization and globalization with full economic reforms. Likewise, exports have been a key matter in the

economic policies since the beginning of the 1980s. Nonetheless, the exports of the economy were not up to the mark.

The contribution from India to world exports was reduced in 2016 to just 1.6% while the share of China was 17%. Therefore, the government in India launched the manufacturing sector Make in India Scheme in 2014 which accentuates export improvements and job creation. Nevertheless, manufacturing share in exports from India decreased from 80% in 1990 to 61.9% in 2017, as in developed countries like the United States (Anand et al. 2015). Manufactured goods accounted for 90% of total exports in the case of China. The issue of unemployment then rests with India, which has the 2nd largest population in the world. In this context, it is significant to analyze the productivity success of India's manufacturing exports, specifically, importance of textile and clothing, which is one of the earliest and main sectors of the country.

In the Indian economy, T&C is historically significant, as it has a major contribution to export, development, and the creation of jobs. Between April to November 2017, the sector kept 12.4% of total exports in India. This sector contributes 7% share of the total industrial production, 2% of the Gross Domestic Product and approximately 15% to India's total exports. As the sector is labor-intensive T&C hires 45 million employees directly and indirectly provides livelihood to over sixty million people. It is the 2nd highest employment generating industry (Ministry of Textiles Annual Report, 2018).

The growth of the global value chain referred to as Global Value Chains (GVC) and the phase-out of the Multifiber Arrangement (MFA) have resulted in significant improvements to the T&C Exports. MFA has been introduced to enact limits, requiring advanced countries to provide developing countries with T&Cs limits from 1974 to 1994. MFA was effective between 1994 and 2005 under the Agreement on Textiles and Clothing (ATC). The ability to sale in the world market is a question of export success, where comparative gains play a major role (Ketels 2010; Gupta 2009). Thus, based on the concept of comparative advantage, India's Exposed Comparative Advantage (T&C),

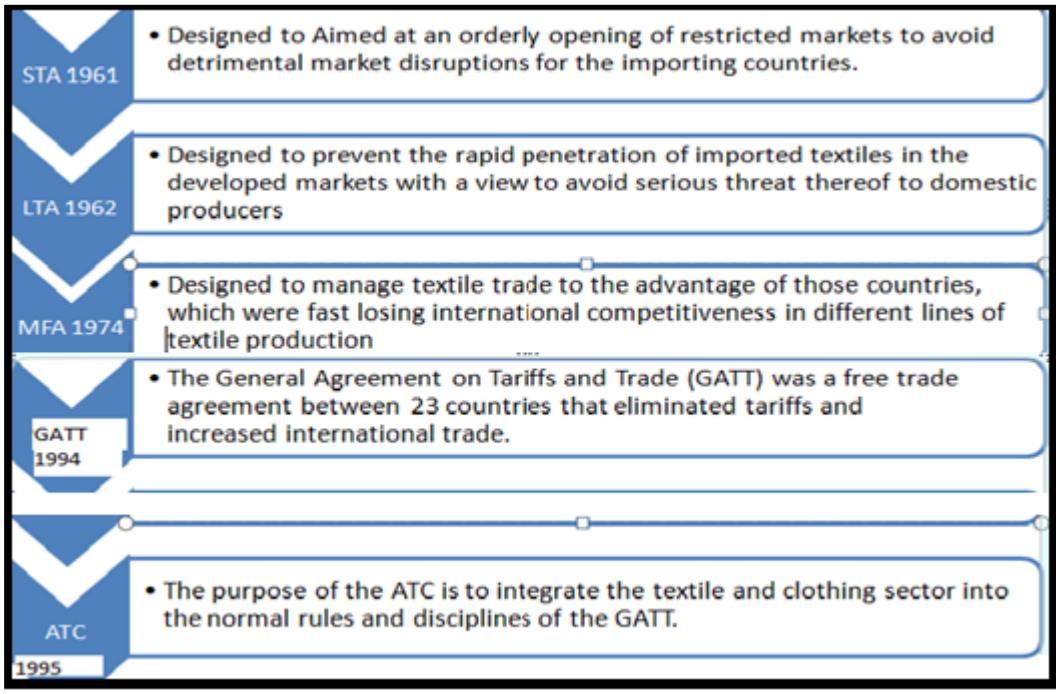
Nation Comparative Advantage (CAC) and Business Comparative Advantage (MCA) have been measured. Indian export success on the American market, one of the most significant users of T&Cs in the world and the largest export destination for T&Cs, is analyzed in particular. In 2017 the United States accounted for 20.9 percent of the total production of T&C from India. India had been the third largest importer of Textiles produces in the US behind China and Vietnam in 2017.

The MFA quota starting in 2005, it became a major T&C exporter on the global market, due to the cheap labor costs countries, such as Bangladesh, Vietnam and Pakistan. It suggests that there has been more rivalry in the regional Textiles market after the end of the MFA. It is, therefore timely to examine the potential viability of India's exports to T&C on the US side. The effect of end of MFA which it had on the Indian Textile Sector exports was primarily analyzed in previous studies conducted before 2005.

The global market for T&Cs was anticipated to increase following the phase-out of MFA with a significant influence on the exports from India (Hashim 2005). In a market such as India where competition prevails in the market, the relaxation of laws and the reforms in the labor required to enhance the performance of exports were discussed (Kathuria and Bhardwaj, 1998). It was provided that the phasing out of the MFA helped developing countries, such as India and China, with lower labor costs (Nordas, 2004). Some scientists examined the profitability of Textile Sector’s exports from India. Most of the studies have evaluated the RCA-based competitiveness for export, which has been established by Balassa (1965) (Kathuria 2013, 2018; Dhiman and Sharma 2017; Kannan 2018). By measuring RCA (Research Center for Control and Culture) and dynamic RCA (Recital Core of Business for Controller and Care), Kathuria (2013) has explored the comparative advantage of the Indian garment industry. Dhiman and Sharma (2017) found that India, based on an RCA survey, had a comparative advantage in most textiles between 2010 and 2014. Kannan (2018) found that from 1995 to 2007, India's comparative advantage in T&C declined. But these reports have measured the global

market for the RCA as a whole, and have not represented current years; Misu Kim, the Indian Textiles and Clothing Sector's Export Competitiveness report.

Flowchart of GATT, STA, LTA, MFA and ATC



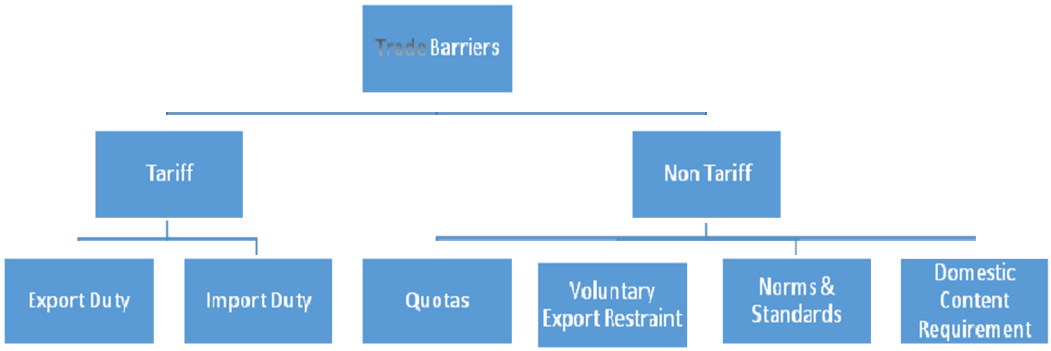
Source: World Trade Organisation Reports

1.3 Trade Security Instruments

Tariff and non-tariff barriers, while the foreign trade is correlated with trade gains, such benefits are not uniformly distributed between trading partners. The latter result in substantially higher levels of transparency and development for liberalizing economies (Salvatore, 2009). Many countries are more profitable, while others are less successful and often even negative. In foreign trade, non-replenish able resources are often quickly exhausted, destroying domestic industries and competition. The amount of income that

will result from trade depends on the essence of trade, namely whether trade (free trade) or restricted trade (protection) is unregulated. Trade that is free from any arbitrary trade barriers such as tariffs, quantitative limits, export controls, etc. is an unregulated export. This form of exchange leads to the most efficient use of productive capital, better labor distribution, higher demand, improved productivity and increased customer choice. The best trade policy is free trade since it maximizes world production and benefits every country. Direct commerce refers to a trading scheme, in which the trade of goods and services is regulated artificially. The protectionist policies adopted by trading partners are the product of a trade restriction. For different purposes, the government is pursuing protectionist policies such as shielding domestic markets from international competition, preserving the country's foreign exchange wealth, promoting balance of payments, mobilizing revenue for the government and discriminating against other nations. The bulk of protectionist policies are barriers to trade. Such trade obstacles are discussed below.

1.4 Forms of Trade Barriers



Two types of barriers to trade, namely tariff barriers and non-tariff barriers are widely visible. The duties or taxes levied on internationally traded goods when crossing the domestic border are a tariff barrier that is one of the oldest types of government interference. There are export and import duties. The main goal of the imposition of

tariffs is to produce revenue for the state and to shield domestic industries from foreign competition. The new protectionist measures inhibiting international trade are known as non-tariff barriers. For example, import quotas, voluntary export limits, subsidies and domestic content requirements are considerably influenced by NTBs (Carbaugh, 2002). This aims at reducing imports, thus helping domestic producers. Some NTBs, known as extreme NTBs, have significant restrictive effects. One of those extreme NTBs used by developed countries to limit textile export flows from these countries to developing economies are the quantitative restrictions.

1.5 Role of the Textile Industry in the Indian Economy

For the period 2014-15 to 2016-2017, the percentage of industrial and gross national production (GDP) contributions in the textile industry is shown in Table 3 below, and for the years 2016-17 to 2018-19, the revenues from textile exports are shown in Table 4 below:

Table 3: Share of Textiles Sector to India's GDP and GDP of the Manufacturing Sector

Year	**% share of Textile Industry to GDP of manufacturing Sector**	**% share of Textile Industry to India's GDP**
2014-15	13.50	2.33
2015-16	12.43	2.22
2016-17	12.65	2.30

Source: National Accounts Statistics, 2018.

Table 4: India's textiles exports including handicrafts from 2016-17 to 2018-19(Rs in crore)

Year	**2016-17**	**2017-18**	**2018-19**
Textiles exports including handicrafts (INR in crore)	265340.00	255159.98	255336.98

Source: National Accounts Statistics, 2018.

It is reported that 4.5 crore persons are directly employed in the textile industry, and six crore persons in similar industries are employed, with many rural women working in the textile field.

The Government has employed several ways for enhancement of production, investments, exports, and jobs creation in the textile sector in the country which includes the below:

- Package of Rs.6000 crores was introduced in 2016 for provoking employment generation, increase exports & investments in apparel and made-ups sector with below three main components i.e.,
- Remission of State Levies (ROSL) Scheme under which the exporters are given refund of the taxes paid to the State governments
- An additional incentive of 10% linked with the production under the ATUFS scheme and contributing the entire employer share of the Employees Provident Fund scheme under the Pradhan Mantri Paridhan Rojgar Protsahan Yojana (PMPRPY) for 3 years.

Modified Technology Upgrade Fund Scheme

To upgrade Rs.17,822 crores outlay technology / textile industry machinery during 2016-2022 to attract one lakh crore investment and create over thirty-five lakh jobs in the textile sector by the end of the year 2022.

Integrated Textile Park Scheme (SITP)

The govt. provides forty per cent subsidy with a Rs.40 crore ceiling to establish Textile Parks in textile infrastructure creation and job creation. In January 2019, a new knitting and knitwear development scheme were launched with an expenditure of Rs.47.72 crore for a period of up to 31.3.2020 for increasing the value and amount of textile produce in the clusters related to the knitting and knitwear to increase production in knitting and

knitwear clusters that provide livelihood opportunities to over 24 lacs people. A new scheme was launched by the govt. to train ten lakhs of youth between 2017-2018 and 2019-20 with an expenditure of Rs. 1300 crores, called Samarth capacity building scheme. This scheme aims at delivering the National Skills Qualifications System (NSQF) compatible demand-driven skills programs to support and complement the initiatives of business to create employments in the integrated and relevant sector.

The National Handloom Development Programme

Handloom Weavers Comprehensive Welfare Scheme, Comprehensive Handloom Cluster Development Scheme and Yarn Supply Schemes –providing critical inputs, looms and accessories, design and development, infrastructure development, of handloom products marketing, etc.

National Handicrafts Development Programme (NHDP) and Comprehensive Handicraft Cluster Development Schemes

It aims at providing for the complete development of handicraft clusters through support for designing, up-gradation of technologies, development of infrastructures and increase in selling, etc.

Power Tex India

This scheme was launched at a 3-year investment of Rs. 487 crores to update the loom, build infrastructures, and access concessional loans to the manufacturing market.

Silk Samagra

Schemes for the development of the silk sector in 8 northeastern states with an outlay of RS.2161.68 cr. which provided for extensive sericulture-integrated silk production

Jute ICARE provides for increase in farmers' incomes by minimum 50% through adoption of approved crops, sustainable agricultural practices and microbial jute re-use.

Integrated Wool Development Programme provided for wool industry growth through shearing of sheep with machines, enhancement of wool market and manufacturing and processing of woolen products.

North East Region Textile Promotion Scheme (NERTPS) providing for promotion of textile industries in the North East supported by ample infrastructural and marketing support.

Apart from the above, government has taken a number of measures to increase the efficiency and volume of the sale of textile produce outside the country of textile products including handlooms, knitwear, etc. through programs and schemes such as special package for garments and made-ups sectors, labor law reforms, providing of fiscal and other income tax benefits through the Section 80JJAA of the Income Tax Act and additional incentives under Amended Technology Upgradation Fund Scheme ATUFS, the RoSCTL scheme with effect from 7th March 2019.

The Indian Merchandise Export Scheme (MEIS) has also increased rates of clothing and machined goods from 2% to 4% and, for example, of 5 % to 7% for hand-wear and handcrafts as at 1 November 2017. Financial assistance is also offered to exporters by the Market Access Initiative (MAI). From 2nd November, 2018, the interest rate equalization for the textile sector MSMEs has risen from 3% to 5% for export related loans. After 02.01.2019, the Advantages of Interest Equalization Policy has been expanded to industrial exporters which had been earlier restricted to manufacturers only. For reducing the costs of the bearing sector, tax rate under GST regime for manmade fiber yarns is decreased to 12 % from 18%.

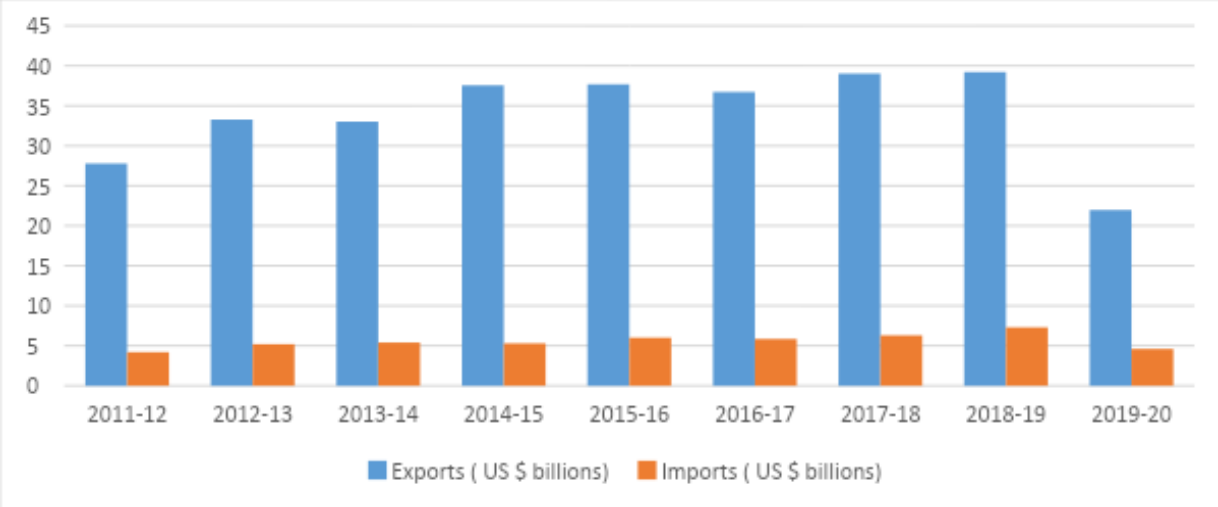
Accrued import tax credit has also been given to garments to reduce the cost materials, which are a significant contribution to clothes. The budget speech of the Interest Subsidy Program also specified the allocation of new or incremental loans of about 2 percent, or about 350 crores, to all GST-registered MSMEs for the gain of interest subsidies. The

Government has supported and sponsored popular crafts in these areas, including the silk, wool and jute industries.

1.6 Dynamics of Indian Textile Sector in the Context of Bangladesh

India and its textile industry have a long history. The country has, however-especially when dealing with global export markets-fallen behind some of its peers in recent times-detained by low competition and higher import duties (comparable to their peers). The worldwide fashion industry comprises mainly of the biggest economies in the world, the US, the European Union (EU), Japan and China. The US and the EU are the world's biggest fashion importers, responsible for 60 per cent of overall global imports, led by Japan, responsible for around 7-10 per cent. Led by increasing labor costs and a strong currency, China has lost market share in the last few years. On the other side, exports from Bangladesh have risen steadily and Bangladesh occupies 2nd position in terms of export of Readymade Goods in the world stage (after adjusting for intra-EU trade). The share of India stood at around 3%, compared to 18% of the share of China. India's share has increased slightly to 4% in about 20 years by 2017.

Figure 2 India's Textile Export and Import during 2011-12 to 2019-20



Sources: Ministry of Textiles, Govt. of India, 2019

Furthermore, Chinese industrial operations are expected to exit China with escalating trade disputes with the U.S. and growing labor costs, thereby enabling nations such as India, Bangladesh, etc. to go forward. The evidence submitted above nevertheless shows that Bangladesh is taking the lion's share, because there have been no significant reforms to India's textile policy framework.

Below tables are the comparison of India and Bangladesh Textile and Clothing export values

Table 5: Bangladesh Export Value of Textiles and Clothing (Million US$)

HS Code (2-digit) and Product	2013-14	2014-15
50: Silk	0.42	0.04
51: Wool, animal hair, horsehair yarn and fabric thereof	0.39	1.08
52: Cotton based textiles	115.6	107.04
53: Vegetable textile fibers nes, paper yarn, woven fabric	714.44	729.08
54: Manmade filaments	33.92	38.48
55: Manmade staple fibers	40.38	28.38
56: Wadding, felt, nonwovens, yarns, Twine, cordage, etc.	28.36	30.57
57: Carpets and other textile floor coverings	11.68	18.9
58: Special woven or tufted fabric, Lace, tapestry, etc.	73.74	47.36
59: Impregnated, coated or laminated textile fabric	11.27	13.12
60: Knitted or crocheted fabric	23.75	46.51
61: Articles of apparel, accessories, knit or crochet	12,049.81	12,426.79
62: Articles of apparel, accessories, not knit or crochet	12,442.07	13,064.61
63: Other made textile articles, sets, Worn clothing, etc.	902.58	943.79
Total Export	30,061.93	31,076.40

Data source: Export Promotion Bureau of Bangladesh, 2016

Table 6: Indian Textile Exports Data (Million US$)

HS Code (Chapter)	Commodity	2013-14 US$ Mn	2014-15 US$ Mn
50	Silk based textiles	149	136
51	Wool & other animal hair based textiles	158	177
52	Cotton based textiles	9926	7718
53	Other Vegetable textile fibre based textiles	337	374
54	Manmade filament based textiles	2570	2392
55	Manmade staple fibre based textiles	2083	2179
56	Wadding, nonwoven, yarn, twine etc.	324	338
57	Carpets and other textile floor coverings	1579	1820
58	Special woven/ tufted fabric, tapestry etc.	379	405
59	Impregnated, coated or laminated fabric	269	366
60	Knitted or crocheted fabric	242	257
61	Knitted apparel and accessories	6658	7655
62	Woven apparel and accessories	8343	9192
63	Other made-up articles, worn clothing, etc.	4457	4646
	Handicrafts*	3885	4537
	Total T&A exports	41359	42192
	India's total exports	314405	310338
	Share of T&A exports	13.15	13.60

Data source: IBEF Report, 2016

1.7 Increasing India's share of the global textile market

Firstly, the performance of India's textile sector in international arena is evaluated. World-wide appetite shifts for human-made fabrics instead of cotton. Cotton based textiles continue to dominate India, demonstrating that it is not up to global demand, which is hampering the country's export prospects. Although India is the biggest cotton yarn producer and exporter and the second largest manmade fiber maker, its adoption is impeded by the new inverted tariff system for manmade fiber. Moreover, technological acceptance is another limitation. For e.g. in India, the data available to NITI Aayog currently show that there are 23.7 lakh shuttle looms, compared to 6.4 lakh in China. There are 6.3 lakh shuttle looms, but China is up to 6 times more efficient than shuttle looms (1.4 lakh) in India. It indicates that India has to fill the huge deficit to make global markets competitive. The absolute cap is the size limit. Some figures suggest that approximately 95% of the fabric produced in India is manufactured in small-scale factories. In tandem with power transmission and high real interest rates, Indian textile items have created an underlying quality handicap that renders them more costly.

Interventions at the weaving / knitting and processing value chain stage have the potential to offset the cost disadvantage of India on international markets. Concurrently, the man-made fiber industry can become profitable by eliminating the inverted tariff system (where the supply is priced at a higher rate than the final product). This will unlock colossal working capital and increase the cost of raw materials. Similarly, the Indian Merchandise Export from India Scheme (MEIS) may need to be updated to adhere to the horizon requirements of the World Trade Organization (WTO). Still, a limited-time plan to move from shuttle webs to shuttle-free lifts is desperately needed to boost national competitiveness.

The most critical technique is perhaps to require both size and scale. The two countries offer specific facilities in Vietnam and Bangladesh, for example, effluent waste water

treatment, water treatment plants, reliable water supplies, and low-cost electricity in their textile industrial parks. In India, this is certainly not a new concept, for that is precisely what Visakhapatnam, Andhra Pradesh Brandix India Apparel City (BIAC) is doing. The BIAC provides the producers of an interconnected environment of plug-and-play installations, which also benefit from fiscal benefits under regulation and state opportunities under the Special Economic Zone (SEZ). In countries that have well-developed transport infrastructures, water availability and low-cost labor this model should be tested.

The government recently received a report from the committee headed by Baba Kalyani on the revitalization of SEZs. The research reflects on the need to reorient the SEZs in jobs and economic enclaves (3E). Investments will concentrate on initiatives that promote economic activity and the creation of jobs, not just on exports. This would also comply with the forthcoming WTO standards. In keeping with the advice of this commission, interconnected textile parks should be controlled to maintain scale and quality.

According to the Ministry of Textiles, about 45 million employees are directly employed in the industry. Considering the competitive complexity of this sector, accelerated growth will also lead to faster employment. An econometric study showed that the work elasticity of this field is 0.37. It indicates that a 1% increase in value-added production contributes to 0.37% additional employment.

So, if we expect that all those measures would enable the textile industry to grow by 10% annually, we should see a 3.7% annual employment growth. It is not attainable in any way. In RBI KLEMS, for example, between 2000-01 and 2004-05, employment has risen by an average rate of 5.7%. The creation of 8.9 million jobs over the next five years would mean an average of 1.8 million job creation per year by a 3.7% growth rate in employment (10 percent increase in added value).

There must be sustained government initiatives to fulfill the job creation capacity of the textile industry. In this area, the development of healthier jobs often provides an

opportunity for the elimination of labor from the agricultural sector, thereby growing the income for both farmers and those who quit. With defined comparative advantage, the central government should work with the State governments to build plug and play facilities. Such facilities should provide shared resources, truly business-friendly, and well-developed link infrastructure. Only then can India enjoy the benefits of this industry.

1.8 Present scenario of Bangladesh's textile industry

The main reason for economic development is industrialization. It plays a major role in transforming the socioeconomic system of developing countries. The textile industry in Bangladesh is more than 500 years old. It is one of the oldest and most famous industries with its rich history. In recent years, the manufacture of yarn and cloth has also experienced a major development. The world textile sector placed a significant effect on globalization. In industrialized countries, textiles and garments are now largely produced by developing countries. Bangladesh is currently the 2nd major RMG products exporter in the world, and its market is worth $20 billion that accounts for 80% of exports of products. Three key factors in Bangladesh have stimulated textile production. There are many tools, incentives and good governance policies in the world. In Bangladesh, a great number of employees are available. Natural gas is also inexpensive, low energy costs. Jobs are ample and Bangladesh has an edge in the manufacture of labor-intensive goods.

The principal point for the increase in size in the textile industry in Bangladesh is hard work. They put in extra working hours to complete the task. In recent times, the country's per capita income and people's living conditions have therefore, increased. Second, the nation has got a good opportunity to trade with America and the European countries in the readymade clothing market. Such incentives were supported by government policies that promoted textile production in Bangladesh. Foreign investment was fostered by liberal government policies. The textile industry in Bangladesh is established and is today a major market figure in the world. There are cloth related products and knit clothing in the country's textile industry. Such goods catch the export income of the region.

However, Bangladesh's textile industry is improved significantly by the quota-free textile law implemented since 2005. Government policies endorsing textiles provided monetary and structural benefits. Labor and power are cheap and readily available here in comparison with India, which offers it a competitive advantage. There were nearly no tariffs for the spinning sector in the new textile policies introduced. However, the tax rates for manufactured synthetic yarns and products are strong to encourage the use of local textiles and yarn production. The fashion innovations in Bangladesh have all of these influences operated together. The country has, however, witnessed the spinning industry's growth over the past decade.

Over ten years, the spinning power increased fourfold. In the current scenario, the textile industry in Bangladesh hires nearly 4 million people. 45% of global work is provided by the textile industry. According to recent reports, Bangladesh annually exports $5 billion worth of clothing to the US, EU countries, Canada and other countries. Exports include polyester manufactured materials, human fiber manufactured materials, photovoltaic materials, etc. Exports of clothes include primarily woven or knitted shirts, tops, pants, skirts, shorts, sweaters and clothing for sportswear. The manufacturing sector provides a large number of employees and supplies the materials needed by the domestic market. It faces certain challenges even though it is one of Bangladesh's growing and largest industries.

In the garment and apparel sectors, Bangladesh has a big future. Nonetheless, the foreign currency earned from apparel and ready-made clothing exports generates a large portion of the national income. 81.43% of Bangladesh's total exports come from the textiles and clothes market. In this situation, it is clear to understand what is going to happen if there is any uncertainty or concern in this field. The main reason for the textile industry's survival in Bangladesh has been ample natural gas, cheap labor and electricity. Since last few years, there has been significant reduction in the availability of the basic resources upon which the textile industry thrives. Bangladesh does not manufactures or grows the cotton and manmade synthetic fibres. The abundant energy available was inadequate.

Food in large quantities has become expensive because it is easily used and wasted. The large workforce of the labor-intensive industry has not been adequately trained and investigated. The key strengths of the textile industry then become a significant retrograde step for the company. Nevertheless, the government hopes to solve these issues.

Bangladesh, in such a circumstance, is unable, or cannot compete in the international textile and garment market, to waste these valuable resources. The main agenda of the 2nd International Conference on Textiles and Apparel was to make effective and proper use of the resources. This conference discussed the current fashion industry situation. Reasonable approaches to sensitive issues and policies to improve the development of the Bangladesh textile industry were the main priorities. The latest factory collapse near Dhaka has called into question safety standards on a global platform in Bangladesh's factories. According to sources, more than 300 factories in Bangladesh have been shut down. About 80% of the factory's employees asked for pay and protection measures to increase. In this critical situation, as a reaction to this deadly incident, Bangladesh has requested the European Union not to take stringent action against them. The economy of the nation would be badly affected if the EU or other investors introduced tough trade policies with Bangladesh. Millions of workers will also lose their jobs. Bangladesh will be able to achieve a target of exporting USD 40 Billion by 2020 provided it maintains current growth rate in the textile and ready-made garment sector. To achieve this role, it will require significant growth and reasonable access to European Union and the USA markets. Below is a comparison of few factors of doing business between India And Bangladesh.

Table 7: India's comparison with Bangladesh

Factors for ease of doing business	India	Bangladesh
Minimum wages for garment workers(monthly)	$225-$275	$150-$175
Industrial Power cost (max.)	18 (US cent)	9.24 (US cent)
Foreign Currency Exchange Rate	INR 75 / USD (United States Dollar)	BDT 85 /USD (United States Dollar)
Long Term Interest Rate	10-12%p.a.	8-10% p.a.

1.9 Aftermath of Post Quota Era in India and Bangladesh

The worldwide textile industry has been in a position of fluctuation from 1st January 2005, while nearly forty years of limits on trade officially ended with the downfall of the Multifiber Arrangement (MFA) quota method. Business and Dealings in these products is currently run by standard World Trade Organization systems. Currently, most of the developing nations deal with rising competition and downward strains on costs as the international textile sector firms up around a comparatively small number of conquerors. The major influence of the quota system has been to put restrictions on external business from many low-priced nations into the United States of America and Europe. Their national sectors cannot vie against the low-priced foreign products. The quotas put important limits on high-volume manufacturing nations for example, India, Pakistan and

Bangladesh, however currently the major objective of the structure had been mainland China.

With the ATC agreement in the WTO, every textile and garment quota looked after by industrial nations under MFA had been removed from 1995 through 2005. In the 10-year conversion era, remaining quotas had been enlarged. Bangladesh relies largely on the textiles and garment export business and, and is potentially susceptible to the huge fright of the last stage of the quota stage out. Simultaneously Bangladesh relies on quota-constrained marketplaces for around 94% of its ready-made garment (RMG) exports, amongst the largest proportions in the world. Therefore, the stability of payments resulting from an abrupt falling off in the Readymade Garments export business might be severe.

The quota and regulation system from its downfall exemplify the extremely selective and focused nature of manufacturing and market dealings in the sector. Though 1st January 2005 was expected to indicate the closing stages of the quota system for every nation and was likely to set considerable regulation challenges free for many republics, quota eradication has exposed a blended result thus far. Also, nations that have missed out the most had witnessed their export business reject earlier that signifies that their miserable performance could not simply be credited to the quota phase-out. Even in the prime of the quota system, distinguished by an indistinct worldwide marketplace for textile products, business tycoons in nations limited by quotas discovered means to use the system. They instituted industrial units in nations with least levels of quota exploitation and, in certain examples, even assisted in the industrialization development of those nations.

The ATC is an effort to amend the destruction of the GATT principles of non-discrimination and intelligibility concerning the MFA that ruled the textile business from the period of 1974 to 1994. Textiles and garment and agriculture had been the only segments that had a multilaterally negotiated free agreement while the Marrakesh accord ascertaining the WTO was signed during 1994. Amalgamation was planned to go off in

four different phases, and by January 1, 2005, all import businesses are to be incorporated. Textile sector organizations in India understand that the consideration at the WTO on the speed of incorporation of clothing business into the many-sided trading structure is low as a result of the development of provincial non-quota trade and the fluctuating model of trade in textiles and garments in the past ten years.

The quota system was formed by developed nations under the MFA in 1974 as a provisional agreement to defend their national textile industries from the offensive of inexpensive imports from low-priced nations. Quota alignments in MFA terminated in a phased way during 2004. The textile industry has been traditionally considered as the main resource of employment creation. Recently, besides this aspect, following the accomplishment of the East Asian markets low talent demands and higher labor assimilation perspective have made it an essential resource of non-agriculture employment for the rustic population of these regions. While fading of quota limitations allegedly eases up the marketplace for exporting nations to export clothes without any limitations, there is loads of trepidation that the employments and revenues of an extremely vast amount of people in the textile sector would be in risk while the exporting nations, specifically with resource bequest, textile tradition and effectively industrialized base, shove for market share.

The South Asian nations particularly, Bangladesh, India and Sri Lanka, themselves vie with each other in the international marketplace. On account of Bangladesh and Sri Lanka the provincial imports are about 30%. India's provincial import businesses are the least at minimum of 5%, specifying the perspective of intra-regional business for India. However, India's export exigency is considerably greater than the export capability within the constituency. Factories buttressed under import-exchange strategies, like in the circumstance of the main textile industry stated above, by and large aim at the promptly accessible domestic marketplaces formerly exploring global marketplaces. On the contrary, Bangladesh's textile sector evolved and centered on the exigency from the overseas marketplaces alone that was assisted by the operational of MFA quotas that

offered exporting prospects for new dealers by confining imports into North America from the recognized dealers like China and Republic of Korea.

With increasing joblessness in the European Union and the U.S., customers have restrained in spending. This reducing exigency in the U.S. and Europe is negatively influencing the sector which has been a major export industry and a major resource of job and external exchange for the last three decades. In terms of Bangladesh, the textile industry gives employment opportunities for around 3 million people, in which approximately 85% are women. Issues regarding the future of the textile sector in Asia are not completely new; this was previously the case during 2005, with the introduction of the Multifiber Arrangement (MFA), the regime of quotas which presided over much of the international marketplace for textiles for more than three decades. The MFA constrained textile imports to the U.S., Canada and EU by assigning quotas to nations in the emerging world.

The MFA structure offers an obligation of import quotas by industrial nations on the exports of garment materials from developing nations. The quotas are generally reached under the risk of one-sided manacles by the importer. These quota systems are precise to unique product grouping and are described by yarn and function. If the indistinct quotas in the MFA assisted the least competitive ventures in obtaining assured market share, at present these nations should concentrate on competence, production and effectiveness. Though the quotas are no longer veracity, other business procedures and import or export approaches are in position, and are being negotiated and established. The entire image transformed as a result of the MFA quota after 2005 (Table 8). The development in textile export dealings from India was impaired, and the development ratio dropped to 6 percent during 2006, which was quite higher than the drop in the overall garment imports in the U.S. of 3.65 percent.

Table 8: Exports of Knit and Woven Garments to the US

Origin	2004	2005	2006	Rate of Change 2005/04	Rate of Change 2006/05
World	66875	70811	73393	5.89	3.65
China	10723	16810	19868	56.77	18.19
Mexico	6845	6230	5448	-8.99	-12.55
Indonesia	2402	2882	3675	19.99	27.50
India	2277	3059	3242	34.31	6.00

Source: (Alam, 2011)

Global trade policies continue to be an essential factor harmonizing clean market forces. Also, the fiscal and economic disaster of late 2008 has brought another difficulty for developing nations largely contingent on textile exports. The East Asian countries employed textile exports as a catalyst to enter upon effortless manufacturing, and finally into more high-level export businesses like electrical and additionally more capital-intensive supplies. Indeed, the quota system controlled these countries, shoving them to engage in more advanced exports. Though, regions like Bangladesh did not suffer much inducement to formulate this change over, nor did they construct a system that would consider a complete commodity chain. Although the MFA began as a protectionist degree to help developed countries, several developing countries also gained, since they were capable of establishing a sector rooted in an assured market share because of the quota system (IBEF 2019).

Bangladesh is the country without a textile base witnessed their export business raised ranging from 10- 20% each despite they were being referred to the likely sufferers in the quota-free trade. In the quota system, Bangladesh did not have any consideration in developing other sectors, since it was more profitable to employ imported clothing to execute the textile product quota. The effect of the quota phase-out was not much pronounced in Bangladesh, and it was coped up to sustain in the global market and even raised their export dealings despite the ominous predictions. It is quite remarkable that whilst few countries like Bangladesh and Cambodia have continued to exist regardless of

prophecies made that they would go down; certain established frontrunners like China and India are even now in the race and have not succeeded as projected. This reveals how fickle global trade in textiles has become after the exclusion of quotas.

1.10 GST's impact on Textile Industry

A large number of professional and unqualified employees are employed by the Indian textile industry in the region. The exports from the Indian Textile Sector is expected to increase under GST. GST will impact the supply chains of the textile industry, particularly the raw materials such as the cotton fibers, besides including all men's and women's garments, such as tops, trousers, saplings, footwear, shoes and other fabric pieces, chosen by most SMEs, as this attracts zero central excise duties. The total textile imports for 2011-2012 amounted to $33161.74 and the total amount generated for textile machinery for the same period was Rs 5280 Crore, according to the government reports.

GST tax rate is anticipated to be at more rate as compared to the prevailing tax rates for the textile sector in India. The new duty-free tax would be on natural fibers (cotton, wool). Nonetheless, the whole textile industry will benefit because of the following changes from GST's introduction:

- Credit chain breakage in an unorganized market or structure system causes a void between the input tax credit flows, and represents a significant proportion of India's textile industry. The input tax credit is disallowed if the registered taxpayer opts for composition scheme or procures from the unregistered sector. GST would build a more natural structure of input credit that would transfer the balance to the regulated industry.
- Reducing the cost of production GST will also possibly subsume specific fringe taxes such as exemptions, entry tax, luxury taxes, etc., which would enable clothing factories to reduce costs.

- Capital goods production allowed credit. The price of inputs for the manufacture of textile products using the latest technology is currently high, as the excise duty charged is not permitted as an input tax credit. The input tax credit is allowed in compliance with GST tax on machinery.
- GST Rates & HSN Codes for Cotton Products like- Saree, Dhoti, Zari Border Zari Border Dhoti, Saree, Shirting, Viol, Casement, Suti, Cambric, Sheeting, Lawn, Lungi, Latha and furnishing fabrics.

Table 9: GST Rates & HSN Codes for Cotton Products

Cotton Composition	**HSN Code**	**GST Tax Rate**
Items with a cotton content and weight of more than 85% are less than 200 m2	5208	5%
Items with cotton content and weight of more than 85% are higher than 200 gm / sqm	5209	5%
Items with a cotton content of less than 85% and other textiles and weight less than 200 m2	5210	5%
Mixed with additional fabrics and weight, items with less than 85% cotton content are larger than 200 gm / m2	5211	5%
Other types of cotton	5212	5%

Source: Central Board of Indirect Taxes and Customs

Codes for Synthetic filament yarns GST Tariffs & HSN codes items such as tents, parachute garments, polyester fiber, umbrella sheets, polyester tops, Certain polyester jackets, nylon saree, Dacron saree, polyester saree, saree cover, ray jackets, rayon boarding and ray shirt goods, etc.

Table 10: Codes for Synthetic filament yarns GST Tariffs & HSN codes for considered items

Yarn Specification	HSN Code	GST Tax Rate
67 Decitex or more plastic mono fiber with no cross-sectional length approaching 1 mm; strips & Likewise to synthetic textile matter with an apparent diameter of no greater than 5 mm.	5407	5%
67 Decitex or higher artificial mono-filament of which No cross-sectional lengths surpass 1 mm strips & the like of noticeable thickness of a synthetic fiber substance not greater than 5 mm.	5408	5%

Source: Central Board of Indirect Taxes and Customs

Claiming of input tax credit will be much simpler under the GST tax regime. It will make textile sector more competitive for the textile sector in the export sector. ITF (Indian Tax-preneurs Federation) provided that the high costs of the procedure and gaps in the collection of the customs downside indicate that manufacturers / traders are not likely to export. The GST scheme of obligation discounts/ lacks its importance. Under the GST tax system, ITC will be issued as a GST rebate unlike the current obligation downside systems of the govt which would provide an enhancement to the export promotion of the textile produce. Both cotton-based textile exporters have the capital goods promotion program. The arrangement enables exporters to demand the exemption from duties, if within six years, they sell six times the amount of the duty taxes saved. This scheme is expected to lose its relevance under GST.

In the recent periods, Goods and Services Tax (GST) has impacted every nook and corner of India's economy. The textile sector is not an exception. GST will put back many central and state duties. The taxation of the textile industry is obscure and non-neutral around its different sections. Several textile productivities are either free from the central and state tax systems or are put through comparatively least tax rates. With GST, the significant roles involving the supplier-administration border, for example, registration, income, expenditure, and reimbursements, will be centralized, which will result in the important generalization of observance since it almost eradicates border among taxpayers and tax management for acquiescence-based activities.

The essential taxes that might include in GST are cenvat, service tax levied and collected by the central govts., on vat, sales tax and entry duties, levied and collected by the state govts. combined with many added or special payments and surcharges. A few of the exceptional problems in the execution of GST which will have important allegations for the textile industry concern whether there would be: single/dual power of traders by Central and State regimes and Single/Multiple tax duties. The textile industry is evenly charged and widely subsidized. Export business in the textile industry is supported through expenditure of un-rebated duties on textile inputs and other financial assistance. Thus, the current influence of the textile and garment industry is moderately negative, because India has the second major textile sector across the world after China.

GST is considered as India's largest and most significant tax restructuring is just all-around bend. The Indian textile sector consists of major businesses which contribute to the real growth of the nation and the global market as well. The textile industry contributes around 14% to industrialized production and around 5 per cent to GDP. Potential development prospects in both the international and the national marketplace have influenced its vital industrial status to accomplish substantial growth. The textile sector is charged both under the central and state government. An essential determining factor of the levy occurrence under GST would be the GST ratio related to the textile sections. While the final GST charges are still to be declared, even at the 12% minimal

amount suggested by the Dr. Arvind Subramanian Committee, the textile and garment industry is more liable to be negatively influenced (Bhaskar, 2017). It projected that tax and duty structure in the GST tax system might be greater as compared with the present tax rate system for the textile sector. In India, an essential part of the textile sector functions in the non-organized segment, therefore creating a space in the stream of ITC availment. GST might facilitate a smoother input credit system that might move balance towards the systematized sector. At present, the textile sector is paying the duty at the degree of almost 12.5% plus addendums and which differs upon the MRP of the goods. As there is no clear view regarding the tax rate of this sector in the system of GST, it is likely at the tax of 15% that would be having a modest influence on the industry. Comparatively, this modest influence might either be unbiased or negative to some extent than the existing present structure of taxes.

The planned GST rate policy for the textile sector considers the present efficient occurrence of tax. It attempts to eradicate the ineffectiveness of the pre-GST form while taking care of the end-user from an irregular hike in costs and charges. GST structure in every industry is replacing a multiple duty system by a single duty system. The textile sector, which was previously free from central taxes to VAT at the yarn phase only, has been fetched into the GST network, although with a minimal charge of 5%.

This will assure accessibility of Input Credit to everyone. The GST regime is yarn neutral at the material stage by 5% GST on both fiber and man-made material, therefore eradicating the ineffectiveness resulting from the different tax regimes on different yarns. GST in the textile structure will possibly support the manufacturers to take on an advanced and forward-looking manufacturing system to progress existing goods and services.

There are various feedbacks and opinions, generalized influences, and views amongst the manufacturers, dealers and public in terms of the GST to be proposed by the Indian Government. GST is a wide-ranging, oblique, diverse-stage, objective-based duty which

will be charged on each value addition. The main purpose of GST is intended at generating a single united marketplace that will positively influence every industry and division of the Indian economy. Service is not charged on the garment industry, given that it comes under commodities. In the existing duty regime, garment and cotton products are principally free from or levied at a meagre rate. Also, the State Governments have closed charging sales duty after execution on extra excise tax. GST in the textile industry will reorganize the input tax claiming system. Besides, the implementation of GST will make the whole textile sector more competitive in the export marketplace. Also, input tax credit would be an important step in endorsing the export of textile goods.

A considerable section of the Indian textile sector functions under the unrecognized division. The production tax credit system makes a difference. If the licensed companies purchase goods from the unregistered business unit, the input tax credit provision is not claimable. Textile GST would alter the input tax credit system drastically as well as establish a critical equilibrium between known and unappreciated business divisions. GST will encourage and motivate the whole textile sector to change towards a recognized zone. An essential result of GST might be to look up acquiescence.

The value chain in the new GST regime can be completely visible. Enhanced acquiescence will instinctively result in good profits for every stage given the fact that the charge is not extremely high. At present, Indian textile sector pays high customs and countervailing excise duties while importing goods. The tax is expensive because it is not available to the production tax credit scheme under existing tax laws. In comparison to the introduction of GST, the excise tax may have input tax credit facilities and decrease the total capital goods import rate. The Indian textile market offers a large number of qualified and unqualified citizen job opportunities. It also contributes approximately 15 percent of the total annual export, and is expected to increase under the GST ratio. GST influences the entire textile industry chain that the majority of small-and small-medium enterprises (SMEs) prefer, because it currently has zero centrally paid excise duties. The duty charge under GST might be more than that of the existing tax structure

for the clothing sector. With the implementation of GST, the textile industry has certain impacts that include: unorganized industry are not generally considered, avail credit where it's looked-for and burden of legacy stocks and problem of added compliance element. Mode of operation has completely changed wherein the GST level has forced compliance and processes of official procedures, demanding them to record every job work. With GST, each movement of supplies will have to be registered officially.

Traditionally, the textile industry has enjoyed free of tax on the yarn and fibre value chain. Following GST, the standard tax ratio will be dropped to around 18%. In GST, the taxable individual could pay integrated tax in place of central plus state duty and vice versa on account of the inaccurate application of the place of supply principles. In that case, while proper compensation of duty, interest would not be charged, and the repayment contention of the incorrect tax paid previously will be considered without subjecting it to the condition of the unfair endowment. In the GST system, the majority of the indirect duties, for example, central and state excise duty, VAT and entry tax and service tax were included and ITC is acceptable for the whole supply chain. It must be observed that the GST regime in India is State-driven. Therefore, an individual making material from diverse regions demands to obtain separate registration in every State.

It is quite regrettable that the Indian textile industry has always opposed the duty of taxation. The Central Governments has stressed to set up exceptions for them at all times. Of late, the planned tax of GST has brought about a variety of agitations and industrial actions all through the groups of the textile industry in India all over again. As a result of GST practices, the textile industry has gone through various challenges and impacts as well. Input Tax Credit (ITC) is one of the significant challenges. GST will create a large gap in the course of ITC if small merchants and retailers continue to be unregistered. Also, ITC will not be acceptable if the official taxpayers obtain inputs from the individual who is unregistered or who is going for the composition system. Since GST is a technology-centric decree, there will be a possibility to bring in huge trouble and burden

to the small-scale vendors. The merchants might either not be choosing to employ workforce or won't be organized to implement the technology to assure flawless GST.

Every country will enforce several duties on the general public to undertake developmental effort. Das and Gupta (2004) pointed out that the levy and duty compliance could be enhanced by executing informal restructurings in an employee's course of action in the Indian tax system. The findings of the research emphasized that the GST will result in extreme tax compliance and minimal duty avoidance by Indians. The Textile and garment industry has been playing an important role for decades. Findings of the study by Mahendar (2017) concluded that GST would create a negative impact on the textile sector.

India is undoubtedly one of the few clothing manufacturing regions in the globe that can claim the inclusive value chain production strength. Also, the industry has certain benefits like, plenty of accessibility of resources like yarn and silk, and the relative advantage with regards to the skilled and unskilled workforce. GST will bring about a ' fiber-neutrality impact' on the Indian garment industry, as stated by the Ministry of Textiles, which denotes all synthetic and natural fibres would be considered uniformly from the levy and duty point of view.

The Indian textile sector is made with the material of the organized sector on the one hand while on the other hand, there are a large number of unorganized units, and both these edges completely co-exist, having an essential role in the Indian economy. At present, the textile sector engages with substantial quantities of profits on the indirect tax front. The textile sector is either free from the expense of excise duty or tax is paid at lesser tariffs. The initiation of GST is expected to deal with most of the uncertainties taking place under the accessible indirect system. The influence for the textile industry under GST is likely to be cost-push inflation temporarily but would be having a favorable impact both for the sector and customers on average for the long-standing period. Tax on

materials, GST is payable on value addition, and exports are zero-rated are some of the advantages of the GST.

Currently, the Indian economy has the most critical transformation in the duty system. It will possibly sort out the issue of the difficulty of tax structure since it will reinstate the existing tax system of India. It is anticipated that the duty tariff in GST might be extreme in the textile sector according to the current tax rate. Cotton and fiber that are presently free from duty would come under a duty rate in GST, however, the textile sector might be favorable from GST as production costs might be lessened as a result of inclusion of different taxes like entry taxes, etc. There will be some negative aspects as well, but GST will encourage the sector for its long run. Without a doubt, GST will offer India a top-notch tax regime by gripping diverse management to the production and service sector. The impact of GST on Information Technology, Agriculture, and Real Estate will be encouraging, and also the textile sector will be profited with the execution of GST.

1.11 Factors affecting the Textile Sector in India

Many years before healing, which began during the 10th stop of the 12 months Plan duration, the dimensions of the textile business have stagnated / dwindled. The fabric industry declined because there was no clean course and policy by the authorities. The healing of the company has also been pushed through the support of various public project projects, regulations along with the financial liberalization and deregulation as well as fiscal reforms and tasks such as the technology venture of Cotton, the Technology Upgradation Fund (TUF). The emerging opportunities in this quarter as the global change began as a result of the gradual phase-out of the MFA between 1995 and 2005 were also a catalyst for the boom.

These actions and opportunities helped attract funding for growth and upgrading of the technology across the value chain with distinct speeds and ranges across specific sectors. The growth in cotton potential showed that non-SSI textile turbines had decreased from

35.53 million in 2001 to 35.01 million in 2008. Rotators had decreased to 3.94 lakh from 4.61 lakh. Yarn improvements can often be clarified as spindles are substituted that are ideal for over drafting and open stop rotors, whose efficiency is 4-5 times higher than ring spindles. Open stop spinning is used primarily in producing rough reminiscent of the spectrum in which ring spinning is unexpectedly of great value.

Furthermore, a wide range of spinning generators with more than 4 million spindles had been generated in Tamil Nadu, with several spindles which accounted for over 10% of the spun yarn production in the past years. The textile field is the final stage of the value chain of the product and the component in the highest price change. This quarter is an exportable market and, as stated in advance, the growth in worldwide apparel exchange is greater than that of textiles. The idea of a society that values the earth, is the least pollutant, creates massive work and produces a wide range of products.

The textile sector in India is largely concentrated in Bangalore, Delhi / Noida / Gurgaon, Mumbai, Jaipur and Indore for textile clothing while the Tirupur, Ludhiana and Kolkata industry are concentrated in knitted cloth garments.

Mainly automated and generally more capital-intensive than apparel are the three sectors of the textile industry, particularly spinning, weaving and processing. Consequently, the manufacturing industry can be described as less flexible, a bottleneck within the whole supply chain that adapts to the taste of the customers throughout the season.

1.12 Impact of Government policies on Textile Sector in India

The Government of India has started a variety of projects, knowing the potential of this sector. The various schemes aim at the standard balanced boom of all the industries, the jobs or job possibilities, the supply of apparel to clothes based on the potential, and improving the lives for the emerging middle class with surplus disposable income. In the home market, it offers itself vast opportunities and, as a result, it is preparing a path-map

of this vital domestic sector growth, besides capturing a higher 7% share of global trade from the current 3-4% scenario.

In conjunction with Cotton technology mission to provide textile industries with increased availability of quality raw cotton. The move to correct manmade fiber and filaments custom and economic obligation to achieve a fair cotton and synthetic growth, de-reserve SSI varieties and TUFS for expansion and modernization of the diversified fabric sectors essential to the maintenance of competitive energy and integrated fabric park plans. TUFS offers subsidies to capital investment. Increasing funding in the apparel sector proved major achievement as data provides that as on 31 July 2006, the TUFS approved projects estimates are at Rs 44,686 crore, reporting a very high increase of around 123% over earlier years.

1.13 Strategies to enhance the industrial dynamics of Indian Textile Sector

In the social and economic scenario of India, the textile and clothing industries are of significance importance. In addition to being the nation’s biggest employer, it hires around 105 million workers (direct and indirect) and contributes about 5% to the country's GDP and 13% to India's exports. The Government has started several measures to reinforce the textile sector because of the significance of this sector. The current government policies are as follows:

Picture 2 Government Policies

Scheme / Policy	Key Features
ATUFS	• 15% capital subsidy on eligible machinery in garmenting and technical textile sector with a cap of Rs. 30 Cr. per individual entity • 10% capital subsidy on eligible machinery in weaving for brand new shuttle less looms (including weaving preparatory and knitting), processing, jute, silk and handloom sector with a cap of Rs. 20 Cr. per individual entity • 15% capital subsidy on eligible machinery for composite units with a cap of Rs. 30 Cr. per individual entity (*if the eligible capital investment in respect of garmenting and technical textiles is **more** than 50% of the project cost) • 10% capital subsidy on eligible machinery for composite units with a cap of Rs. 20 Cr. per individual entity (*if the eligible capital investment in respect of garmenting and technical textiles is **less** than 50% of the project cost)
Scheme for Integrated Textile Parks (SITP)	• Grant/Equity up to 40% of the textile park development project cost subject to a ceiling of Rs. 40 Crores. • GOI support under the Scheme will be generally in the form of grant to the SPV unless specifically decided by the PAC to be equity. However, the combined equity stake of GOI/State Government/State Industrial Development Corporation, if any, would not exceed 49%.

	• Grant at 90% of the project cost subject to a ceiling of Rs. 40 Crores for first two projects in the States of North East Region of India.
Integrated Skill Development Scheme (ISDS)	• Assistance up to 75% of the cost of the project, within an overall ceiling of Rs. 10,000 per trainee.
Technology Mission on Technical Textiles (TMTT)	• Upgrade existing Centre of Excellences and set up of four new COEs • Support for business start-up • Providing fund support for organizing workshops • Support for standardization • Market development Support for sale to the institutional buyers • Market development Support for export sales • Grant for conducting Contract Research and Development in identified institutes
Swarnjayanti Gram Swarozgar Yojana (SGSY)	• Provide assistance to people by providing them income generating skills through a mix of bank credit and Government subsidy. • Subsidy at a uniform rate of 30% of the project cost, subject up to Rs. 7,500 per individual.
Integrated Processing Development Scheme (IPDS)	• Grant up to 50% of the project cost (excluding land cost) with a ceiling of Rs. 75 Crores for projects with Zero Liquid Discharge Systems and Rs. 10 Crores for projects with conventional treatment systems. Support for marine discharge projects would be analyzed on a case to case basis with a maximum ceiling of Rs. 75 Crores. • The project cost shall be borne by the Center, State, Beneficiary, Bank loan in the ratio of 50:25:15:10 respectively.
Merchandize Exports from India Scheme (MEIS)	Rewards for export of products shall be payable as percentage of realized FOB value: • For handloom, jute and coir based products - reward rate is 5% for all countries • For all other eligible textile and apparel categories - reward rate is 2% for EU (28), USA, Canada and Japan.
Duty Drawback	Drawback rates for key textile and apparel categories: • Cotton yarn: 2.8% to 4.7% • Cotton fabric: 4.3% to 7.1% • Apparel: 7.5% to 9.8%
Market Development Assistance (MDA)	• Financial support to exporters for conducting export promotion activities abroad
Market Access Initiative (MAI)	• Financial assistance for carrying out marketing projects abroad, including o Opening of showrooms o National level participation in trade fairs/exhibitions

India's vast domestic market offers the prospect of large-scale growth in domestic textiles and apparel use, leading to high investment in alternatives and foreign countries, particularly in positive product sectors. In compliance with a 1999 review, technical textiles (for instance, in aerospace, marine, medical, civil engineering and all other commercial packages) as well as home textiles and garb could be the most significant areas for exchange and overseas financing in India. The S.R. Satyam Expert Committee (SEC), created by the GOI, agreed that these sectors have the best prospects for booming and advocated various measures to encourage them.

Rising development with rising domestic affluence, a growing fitness perception for the use of more disposable appliances and the successful benefit of artificial fibers in India has been a market for the nonwoven textiles. The liberalization of the Indian economic system has given rise to importing machinery and was subject to preferential tariffs and joint project agreements with international companies. Because of the high car manufacturing competition, the technical textiles industry in India has increased. The Indian goal is, with the assistance of 2005, to achieve a $6 billion (10% of global production) output in technological textiles. The GOI aims to provide the industry with foreign funding opportunities and tax concessions.

Indian denim demand has an 8% component. According to a capita denim usage in India, around one-fifth of the global typical is estimated to be 0.1 meter. With the expansion of the Indian financial system and strong consumer spending on clothes, domestic appeals are projected to grow. The Indian Denim region currently has an average capacity utilization of 50-60%.

National Textile Policy

It provides for the recognition of the significance of the textile industry to fulfil one of the core needs of its population and the value of their sustained development to boost quality of life; recognition of the special role of the textiles industry as an autonomous field from

raw material manufacturing to finished goods and their significant contribution to the economy.

Objectives

The policy is aimed at- promoting textile industry 's achievement and retention of a global leading position in textile output and export; encouraging the industry to resist pressure on import penetrations and maintaining a powerful domestic presence; liberalizing laws and regulations such that various sectors of the textile industry will work.

SAATHI Scheme

The Ministry of Textiles and Ministry of Power have worked together to ensure the maintenance and support of energy-intense textile techniques in the power dumping industry and cost savings resulting from the use of these technologies under the initiative SAATHI.

Energy Efficiency Services Limited (EESL), an administrative department of the Power Ministry, will substitute obsolete old electric engines with energy efficient IE3 engines that will save up to 10-15 percent energy in the initial phase.

The use of such efficient equipment would contribute to a decrease in energy consumption and expenditures without capital costs for the unit owners. Power loom clusters have been developed for the pilot test in Ichalkaranji, Bhiwandi, Erode, Surat, Bhilwara and Panipat.

Merchandise Exports from India Scheme

In the context of the Indian Foreign Trade Policy (FTP) 2015-20, i.e. 1 April 2015, the Government has initiated the Merchandise Exports from India (MEIS). It aims to promote the export of products that are notified and produced in India.

The main features of MEIS are as follows:

MEIS is the result of a substantial integration and simplification. Traditionally five separate structures had been developed for the compensation of exports of products with different forms of tariff codes and different terms. Both have now been combined in a new scheme, the Indian Retail Export (MEIS).

ii) MEIS rebate rates: MEIS reimbursement shall be paid by the sum of the FOB export covered by a MEIS duty loan agreement as a portion (2, 3 or 5 percent). A document for paying different duties and fees, including customs / excise / sales charge, may be transferred or used. The inputs and scripts imported are entirely transferable within the scripts. For exporters, this has been very versatile. In the earlier schemes the scripts relating to their use and the portability of objects had several conditions.
iii) Products covered and allocation: MEIS covered 4914 tariff lines at the time of launch, 1 April 2015. In the context of the annual allocation of Rs 18000 Crore by the Ministry of Revenue, the market and sector awareness were established.

Scheme for Capacity Building in Textiles Sector (SCBTS)

The Ministry of Textiles' Capacity Building System (SCBTS) aims at training young people for a sustainable and profitable job in the textiles sector throughout the value chain of textiles with the exception of spinning and weaving in the organized sector.

The following implementing agencies implement the skills building and enhancement programmes:

1. Industry of textiles
2. The Ministry of Textiles / State Governments have institutions / organizations which have training and placement link to the textile industry.

3. Training institutions / NGOs / Societies / Trusts / Organizations / Startups / Entrepreneurs in the textiles sector with investment connections with the textiles industry.

Incentives for textiles-

The Indian Textile Ministry has pledged Rs 690 crore to set up 21 readymade apparel factories in seven states for Indian textile production and modernization.

Government Incentives

In order to raise exports by USD 31 billion, the Indian government has announced a special package, creating a crore job potential and attracting an investment in the region of Rs. 800 billion from 2018-2020. As of August 2018, an additional investment was generated in Rs 253.45 bn.

Technology Upgradation Fund Scheme(TUFS)

The Indian textile industry, in particular in the weaving and processing industries, has no technological advantage as the textile industry in the developing countries. As a result, the Government launched on 1.4.1999 the TUFS School on Textile and Jute Mills, which was later extended to 31.3.2007, to facilitate the modernization / technical development of textile mills for five years. The Ministry of Textiles is a flagship program. From 01.04.2007 to 28.06.2010, the program was updated. The goal of the TUF scheme is to increase technical innovation spending, concentrating in particular on sustainable development through the value chain. The purpose of the scheme is to provide domestic textile industry support for existing goods as well as to set up new state-of-the-art production units in order to guarantee their viability and dignity at home.

It is the plan

(a) to provide the Indian textile industry with funds to modernize at international interest rates.

(b) In terms of specified machinery, the technology standard is benchmarked.

(c) Sections such as Spinning, Cotton Ginning & Preserved Filament Yarn (VFY / Viscose staple fiber (VSF), Staining / Knitting, Restructured TUFS The Restructured TUFS Scheme (TUFS) was introduced with effect from April 2011 till March, 2012. The Ministry of Textiles has authorized the extension of the R-TUFS to the degree of the allowance of the non-used grant limit in accordance with the Ministry of Finance, Department of Spending, Project Finance – II. In keeping with details of UID projects, Restructured TUFS and its continuity under the 12th Phase have attracted Rs.37655 crores to expenditure and continue to leverage technical innovations in the textile industry to allow it experience the international competition with an insistence on balanced value chain growth by (a) answering and fostering the issue of heterogeneity.

In 2003, 2006 and 2010, the system was tested three times. Both evaluated the program and recommended the application of it to be of interest to the textile industry. This research shows that inflation, emissions, maintenance and labor costs have been reduced as well as improved affability, wages, growth, productivity, exportation, etc. In March 2013, the Budget Finance Committee previously discussed the plan and recommended that it be introduced under the 12th Five Year Programme.

Revised Restructuring of the TUFS System

The system was upgraded and reorganized. On 1 April 2012, the New Restructured TUFS (RR-TUFS). So far, RR-TUFS has approved Term Loans of Rs. 7,745.35 crore.

i) The total subsidy outflow in the autonomous spinning sector constituted 26% of the plan allocation (e.g., Rs.11952.80 crores), including the spinning sector obligations.

(ii) A pilot project is also being designed for the electricity-flowing industry, which aims to provide incentives, to increase its production and performance, to increase its domestic market and export market demand, for the growth of services, for the development of factory buildings and shuttle-free looms on the basis on the sales.

iii) The Micro-, Small and Medium Enterprises (MSME) accounts for 10 percent of the permitted funding of new sanctions.

(iv) (a). In the case of a self-supporting spinning industry, for more sanctions for individual spiders, there is a project expenses limit of Rs. 250 crores.

(v) a) stand-alone spinning systems – 2% interest rebate (IR) for current stand-alone / replace / modernized spinning machine subsidy benefits under the twelfth budget would be as follows.

b) For forward-looking spinning power systems that have identical weaving / knitting / sorting / garmenting capacities-5 percent IR.

Amended Technology Upgradation Fund Scheme (A-TUFS)

Over a period of seven years beginning in January 2016, the Minister of Textiles has initiated the amended technology upgrade scheme (ATUFS). To qualify benchmarked equipment, at a 15 percent apparel rate, ATUFS offers a once-in-time capital subsidy.

The latest scheme targets, in turn, at:

1. Job generation and export, supporting the textiles and manufacturing industry, which will generate jobs mainly for women and increase India's share in world exports.

2. Facilitation of export and work professional textiles, industry sunrise 3. The goal is to boost efficiency and competitiveness by encouraging converting existing lines to new facilities 4. Encourage expanded production and monitor the need for imports of materials into the textile industry.

India's vision of textile industry

The complete disintegration of Indian textiles-India is one of the oldest and several decades ago industries in the Indian economy. India's total FY 2017-18 textile exports amounted to US$ 39.2 billion and are projected to rise to US$ 82 billion by 2021.

The textile industry in India is challenging, with hand-woven textile industries on one side and the capital-intensive, advanced mill industry on the other side. The autonomous power lines / sleeves and knitting devices are the most critical element in the textile industry. In comparison with the other industries of other countries, the strong relationship between the textile industries and agriculture (for raw substances like cotton) and the traditional culture and practices in the country make the Indian textiles industry unique. The Indian textile industry is capable of producing a broad spectrum of goods for various industries in India and worldwide.

It is anticipated that the Indian textiles industry would reach approximately US$ 150 billion by 2019. In 2018-19, India's textile industry accounted for 7% (in volumes) of India's industrial production. In 2018-19, India raised its GDP by 2 percent, hiring more than 45 million people. 15% of Indian export sales were contributed in 2018-19 by the industry.

In India, raw cotton production in the year 19^ has been projected to reach 33.7 million bales.

Spending In the last five years, the textile industry has experienced an increased investment. From April 2000 to June 2019, the sector (including tested and printed) earned US$ 3.19 billion in FDI. 100% of the FDI was also immediately approved in the textile industry of India.

1.14 Statement of Problem

In 1995 associates of the WTO concurred to phase out accords which had restricted dealings in textiles and clothing for more than three decades. The global structures of textile and clothing quotas ended in January 2005. Since the quota structure had enforced purchasers to buy products wherein quota allocation was accessible, not wherein products were most effectively manufactured, it protected a lot of developing nations from two essential resources of rivalry: international supply chain forces and rivalry from leading dealers, like China and India. Some might state that the closing stages of the quota structure were the commencing of the last part of the 40-year period and the commencing of the broad globalization of the textiles and clothing sectors. Nations and market places are still adapting to these unstable transformations. In the EU marketplace, both Bangladesh and India have performed well since 2005. It is just a few years ever since the phasing-out of the international structure of quota controls that presided over trade in the textile sector. Certain countries that had been estimated by many researchers to lose out in the post-quota globe have not only handled to keep hold of their historical profits, but as well accomplished significant development in their export revenues. This is largely on account of re-imposition of quotas on textile exports from China, which were taking advantage of provisional protection dealings as commenced by China in the development of its attainment to the WTO. During 2008 and early 2009, U.S. and E.U. traders witnessed margin shortfalls as excessive as 30 percent. From 2005, The Asia foundation's financial program has been employing Asian nations on the problem of competitive ability in the post-quota world. In contrast to former forecasts, a lot of the “unanticipated” countries did endure; in actual fact, many nations, including Bangladesh, primarily multiplied their garment exports to the United States following the MFA phase-out.

1.15 Aims and Objectives

1.15.1 Aim of the Study

The aim of current research is to study industrial dynamics of the Indian textile sector with reference to Bangladesh i.e. The effects of Multifiber arrangements in the post-quota era in Bangladesh and India, the performance of the Indian Textile Sector with regard to competition are to be researched upon. The research sought to achieve the following objectives.

1.15.2 Objectives of the Study

- To review the impact of the post-quota era (post 2005) preferential access by EU, USA, and other developed countries to Bangladesh on India's Textile Sector.
- To analyze the effectiveness of the infusion of funds in new plants and machineries through the Indian Textile Companies.
- To highlight the need of the government support and accordingly develop a proposal for the Indian government.

1.16 Research questions

- What is the impact of Multifiber Arrangements (MFA) on the textile industry?
- How the post quota era (post 2005) changed the view and profits of the textile industry of India and Bangladesh as well?
- What are all the challenges that have been faced by the Indian textile industry in the wake of the post quota era?
- How the current GST tax ratio influences the growth of the textile industry of India.

1.17 Significance of Study

India is developing as the textile and garments hub of the world. Indian textile industries are cutthroat and money-spinning by enhancing its efficiency, production, product diversification, and improving operational scale. Since the significance of the textile industry to its economy is incredible, the current study attempts to explore the impact on the post-quota era and various advantages that are taking place, followed by the post quota era. The current study has emphasized the benefits that took place after the quotas system. The final phase of the quotas system was a sign of the introduction of a period of positive change and development in Bangladesh. The post-quota international market has not only unlocked a panorama of prospects but has as well raised a mass of challenges to the Indian textile export. The opportunity deals with limitless market access, a challenging status of India concerning other cutthroat countries for its potency on a significant source base, and the manufacturing of extensive range of products.

1.18 Structure of the Thesis

Chapter 1 explains the introduction of proposed study that gives complete structure about this study perception "Industrial Dynamics of Indian Textile Sector with special reference to Bangladesh" including the statement of the problem, research background, research questions, aims and objectives of the study, and limitations of the study and as well as the significance of the study.

Chapter 2 discusses review of literature that explores several related works to perception on Industrial Dynamics in the Indian Textile Sector with special reference to Bangladesh. In addition to these, impact of post-quota era (post 2005) preferential access by European Union and other developed countries to Bangladesh on Indian Textile Sector is explored.

Chapter 3 provides a research methodology that describes the research design, testing approach, sampling system, design of tests, study population, data forms, strategies for

collection of data, the design of questionnaires, data analysis and the techniques of interpretation used in this research. In addition, the shortcomings of the present study are discussed in detail in this portion.

Chapter 4 discusses the data analysis and discussion and it analyzes and discusses the impact of the post quota era (post 2005). Also, challenges that have been faced by Indian textile industry in the wake of the post quota era are discussed.

Chapter 5 is the concluding chapter which describes a review of the findings of the discussion section and concludes on the subject of study " Industrial Dynamics of Indian Textile Sector with special reference to Bangladesh," followed by recommendations and suggestions based on the results of the analysis.

CHAPTER TWO

2. Literature Review

2.1 Introduction

The present chapter attempts to review some available empirical studies regarding the growth and productivity of the Indian industrial sector with special reference to the textile industry. It also explores the analysis of export efficiency, structure, export path, Indian competitiveness indicators, and the factors affecting it. Verghese (1979) attempted in 1971-78 to calculate improvements in India's international competitiveness. India's profitability has been evaluated in comparison to its 11 leading global producers' rivals. Belgium, Canada, Italy, France, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom, and the United States have been vying for the event. Similar distinctions were rendered by other rivals such as South Korea, Taiwan and Hong Kong about the individual products exported.

International trade in goods and services is considered a competitive force for global development and one of the most robust relations between the different countries of the world. The exchange of goods and services between various countries is international trade. The international trade status of an economy influences the economic well-being of most trading countries.

For two fundamental purposes, countries participate in foreign trade, each adding to the trade benefit. First of all, countries are trading because they are different. Nations should take advantage of their differences by agreeing to an agreement that does everything reasonably well. Secondly, countries exchange to develop and reach economies of scale. Also, foreign trade trends illustrate the relationship between these two factors. Over time,

theoretical theories have helped to explain the pattern of trade between various nations. (Krugman and Obstfeld, 2000).

2.2 Theoretical Underpinnings of Trade Theory

The theory of trade suggests that trade between two countries contributes to peace as a result of their dependency. Trade, however, has a double-sided rivalry as it can contribute to peace, stability and conflict. The economic theory that regulated foreign trade was mercantilism in the 17th and 18th centuries. Mercantilists argued that a country must export more than it imported to become rich and wealthy. An influx of bullion or precious metals, mostly gold and silver, will then pay off the resulting export surplus. We assumed that the economic stability and political strength of a nation comes from its precious metal stocks. We argued in favor of a protectionist strategy to reduce imports to increase exports, thus generating a trade surplus which could be utilized in the procurement of more precious metals to increase those inventories. Mercantilists called for tight government regulation and economic nationalism. Though mercantilism is an ancient ideology that is mostly debunked, it still resonates in the political discourse and commercial policies of many countries in modern times (Hill, 2007). The legendary economist Adam Smith, who created an absolute-benefit philosophy, was the first to explain why a nation benefits from free trade. Smith proposed that the market mechanism's' invisible hand' would decide what a nation imports and what it sells, rather than government policy. According to Adam Smith, each nation's mutually beneficial trade needs at least one element which it can export to its trading partner as the least expensive product (Carbaugh, 2005). The absolute advantage theory of Adam Smith (1776) explains that unrestricted free trade gains result out of the permission international trade gives a nation to master in producing and exporting its produce which are effectively produced in the particular country and on the other hand indulges in import of products which are more competitively produced by other economies (Hill, 2007). Where

one country has an overall gain over the other, and the latter wants the other, buying from the other would always be better for the latter than making it.

(Smith, 2003) According to Smith, you can increase the production and export of these goods. Smith proposed that the market mechanism's unseen hand would decide what the country is importing and exporting instead of the government's policy (Hill, 2007). According to the Ricardo comparative advantage model, even though it implies purchasing produce from the other countries, a country would produce those products in which it achieves efficiency and would reply on the products of other nation which that respective country specializes in and produces with higher efficiency. (Hill, 2007). Free trade can also help a country which makes it less expensive and improves welfare for everyone in the country (Suranovic, 2007). In contrast to Smith, who stressed the importance of absolute differences in costs among countries, Ricardo highlighted comparative (relational) cost differences (e.g., comparative advantage principles) (Carbaugh, 2002). It was argued that variations in the national factor of land, job and capital have the comparative advantages (Hill, 2007).

The Heckscher-Ohlin model forecasts that countries should export products that intensively make use of locally abundant factors, while at the same time importing products that intensively use locally scarce factors (Hill, 2007). Criticisms of the Hecksher-Ohlin comparative advantage hypothesis are based upon his belief that all goods, which is not the case for raw materials or single producers, are technologically similar (Ugarteche, 2000). Heckscher-Ohlin's paradigm has been overturned by Leontief Paradox. The new theory on trade (Paul Krugman) points out that in some instances countries are specialized in the manufacture and export of some goods, not because of fundamental differences in factor endowments, but because only a small number of companies can support the global market in those industries (Hill 2007). This is partially due to the ability of firms within a country to gain first movement rights. The pattern of trade between nations is observed. Experience has shown that sectors that receive tariff and non-tariff barriers become increasingly inefficient over time. In addition to the

simple Tariff, there are also competing quotas, export restrictions and domestic content laws. Protectionism discourages not only imports but also exports because import tariffs increase output costs for the sectors and boost protectionist national prices (i.e. less competitive) (Ritzer 2010). Many developing countries which had previously been adopting an industrialization strategy for import substitution have since the beginning of the 1980s adopted an exterior focus and liberalized trade policy. These reforms included significantly reduced and simplified average tariff rates and quantitative limits on imports.

2.3 Quantitative Restrictions

The typical effective means for controlling imports and exports are quantitative restrictions that take the form of quotas. In the form of import quota or export quota a quantitative cap can be imposed. Quotas of import limit the imports by setting maximum quantities or values of the goods permitted for the importation of specified items. Generally, permits for other persons or businesses contribute to the limit. Import quotas also increase the domestic price of the goods imported, and also generate quota rents (Krugman, 2006) Export subsidies are payments to a business or to an individual who transfers a good outside the country. An export subsidy may either be variable or ad valorem (the proportion of value exported) (a fixed sum per unit). When the Government provides an export subsidy, the goods shall be exported to the degree that the domestic price is surpassed by the subsidy by the international price (Krugman and Obstfeld, 2006). Subventions to exports are known as dumping. Since international agreements term as illegal export subsidies, many countries placed them in covert forms which distort the free trade mechanism.

The requirement for domestic content is a law that requires some portion of the final product to be manufactured domestically. Domestic content is a requirement. In some cases, this proportion is stated in physical units and, in other cases, in value terms, it is stated that a minimum share of a reasonable price reflects domestic added value. The

local content legislation offers protection from domestic parts suppliers in the same way as an import quota. The results are very different in terms of businesses that prefer to purchase locally. There is no strict cap to local content on imports. This allows companies to produce more as long as they also buy more domestically (Krugman and Obstfeld, 2006) One significant feature of the demand for local content is that it does not create any government revenue or quota rentals.

The disparity between prices for imports and domestic goods, in turn, is then measured in the final price and passed on to customers (Krugman & Obstfeld, 2006) Voluntary export restrictions- It is a type of import quotas where, usually on the request of the importing country's government (Hill, 2007), export is restricted by the exporting country itself. That is the situation in which an importing country "voluntarily" pressures another country to reduce its product exports under the danger of the all-out trade restrictions, as those exports threaten all domestic industries (Salvatore 2005). This is the situation. VERs (Voluntary Export Restrictions) are bilateral agreements where an exporting country restricts the export of the commodity to either help or the trade deficit of the other country or protects the domestic industry (importing country). VERs are adopted by the importing country under pressure. Such export constraints on the market-oriented production of goods are the source of surplus incomes or rentals, also viewed by producers as prizes. From an economic standpoint, voluntary export controls are just like import quotas, where the licenses are given to foreign governments and, therefore, the importing country is costly. Some cooperative export contracts span many countries.

One of such multilateral agreements put on textiles producing developing countries by developed countries is the Multi Fiber Agreement (Krugman, 2000). MFA quotas are usually negotiated bilaterally, under the threat of unilateral importer restrictions. Such quotas are specified by fiber and function and are unique to different categories of goods. This contributes not only to the discrimination of different fibers and goods but also between exporting countries (Martin, 1996). The global dispersion of textiles and

clothing production is influenced by a variety of factors, including labor costs, price, efficiency, time to market, durability and capacity to produce fully (Salvatore, 2009).

Under MFA, India has bilaterally agreed to put QRs for its textiles with large western countries. In the first sign of a bilateral agreement, a past success provision is introduced to determine the initial quota for existing companies. A business is granted a quota based on previous results and the business becomes a quota holder. A quota allocation can be achieved for holders of free quotas in the following year if they use their free quota entirely. Also, potential entry to the pool for any organization that does not use the free quota it earns can be withheld to promote maximum use. Quotas will typically be given annually, and holders will need their existing annual quota quotas to be allocated in the future. A usage rate of 95% or more (taken for full usage) entitles a quota holder, in the form of which the bilateral agreement underlies, to obtain a further full benefit of an extra amount decided by a suitable growth factor. Utilization rates between 50% and 95% enable a business to earn a New Year quota equal to the export amount in the past year. For the coming year, a company that doesn't even use 50% of its quota won't get any quota. A quota holder can shift part of his quota into other companies to determine his overall quota usage and include his results. Quota allocation, usage and transition have a definite relationship. An initial holder cannot retain his quota without direct export or having a company on his behalf to export textiles if it is moved from his quota. The countries exporting their quotas for certain goods would switch to countries and product categories which are less limited.

As the quota allocations are usually focused on actual export output, even when it is not profitable, there is a further incentive to increase exports into restricted markets to increase quota allocations in the following years. Consequently, the quota system provided many developed countries with access to competitively impossible markets (ILO, 2000) otherwise. It has contributed to a "trade diversion," a boost to the developed countries for importing and development.

As Bown and Crowley (2007) predicted that countries faced with a bonding quota from those areas would then either redirect the commodity from under developed countries or minimize its export from underdeveloped countries through substitution by production of the same domestically (Fugazza and Conway, 2010). The potential is also present for economic deflection and trade destruction. In the absence of quotas, a small number of manufacturers and larger firms can combine production due to the economies of scale, which can be achieved. The present analysis involves quotas that apply to the quantity limitations on the various types of garments (such as knitted shirts or sweaters, oral gloves) and textiles which have the export potential to the USA, Canada and the European Union (EU) (e.g. knits fabrics, acrylic yarns, cotton fabrics, etc.). The Textiles and Clothing Agreement (TCA) with the same MFA has now been replaced by the MFA. The ATC program assigns a limit of the amount to be legally exported in the USA, to Canada and to the EU over a limited period to countries which are manufacturer of clothing and textiles. Due to the countries and the commodity the ATC quotas were different. Quotas were typically distributed on the basis of historical exports.

Japan has not extended MFA quotas among the main Textiles and Clothing (T&C) importers, although Norway has eliminated those quotas in 2001 (Appelbaum, 2004). The existence of bilateral quotas under MFA prevents the regular operation of the market system. It thereby leads the distribution of resources inefficiently among various activities and sites as well as the inefficient distribution of products between consumers in various countries. The state of efficiency in production and consumption demands that producers' marginal social costs for output be equal to the price paid by consumers for the product. The presence of an MFA quota system comprises the ability of the business system to fulfill these efficiency requirements. Within this context, the essence of the misallocation between producers and in the importing country as a consequence of the enforcement of the quota is important to remember.

Inefficient transfers between manufacturers and contingency constraints move production from cheaper suppliers to higher-cost suppliers. Such re-allocations take many forms: re-

allotment by regulated import markets from restricted exporting countries to domestic vendors, trans-allocation between restricted exporting countries, transfer from restricted exporting countries to unconstrained countries, and even re-allotment by individual companies to a restricted exporting nation. Both of these relocations are possible causes of output inefficiency, causing quota system losses (Faini et.al, 2001) (Importing country inefficient allocation).

The bilateral quota agreements arbitrarily divide and separate markets that allow for variation in consumer prices between the markets for the same purpose. This segmentation leads to inefficient assignment among consumers of products. Inefficient market allocations take two forms: reallocation of consumers from various limited imported countries to consumers in restricted importing countries who have not negotiated or imposed any restriction on consumers in importing countries (Faini et al. 2002). The increased cost of production and a binding quota per unit of economic rent represented the effect of quantitative trade restrictions. Quotas contribute indirectly to production costs by supply restriction and therefore price rise as well as directly because the quota is often sold to the business sector and hence is a business expense. Quotas are levied in the form of quota rent, the value of the price differential arising from the quota if the quotas are binding. That is because a contractual quota permanently restricts the availability of the goods to the importing market, which contributes to price rises and offers commercial rents to producers with market access (i.e. export capacity within the quota). The exports that are given the quota usually receive this loan. When quotas are allocated, the rentals are added up to whoever has a right to sell quotas–depending on how controls are applied and the market power of the particular markets, in some cases, the exporting country's states, in others the exporting countries themselves.

The quota rights, if the quotas are binding, are priced. The quota method contributes to the quantity and price rise of the quota-controlled products in the restricted markets in comparison to unregulated products. Because textile and clothing quotas have been controlled by suppliers to provide "voluntary" export controls, seldom with distributed

quotas done through the auction, such rentals are considered alternative i.e. implied export tax. (Kathuria, Martin and Bhardwaj, 2001) One crucial point is that the taxes here arise out of the limitations levied by the country of import. The effect of the literature quota is typically expressed as an export tax equivalent or EYE for these reasons (Francois and Worz 1998). The export tax equivalent (ETE) is the amount of the quota divided by the price of a producer who does not have a quota for that commodity. ETEs may also be regarded as economic rents that result from the opportunity to charge higher prices on MFA-restricted import markets or from the full readiness of companies to pay for the export of a particular garment product. Such rents and the ETE will vanish with the abolition of the MFA system. On the other side, quota limits have helped to increase industrial production in some countries with small quotas (mostly East Asian countries), by enabling these countries to shift to higher value-added production, which is either costlier or more cost-effective in terms of value-added activities (e.g. the design and marketing) in the clothing commodity chain The most recent examples are Hong Kong, Taiwan and China (Tyagi, 2003). Moreover, Mexico has pushed gradually into full-scale manufacturing of products, skills development and innovation in more value-added activities (Juststyle.com, 2003 Gereffi, Spencer & Bair, 2002).

Instead, it may provide a degree of security that reduces their opportunities to implement new technologies, to the point that the quota redirects production to relatively unregulated countries. (Applebaum, 2004) The MFA has also driven the transfer of foreign investments to poorer, least developed (LDC) countries, where the limited quota countries are pushing investment into low-quota use. Industries were set up in Bangladesh, Sub-Saharan African nations and in Caribbean countries by the Korean companies, other Asian countries had companies from Mainland China setting up industries and Nepal had Indian companies setting up production bases. Maintaining a non-transparency in security measures such as MFA is very important to calculate the quota rents to assess their restrictiveness. The countries that enforce protection and those affected are not aware of the implementation of a security threshold.

Analysis of India's competitiveness involved determinants - relative unit value of exports, comparable consumer price indices, relative wholesale price indices, relative GDP deflator, relative unit labor costs and relative profitability (using three profitability measures – (a) the ratio of the manufacturer's unit value of export to wholesale manufacturing prices (b) ratio of item amounts of the manufacturer to wholesale prices, and (c) ratio of the price deflator exports to price deflator of GDP).

All measures (except the relative unit value of exports in manufactures) related to changes in the general international competitiveness of India vis-à-vis major trading competitors. A rise in the index of various measures reflects a decline in the competitiveness of Indian and a decline in indices reflects a rise in competitiveness. The analysis showed a steady improvement in the international competitiveness of India relative to that of major competitors. In the case of the relative unit value of exports in manufactures, the USA and Italy registered high competitiveness other than competing countries. It concluded that obstacles to improvement in the competitiveness of produce of India's sector laid in points such as the product quality, supply and selling measures adopted to sale the produce. Goldar (1986) analyzed growth of the total factor productivity (TFP) for 1951-79 and also 1951-65 and 1959-79 sub-periods, in the Indian industries. He has studied small business production activity between 1960 and 1978. Productivity pattern studies were carried out at a divided level in 1951 and 30-four primary 3-digit industries in 1960-70 for five large industries (textiles, steel, plastics, electronics and other industries). Multiple regression models were used to analyze inter-industrial variability in productivity growth. The rate of growth of value-added labor and capital for Textiles is lower than those for aggregate-CMI, while TFP experienced substantial gain during 1951-65. Jain (1988) studied the export marketing of textiles & garments and argued that in view of the changes in the international scenario and the unprecedented increase in competitiveness, there was a need for refocusing the Textiles and apparel manufacturing plans. The study offered an empirical analysis of the export

success of India's textiles in the developing markets as well as the export output of other developing countries such as Hong Kong and South Korea.

At the eve of the expiry of contingency constraints at the end of 2004, a flood of studies on the potential effect of the abolition of quotas were done. Several International Organizations such as WTO, World Bank, Asian Development Bank and the United Nations found that, following the abolition of quota limits, significant gains would be made for emerging and industrialized countries like India. Authors such as Spinanger (1998) and Martin and Winters (1996), particularly in connection with developing countries, have far more cautious views on this after 2005 scenario. They opine that after the elimination of restrictions on textile quotas, developing countries will have negative effects.

The majority of studies that have attempted to measure the impact of the quota deletion in textiles on the economy and trade are expecting growing global welfare due to the WTO ATC. However, there are broader projections of welfare gains, with global annual benefits estimated to range from US$ 6.5 billion to US$ 324 billion, respectively. Most of the studies generally show that T&C goods are expected to contract in the developed countries but that imports from developing countries are projected to increase. The distribution of welfare benefits has similar differences. Several studies find the developed nations principally benefitted of the ATC reforms, on the other hand, other authors suggest that the overall policy changes will lead to their loss. The review of literature in the present study is divided into the following themes:

- Welfare and Trade gains
- Studies with Regional Focus
- India specific studies
- Profitability.

2.4 Welfare and Trade Gains

Abolition of quotas and tariffs between Canada, the EU, the United States and developed countries was studied by providing for a static CGE model for maximum competition and steady returning nations. The goods sold should be uniform. The focus of the research was mainly on the textile sector by defining 14 textile and clothing categories in their model. The authors anticipated the benefits of the worldwide suppression of quotas and tariffs to amount to $23 billion a year, accounting for approximately 2/3rd of industrialized nations' income and 1/3rd of developing nations. Several developing nations are expected to increase exports of several hundred per cent at manufacturing costs in developed countries. Analysts expected the abolition of textile liberalization would lead to higher losses, assuming the tariffs are not changed (Trela et al. 1990). It was measured that the effects of the Uruguay Round Final Act on 9 sectors and 10 groups on the basis of a CGE model which was static in nature. The overall benefits from the expansion of the textile quota were found to be more than those from the expected liberalization of services in agriculture and the market, reflecting USD 84.5 billion annually, or nearly 40 % of the net gains in the Uruguay Round of trade negotiations. In developed and developing countries, welfare gains will decrease almost equally. Trade in textiles in the world will increase by 6%. The country group of South Korea, Chinese Taipei, Hong Kong / China and Singapore is projected to increase by over 80% in large-scale labor market changes (Nguyen, Perroni and Wigle (1993).

In comparison, the textile labor forces are expected to contract by 22 percent in the textile sectors of the developed countries including the USA, New Zealand, Australia, Western Europe and Canada. Yang (1994) concluded that the most of the countries would benefit and there would be significant rise in the world income. His research focused on an eight-country apparel model with a limited two-sector split, which reveals regional improvements in welfare marginally smaller than anticipated developments in Trela or Whalley. Moreover, the advantages in the developed world are not primary gained, but

divided evenly between emerging and emergent countries, even though exporters do not take account of explicitly the inefficiency of their internal quota allocation schemes. The results are partly attributed to decreased tariff rates in the quota protection of developing countries ' economies, and the Yang study distinguished between regulation and nonregulated goods in the United States, the EU and other restricted economies. Total textiles and fashion apparel withdrawals are forecast to reach 47 billion dollars a year by François and McDonald's and Nordstrom (1994), reflecting 42 percent of the overall social security rise of the Uruguay Round. Their research was driven by a dynamic, competitive, and constant CGE model. In a 2nd scenario, the researchers expected monopolistic rivalry, with higher to scope returns, to account for as much as two thirds of the Uruguay Room gains, of 189 billion dollars more than four times the estimated social welfare benefits from textile market liberalization. Furthermore, the second instance indicates that all nations, including the developing world, have positive benefits from the abolition of textile quotas. The developed countries are missing out, by comparison, as they are completely productive and continually modified. This is the result of increasing import request prices in the competition with monopolies and increasing revenue, which make it easier to offset losses of quota rentals because developing countries have increased access to markets of developed countries. Trela and Whalley expand their CGE model in a follow-up report to include the effects of the internal allocation schemes in exporting countries. Two categories of producers are differentiated in developing economies into exports of goods: existing higher-cost manufacturers offering limited markets for exporting goods and emerging, better affordable manufacturers supplying domestic markets. The removal of MFA restrictions will make it possible to transfer textile produce to the most productive producers, in domestic markets as well as international markets. It was reported by Trela and Whalley that costs of welfare exceeded the country limits due to unsustainable quota allocation programs, leading in the event that quotas and tariffs can be abolished by $49.7 billion annually in net gains. Increased efficiency was passed to the importers of technologies at lower rates, though

the key advantage of replacing the wasteful method for the delivery of intangible goods is the exporters of industrialized countries.

Hertel et al., 1996 carried out analysis of the liberalization of trade in manufacturing and employed a GTAP tool. However, the ATC reforms in projected 2005 economy is the foundation of their forecasts. Given the expected economic development, institutional reforms, and the rise of the ATC quota, they believe that nearly all exporting companies would have longer-term MFA quotas. Exports of clothing are particularly limited from China, Indonesia, Malaysia and the Philippines. Annual global welfare benefit amounting to $37.3 billion is to be generated under these conditions, with the abolition of textile and apparel quotas. The MFA legislation, which Yang (1996) also discussed, is expected to come into effect in 2005. First, it measured the impact of acceleration of the ATC transfer period limit until the MFA limit was eliminated. He observed that development and social impacts were marginal during the three stages of the ATC transformation. The small effects can be explained by volume descriptions of the integration criteria so that countries first reduce the need for changes, by incorporating products that are high but low in value (Bagchi 1994). Global gains are expected to rise to $52.9 billion a year by eliminating MFA quotas entirely.

At certain periods and in a more particular sector or region, a related simulation was used (François et al., 1996). We also discuss alternative ties between business, profit and capital accumulation. When researching long-term effects on the purchase of property, which can increase revenue gains or losses, various assumptions are taken into account concerning equity (fixed or endogenous) and investments (fixed or endogenic). The findings suggested that the full dynamic adoption (inventory and endogenous savings rates) almost doubles the amount calculated by fixed equity and fixed savings by the liberalization of the textile and apparel industry. Yang et al. (1997) are examining, based on the 1992 results, the market liberalization of textiles and clothing using the CGE GTAP model. There are ten separate sectors, two of which are separate for clothes and textiles, and seven vary. The figures indicate that ATC would receive a net economic

income of $28.6 billion or 38 per cent of the overall global welfare benefits from the Uruguay Round. Export changes are projected to be identified by the writers as a consequence of slowly abolishing MFA restrictions, which reflect better importing costs for Asia, North America and the EU. We expect commerce between Japan and developed countries to deteriorate. Much of the early study of the ATC change could be due to the overestimation, and ultimately to the advantage of reducing current protection, of a tariff equal for apparel and fibre quota. There are huge social benefits of the ATC law. The Annual Advantages of ATC Reform were forecast at 16 billion US Dollars, or 27 percent of the overall Uruguay Round gains, Harrison, Rutherford, and Tarr (1997) with revisited tariff equivalent numbers and an ever-renewed static CGE model. A slightly higher global profit of $16.4 billion from textile liberalization and clothing has been projected by increasing prices in its model scale, while another $20.3 billion of advantages has been made by taking into account the competitive effects of its cumulative capital accumulation.

The inclusion of complex ties in a model similar to that of Francois et al. (1996) has provided better favorable approximations of the effects of the ATC change on the developing economies. Harrison also performed a sensitivity study on demand to find that if demand were perceived as reasonably inelastic, the welfare increases in development countries would be greater and more widespread, as import price reductions would increase demand in developed imports and increase trade increases in contrast. More producers such as China, Southern Asia, Indonesia, Thailand and Malaysia could, however, benefit in general from the possibility of breaking into 11 previously restricted markets of the Latin American countries, Middle East countries and North African nations which had high cost producers. In addition, greater elasticity in substitution across specific export markets may be of benefit to developing countries. The liberalization scenarios in the period of the Uruguay Route are contrasted specifically by Bach, Dimaranan, Hertel and Martin (2000).

The (Mishra, 2019) research based on the analytical methodology of the author of interviews with main data collection and secondary data of science literature with its objective being to identify points that affect SMEs and key drivers' internationalization cycles and barriers. The aim of the study is to gain insight into the real challenges small businesses face in extending their operations abroad. The different kinds of obstacles and incentives they face to travel overseas. The impact of this global expansion is still centered on the domestic sector today. Even smaller companies have started to consider and expand globally through digital technologies, such as e-commerce, better networking and so on, in the modern era and cycle of globalization which has become very common.

However, some sectors are still facing issues that have not been transformed by technological developments in some countries. Such immaterial considerations will be explored by the author on the ground on the Indian economy and by Indian small firms and their exports abroad. The study examines the merits / demerits of expansion and the natural barriers to it.

Governments are planning to enact a carbon tax to achieve a decrease in production of greenhouse gases, higher national wages and employment levels, renewable energy infrastructure creation and electricity efficiency. Another important factor is the realisation of the impact and effect of carbon tax policies on the different fiscal, social and industrial sectors as it impacts production costs, productivity and industry profits. The goal of that research (Khastaret al., 2020) is to evaluate the effect of a carbon tax on the growth of Finnish industry as one of the countries that use a computational total balance model to achieve a high energy-intensive consumption (Figuset al., 2019) (Beyers et al., 2020). This study analyses the impact of carbon tax in the macroeconomic and manufacturing sectors. The outcomes of this report reveal the marginal effect on Gross National Output (GDP) of introducing carbon tax policies. The shifts in the trade balance, the exporting and import rates, the production price, and the electricity consumption ratio in the industrial industry have been considerably shown. The effect is

significant. Despite the small reach of the industries in Finland, for example, they seem to be more competitive.

The administration of Tanzania has set a target of rendering the nation a semi-industrialized and half-income economy by 2025. To facilitate this transition, the Government exempted the Value Added Tax on capital goods in the 2017-2018 fiscal year as a means of promoting the utilization of these goods by manufacturing industries and generating production, jobs and increased income. This research analyzes the effect of a cut in the value added tax on capital goods (electricity, automobiles, machinery and equipment) under two separate principles of closure, first being that the fixed government spending and variable government savings and the second being flexible government spending and fixed government savings. Under the first dictatorship budget investments decreased, and the businesses heavily dependent on government spending suffered. Second, the production rose for all manufacturing industries leading to a decline in average unemployment. Dependable intake rose for all except the most deprived groups of households (Maskaeva *et al.*, 2019).

This research, focused on Joseph Schumpeter's macroeconomic theory, integrates data envelopment, a complex computable general equilibrium model, with projected secondary material flows to evaluate the efficiency of 43 dark-fermentation biohydrogen production and improved production impacts on biohydrogen performance. It was noticed that the hybrid model was feasible. This analysis reveals that continuous production performance exceeds batch production significantly. The concentration of biohydrogen substrate is the most critical contribution to biohydrogen generation. Statistically, pH has an effect on batch technology output and significantly exceeds the performance of batch technologies in the continuous processing, but remains insufficient to increase maximum processing maximum efficiency for the majority of continuous technologies (Lee, 2020).

Susanto, 2020 provided in his research about the nature of the textile industry which is both capital as well as labor intensive. He studied the competition in the textile sector among Indonesia, India and China by employing the Herfindahl index, Trade Specilization, RCA i.e., Revealed Comparative Advantage and the Constant Market Share. The Herfindahl index provides for perfect competition between the three countries. The trade specialization approach shows that the exports from India show relatively more stability than the other two nations viz. China and Indonesia. In general terms, there is promotion of exports in this methodology. The RCA approach provides for a stagnating export levels for India and Indonesia while for China it shows a greater competitive edge. Susanto concludes China to be the most competitive among the three followed by Indonesia and India. Guan et al., 2019 analyzed factors influencing the international competitiveness of the textile industry of China viz. labor, raw materials, capital, demand and supply, state of the other related industries and the strategies and policies having direct and indirect influence. He concludes in his research that investment in the fixed assets along with the speed of upgradations of equipment being used by the industry needs to be increased. Also, the costs of the basic inputs need to be reduced and controlled along with the growth of the supply chains of inputs which shall ultimately lead to higher profitability of the companies.

Building on the latest international literature and the United Nations System of Environmental-Economic Accounting Framework (SEEA), this research gives more empirical proof of the incorrect estimation of macroeconomic figures through a lack of the incorporation of natural capital wealth in national accountancy. The SEEA methodology paradigm on natural resource incorporation into the structure of national accounts strengthens the explanatory capacity of the CGE models and enables the analysis of economic-environmental ties. To explain the natural capital loss induced by environmental catastrophes, the paper integrates prices of natural resources into supply and usage tables (SUTs). This also uses (Sangare and Maisonnave, 2018) ACGE to demonstrate the economic consequences of a particular occurrence in which hurricanes in

Polish forests decreased almost 80,000 hectares of woodland in 2017. The findings of the model refer to the methodological details reported during the case (Jendrzejewski, 2020).

Eliminating the total world social welfare profits from MFA figures using strong export tax alternatives for 2005 generates projections higher than those of the 1992-USD global welfare period. Other parts of the Uruguay Round have provided less specific results, such as the Tariff Reform package, and that reflects the particular interest of the observers in growth of the economies and the improvements in the structure of the textile sector. In Javed and Bhatti (2000), a comparative advantage in terms of production speed, efficiency and ethical supply is not decided by the post-MFA system of world trade in terms of cheap labour and factor endowments. The study showed the results of the liberalization (Diao and Somwaru, 2001). It sets out ATC reform to reduce tariffs by 30-40 percent and increase export output annually over 20 years. After the changes in trade policy, the trade rates in textiles and clothing were estimated to be between 5% and 16 % higher than if trade were not liberalized.

Clothing and textiles exports from developed countries would also rise to some extent. These findings reveal international links in production patterns with lower prices of clothing, which boost the demand in the developed and developing countries, and exports which increase imports into manufacture of labor-intensive clothing of capital-intensive textile products. Exports from Asia and the Middle East will gain a global market share which would be at the expense of the producers from Eastern Europe, Latin America and developed countries. As the authors conclude that there is no MFA allocation fee, increased capital distribution in all countries leads to social welfare benefits following trade liberalization. The estimated potential global gains are a total of $88 billion annually (year 5) and $203 billion over the long term. Around two-thirds of all welfare benefits are available for developed countries. The GTAP (Global Trade Research Project) model is used for analyzing the effects of removal of quotas on labor and the up-front industry through Lankes (2002). Tariffs and quotas are estimated to save jobs saved in the developed world at the cost of jobs in developing countries.

The abolition of MFA quotas and clothing and textile tariffs will build jobs in developing countries for over 27 million people working in the textile sector. Global welfare gains are valued at $34.7 billion per annum, which accounts for over 2/3rd of the developed countries overall benefits. Any of these advantages are obtained by producers of fiber crops. For instance, textile and clothing-liberalization is projected to bring cotton exports from sub-Saharan Africa up by 9 percent or 132 million dollars. The effects of the more freedom of trade in clothing and textiles, including reductions in tariffs in developed countries was studied which provided that those developing countries will reap almost the full welfare benefits of these liberalization efforts.

Regional trade agreements such as the European Agreements and NAFTA, as well as legislation on processing marine products that allowed businesses to bypass MFA quotas, resulted in a significant impact on textiles and clothing trade during the 1990s (Brugnoli and Resmini, 1996; Spinanger, 1999).

The impacts of further regional integration, as well as the MFA quotas removal study are estimated by Fouquin, Morand, Avisse, Minvielle and Dumont (2002). In particular, the effects between the European Union and the Mediterranean and North and Latin American countries with proposed free trade zones approximate them. They think it will increase textile and clothing production respectively by 20% and more as a result of removing the EU remaining import tariffs on textiles and clothing from Mediterranean countries. Exports to the EU of clothing will be about twice as large. The Mediterranean countries will benefit $3 trillion a year from a welfare deflation scenario without national bias in terms of welfare results. Asian exporters, in particular China, are losing exports and financial welfare due to trade diversion.

The development of a free trade area in the Americas, although the quantitative effect would be less pronounced, is expected to have qualitatively similar impacts. OECD (2004) focuses on recognizing supply chain trends, policy and regulatory issues in the areas of trade, labor adaptation, technology and innovation, and business facilitation

criteria and strategies. The study differentiated others in that it recognized that trade policies continued to affect decision-making on investment and production and offered useful overview of critical political issues and market growth, and how policymakers could help their industries adapt to the new trading regime. It also presented a roadmap to capitalize on opportunities resulting from the improved conditions of market access for the company.

UNCTAD (2004) stressed the factors affecting trade in textile and clothing in the post-ATC trading climate and argued that the success of the exporter would rely on how the opportunities are taken advantage of and how the difficulties generated by the termination of the ATC are resolved. The study observed that the competitiveness of textile and clothing industries in the current policy environment was primarily guided by factors like cost of labor, the proximity to the market, the access to preferential access to the market and preferential rules of origin and forecast that in the next few years, trade in this field will rise as population, incomes and living standards increase.

The study determined that companies from developed countries that could meet consumer expectations, increase the value chain and operate in niche markets are ready to make significant profits. In light of the gravity model, Ernst et.al (2005) analyzes trade and work problems after the MFA end. The outcome has shown significant changes in the structure of global trade which have led to major changes in yields and employment among countries. China, Pakistan, Hong Kong, Taiwan and several other South Asian Countries and Belarus, are projected to benefit most from the MFA phase-out. Other countries would be light losers but are likely to win if their new environment is implemented by effective adaptation policies, especially smaller countries that have good transport ties with low labor costs, such as Thailand, Cambodia and Bangladesh. Many countries may be impacted by growing competition in the textiles and apparel industry but may be able to survive by applying different restructuring strategies. This group includes countries such as Mexico and other Central America. Some countries are losing out in textiles and apparel and need to diversify their economies and develop other

industries. This group includes sub-Saharan countries, including Lesotho and Madagascar.

Kowalski and Molnar (2009) examine some large producers ' strategies to survive in the global competitive arena post-quota. The report states that the quota structure contributed to the dispersion of global textile and apparel production and procurement. Its removal, for textile and apparel manufacturing, trade and investment, has dramatically influenced the overall landscape and has created substantial gains by "agglomerating" production, utilizing economies of scale, spillover technical and reducing financial costs. The study showed that the key strategies adopted by companies for their survival after the quota regime are vertical separation, horizontal distinction, reorientation of markets and relocation of production overseas.

2.5 Studies with Regional Focus

A variety of studies have not just assessed the global impact of the ATC Law, but also analyzed the impact of textiles and clothing liberalization on the specific field. The chapter is defined under two headings: examining optimistic intentions and evaluating negative anticipations of the elimination of quotas.

2.5.1 Favorable Expectation

By using a partial balance approach, Cline calculates net gains for clothes at US$ 7.3 billion a year and US$ 0.8 billion for textiles, resulting in gross liberalization net profit (Cline 1987). It also looks at the effect on income distribution of fashion and apparel protection. He found that protection is mainly favorable for higher income groups, which generate a large proportion of profits in the protected industries when analyzing the results of jobs, market preferences and corporate profits. De Melo and Tarr (1990) analyses the effects of quota eradication in their CGE economic model in the US.

Efficiencies are projected to produce $5.9 billion per annum and an estimated $6 billion in export profits, leading to a total average welfare rise of $11.9 trillion.

The writers often address concerns surrounding modification costs for the domestic quota industry. Reinert (1993) uses a technique close to De Melo and Tarr in the estimation of social issues as unemployed employees' earnings over six years by differentiating the clothes and garment industries.

The gains of the US are worth 7.3 billion dollars from the abolition of MFA quota. Roughly 90% of the changes were attributed to abolition of textile limits and 10% to liberalization of apparel exchange. Austria (1996) investigated the impact of the MFA process on the garment and textile industries of the Philippines.

In the MFA years, secondary data from 1980 to 1994 evaluated the export performance of the industry focusing on the position of the quota and quota management in the region. Survival opportunities have also been studied from the phase-out in the quota setting and developments in footwear, fashion manufacturing and regional advantages. Although MFA guaranteed exports of textiles and clothing to the world, it caused loss of domestic capital, because of inefficiencies in the distribution of quotas between exporters, not only affecting the amount of the exports' income but also the productivity of the capital used.

For some significant companies that export garments and textiles, the GTAP-CGE model was used by Yang and Zhong (1998) to analyze approximate annual changes in production and exchange. One assumption is that, while trade liberalization will increase demand growth in China, textile production will continue to rise considerably less rapidly than GDP. Total growth in clothes volume, however, surpasses efficiency. The NIEs displayed antithesis to Chinese intense rivalry in garment manufacturing after trade liberalization by the textile demand in China and by other apparel manufacturers that helped raise textiles in their NIE.

Accordingly, China should gain a yearly profit of up to $8,6 billion from abolishing an MFA similar to an associated report (Zhong and Yang 2000). In close two-thirds of the overall advantages of the Uruguay Runde liberalization pattern, the results of the EU ATC change on Francois, Glismann, and Spinanger (2000) are evaluated using a CGE model. Assessment of comparatively small-scale MFA quotas and tariff rise in particular during the Uruguay Round. The projections suggest that the EU would save 25.3 billion euros a year in total, 97% as a consequence of withdrawing MFA and 3% of tariff reform. In addition, they agree that it is necessary in the Member States to assign advantages of change. The main winners of the ATC law are Germany, as well as France and the United Kingdom.

In Southern Europe, the adverse sectoral impacts will be fairly large but will be offset by more than expected sales from the business. The authors measure the expense of protection per saved job quarterly. For textiles, the costs are around €28,500 for rising job and about €41,100 for clothes. Ianchovichina, Martin, and Fukase (2000) assessed the impact of China's WTO accession with a emphasis on the November 1999 accession bid. The GTAP research focuses on economic projections for the duration between 1995 and 2005. You accept that for Chinese accession to the WTO, the textile industry will be the main sectoral influence. The production of apparel is projected to rise by 249 per cent in the ten years after the accession, up from 54 per cent in a counteracting failure to accede. Exports are projected to increase by 330%, compared with 43% without participation. The expansion of the development of garments is projected to raise demand for import textiles by 163 percent. In their analysis of the effects of world trade policies, Chadha, Pratap, Bandyopadhyay, Sachdeva and Kurien (2000) anticipated that the phasing out of the MFA quotas represents over ½ of the nation’s total Uruguay Round income would enhance the welfare of the nation by USD 1.9 Billion(in 1995-US$). This figure is likely to rise in the future as ETE for Indian garments and apparels rose over the period (Kathuria and Bhardwaj 1998; Kathuria, Martin, and Bhardwaj 2001). Furthermore, the conclusion of the results on the impact on trade liberalization of Indian domestic policies

reform Elbehri, Hertel and Martin (2003) has shown that, with the growth in the labor productivity of Indian textiles and clothing industries by 67%, the benefits of the ATC reform would more than double for the region.

The Chinese and Chinese Taipei accession to the WTO was also studied by Francois and Spinangers (2002). In Greater China, particularly the People's Republic, they view textile sector as high export opportunity sector. ATC' s reform alone would lead to increase in the GDP of China by 1.1%, which is equal to approximately $1/5^{th}$ of the WTO accession's overall economic growth effect.

The GTAP results suggested for China and Chinese Taipei, a substantial increase for exports of the textile sector in terms of accession to the WTO and the ATC reform. Exports from China are expected to explode for garments. More broadly, MFA countries with preferential market access are projected to experience significant declines in the international market. The researchers assessed the potential consequences for China's WTO accession and the reforms of the ATC and concluded that China will continue to be a significant source for manufacturing textiles and clothes, and will be facing fiercer foreign competition. Schoppenau, Egerer, Brenton, and Buelens (2002) studied the impact of the ATC reforms on the textile and clothing industry of Germany. Firstly, they model the effect on the textile and clothing markets of the EU's eastern expansion, and the last step being the ATC reforms to take place following the accession of 10 new Member States.

The growth in textile production (plus 2.9 percent) will be steadily positive, and the performance of clothing (minus 1.5 percent) is projected to be moderately negative in Germany. Approximately 4.4 percent would be required to reduce the MFA quotas, with the resulting impact of apparel output and job reduction by around 6.4 percent. The decrease is much more dramatic, yet still restricted. In a second simulation, the authors assess the influence on fashion and clothing tariffs on the planet, which will exercise

minor impacts in Germany and the EU. General equilibrium study is supported by some balancing evaluation of the impact of spinning, weaving and machinery on textiles and clothing industries. These sectors are likely to have different effects, as the latter are shaped differently in the abolition of MFA quota regime and changes thereof in the textiles sector. Projections for the spinning sector provides that it is expected to produce 3.4% of spinning output in German, that is to say, less than textiles and clothing and more than proportionate (10.4% and 9.2% respectively) output in the textile and machinery industry.

The study did not mention any forecasts for welfare results. At the same time, Germany is anticipated amongst the principal beneficials of the ATC reforms in the EU due to lower goods prices and more effective use of resources (Francois, Glismann and Spinanger, 2000). Baleix (2003) studied the effect of phase-out of European imported clothing quantitative restrictions under the MFA process by employing gravity equation. The study found that a 20% rise in European imports would contribute to the phase-out of QRs. There will be an increase in EU exports by almost 37 percent in some countries such as Vietnam, Korea and China, whose exportations are subject to QRs systemically. The elimination of the quota would increase EU imports of clothing by 20%. The major countries of origin of this development will be China, India, Korea, the Czech Republic and Poland. The proposed trade diversion will have implications for those countries which are still earning from the open access to the European Union.

Elbehri (2004) analyzed the effects of the abrogation of MFA quota system on the cotton and textile sectors on global trade. The analysis was focused on a new set of restrictions on MFA trade focused on the 2002 commodity, quota level and price data. The study offered a comparative static assessment of shifts in global trade trends post-MFA, using a multiregional general equilibrium. In the study, the MFA implied tax on cotton was taken into account and inter fiber substitution was permitted. The experiment was tested in many scenarios, including the abolition of quotas only or coupled with the liberalization of tariffs. The study reported significant changes from preferential exporters to Asian and

South Asian suppliers subject to mandatory MFA quotas in textiles and clothing trade. But the expansion of the clothes sector does not help all MFA exporters equally. The USA showed substantial growth in the import of clothing replacing domestic goods, increased retail consumption and significant welfare gains. The results for the fiber markets in the US showed that there is less demand for domestic cotton. Still, the US exports have increased because of higher global demand, notably if quota and tariff are eliminated.

In its review of the effect of the phasing-out from ATC, Nordas (2004) used the GTAP model. The study provided that after complete implementation of the Textiles and Clothing Agreement (ATC), China and India will emerge as the world's most significant player in the world clothing market. Nordås (2004) states that, while the effects of the simulation are driven by price shifts, time and distance are not captured as barriers to trade.

The effect of quota withdrawal on ASEAN trade in textiles sector is examined by Wattanaputi Paisan (2005). The PRC and India are most anticipated to benefit from the quotas-free trade climate; however, a major share of their market shares is being lost to many providers which earlier relied on favorable quota assignments. These exporters include many medium-and under-developed ASEAN economies, which in the post-ATC period are facing more difficult adjustments and challenges.

Yao and Whalley (2015) have studied the effects of the MFA/ATC using both world trade and US data since the removal of the MFA/ATC. They analysed the trade data which are consistent with theoretical predictions of more trade volumes, lower product prices, smaller effect of RTA on trade, less transshipment and quota hopping investment, and higher country concentration of exporters. They concluded that the effects of the MFA on clothing trade were more significant than for textiles trade. They have also highlighted the benefits that come with freer trade in textiles and clothing which shall be there for other sectors that are still under trade protection.

Manoj and S. Muraleedharan (2019) in their study have provided for the impact of trade liberalisation on the productivity of Indian textile industry. Their findings provide that the labour productivity shows an improvement during the post MFA period along with the capital productivity which shows higher average capital productivity during the pre-MFA period vis-à-vis post MFA period. Besides, their study provides that there has been an increase in the capital intensity for all product groups in the post MFA period in comparison to the pre-MFA period.

2.5.2 Unfavorable Expectation

Some studies have studied the impact of quotas elimination, and in the majority of these studies, the textile trade of trading partners has not shown promising growth. In particular, for emerging economies, they expected market loss. The distribution effects of textiles and clothing safety in the United States were investigated by Hanson and Reinert (1997). They divide households into eleven income groups using the Reinert CGE model of 1999 and analyze the impact of the elimination of the MFA quota on each group. They considered textiles and clothing security to be somewhat modern, contrary to Cline (1987). The lack of employment prospects for low-salary employees in the manufacture of textiles and apparel after the MFA removal is not entirely compensated by lower consumer prices. Therefore, it is expected that the abolition of quota security would have a small effect on the distribution of income in US in the way of increased inequality.

The effect of alternative target dates on MFA quota deletion after accession by Walmsley and Hertel (2000) has been investigated using an advanced version of the GTAP model. These in particular reflect a scenario in which quotas payable in China 's textiles and textiles by the countries of North America and Europe would be eradicated by one in early 2005. The findings show that late liberalization would not favor all of China, North America and Europe. The authors also note that job losses are postponed but not

eliminated in the textile and clothing industries of industrialized countries if quotas are gradually phased out.

The effects of the MFA process on the Sri Lanka garment sector have been examined by Weerakoon and Wijayasiri (2000). The study found that most of the total export revenues of Sri Lanka are concentrated in women and men's casual wear. Because exports concentrate on the quota categories, Sri Lanka could find it harder to compete in the international quota-free environment after 2005 with significant, low-cost providers. The report also suggested that its activities be restructured to function in the current trade climate.

Someya et al. (2002) analyzed the possible effects of the deletion of MFA in the MENA countries trading system. The analysis showed that fear of the overall route from world clothing to MENA (Egypt, Jordan, Morocco and Tunisia) is not justified as tariff preferences, and a niche market is expected to continue. The possible market share losses are likely to be limited in GCC countries that are used by third-party re-exporting companies as export platforms to bypass the quota barriers to their land exports. Tunisia is well positioned amongst manufacturing exporters for sustaining its market, primarily in Europe, under the EU-Mediterranean Convention, which ships European yarn to Tunisia for manufacturing in fabrics and garments.

The World Bank report in 2006 found that the countries MENA-4 lost export market positions in the EU one year after the expiry of the MFA. After the withdrawal of the remaining quotas, the gross exports of textiles and apparel from Tunisia, Morocco and Jordan to the EU have decreased by 5.8, 7.4 and 13 percent, respectively. The value of textiles and clothing items in Egypt's exporters to the EU dropped just marginally by 1%. A drastic rise of Chinese exports (41.5%) and a significant rise in Indian exports (18%), as well as strong results by both Turkey and Bulgaria, have led to a decline in MENA-4 countries in the EU textiles and clothing industry. After the removal of the MFA, Egypt and Jordan were economically stable.

The results of phasing out MFA style restrictions and additional barriers to Pakistan's textile industry are analyzed by Musleh Ud Din and Kalbe Abbass (2006). The phase-out of MFA on Pakistan Textile exports is expected to have a positive impact in the long term. At the same time, it raises a surge of challenges for the textiles sector of Pakistan to erode preference care as part of MFA. Public policy needs to be centered on tackling the textile industry's systemic challenges in order to perform better in a more dynamic international setting. Wijasiri and Dissanayake (2008) looked at several developments in the Sri Lankan textile & clothing industry, where the intensification of competition in the light of the MFA phase-out led. The analysis found that some large companies have become an entire company, although others attempt to set up their own 23 markers. Innovative goods have been developed by the apparel and clothing industry by establishing backwards relations, introducing productivity enhancement initiatives and introducing lean manufacturing procedures. Investments are also being made in Computer Aided Designing (CAD)/(CAM) Computer Aided Manufacturing technology as well as in green production plants. Marketing technologies have also been applied to countries other than the US and EU, such as international and local imaging services, promotion of corporate social responsibility and market diversification.

Hudson et al. (2011) indicated that while the abolition of MFA was considered to be a net global gain because it required the removal of a distortionary collection of trade deals, the presumption was based on free trade principles as the underlying global trading scheme. However, the global trading system after the MFA's abolition of quotas was still well short of open due to the exchange patter that had arisen after the MFA's unintended consequences of development infrastructures and trade laws focused on distortionary incentives.

Hassan (2013) studied the difficulties arising from reforms to the global trading system and the relative stability of the global markets as the result of the Bangladesh prepared clothing industry's scrapping of MFA. The study found that the MFA process produced the ready-made Bangladesh clothing industry with a huge challenge. Bangladeshi rivals

like China, India, Vietnam, Turquie, Mexico and the African States had a negative effect on the growing competition of the RMG industry. The Bangladesh RMG faces more and more pressures on developed countries' obligations, which include dependence on imported raw materials, political instability, the unpredictable economy, high interest rates on banking, lack of policy incentives and inadequate awareness of foreign marketing, port problems, weak facilities and the workforce.

Ahmed, 2019 and Khan, 2020 provided in their study that the Vietnam is Bangladesh's readymade goods biggest competitor is Vietnam which has become new avenue for investment for the Chinese readymade goods industries. Paul, 2018 provided that the minimum wages for textile sector workers has risen by around 51% which has increased the difficulty of Bangladesh Textile Industry in competing with China. Also, in case of non-resolving of these issues in near future, growth of the readymade goods industries shall be jeopardized.

Gautam et al., 2020 studied the economic performance and competitiveness of the textile industry of India with China and Vietnam by employing use of Balassa index and other factors employed by the World Bank in terms of development, diversification and sophistication between the year 1988 and 2016. They obtained data from WITS on the basis of Harmonized Classification and concluded that India has gained comparative advantage from 7 to 8 products while Vietnam showed upward trajectory from showing comparative advantage in 2 products in 2000 to 7 products in 2016. Besides, China has increased its dominance from around 9 products to all during this period.

The study concluded that there are tremendous opportunities for the Indian textile industry on the world market, as most products have shown positive export growth.

Joseph and Narayanaswamy (2013) have studied the global textile & clothing trade pattern and export performance of Indian textile & clothing industry vis-à-vis its competitors. Their empirical findings through the application of trend analysis and coefficient of correlation over 8 years period since 2005 provide that the Indian textile &

clothing market are not only losing their share to China but are finding it difficult to sustain competition from countries like Bangladesh and Cambodia in some area of the textile sector which are excelling in the competition better than India. Besides, they have also noticed that Indian exports of textiles & clothing is highly correlated with global trade pattern in contrast to countries such as China and Bangladesh.

2.6 India Specific Studies

In this section review of literature is divided into the following themes: 1) Direction and composition of trade; 2) Quota removal and unfavorable effect and 3) Survival Strategies.

2.6.1 Direction and Composition of Trade

Mehta. R (1997) analyzes the impact of post MFA on the Indian textile industry. Through the report, the elimination of MFA has given India's textile exports and apparel industry opportunities and challenges. The results show that the removal of MFA was positive for exports from India. India's textile exports in the post-MFA regime have significantly increased. Not only did it capture increased import demand in developing countries, but it also grabbed market share in the destination markets of emerging economies in other nations. A productive analysis of Indian exporters shows that China is the biggest winner on the US market (by countries) during the post-MFA regime, with the highest number of anti-dumping cases followed by textiles and articles (19 per cent). From January to August the US imports from China increased by $9.6 billion.

The ATC has had a positive and increasing effect on Indian textile and apparel exports. This rise was attributed to the growing demand for imports and (ii) to trade diversions in destination (developed) countries in other nations. Besides, the rise was not limited to a few commodities, but almost all commodities. The possible benefits for the abrogation of

MFAs for the developing economies, especially India, were analyzed by utilizing the NCAER-UM model for World Trade, Output and Employment in 23 Multi-State Sector Computable General Equilibrium (CGE), (Chadha and Pohit, 1999). The MFA-free trade is aimed at promoting the development of these labor-intensive sectors in India, the Rest of South Asia and China (ASEAN (ASN Indonesia and Malaysia), Rest of South Asia (NIE) Hong-Kong, South Korea, Singapore and Taiwan).

Trade liberalizing the textile and clothing sector would stimulate the development of such labor-intensive sectors in China and South Asia, as the result of the phase-out MFA. Across South Asia, other than India, the highest welfare rises are reported. The ASN 25 area also proved major percentage gain in textile production (14.5%) and NIE (8.5%), and RSA (7.5%) and IND (5%) in the study as well. In exports of both textiles and the clothing industry, India has proved to be the largest proportional gainer (26% and 42%), led by ASN (19,5%), RSA, (17%) or NIE (8%).

Nanda and Raikhy (2000) have pointed - India is facing the challenge of free trade with the gradual removal of MFA, and India will raise its market share between 2.4% and 4% from the present stage. To increase its market share, the technology is diversified into the high range, the upgrade of labor, power, the extension of offshore manufacturing facilities into selected clothing, in specific areas such as Andaman Nicobar, etc.

Indian textile competitiveness was calculated by the RCA formula, the proportion of the export share in India to its share in global exports and the REC ratio, the ratio between India's textile exports in world textile exports and India's export share of Indian textiles. Also, an Effective Rate of Security (ERP) had been estimated for 21 years between 1973-74 and 1993-94. It was found that both competitiveness and productivity will decrease and competitiveness will increase exports with a more protective regime. In her report, Vijaya Ramachandran (2001) established links in the production which are without much strength and export value chain, significant obstructions to growth, policy changes for increasing textiles and garments manufacturing and exports after the end of the MFA

quotas system. It discovered 3 critical weaknesses in the production chain-the failure of the indigenous manufacturers to supply sufficient fabric, particularly man-made, the lack of textile machinery available, and the lack of vertical weaving and processing capacities. The study suggested that policymakers would focus on the following issues: incorporation of informal industry development into the mainstream economy, investment in much-needed infrastructure, sustainable positioning for post-MFA market conditions and a sustained shift towards value addition and product development. According to Apparel Fortnightly (2002), phasing out the MFA is anticipated to be the major success for liberalized trade in the world and a boom for developing countries like India. But for all the countries of the developing world, the result of such liberalization will not be the same. Others are going to emerge as major winners, and others will struggle the most as the textile trade is incorporated into the WTO regime. Many well-established countries in the world had a strong base, superior technology and strong marketing abilities, and would be the beneficiaries of brand equity.

The Chandran Group (2004) concluded that Indian textile mills had a major modernization and expansion plan on India's threshold, intending to meet the Indian government's 2010 Textile Export Goal of USD50 billion. World trade in textiles and apparel was expected to grow from 374 trillion US Dollars to 550 billion US Dollars by 2010. Throughout the post-quota era, only countries with developed textile industries like India, China, Pakistan and Indonesia will benefit rapidly. Verma (2002) evaluated Indian exports in the U.S. and EU markets for competitive results. Twin parameters have been introduced to determine this. i) Unit value growth rates of the commodity imported in India have exceeded the overall product unit value growth rate of all industry suppliers. ii) The market share rose between 1995 and 2000.

Besides composite goods, Indian exports of textiles to the US have no future. This has been found. Many goods also lost market share. The output of India in the EU in the synthetic textiles (yarn and fabrics) was excellent. The dresses, jackets and skirts were leading. Among them were shoes. Cotton bleached material and woven bed linen were

possibly products whose exports to the EU were restricted by quotas and hence were likely to benefit in 2005 from quota decommissioning. In the short term, both China and India have been projected to be gaining additional market share proportional to the existing market share by Exim Bank (2005). Exim Bank projected India's market share in the textile industry to be 13.5 percent, and in the United States, 8 percent. So far as the EU is concerned, the gains were calculated primarily in the garment industry. Despite the light of the expected further EU enlargement, the possible improvements in the textile sector on the EU market have been reduced. India, compared with China's market share of 12%, was projected to have an 8% market share of the EU textiles industry. During the post-MFA period, Rameshan (2004) analyzed, with a particular emphasis on the two key trading partners, the USA and the EU, the textile export and clothing output of India and China. The survey found that India was unable to substantially benefit from the quota elimination of textiles and apparel in these markets relative to China. The profits of India in the ATC and post-MFA textiles & clothing sector were beyond its expectations.

In line with the abolition of quota, Hashim (2005) examined the profitability of 3 main Indian textile industries i.e. cotton yarn, manmade textiles and readymade garments, based on unit cost and productivity. Unit cost decomposition indicates that a rise in raw material costs was the main contributor to unit cost in three industries. For this analysis, the cost and efficiency of the unit were reversed. Industry and countries with higher production had lower unit costs and vice versa. In the report, credit payment, cheaper materials and better energy availability were listed as steps for making the textile industry of India more cost-capable in the post-MFA period. These initiatives encouraged better use of capacities, flexible labor regulations and simple exit rules for companies.

Landes et al. (2005) reported that, as customer demand in India rises, and textile and garment exports grow, the Indian cotton and manmade fibres industry is likely to expand following the denial of MFA quotas. The growth rate of cotton demand will be based on government reforms, including taxes on manufacturing, utilization and export competitiveness of manmade fibres, clothing and textiles industry.

Raw cotton imports have increased in recent years, but future growth depended on how much India would improve chronically low yields and better quality of cotton.

Tiwari (2005) explored the integration of India into the global clothing market to understand other ways of integrating the world, especially in view of removing quotas. Although FDI's efforts have been made to attract textiles, apparel, and retail companies and domestic companies, as well as develop global alliances, they have been active in incorporating them into export markets rather than leading to them. India's relatively rapid growth as a productive exporter of textiles and clothing following years of inner orientation was driven more by changes in domestic policies in the 1980s and 1990s and by how these changes interacted with world trade legislation and ongoing reforms in the domestic Indian market on the one hand, rather than with strictly exogenous shifts. The domestic companies therefore, played a more substantial role as significant external engines, such as foreign buyers, FDIs and preferential trade agreements, in internationalizing Indian textiles and equipment.

As the Indian textile and clothing industry adjusted to the uncertainties in the post-MFA environment, it was essential to consider different routes. Hopeful findings were the existence of a significant number of internationally-built domestic companies, rising design sensitivity and the growth of upgrading processes not inherently linked to work or reliance on global textile value chains. While the ATC cycle went on, Rangarajan (2005) observed that the trade policy remained significantly affected by the apparel value chains even as it was updated more broadly, despite the precedence over sectoral ones of a more comprehensive multilateral system and based on regional-specific trade arrangements. In the post-MFA era, the trend of relocation to big, currently restricted suppliers like India was more concentrated.

The Indian exporter could no longer talk about size, quality and responsiveness strategies in such a competitive scenario. To understand areas that need to be stressed after MFA and to be planned to make the Indian textile and clothing industry competitive in the

world textiles and apparel trade, Ishtiaque (2005) conducted a study of garment exporters, factories and purchasing homes. The survey revealed that t-tops, men's tops, women's blouses, women's dresses and pants were listed as categories with strong future potential after quotas have been eliminated and that these categories are the best exporters of the best 500 garment companies registered with Apparel Export Promotion Council (AEPC). There are, however, categories such as female skirts and jackets where the expectations of buying applications to broaden trade from China in the post-MFA period are relatively low. In the post-MFA era, additional value for sticking, printing and beading work, then applied, would create a growing opportunity for clothing. The study indicates that the fiber composition with new potential in the post-MFA era is pure cotton, followed by the cotton / polyester mix. Brand specialization and capacity building are further points Indian manufacturers and exporters have to take in this regard. The Indian textile industry is rising very well, as the young population has risen, states Sign I.N (2007). Although many Indian companies have purchased Western brands that make our exports easy to penetrate in the EU and the USA, we face intense competition from countries such as Indonesia and Bangladesh. The industry needs to invest more in this sector and also modernize to compete with other countries, because our machinery and equipment are still outdated as well as our labor laws are restrictive, posing a severe threat to this industry's further growth. The study suggests that India must address the weakness of its industry, mainly as a result of the removal of quotas, to increase our share of the world textile trade.

In the wake of phase-out of MFA, Collins (2008) explores the cotton textile industry scenario. The study found that the abolition of quota strengthened the domestic and global cotton prices line, enhanced the producer's productivity and reduced-price risk. In the domestic and export sectors, MFA and phasing out quota systems in India have given further impetus to cotton consumption. Since the end of the MFA, cotton textile exports have risen by more than 300,000 tons. The trade is shifting to resource-based gain (India, China, etc.) from preferential blocs (NAFTA, AGOO etc.).

The MFA phase-out has had a more indirect effect on cotton production in India by promoting government involvement to promote an environment of more open cotton policy and by opening up new export goods markets. Abraham and Sasikumar (2010), using Tobit-estimating techniques, are evaluating the approaches used by companies to boost international competitiveness in apparel and clothing exports. The results suggested that a significant route to enhance the export output of Indian companies in T&C was the increase in the share of low-cost labor. Throughout the time after the introduction of the ATC, the use of this means to boost efficiency in the international market. Capital and technology factors have, on the other hand, no conscious impact on the international market export output of Indian firms. This supports the assumption that Indian T&C companies have usually used rather than the other methods the low level of competitiveness.

After the phase-out of the MFA in 2001-09, Chaudhary (2011) studied the changing structure of the Indian textile industry. The trial split the time in pre-MFA (2001-04) and post-MFA (2005-09). Complete Indian textile and clothing exports, cotton production, FDI textile production and operating profits of textile exporters were considered under the report. The MFA phase-out in the indigenous textiles and clothing sector was shown to have a positive effect.

Gupta and Khan (2017) have measured the competitiveness of Indian textile industry in comparison of twelve major players of textile Industry in World. They have used RCA Index and International Market Share to measure the competitiveness along with Compound Annual Growth Rate and Coefficient of Variation. The paper has studied changes in competitiveness and exports potential of Indian textile Industry both pre and post Agreement on textile and clothing. The findings of the study provided that India is most benefitting country after China post elimination of the ATC i.e., 1st Jan 2005 and RCA point of view, India must consider the products which have good export potential in the world textile markets.

Kim (2019) analyzed India's export competitiveness in the textiles and clothing (T&C) sector in the United States and found out that the competition in the global T&C market intensified after the elimination of the Multi-Fiber Arrangement in the year 2005. They calculated the comparative advantage of India's T&C based on Revealed Comparative Advantage (RCA), Market Comparative Advantage (MCA), and Comparative Advantage by Countries (CAC) and observed India had a comparative advantage in the T&C sector in the U.S. from 1991 to 2017, despite intensified competition in the global market.

2.6.2 Quota removal and unfavorable effect

The effect of MFA withdrawal on exports of clothing and textiles focused on India is examined by Kathuria, Martin, and Bhardwaj (2001). The research has shown that the MFA was discriminatory in nature. While the abrogation of quotas on the international textile trade in 2005 would open up new avenues for the developing economies in 2005, it will also make them prone to increased competitiveness of other previously restricted exporting countries. The results would depend on the policy response of any nation. Nations that try to put in systems and develop their policies will possibly benefit from abolishing quotas. The effect of quota abolition on India by the Global Trade Analysis Project (GTAP-6) in 2 scenarios were analyzed by Ananthakrishnan and Chandra (2005). The scenario I assumes that the quotas are absolutely abolished, while scenario II assumes that quotas for China are abolished partially, and all other countries are eliminated.

The simulations results did not indicate a promising time for India as regards development of exports is concerned in the quota-free world of textiles and clothing (Scenario I). It shows that Indian textile and clothing exports will continue to increase, but will suffer adverse reactions, in the presence of safeguards in the country as soon as the exports rise (Scenario II).

In the aftermath of liberalization, Singh and Kundu (2005) studied the profitability of the Indian textile cotton industry. The research was carried out by an observational survey of 81 senior and medium-sized managers from cotton-building and exporting companies in India. It was found in the study - while internationalization offered India's cotton textile industry vast market opportunities, it was faced with threats of fierce competition. In the report, the world's main competitors in the international textile industry were China, Vietnam, Bangladesh and Malaysia. In terms of factors of inputs, industry has been found competitive in areas of labor, transport and raw materials while in areas of finance and technology adaption and power it is not found competitive.

In their study, Sasidaran et Shanmugam (2008) examined the implications for the efficiency of Indian textile industries following the complete phasing out of MFA in 2005, as a result of the disruption of the global textile industry. The results of the study showed that the mean output has dropped over the years, suggesting that the use of inputs has not been effective.

During the liberalization process, Indian textile firms struggled to make productive use of their production, which would have enabled them to stand up to and resolve the intense competence of other actors such as China. Regarding Indian textiles and apparel sectors, Singh and Goel (2008) looked at the effects of the global financial crisis. Data were selected for the period 1995-2007 for 79 companies (10 enterprises in composite milling, 23 in MMTF, 18 in weaving, 12 in hanging and knitwear and 16 in readymade clothing). The study considered variables were production, employment, exports, imported capital, imported inputs, domestic capital and inputs. The study found that workers were influenced by side factors of demand and supply. The financial crisis was found to have significant consequences for the textile-intensive export-oriented labor industry. Workers have been laid off on weak export demand. Imports of intermediate inputs relied on the jobs significantly. The effect on the supply side was also analyzed, and the effect of slowing down was felt indirectly by exports by dropping production. The impact was also evaluated.

Mercy, D. K. M. (2010) focuses on the possible effect of phase-out of the MFA on exports of Indian textiles and clothing. For the study, it uses trade data from 1996 to 2006 for the shift share review. The result indicates that the phasing-out of MFA for the Indian textile and apparel industry did not provide major export opportunities. The quota policy may have had such a profound impact that trade liberalization in Indian textile product exports still has a trailblazing impact, that while India reported a 26% rise in the export of textile MMFs in the USA in January-June 2005, India lost its share of the market from 1.52% to 1.06%.

2.7 Survival Strategy

Some research has tried to illustrate the strategy for survival to be followed following the abolition of quotas. Based on an inquiry by selected exporters of clothing from the North (Delhi and Ludhiana), Singh and Kathuria (2006) evaluated the specific problems of Indian textile exporters following the MFA phaseout. The survey suggested many approaches to be established because of the requirements of the buyers in the free quota world. The survey proposed measures to remain competitive against low-cost suppliers such as Sri Lanka and Bangladesh, such as the provision of high-quality films, fabrics and accessories to exporter garments and the establishment of bilateral agreements with the US and the EU. The choice of a supplier in the post-MFAs will be more essential for determinants, including delivery time, efficiency, higher ability and competitive prices.

Shipa et.al (2007) points out that every day since the global competition and today's buyers are searching for an article of clothing that has a different appearance and is sustainable and environment-sensitive and has creativity. The spinning, weaving and finishing performance will increase these issues. Instantly, cotton should be produced that is less durable than a nylon / wool / cotton blend.

Dagur Jonnson (2007) addresses post-MFA management approaches. The elimination of America's global fashion quota scheme has made significant industry players reorganize

their business in the vast American clothing market. In the American clothing industry, this move towards reorganizing the industry for intense competition is evident. Better merchandising, improved inventory control, restructuring outlets and more significant presence in the country are the fields in which the industry concentrates most.

The only goal behind all these is to gain more and more efficient market access with a variety of goods. Such developments differentiate one player from another, which ensures that everybody invests in R&D only to reap the rewards of their new creations.

Kavita et al. (2008) have observed that Indian textile exports will rise over the next five years from USD 6 billion to 18-20 billion USD. It will add more than five million direct jobs and seven million indirect jobs in the allied sector, primarily cotton cultivation. Efforts in cotton science, technology generation, technology transfer, modernization and improvement in ginning and pressing plants and, where possible, an effective marketing strategy.

2.7.1 Studies on Profitability of Indian textile industry

Not many studies have been performed to research the productivity of textiles and garments in the post-MFA system. CRISIL (2011) is evaluating the rentability of cotton yarns by collecting a sample for cotton yarn sectors, JBF Industries, Sangam (India), Alok Industries and Shri Lakshmi Cots for the MMF segment, Kewal Kiran in the RMG segment. The study showed that these players were facing extreme competitiveness pressures leading to significant market capitalization erosion. In 2010, the negative return of cotton yarn and MMF players was 48% and 37%, respectively. The stagnation of domestic as well as export market demand and the increased cost of production have undermined these sectors ' profitability. The relation between net profit and production expenses and net profit and salary / wage expenses was examined by Kapoor Sachin (2012). The study found that the mills could produce more profits if cotton and blended mills were to raise their manufacturing costs in terms of superior raw material quality or

automation. Similarly, by hiring experienced, technologically trained workers from non-cotton mills to raise their labor costs to boost production, mills may generate more income.

Sunita Sukhija (2012) analyzes textile industries ' leverage positions in India as well as the impact of leverage on profit per share of selected textile companies over the years 2005-2010. This analysis demonstrates Lakshmi Mills Co.'s overall control. In Ltd. companies, higher profits are highest, and the EPS results are high for Raymond Ltd. in comparison with the five other firms. The average results of Visaka Industries Ltd during the study period are calculated.

By evaluating the gross income, net profit and profit margin ratios in four leading players, (Grasim Ltd., Alok Industries, Century Textiles and Aditya Birla Nuvo Ltd.), Vataliya and Jadav (2012) analyzed the competitiveness and quality of four leading players in textiles (Grasim Ltd., Alok Industries, Century Textiles and Aditya Birla Nuvo Ltd.). In both manmade and cotton fabrics during the study period, the gross profit-to-sales ratio was meagre. In man-made textiles and cotton textiles, it was 5.49 percent and 7.67 percent.

In light of the competitive principles profit before depreciation interest and tax (PBDIT) and profit after tax (PAT), Anand (2014) analyzed the financial strength of the textile industry in India. The study also analyzed the role of textiles companies as regards liquidity and solvency. The study showed a marginal decline in margins of profitability due to increased cost of supply, costs and cost of output. In 2012, the entire textile sector was severely hit due to volatility in significant export markets, which reduced the profit margins. In all textile firms, liquidity and solvency are virtually the same.

An overview of the impacts of the developing countries' quantitative constraints on exports of garments and textiles from developing countries was an essential feature of the report. In most of the developed countries, quantity constraints have been found to help India retain its share in exports of apparel and clothes. Strategies were suggested to

achieve optimum diversification of exports and to enhance the competitiveness in the world market to improve export performance in the future, by improving the export marketing of garments through product development. Market diversification also needed attention from the export marketing firms. Erzan, Goto and Holmes (1989) studied the size and output of MFA for suppliers of textile goods in developing countries for the period 1981 to 1987 and how well such constraints resulted in market benefits for unconstrained or less known suppliers in the developing countries. In terms of trade share subject to reciprocal constraints, quota usage levels and shipments which fall under binding quotas, the trends on the markets have been checked.

The production and demand reaction of emerging exporters was focused on their proportion of exchange and their increasing use of quotas provided by these quotas. They analyzed volume and unit value changes on shipments subject to large or completely used limits as proof that the Multi-fibre Arrangement (MFA) is restrictive / effective. A formal simultaneous equation method indicating specifications and other supply situations were used to examine exchange diversion in a representative sample of apparel items.

The study found that the binding restriction on existing developing country suppliers in all four markets examined was related to the loss of market shares. The scope seemed quite limited, except in the US. There were no inherently or entirely MFA-related shifts in the market shares reported, however, these adjustments could be attributed to improvements in comparative advantage. The allocation plans were reviewed by Erzan and Holmes (1990). By examining their implementation with actual data, they examined the essential tools and suggested parameters for the two main approaches.

Historical MFA development in the EU and US has been evaluated and thus inferred that growth rate after the quotas system is crucial point input for an agreement on a temporary quota basis in any phasing-out scenario. It also portrayed a phase-out within the MFA, based on historical data, which depended on rapid quota production. To line with the US plans, they have examined phasing out of the quotas on the basis of the international

limits. Through introducing the shift to the USA economy, sudden effects were explored. The study showed that growth rates of the quotas were inversely related to export efficiency.

A simple equilibrium trade model was established by Goto (1990) to estimate effects of MFA on world trade in clothing, especially on exports from developing countries. The model considered two markets and six groups of suppliers and analyzed several effects of MFA - the trade suppressing effect (i.e. how much the clothing exports from restricted less developed countries (LDCs) were suppressed due to MFA), the effects of the diversion of the trade among markets and the spill-over effect. The model was applied to the clothing trade in 1986. By using the model, various scenarios of liberalization of clothing trade had been analyzed –

- Simultaneous removal of MFA quotas
- Unilateral removal of MFA quotas by either the US or EU (or EC)
- Simultaneous removal of MFA quotas and tariffs. It was found that the primary beneficiary of the MFA was the domestic producer in the importing developing countries.

As a result of the MFA, the amount of exports of manufacturers of the USA was higher by more than $ 3 billion ($ 400 million for EC producer) than otherwise. When MFA quotas and tariffs were taken together, the value of clothing shipments by the US producer was $ 8 billion higher ($1.5 billion for the EC producer) than under no such restrictions. The spill-over to unrestricted developing countries (such as most Latin American countries) was much smaller than often alleged. It was observed that the results of the estimates depended very much upon the chosen values of the parameters, such as supply elasticity and elasticity of substitution among differentiated products. Trela and Whalley (1990) employed a general balance model for analysis in fourteen product categories of the thirty-four developing nations to study the impact of the restrictions imposed through quota system by the United States, Canada and the EC.

Information on Hong Kong quotable rates was used as a metric for the price of quota suppliers for goods that were excluded. Through raising the allocation price from the US, the import price for Hong Kong was measured. They then calibrated the cost of production in other exporting countries of quota-restricted products by multiplying the Hong Kong unit costs by the ratio of the relative wage rates of the exporting country in the textiles and clothing industry to Hong Kong. They estimated the MFA's worldwide and domestic welfare charges using 1986 data. The results showed worldwide benefits of over $17 billion, including $11 billion for developing economies and profits which quotas brought to the USA. The results showed over $3 billion for quotas eliminated. The results showed total improvements.

2.8 India’s Textile Industry and Bangladesh’s Textile Industry

India's textile industry is not only India's most significant industry, but also India's oldest. Then, it is the world's largest market since China. The sector accounts for 14 percent of the country's industrial production. Its sector also accounts for 17% of its total exports. The Indian Textile Industry provides 35 million citizens in the country on the second stage of India's agriculture sector with employment opportunities.

India is the world's largest jute production country, the second-largest silk production nation, the third-largest cotton production country and the 5th largest synthetic fiber production region. Two large industries can be grouped under India's textile industry. 1. Sector of an ordered factory. A decentralized non-organized industry. India is the world's largest exporter of yarn, has a 25% share of the world yarn export market and has a 12% share in world production of yarn and textile fabric. India has the highest loom capacity and 61% of the global loom age.

India has advanced and excelled through a low-cost skilled labor market, cheap raw material availability, numerous cotton fiber varieties, a large and potentially large domestic and international market, as well as autonomous and independent textile

industries in the textiles industry. In the textile industry these are the factors that makes India outnumber. There is no questioning the leading role of India's textile industry. In all recent times, US$ 52 billion is expected, and market speculators estimate that US$ 115 billion by 2012 is estimated, and recent increases of US$ 34.6 billion in India's domestic market. Indian textile industry exports in 2006-07 amounted to just $19,14 billion, while a splendid peak of $22.13 billion was seen in 2007-08. The output of India is expected to increase further to 4% by 7% in 2012. Following the WTO and MFA, India has become a primary global industry, and India has been successful to a certain extent in its ongoing and relentless efforts.

2.9 Bangladesh' Textile Industry

The textile industry in Bangladesh has long been the backbone of her sector. Bangladesh Textile Industry 45% of the industrial workforce is provided by the industry. Nearly 4 million people, including women, are attached to this industry, from the total population of the country. The exports of RMG, which amounted to 643 million USD in 1990, rose by 12 billion USD in 2008. The Bangladesh textile industry is a mix of public and private enterprises in small and large scales.

The textile industry of Bangladesh can be categorized into three industries, one being the government sector, the second the handloom and the third being the private sector, which are regulated. More important is the role of the handloom sector. The largest population of the world is working in this field. It has a more significant role than the other two in the country's export revenue. Under the Asia Pacific Trade Agreement, Bangladesh exports approximately 750 textile products with nominal duties to the Chinese market. In Japan, Bangladesh's textile products have also increased their demand. Bangladesh has quotas and duty-free trading services, despite being a less developing country. The textiles sector share is close to 80% of its export revenue, which was nearly 23 billion USD in 2011-12.

The textile industry requires 3 billion yards which are supplied almost from 85–90% from neighboring countries such as China, India, Taiwan, Thailand and Singapore, and their demand for this raw material increases 20% annually, according to the Organization of Manufacturers in Bangladesh. Nonetheless, the textile sector is Bangladesh's biggest and flourishing industry, but the most important problem is that the raw material is not available to meet Bangladesh's demands. This industry has, despite this, gained its place worldwide. The sector profits entirely from the relative advantage of the affordable and straightforward jobs. (Muhammad Tahir & Dr Khalid Mughal, Textile Industries of Pakistan, China, India and Bangladesh, 2012).

Sikder (2019) have provided in his study an overview of the Textile Industry of the Bangladesh which consists of majorly exports of textiles, clothing, and ready-made garments (RMG) which constitute around 77% of Bangladesh's total merchandise exports in the year 2002. By end of the year 2005 the (RMG) industry was the only multibillion-dollar manufacturing and export industry in Bangladesh, accounting for 75 per cent of the nation’s earnings. Country's 81% of exports come from the RMG sector and it provides employment to over 20 million people in the country.

Mlachila and Yang (2004) evaluated the effects on the Bangladeshi economy of phasing out textile and clothing (T&C) quotas by developed economies and observed that Bangladesh could face significant pressure on its balance of payments, output, and employment when the quotas are eliminated as the planned abolition of the quotas under the Agreement on Textiles and Clothing in 2005 will lead to variations in the competitiveness of various exporting countries including Bangladesh. They concluded this based on the assessments of quota restrictiveness and export similarity, and an analysis of its supply constraints through the application of The Global Trade Analysis Project (GTAP) model which is a comparative static, global general equilibrium model based on neoclassical theory.

Herok et al (2003) analysed the impact of the Agreement on Textile and Clothing (ATC) and a worldwide tariff reduction on textiles and wearing apparels on Bangladesh. They observed that Bangladesh faced welfare loss in both the situations with the main reason being Bangladesh having free access to the European Union market. Further trade liberalizations are therefore worsening the Bangladeshi position opposite to its competitors. They arrived at the result by employing the general equilibrium model of the Global Trade Analysis Project (GTAP).

2.10 Post Quota Era in India and Bangladesh

The actual system of import quotas that dominated the textile alternate since the early 1960s is completely phased out from January 1, 2005 and importing nations will not be capable of discriminating among exporters. In view that this could have a much-achieving effect on world trade in textiles and clothing, many growing nations acquainted with function under a quota regime for decades, which includes India, are sure to stand new challenges.

Of direction, this isn't always a sudden improvement and the exporting international locations have been given sufficient time to put together for the removal of quotas. For the reason that the post quota era of Indian and Bangladesh turned to be a systematics process in the sphere of the textile industry. On the date of January 1, 1995, global textiles have been presented with a process of a gradual transformation beneath the 10-yr transitional program of the WTO's agreement on Textiles and clothing (ATC). However, in the early 1970s, the industry has seen a change in the Multi-fibre Arrangement (MFA) quotas, which has been backed by the investors of regions such as Hong Kong and Korea. It has brought a paradigm shift in the actual concept of trading. It has created a limitation of the export market of Bangladesh which has turned out to be a confident market with various investors. The Bangladesh market of textile, which has seen a change post quota

era has inclined to grow due to the cheap labor rates and the investors find it easy to bring out the production and create massive revenue for such causes.

The Indian fabric enterprise is really on the crossroads nowadays. At the same time as the post-quota regime has opened up new possibilities, there also are threats because of intense competition from China and some other developing nations including Bangladesh, Vietnam and some African nations, that have modernized their fabric industries over the past three years and emerge as extra price-aggressive than India. With the rise of the readymade garments market, it has created the corridor for the other nations to enter the market of India and Bangladesh, which has equally shown its existence in the self-sufficient market of India and Bangladesh.

Textile evolved to be one of the largest industries in India with its overall length (home and exports) expected at USD Billion 150. Analysts consider that there can be new opportunities for India to extend its textile and garment exports inside the post-quota regime. In reality, approximately a dozen worldwide stores have set up shop in India. Further, while Bangladesh has created the presence of the textile market on its own over the last years to supply their produce, exercising out with the earlier exercise of operating through neighbourhood buying marketers. This improvement coincided with the Indian authorities' selection to throw open the garment quarter and allowed one hundred percent foreign direct investment through the automatic route.

Currana and Nadvib (2015) have assessed in their study how changes in the European Union's regime for preferential market access affect the trade profile and upgrading prospects of the Bangladesh's textile industry and observed that shifting trade preferences play a key role in determining structural transformations within the industry which as per them calls for even more careful consideration of trade regimes and the rules of origin within the Global Value Chain analysis.

2.11 Research Gap

The Indian textile industry, along with Bangladesh is beset with such a lot of troubles on the way to act as an obstacle in the growth potentialities of the sector. The primary element that prevents the overall results of the Indian textile arena is the shape of the enterprise itself. Indian textile zone has one of the most extended and complex delivery chains in the world, with as many as 15 different stages among the farmers and the very last manufacturer/dealer.

This complicated supply chain will no longer serve to the lengthening of lead times, however, additionally including to price. The cost of logistics inside the Indian textile enterprise may be very high and inflexibility of labor laws has discouraged the enlargement plans of the principal producers. Many Indian fabric producers have shifted or opened new ventures in neighboring Bangladesh to take advantage of low labor cost and duty concessions on exports to US and EU markets. Apart from this, the excessive cotton charges and low requirements for the home front have also adversely affected the industry. Some other place of problem for India is the export incentives in textiles and clothing. India should opt for phasing out of the export incentives it provides to the textile sector to comply with the WTO commitments. Export incentives are given with a purpose to improve the export competitiveness of the products to international markets.

A nation is said to achieve competitiveness in export when its global export share of a specific product group (described as a phase heading of the ITC-HS) is 3.25 percent or extra in two (consecutive calendar) years. India's textile sector exports already crossed this limit in 2007. As a result, India will need to phase out its export sops for the sector by 2015 (Business Line, 2013). No matter the above factors, there's a few rays of wish for India and Bangladesh. Elements that include export marketplace somewhat charge extra than the home price. Further, lot of international clothing companies depend on Asian economies such as India, China, Bangladesh which has increased the prospective of the

Indian Textile industry. India also can take advantage of the various problems related to Chinese fabric industry. China's potential to grow its percentage in international trade is laid low with factors consisting of rising domestic demand, scarcity of raw material and different key sources like electricity and increasing cost of labor. Apart from this, the textile industries in India have inbuilt strengths ranging from the raw material availability, specifically cotton, systematic operations and design talents which will provide for the inclination of the world export from the Indian Textile Industry. Each domestic intake and increased proportion of exports can be riding pressure for the future growth of this region.

The earlier researches have been centered around India without any direct comparison with Bangladesh. With growing competition with Bangladesh's Textile Sector and direct competition to the Indian Textile Sector, need was felt for the study to be carried for the same.

Further, the earlier researches carried out in this field have been for shorter time period while this study intends to compare the results over a period of 15 years (2005-2019).

Besides, entire Textile HSN Chapters (i.e. Chapter 50 to Chapter 63) have been taken into account unlike earlier researches which have been mostly limited to the apparels sector.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1 Introduction

Multi-Fiber Arrangement was brought into law in the year 1974. MFA brought export restrictions which extended to, in addition to the cotton, on the wool trade manmade fibers. This arrangement passed through four stages: MFA-I, MFA-II, MFA-III, MFA-IV.

MFA-I (1974-77) Negotiated in 1973 and placed into force as of January 1974 under American Advocacy, which also included non-cotton apparel items not included in previous agreements. Product items have been broadened to include tops, yarns, piece products, compositions, cotton apparel, wool and fiber made from manufacturing or mixtures. It envisaged the creation of the TSB to address conflicts and to make recommendations to the GATT 's Textile Committee. This guaranteed a rise in export earnings for developing countries, due to the market disruption which may arise because the developing countries receives unnecessary imports. In such cases, the developed countries were empowered in restraining the export levels, based on past exports, and allowing for some favorable growth rates as well which were done through bilateral consultations.

During MFA-II (1978-81) the European countries showed the most protectionist approach when coverage of textiles and quantitative limits were very thorough and 90% of non-jute textile exports were faced with certain restrictions. Introducing the "fair departs" provision was the significant improvements introduced to MFA-II. In this provision, trading partners may consent, in particular, to deviate from the general terms of the MFA. Because the exports of developing countries were largely restricted and continued in nature, this would adversely affect their export performance.

As far as distribution and development rate is concerned, MFA-III (1982-85) was more conservative than MFA-II. MFA-III imposed some additional restrictions on the so-called 'surge mechanism' of major exporters, which restricted medical exporters like India's production.

Under the scope of the MFA-III, the United States entered into 41 bilateral agreements with its major suppliers limiting growth of exports to different garment and apparel styles. It offered the developed countries further resources to pay for the steps of security. Textiles and garments have been viewed as two separate sectors and quotas have been established accordingly. The situation in Indian textiles and clothing exports deteriorated, however, as most of the bilateral agreements signed included rigid category ceiling criteria, production, continuity and swinging provisions.

The latest in the sequence MFA-IV (1986-94) was concluded in July 1986 and, for the first time in an effort to regulate exchange in all textile products, included the silk, linen and jute for established fibres. The potential "loopholes" that enabled textile and garment imports to extend under previous arrangement needed to be identified. They needed supposed to have been imaginable. The inclusion of natural fiber in MFA removed the ability to redirect trade in non-MFA goods from the developing countries. At this point the world went up against the MFA because it allowed the developing countries to export each other unrestrictedly and to defend themselves from other low-cost exports. Also developing countries' customers were at a disadvantage as such quotas forced them to pay an unfairly high price (Gokhale and Katti, 1995).

The MFA violated the principles of the multilateral system in several ways:

1. It violated the premise of Most Favoured Nation.

2. It did not impose tariff constraints rather quantitative restrictions were applied.

3. Developing countries were widely discriminated.

4. It lacked transparency (Nordas, 2004).

The MFA was designed to provide "space to breathe" into the domestic industries of developed countries in order to adapt to new competition sources. Even though the MFA's key goal was to ensure that the export profits of developed world rises significantly, the program was methodically exploited in the final analysis. The Charter of Protectionism had become unbridled (Bagchi, 2001).

The research method is the survey, which includes various techniques and processes that are used for effective conduction of research. Hence, the research method is referred to as a method that helps researchers to analyze the historical records and documents which are in the form of field research and laboratory research by taking a small group study of random behavior. Furthermore, analysis approach is a means of consistently approaching the question of study (Kothari, 2004). This is an empirical method that leads to science by observing the different measures the researcher usually takes in the analysis of the question of research. The thesis involves a range of research methods, strategies, theories and data collection instruments to concentrate on industrial dynamics of the Indian textile sector with special reference to Bangladesh, which allow the researcher efficiently and effectively to collect information.

3.2 Research Paradigm

A research paradigm is referred as a set of common belief and agreements which are shared between scientists so that they will be able to identify the problem and address in an effective manner (Baskerville and Wood-Harper, 1996). In addition to this, it is also defined as a fundamental part of the research methodology that regulates research by adopting a well-defined strategy that is based on the research topic. In the current study to examine the Industrial Dynamics of Indian textile sector with special reference to Bangladesh, Interpretivist Paradigm is to be used as it helps to understand the effect on the Indian textile industry in the post-quota era. Interpretivism research Paradigm mainly

focuses on understanding the problems based on the subjective experience of an individual (Crowther and Lancaster, 2012). Hence, while analyzing the positive impact of globalization on the textile export of India and also determine the changing scenario at the international level, Interpretivism research Paradigm mainly includes oriented methodologies such as interviewing, participant observation, which are subjective and which create a relationship between the researcher and the subject. As the study is qualitative and quantitative in nature so that interpretivism research paradigm is best suited which stick it out the mathematical exploration of the qualitative data which are collected for the various data collection methods. In respect to this, the collected data is comparing the actual results of exports and its figures, economy size, sector size effectively. Apart from this, it also helps to analyze the effectiveness of infusion of funds in new plant and machineries through the Indian textile companies by organizing and conducting the survey and also highlight the need of the Government support and accordingly developing a proposal for the Indian government which are totally based on subjective and all the information also collected with the help of questionnaire and the data also collected through govt. domains also, which is available on govt. websites, for instance the website of the Textile Ministry of India(Gadamer, 2006).

3.3 Research Approach

The research approach is a fundamental part of the study, which is mainly classified into two parts: quantitative research approach and qualitative research approach. In the current study, a qualitative research approach highly adapts which is based on theories for formulation of hypothesis and collecting of evidence. In addition to this, study also uses qualitative research approach which is subjective in nature that utilizes the phenomena of setting to understand and illustrate the findings. This method helps to collect the primary data by the help of an open-ended questionnaire. Apart from this, all the data is to be

collected from 10-15 textile industries located in Ludhiana, Tirupur, Ahmadabad, NCR region and information is to be collected from the owners/managers of these companies, thereby analyzing for the new projects and expansion of existing project with their investment strategies. The study also helps to understand the upgradation of the machinery and technologies by referring to various articles and theories which are subjective in manner. Hence, the research approach mainly includes a mixture of various philosophies and theories which are related to the research topic and help the researcher to identify the various variables in an effective way.

The study seeks to determine the actual increase in textile trade in the world and also determine the increase or decrease in India and Bangladesh share in it. The study also focuses on determining the impact of investing in Bangladesh by evaluating the impact of removing the quota on the textile industry in India and Bangladesh to the United States in European Union market for the period of 10 years that is between 2005 and 2015. Hence, it can be said that by the help of qualitative and quantitative research approach all the facts related to the dynamics of the Indian textile sector with special reference to Bangladesh and investment strategies will be determined in an effective way.

3.4 Research Design

Research Design is a process that helps to frame a conceptual framework of the whole study. It is also known as a blueprint for the research because it analyzes various factors that affect the validity of the research to find the data which are controlled in an effective manner (Creswell and Creswell, 2017). In the current study, to examine the industrial dynamics of the Indian textile sector with special reference to Bangladesh, Descriptive Research Design is used that helps in developing a detailed Data Collection procedure and plan with their unique characters and processes are also revealed by conducting research examination through the descriptive research. The study is qualitative and

quantitative in nature, the researcher is dealing with testing the hypothesis by making an association between predetermined theoretical concepts in a better way. Descriptive Research Design is also a combination of various approaches and predetermined assumptions that are totally based on researcher's own experience and attitude or their interpersonal observation skills. To determine the changes in the scenario at the international level and making a relationship between the advantage to countries like Bangladesh with the European Union and United States and also focus on effectiveness of infusion of funds in new plant and machineries, Descriptive Research Design is best suited for conducting and collecting the data based on the objective and resource problem. Apart from this, research instrument also includes the open-ended questions for collecting data. In respect to this, there were 10-15 textile industries from Ludhiana, Tirupur, Ahmedabad and NCR region each in which owner/manager of the industries are required for answering the questions which are based on investments made by the companies into the new project and expansion of existing projects with new and upgraded machinery and technologies. The studies also help in providing the areas for export growth and increase its products that help in achieving the new subsidy schemes by promoting investment in the textile industry especially in the new plant and machinery. Hence, the study also focuses on the data which are related to the past 10 years which indicate the Government support to the textile sector along with its corresponding result in the form of the annual growth rate of the textile industry also explained in the study (Houghton, Casey, Shaw, and Murphy, 2013).

3.5 Data Collection

To collect the data, the data collection method is useful for collecting all types of quantitative and qualitative data effectively. In the current study, for collecting the data both primary as well as secondary data collection method is to be used (Greenhalgh and

Peacock, 2005). While focusing on the primary data collection method, it can be said that it includes a survey method which is the popular technique from primary data collection with the help of Survey instruments such as questionnaires, personal interviews, Focus Group Discussion. To determine the main benefit of using qualitative questionnaires having both close-ended and open-ended questions, is that it helps the participant to express their views for the questions which are related to the research topic. Managers who are working in these industries are required to answer the various questions which are based on the investment that is made by the companies into the new project for expanding their existing projects with new and upgraded machinery and technologies. In addition to this, the Secondary Data Collection method is also used in the study. While making progress of secondary data collection method, it can be said that it includes already collected data which was collected by the previous authors, researchers and Scholars and researcher will be able to modify the already collected data as per the requirement and current trends so that it will be valid and reliable (Ritchie, Lewis, Nicholls and Ormston, 2013). In the current study, various reports of the government relating to the textile sector along with its corresponding result in the form of the annual growth rate of the textile industry is included for analysis in the study. Apart from this, to determine the effectiveness of the simplified procedure and relaxed entry barrier for new business activity which are supported by liberal FDI rules are also included in the study which highlighted the shortcoming of existing policies and procedures in an effective way. In addition to this, the development of the new world-class infrastructure, which is in the form of new port sustaining growth and the requirement of the textile industry also included as a secondary source of collecting data. Hence, it can be said that secondary data mainly include collected information which is in the form of report, article, and newspaper so that researcher will be able to evaluate the impact on textile clothing export of India and its competitors that is Bangladesh to the United States and European Union market. Additionally, the study also determined the impact on the analysis, which is used to detect the influence on the actual export realization and the compounded annual

growth rate of the country described above along with India, which is used for making a valid comparison (Lim and Ting, 2013).

3.6 Sample Population

Sampling is a statistical process in which a small number of units are taken for a given population randomly. Sample design and techniques can be classified into two parts: non-probability sampling design and probability sampling design. By making the focus on probability sampling design, it ensures that the happening of an event in a certain period (Egan, 2014). In the current study, to determine the impact of changing scenario at the international level and also examine the competition faced by the Indian textile sector with special reference to Bangladesh, a simple random sampling method is highly used in the study. While using a simple random sampling method, researchers will be able to take a small number of units in a given population randomly for examining the result, which is based on the predetermined assumptions, experience and situation analysis. While making a focus on sample size for the collection of data, it can be said that the study mainly adapts and includes 50 textile industries from Ludhiana, Tirupur, Ahmedabad and Delhi NCR region with one respondent from each company - either the owner of the company or the person managing the company's business. The companies have been selected on the basis of random sampling from amongst the 500+ companies from the list available from AEPC which have over 80 percent of their turnover as exports and are manufacturing textile goods which is in direct competition with the Bangladesh companies.

3.7 Data Analysis

To represent the collected data and make a final judgment based on the collected facts related to the research topic, it is essential to analyze the data by using two methods, such as statistical analysis and thematic analysis. It can be said that data analysis is an essential part of the research by which researchers will be able to analyze and examine the various variables by plotting the value so that based on the collected facts, reliable information will be determined and resulted efficiently. To examine the industrial dynamics of Indian textile sector with special reference to Bangladesh, all the data has been collected which is related to the impact of competition posed by the Bangladesh on India's textile sector and also examines the changing scenario at the international level. The study also collects the data which is totally based on the review of the impact of the preferential access in the post-quota period by European Union and the USA and other developed countries to Bangladesh on India's textile sector. Apart from this, the study also highlights the need for the Government support and accordingly develops a proposal for the Indian government. All these data are presented in a thematic analysis way which is used by identifying, labeling, coding, patterns, and trends of the responses collected from the questionnaires. Under the thematic analysis, all the values and data are collected and plotting in a tabular manner. After that, all the table of presented data is examined in a graphical manner by using Pie Charts, bar diagram, histogram, etc. Hence, it can be said that the thematic analysis provides a brief and systematic analysis of the collected facts and data. Moreover, the statistical tools used to obtain more accurate results by using SPSS analysis, Chi-square test, Correlation, CAGR and simple percentage method and descriptive analysis so that the validity and reliability of the data is to be ensured in the study (Forzano and Gravette, 2012).

3.8 Techniques And Methodology

i. Measurement of the percentage

Similar terms in the data collected can be compared using percentages. Data collected is compared by means of calculation of percentages which is a way of writing a ratio. Percentage is calculated by the below formula:

$$\boldsymbol{Percentage = \frac{Number\ of\ Responses}{Total\ number\ of\ Responses} X\ 100}$$

ii. Chi-square

A chi-squared test, written also as a $\chi 2$ test, is a statistical hypothesis test that is valid when the chis-squared test statistics, specifically Pearson's pivotal test and its variants, are distributed under the zero hypothesis. The Pearson chi-squared test is applied to assess if the predicted frequency variations are statistically important in one or more categories of a table. The results are categorized into mutually exclusive groups in the typical implementations of this study. If the null hypothesis is valid, then a frequency distribution X2 matches the test statistics determined from the observations. The purpose of this test is to assess the probability of null hypothesis being assumed by observed frequencies. Test statistics following $\mu 2$ distribution occur when the observations are independent and normally distributed and which assumes are often justified under the central limit theorem. Often X2 experiments are performed on the null independence hypothesis of a pair of random variables on basis of observations by pairs. Chi-squared experiments are also used to test the distribution of the test statistic asymptotically approaches the distribution of X2 such that the testing statistics represent a Chi-squared distribute (if the null hypothesis is true) The analysis uses chi-square tests for analyzing results. The analysis of data in the study uses chi square tests.

$$x^2 = \sum \frac{(Observed\ frequencies - Expected\ frequencies)^2}{Expected\ frequencies}$$

$$x^2 = \sum \frac{(Fo - Fe)^2}{Fe}$$

The analysis of assumed data in the study uses chi-square tests.

iii. SPSS:

SPSS represents the Statistical Package of Social Science. In this analysis, SPSS Software was built to interpret empirical evidence in a quantifiable way (Forzano & Gravette 2012).

iv. Compound Annual Growth Rate

CAGR stands for the Compound Annual Growth Rate. This is a calculation of the average growth rate of a commodity over time, taking into account the effects of compounding. These are also used for measuring and evaluating the past interest, investment performance or for forecasting their anticipated future returns. CAGR refers to the mean annual growth of an investment/value over a specific time duration. The value of the investment is assumed to be compounded over the period. Unlike the absolute return, CAGR takes the time value of money into account. As a result, it can reflect the actual returns of an investment generated over a year.

$$CAGR = \left\{\frac{EV}{BV}\right\}^{1/n} - 1$$

Where, EV – Ending Value

BV - Beginning Value

N: Number of Compounding Periods (Years)

In order to understand the comparative advantage and competitiveness of the textile and clothing industry in India and Bangladesh, the present study is focused primarily on secondary data. The present study is based on a two-digit classification of the harmonized system for the 50-63 main products between 2005 and 2019. The study is based on Balassa's Revealed Comparative Approach, Revealed Symmetric Comparative Advantage, Market Comparative Advantage and Comparative Advantage of Countries. For the analyze the data has been taken from UN-Comtrade, Export Promotion Bureau and World Bank.

v. Revealed Comparative Advantage (RCA) indices

Most research studies have used the concept of comparative advantage enormously to discuss whether a commodity is comparative or competitive. Revealed Comparative advantage helps to calculate the comparative value of the commodity and the profitability or the competitiveness of the commodity in the market. The index compares the ratio of the share of industry and product in overall exports of countries' with that of industry (or product) in total exports of the world.

RCA can be calculated as

$$RCAik = (Xik/Xi)/ (Xkw/Xw)$$

Where Xik denotes as India's export of Textile products, Xi signifies as India's total exports to world of all commodities, Xkw indicated as world's export of Textile, Xw represents as world's total export to rest of the world of all commodities.

The value of RCA index lies from 0 to ∞ ($0 \leq RCA_{ik} \leq \infty$). The country has said to be relative comparative in advantage if its value is more than 1. As follows RCA turns out to produce an output product which cannot compared on the both side of the 1 whereas RSCA measures the value lies between -1 to 1(Dalum et al.1998; Widodo,2009, Saki et al., 2019, Maryam et al., 2018). RSCA can be formulated as:

$$RSCA_{ik} = [RCA_{ik}-1/RCA_{ik}+1]$$

The data for the present study were collected from the World Bank, UN Comtrade and UNCTAD over the period 2005 to 2015, due to abolition of export quota system in 2005. The identification code of the commodity used for the study is based on 2 digits Harmonized System 50 to 63. The commodities are further categorized 50 to 59 HS codes related to fiber and fabrics and 60 to 63 codes described clothing and linen products which constitute to the final products.

Table 11: Category of textile and cotton products based on 2-digit HS codes

HS Code	Description
50	Silk
51	Wool, coarse animal hair; horse yarn and woven fabric
52	Cotton
53	Other vegetable textile fibers; paper yarn and woven fabric of paper yarn
54	Manmade filaments
55	Manmade staple fiber
56	Wadding; special yarn; twine; ropes; cordage; felt; nonwovens and cables
57	Carpets and textile floor coverings
58	Special woven fabrics; tufted textile fabric; lace; tapestries; trimmings and embroidery
59	Impregnated coated, laminated textiles fabrics and textile articles of a kind suitable for industrial use.
60	Knitted and crocheted fabrics
61	Apparel and accessories Knitted and crocheted fabrics
62	Apparel and accessories, not knitted and crocheted fabrics
63	Other made –up textiles articles; sets; worn clothing and worn textile articles; rags
(Source: Handbook of Procedures, Vol. III, DGFT)	

3.9 Ethical Considerations

Ethical consideration is referred to as the critical path of the research, which includes all the code of conduct of ethics and ethical practices such as the language of questionnaires and its appropriateness. It is also known as informed consent, which includes detail about the objective of the research is to be explained by the researcher to the respondent. The researcher also ensures that no respondents were influenced during the conduct of the

research (Crowther and Lancaster, 2012). The participants are also permitted to withdraw from the research process whenever needed by them. The study also ensures that the entire requirement is matched by the background of the respondents, such as their company's export turnover %, etc. These principles are followed and put the guarantee that the entire respondent is choosing to participate in a free manner and understand the norms regarding the processing of the research project and any potential risk thereof. In addition to this, while conducting the research which is based on the industrial dynamics of the Indian Textiles sector with special reference to Bangladesh, the positive and negative impact of the quota system are analyzed, and all the details and information collected from the respondents are valid in nature. Apart from this, the study also maintains the confidentiality of the collected data. It was assured by the researcher that after submitting the research paper the data of the respondent, which are in the form of personal details and their professional details will not be shared after submitting the research project. Hence, it can be said that all the data will be secured and stored ethically. Thus, it can be said that ethical consideration always includes a legal part of the research, which bound both researcher and respondents to provide fair and write a response without considering any misrepresentative activity.

3.10 Reliability and Validity

The reliability is known as the exactness of the tool, which is used for framing and executing the study by evaluating all the facts and data in an effective manner (Lim and Ting, 2013). The search of study ensures that each respondent has answered the questions submitted in full. Hence, it can be said that reliability of data is defined as the accurateness of the data because all the actions and process for collecting the data in a data collection chapter have been done in a proper manner which does not create any kind of misrepresentation in the research project. As the study is qualitative and

quantitative and is using actual export figures of Indian's textile sector and concerning the change in Bangladesh exports and both primary, as well as secondary data collection method, is to be used so that the reliability of the data by collecting the information from the primary data collection methods is reliable. The study also referred various kind of articles which are already published in journals, books and online sources.

Furthermore, all the data that are collected in the form of a secondary data collection method is also reliable in nature. In addition to this, while making the focus on the validity of the data; it includes Researcher's assurance that all research requirements are met by using the data obtained. The scientist has maintained its integrity, formulating the survey question in satisfying the aims and objectives of the study (Miller and Gatta, 2006). Hence, it can be said that the study maintains the validity and reliability of the data by collecting all the fields and valid information without making any kind of exemption or hypothetically predetermination for conducting the study.

3.11 Summary

The technique of analysis is a fundamental part of collecting data and ensuring the validity of the data by using various kinds of methods, approaches, and philosophies that are based on pre-determined assumptions and beliefs. Also, interpretive research paradigm is also carried out in order to analyze the industrial dynamics of the Indian textile sector with special reference to Bangladesh. Furthermore, descriptive Research Design is also adopted in the study. For collecting the data, primary data collection methods, as well as secondary data collection methods are to be used. While collecting the data from Primary Data Collection method, it includes qualitative questionnaire with both close-ended and open-ended questions. Secondary data collection approaches, on the other hand, include data collected from reports, articles, newspapers to evaluate the

impact of quota removals on textile and clothing export of India and Bangladesh to the United States and European Union market.

In the study, it also includes a sample population - textile industries from Ludhiana, Tirupur, Ahmedabad, and Delhi NCR region. Managers of these industries are required to answer the questionnaires. In respect to this, the data analysis is also done by identifying labeling, coding patterns, and trends of the responses collected from the questionnaire. At last, the study also includes the reliability and validity of the data by including the ethical consideration of the study that ethically defines the study.

CHAPTER FOUR

4. Results and Discussion

4.1 Introduction

With the culmination of the transitional phase of 1 January 2005 under the Agreement on Textiles and Clothing (ATC), the Multifiber Arrangement (MFA) and the framework of bilateral quotas that have regulated global textile and apparel trade for the last forty years ended.

The Indian value chain for textiles and apparel consists of four different stages: spinning, weaving and knitting collection and development. The method of spinning is used to transform cotton or creamed fibres. For cotton, before spinning, the seeds and impurities are removed. Then cotton or manmade yarn can become woven or knitted fabrics. The process involves the bleaching, dyeing, mercerizing and printing of finished products for the production of garments. The production of clothing is the final phase of the manufacturing, design, cutting, refining, processing, finishing and packaging cycle.

Both primary and secondary data are used for the study. This chapter includes the primary and secondary data analysis according to the objectives and the results of the objectives achieved from the data analysis.

4.1.1 Primary data analysis

The respondents selected for collecting the primary data for the study were 50 textile companies from different states of India-Delhi, Ludhiana, Ahmedabad, Coimbatore and Tirupur as these cities have a large number of textile industries. A questionnaire was prepared to collect the data from these industries. The data is collected by asking the respondents to answer the questionnaire. Out of 50, respondents were individual

Proprietorship, partnership industries, and private limited companies. Some of these industries are manufacturers of knitted fabrics, some of them produce woven clothes, readymade garments and some of them are manufacturing any other items with only a few of them were using International standards such as Japan Industrial Standards, US standards, etc.

4.1.2 Secondary Data Analysis

Textiles and apparel are an important field of foreign trade, and has acted as a driver of development for emerging and less developed countries in particular. India is next to China, the second-largest textile and garment manufacturer in the world. Within a world-wide textile economy, the Indian textile industry has a significant role through its contribution to the global textile potential and textile fiber / yarn production. Approx. 25% of the world's spindle capacity and 8% of the global rotor strength are in the Indian textile industry. India exports textiles worldwide represent only 4,72% of the world's exports of textiles and clothing. A large range of items, including cotton and textiles, handmade threads and garments, wool and silk garments, fabrics and assorted clothing, are often included in the export bin. It has been estimated at around US$ 108 billion for the Indian textile industry (CCI Report, 2015). Specific export controls regulated the international exchange in textiles and clothes. A significant quantitative exchange limit on fiber products from developed countries was placed on the Multifiber Arrangement (MFA). The multi-fiber system has been built out of a number of export constraints on broad Asian textiles and apparel exporters levied by the United States and Europe (Spinanger, 1999). In 1961, the first was a Short-Term Agreement on International Trade in Cotton Textiles (STA), preceded in February 1962, by the GATT, accompanied by a Long-Term Agreement on International Trade in Cotton Textiles (LTA) which was signed by twenty-two major trading nations, allowing importing countries to use quotas

to defend the label. In order to extend the reach of the legislation and to include the rules and procedures by which countries would enforce import restrictions, the 1974 multi-fiber agreement was agreed later. The MFA was a broad, multilateral framework for the management of trade in textiles and clothes for cotton, wool and manmade fibres. In certain countries exporting, but not in other countries, MFA quotas were enforced on the basis of nationality, such that the commodity scope and degree of restriction varied from country to country. It aims at restricting the low-cost exports to the developing world markets of garments and textiles. MFA was not, at the same period, relevant to products from the least developed countries or the exchange between the wealthy industrialized countries. The MFA also resulted in a decrease in the size of textile factories, because no nation may produce more than the quota allotted to it, in the exporting countries with a natural comparative advantage. The General Agreement on Tariffs and Customs MFA was incorporated into the GATT in 1995. ATC was a collaborative agreement between MFA and the Multilateral Trading Scheme convergence of textiles and clothes exchange. The ATC provided for a period of 10 years (1995-2004) to dismantle the Multi Fiber agreement. In the transitional phase ending in 2005 and rising quota growth rate for remaining goods at subsequent levels, ATC provided for gradual abolition of quotas in specified products in four phases.

Eliminating MFA and developed countries have been promoting their exports since 2005 with the launch of free trade in textiles. The growth in textile exports will be focused on consumer conditions, including commodity quality, price, advertisement, branding, and other promotional means and physical marketing, cost and logistics decisions, since such exports will be clear of quota exports. Many restrictions, such as non-tariff barriers, based on environmental health and related labor standards, may face exporting countries. Exports to under-developed countries of textile goods do not increase dramatically as a result of regional trade agreements being established which imply that regions would have more of a degree of liberalization than the rest of the world, for instance EU, NAFTA and anti-dumping and countervailing acts of developed countries. The

emergence of trade and economic liberalization globalization within the nation has provided the Indian textile industry with new threats and opportunities. Both conditional constraints (quotas) on exports and imports have ceased to operate since 1 January 2005 as part of the ATC within the structure of the WTO. This business penetration would offer a range of prospects for the Indian textile industry as well as challenges (Kathuria and Bhardwaj, 1998). This is a chance because open and unregulated business access is offered. It is a danger because, until now for quotas exports, minimum agreed amounts are no longer available. Only businesses with solid roots and a breadth of different regulatory industries will succeed in such a highly competitive setting. Manufacturers in developed countries are expected to appear as part of the "outward sorting" phenomenon in their attempts to combat the clothing suppliers of countries such as India, which may be named the output dislocation. The World Trade Organization has ranked India as one of the strongest, just second to China. With respect to the World Trade Organization Report on the International Textiles and Clothing Market, the deal on Textiles and Clothing was revealed, with major improvements in the EU's cooperation with the ATC Regulations to abolish the quota framework, as China and India will dramatically expand their market share. India 's share of the garment export market in the EU is expected to grow from 9% to 11%, and its share of Indian apparel items would raise from 6% to 9%. The WTO report, on the other hand, indicated that textiles from India to the USA and Canada would increase their share of market from 4% to 15% (Nordas, 2004).

4.1.3 Some of the Current Statistics of Different Variable in the Textile Industry

Table 12: Schedule of Quota Integration under ATC

Phase	Year	% of Product to be Taken Underneath Elimination of Quotas
1.	1995	16
2.	1998	17
3.	2002	18
4.	2005	49

Source: World Trade Organization Reports, 1994

1st Objective analysis

- Objective: To review the impact of the post-quota era (post 2005) preferential access by EU, USA, and other developed countries to Bangladesh on India's Textile Sector.

The first objective of this study is to review the impact of the post-quota era preferential access to Bangladesh by the EU, the USA and other developed countries to India's textile sector. This has been done by means of calculating the CAGR (Compound Annual Growth Rate) and computing the RCA (Revealed Comparative Advantage)

In a diverse, world textile industry, the composition of Textile Exports India plays an important role. While an important player in the global market, India's share has stagnated at about 3 to 5 percent in the world trade in textiles and clothing. The post-MFA situation was supposed to open doors to the apparel trading partners as the bulk of obstacles to tariffs would vanish after 2005. The elimination of quotas has given

consumers an alternate supply from the most competitive and cost-effective manufacturers and nations, opening the door to intense market competition fueled by low prices and new regulations. In this sense, the leading textile and garment exporters' role in the updated world scenario has been attempted.

Table 13 reveals the increasing growth trend of the garment and clothing manufacturing industry's leading exporters since 2005. The domination of Asian countries as leading producers of textiles and clothing exports is one of the significant remarks in this relation. This conclusion contradicts Fouquin, Morand, Avisse, Minvielle and Dumont's (2002) findings, in which Asian exporting companies, in particular China, were concluded to reduce exports and economic prosperity because of post-quota trade diversions. Vietnam is shown to be the most promising exporter in Asia in the composition of its annual rate of growth (17.5%), which was followed by the following countries in 2005-13: Bangladesh (16.0%), China (12.9%) and India (11.3%). These results confirm the findings of Diao and Somwaru (2001). At the expense of producers in Eastern Europe, Latin America and industrialized nations, Asian and Middle Eastern exporters are expected to take over world market share in post-count countries.

Table 13: Top Exporters of Textiles and Clothing since 2005 (US $ billions)

Countries	2005	2010	2011	2012	2013	Annual Growth Rate (2012-13)	CAGR (2005-13)
China	107.5	198.9	239.8	245	283.9	15.88	12.90%
India	17	27.1	33.4	32.7	40.2	22.94	11.30%
Bangladesh	7.7	17.9	23.8	23.8	25.5	7.14	16.20%
Vietnam	5.3	13.5	17.4	18	19.3	7.22	17.50%
Spain	8.3	11.3	13.3	13.4	15.5	15.67	8.20%
The Netherlands	7.6	10.2	13.6	12.3	13.1	6.5	7.10%
Australia	3	3.3	5.5	5.8	5.4	-6.9	7.70%
Poland	3.6	5.2	5.9	5.4	6	11.11	6.40%
Cambodia	2.2	3.1	4	4.3	4.6	6.98	9.50%
Sri Lanka	2.9	3.6	4.3	4.1	4.4	7.32	5.30%
Pakistan	10.3	11.6	13.6	12.9	13.7	6.2	3.60%
Indonesia	0	0	13.3	12.5	12.7	1.6	-
Turkey	18.7	21.5	24.5	25.1	27.2	8.37	4.80%
South Korea	13.7	13.5	15.5	15.1	15.4	1.99	1.50%
Rest	265	258	295	277	283	2.17	0.80%
Total	473	598	723	707	770	8.91	6.3

Source: Wisedge Analysis (adapted from Alok Industries)

After the MFA phase-out in 2005, sourcing countries could import from any country without any bounds and started importing from developing countries with lower labor costs (Tewari 2005; Gere*ffi* and Frederick 2010). After the MFA phase-out in 2005, Vietnam, Bangladesh, and Indonesia emerged as major exporters of T&C to the U.S. (Table 1.13). Pakistan, Honduras, Cambodia, and Sri Lanka recently emerged as top 10 countries exporting T&C to the U.S. in 2017.

Table 14: The main U.S. import sources of T&C.

Rank	1995	2000	2005	2017
1	China	Mexico	China	China
	(12.5%)	(13.7%)	(24.55%)	(35.80%)
2	Hong Kong	China	Mexico	Vietnam
	(9.57%)	(10.73%)	(8.26%)	(10.74%)
3	Mexico	Hong Kong	India	India
	(7.45%)	(6.31%)	(5.49%)	(7.18%)
4	Korea	Canada	Hong Kong	Mexico
	(5.19%)	(4.86%)	(3.87%)	(4.81%)
5	India	Korea	Canada	Bangladesh
	(3.94%)	(4.37%)	(3.44%)	(4.66%)

Source: Author's Calculation on the basis of data obtained from World Integrated Trade Solution

According to the World Trade Organization (2018), India was the third largest exporter of textiles after China and the EU, and was the fifth largest exporter of clothing after China, the EU, Bangladesh, and Vietnam in 2017. Below Table illustrates the same.

Table 15: The top five exporters of Textile & Clothing

Textiles		Value (US$ Billion)	Share in World Exports (%)			
	Year	2017	2017	2010	2005	2000
	China	110	37.1	30.5	20.3	10.4
	EU	69	23.4	27	34.9	36.7
	India	17	5.8	5.1	4.1	3.6
	U.S.	14	4.6	4.8	6.1	7.1
	Turkey	11	3.9	3.6	3.5	2.4
Clothing						
	China	158	34.9	36.7	26.6	18.2
	EU	130	28.6	28.4	31	28.7
	Bangladesh	29	6.5	4.2	2.5	2.6
	Vietnam	27	5.9	2.9	1.7	0.9
	India	15	4.1	3.2	3.1	3

Source: World Trade Organization (2018)

Over the last few years, intra-Asian trade has also been improving a variety of trading deals. The advanced manufacturing facilities in Vietnam have led to the turn of the textile industry into value lines. As for Bangladesh, duty-free entry to European markets is open, while Indian firms will pay 9.6 percent of their export duties. In this way, India has been put in a disadvantageous position on the European market. Relative to India, the exports of which rose by only 11.3 percent compared to the 16.20 percent achieved by Bangladesh. If, however, we compare these significant players' annual export growth rates from 2012 to 2013, we can see that India's annual growth rate has hit a maximum of 22.94% against China and other competitors. Today, India exports $40.2 billion in textiles, while global total textile exports amount to $772 billion, India accounting for 5.2% of the share. The growth in exports of textiles from India is mainly due to the development of the garment and apparel industry, contributing almost 43% of the share.

The recent increase in the risks of Indian businesses and the government's support programs in terms of product diversification and market diversification allow India to be a stable source of supply for Bangladeshi labor, non-compliance and security concerns (Economic Times 2014).

Table 16: Table showing comparison of Average Tariff on Import of Textile Goods

Comparison of Average Tariff on Import of Textile Goods			
	Import into European Union	Import into USA	Import into Canada
Export from India	5.90%	6.20%	17%
Export from Bangladesh	0% (EU GSP Scheme)	3.9% (US GSP Scheme)	0% (Canadian GSP Scheme)

Source: EU Trade Helpdesk (https://trade.ec.europa.eu/), Economic Times, 02 Jan, 2019

Besides below countries offer almost (few countries giving access on nominal duty rate structures) duty free import for Bangladesh Textile goods unlike for India for which duties ranging from 5%-22% are charged:

1. Australia
2. Belarus
3. Canada
4. Liechtenstein
5. Japan
6. New Zealand
7. Norway
8. Russian Federation
9. Switzerland
10. Turkey
11. Austria
12. Belgium
13. Czech Republic
14. Denmark
15. Estonia
16. Finland
17. France
18. Germany
19. Greece
20. Hungary
21. Iceland
22. Italy
23. Latvia
24. Lithuania
25. Luxembourg
26. Malta
27. Netherlands
28. Norway
29. Poland
30. Portugal
31. Slovakia
32. Slovenia
33. Spain
34. Sweden
35. South Korea

Chapter Wise Comparison of Exports Growth Rate of Textile Sector of India And Bangladesh

Table 17: Table Showing Comparison of Chapter 50 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Silk based textiles)

Year	Bangladesh's Chapter 50 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 50 Exports (USD Million)	Growth rate of Textile Exports
2005	0.270		403.580	
2006	0.350	29.63	383.330	-5.02
2007	0.170	-51.43	348.410	-9.11
2008	0.190	11.76	359.940	3.31
2009	0.040	-78.95	271.130	-24.67
2010	0.030	-25.00	335.200	23.63
2011	0.022	-26.67	259.740	-22.51
2012	0.021	-4.55	163.520	-37.04
2013	0.033	57.14	164.300	0.48
2014	0.020	-39.39	140.570	-14.44
2015	0.023	15.00	111.220	-20.88
2016	0.020	-13.04	90.680	-18.47
2017	0.024	22.00	76.560	-15.57
2018	0.027	10.66	82.780	8.12
2019	0.022	-18.52	84.290	1.82
Total		-111.35		-130.35
Mean Growth Rate		-7.95%		-9.31%
CAGR		-16.40%		-10.58%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 50 of HS Codes i.e. Silk Based Textiles, it is clearly visible that though the mean growth of the India and Bangladesh experienced downward trend in this HS Chapter, the fall in the Bangladesh's Exports is less than that of India's Exports i.e. Bangladesh's Textile Sector performed better than India in Chapter 50 i.e.Silk based textiles over the period 2005-2019.

Table 18: Table Showing Comparison of Chapter 51 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Wool & other animal hair based textiles)

Year	Bangladesh's Chapter 51 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 51 Exports (USD Million)	Growth rate of Textile Exports
2005	0.791		83.000	
2006	0.418	-47.16	86.880	4.67
2007	0.447	6.94	101.240	16.53
2008	0.514	14.99	126.180	24.63
2009	0.235	-54.28	111.400	-11.71
2010	0.318	35.32	142.290	27.73
2011	0.314	-1.26	216.000	51.80
2012	1.106	252.23	187.700	-13.10
2013	0.133	-87.97	163.360	-12.97
2014	0.127	-4.51	178.530	9.29
2015	0.398	213.39	180.860	1.31
2016	0.365	-8.29	159.480	-11.82
2017	0.373	2.19	161.220	1.09
2018	0.416	11.53	188.060	16.65
2019	0.341	-18.03	181.490	-3.49
Total		315.08		100.60
Mean Growth Rate		22.51%		7.19%
CAGR		-5.83%		5.75%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 51 of HS Codes i.e. Wool & other animal hair based textiles, it is clearly visible that though the mean growth of the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is more than that of India's Exports i.e. Bangladesh performed better than India by having around 3 times mean growth rate as compared to India in this chapter of textile sector over the period 2005-2019.

Table 19: Table Showing Comparison of Chapter 52 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Cotton based textiles)

Year	Bangladesh's Chapter 52 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 52 Exports (USD Million)	Growth rate of Textile Exports
2005	55.707		2612.085	
2006	739.339	1227.19	3510.154	34.38
2007	225.596	-69.49	4408.541	25.59
2008	78.115	-65.37	4548.479	3.17
2009	85.742	9.76	3194.769	-29.76
2010	106.356	24.04	6889.855	115.66
2011	110.218	3.63	7795.537	13.15
2012	107.849	-2.15	8568.855	9.92
2013	119.724	11.01	11293.952	31.80
2014	101.960	-14.84	8883.916	-21.34
2015	90.893	-10.85	7470.346	-15.91
2016	87.265	-3.99	6262.460	-16.17
2017	91.830	5.23	6917.321	10.46
2018	98.977	7.78	8094.168	17.01
2019	78.232	-20.96	6002.695	-25.84
Total		1101.00		152.13
Mean Growth Rate		78.64%		10.87%
CAGR		2.46%		6.12%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 52 of HS Codes i.e. Cotton Based Textiles, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is more than that of India's Exports i.e. Bangladesh performed better than India by having over 7 times growth rate as compared to India in this chapter of textile sector over the period 2005-2019.

Table 20: Table Showing Comparison of Chapter 53 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Other Vegetable textile fibre based textiles)

Year	Bangladesh's Chapter 53 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 53 Exports (USD Million)	Growth rate of Textile Exports
2005	321.635		174.596	
2006	379.083	17.86	156.169	-10.55
2007	475.143	25.34	170.030	8.88
2008	463.321	-2.49	202.237	18.94
2009	472.908	2.07	170.410	-15.74
2010	822.689	73.96	348.745	104.65
2011	733.442	-10.85	378.933	8.66
2012	762.614	3.98	325.650	-14.06
2013	764.965	0.31	326.884	0.38
2014	700.975	-8.37	350.217	7.14
2015	675.354	-3.66	358.134	2.26
2016	678.415	0.45	414.293	15.68
2017	673.420	-0.74	428.025	3.31
2018	750.860	11.50	418.409	-2.25
2019	586.740	-21.86	446.959	6.82
Total		87.52		134.12
Mean Growth Rate		6.25%		9.58%
CAGR		4.39%		6.94%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 53 of HS Codes i.e. Other Vegetable textile fibre-based textiles, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is less than that of India's Exports over the period 2005-2019.

Table 21: Table Showing Comparison of Chapter 54 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)
(Manmade filament based textiles)

Year	Bangladesh's Chapter 54 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 54 Exports (USD Million)	Growth rate of Textile Exports
2005	10.483		958.365	
2006	12.062	15.06	998.908	4.23
2007	20.568	70.52	1234.308	23.57
2008	17.367	-15.56	1587.626	28.62
2009	16.023	-7.74	1783.249	12.32
2010	25.583	59.66	2183.871	22.47
2011	24.676	-3.55	2645.209	21.12
2012	27.575	11.75	2260.937	-14.53
2013	35.462	28.60	2680.862	18.57
2014	35.686	0.63	2505.413	-6.54
2015	37.049	3.82	2190.203	-12.58
2016	36.595	-1.23	1925.427	-12.09
2017	36.732	0.37	2125.509	10.39
2018	37.543	2.21	2269.470	6.77
2019	33.528	-10.69	2342.570	3.22
Total		153.86		105.55
Mean Growth Rate		10.99%		7.54%
CAGR		8.66%		6.59%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 54 of HS Codes i.e. Manmade filament based textiles, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is more than that of India's Exports i.e. Bangladesh performed better than India by having around 11% mean growth rate compared to around 7.5% India's mean growth rate over the period 2005-2019.

Table 22: Table Showing Comparison of Chapter 55 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Manmade staple fibre based textiles)

Year	Bangladesh's Chapter 55 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 55 Exports (USD Million)	Growth rate of Textile Exports
2005	31.196		822.030	
2006	17.342	-44.41	973.665	18.45
2007	39.677	128.79	1295.189	33.02
2008	25.201	-36.48	1395.059	7.71
2009	21.403	-15.07	1214.901	-12.91
2010	32.303	50.93	1621.828	33.49
2011	28.404	-12.07	2245.788	38.47
2012	44.039	55.05	1996.788	-11.09
2013	42.022	-4.58	2185.627	9.46
2014	30.588	-27.21	2181.561	-0.19
2015	25.971	-15.09	2127.189	-2.49
2016	25.335	-2.45	2047.051	-3.77
2017	24.488	-3.34	2144.616	4.77
2018	27.304	11.50	1910.151	-10.93
2019	19.558	-28.37	1751.110	-8.33
Total		57.18		95.66
Mean Growth Rate		4.08%		6.83%
CAGR		-3.28%		5.55%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 55 of HS Codes i.e. Manmade staple fibre based textiles, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is less than that of India's Exports over the period 2005-2019.

Table 23: Table Showing Comparison of Chapter 56 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Wadding, nonwoven, yarn, twine etc.)

Year	Bangladesh's Chapter 56 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 56 Exports (USD Million)	Growth rate of Textile Exports
2005	50.393		77.910	
2006	50.967	1.14	93.964	20.61
2007	47.780	-6.25	120.526	28.27
2008	45.671	-4.41	152.536	26.56
2009	33.897	-25.78	162.970	6.84
2010	32.627	-3.75	239.158	46.75
2011	25.776	-21.00	301.057	25.88
2012	22.217	-13.81	310.374	3.09
2013	24.272	9.25	352.623	13.61
2014	25.490	5.02	345.639	-1.98
2015	29.590	16.08	427.722	23.75
2016	30.965	4.65	431.720	0.93
2017	36.732	18.62	387.449	-10.25
2018	44.369	20.79	418.994	8.14
2019	36.322	-18.14	422.293	0.79
Total		-17.58		192.99
Mean Growth Rate		-1.26%		13.78%
CAGR		-2.31%		12.83%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 56 of HS Codes i.e. Wadding, nonwoven, yarn, twine etc., the mean growth of India experienced upward trend while that of Bangladesh experienced downward trend, i.e. the Indian Textile Exports performed better than the Bangladesh's Textile Exports in this chapter of textile sector over the period 2005-2019.

Table 24: Table Showing Comparison of Chapter 57 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

Carpets and other textile floor coverings

Year	Bangladesh's Chapter 57 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 57 Exports (USD Million)	Growth rate of Textile Exports
2005	3.182		1051.246	
2006	2.829	-11.09	1222.250	16.27
2007	5.998	112.02	1220.764	-0.12
2008	7.080	18.04	1188.811	-2.62
2009	5.977	-15.58	978.190	-17.72
2010	8.816	47.50	1330.358	36.00
2011	5.657	-35.83	1279.522	-3.82
2012	6.950	22.86	1350.669	5.56
2013	10.319	48.47	1715.697	27.03
2014	13.254	28.44	1800.141	4.92
2015	18.905	42.64	1718.611	-4.53
2016	22.238	17.63	1736.929	1.07
2017	26.936	21.13	1752.492	0.90
2018	33.106	22.91	1752.787	0.02
2019	27.101	-18.14	1714.223	-2.20
Total		300.99		60.75
Mean Growth Rate		21.50%		4.34%
CAGR		16.53%		3.55%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 57 of HS Codes i.e. Carpets and other textile floor coverings, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is more than that of India's Exports i.e. Bangladesh performed better than India by having around 16.5% mean growth rate compared to around 4.34% India's mean growth rate over the period 2005-2019.

Table 25: Table Showing Comparison of Chapter 58 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019) (Special woven/ tufted fabric, tapestry etc.)

Year	Bangladesh's Chapter 58 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 58 Exports (USD Million)	Growth rate of Textile Exports
2005	67.972		143.312	
2006	93.071	36.93	170.941	19.28
2007	98.585	5.92	190.581	11.49
2008	118.837	20.54	236.456	24.07
2009	134.847	13.47	193.704	-18.08
2010	156.948	16.39	239.977	23.89
2011	95.374	-39.23	243.283	1.38
2012	84.628	-11.27	258.253	6.15
2013	92.049	8.77	397.533	53.93
2014	68.823	-25.23	407.234	2.44
2015	48.915	-28.93	365.894	-10.15
2016	39.410	-19.43	361.222	-1.28
2017	36.732	-6.80	376.733	4.29
2018	37.543	2.21	369.557	-1.90
2019	30.734	-18.14	413.858	11.99
Total		-44.79		127.50
Mean Growth Rate		-3.20%		9.11%
CAGR		-5.51%		7.87%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 58 of HS Codes i.e. Special woven/ tufted fabric, tapestry etc., the mean growth of India experienced upward trend with 9.11% mean growth rate while Bangladesh experienced downward trend with -3.20% mean growth rate, i.e. the India's Textile Sector exports performed better than the Bangladesh's Textile Sector Exports in this chapter of textile sector over the period 2005-2019.

Table 26: Table Showing Comparison of Chapter 59 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Impregnated, coated or laminated fabric)

Year	Bangladesh's Chapter 59 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 59 Exports (USD Million)	Growth rate of Textile Exports
2005	4.223		81.741	
2006	5.659	34.00	74.507	-8.85
2007	7.575	33.86	96.324	29.28
2008	7.129	-5.89	99.965	3.78
2009	7.675	7.66	91.988	-7.98
2010	10.668	39.00	146.134	58.86
2011	10.794	1.18	157.352	7.68
2012	9.364	-13.25	181.430	15.30
2013	10.543	12.59	239.933	32.25
2014	10.960	3.96	393.924	64.18
2015	12.617	15.12	223.889	-43.16
2016	12.667	0.40	207.870	-7.15
2017	14.080	11.15	225.728	8.59
2018	15.699	11.50	248.580	10.12
2019	13.138	-16.31	277.390	11.59
Total		134.96		174.48
Mean Growth Rate		9.64%		12.46%
CAGR		8.44%		9.12%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 59 of HS Codes i.e. Impregnated, coated or laminated fabric, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however India performed better than Bangladesh by having around 12.46% mean growth rate compared to around 9.64% Bangladesh's mean growth rate over the period 2005-2019.

Table 27: Table Showing Comparison of Chapter 60 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Knitted or crocheted fabric)

Year	Bangladesh's Chapter 60 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 60 Exports (USD Million)	Growth rate of Textile Exports
2005	7.238		44.345	
2006	14.038	93.95	71.867	62.06
2007	15.906	13.31	80.096	11.45
2008	19.174	20.55	112.256	40.15
2009	19.004	-0.89	109.295	-2.64
2010	20.020	5.35	143.794	31.57
2011	21.251	6.15	256.458	78.35
2012	16.843	-20.74	209.374	-18.36
2013	18.731	11.21	256.496	22.51
2014	24.066	28.48	258.952	0.96
2015	33.521	39.29	238.003	-8.09
2016	33.780	0.77	265.892	11.72
2017	45.915	35.92	319.376	20.11
2018	58.021	26.37	420.364	31.62
2019	53.086	-8.51	443.496	5.50
Total		251.20		286.91
Mean Growth Rate		17.94%		20.49%
CAGR		15.30%		17.88%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 60 of HS Codes i.e. Knitted or crocheted fabric, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however India performed better than Bangladesh by having around 20.49% mean growth rate compared to around 17.94% Bangladesh's mean growth rate over the period 2005-2019.

Table 28: Table Showing Comparison of Chapter 61 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)

(Knitted apparel and accessories)

Year	Bangladesh's Chapter 61 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 61 Exports (USD Million)	Growth rate of Textile Exports
2005	3346.925		3124.753	
2006	4072.097	21.67	3576.970	14.47
2007	4734.698	16.27	4129.436	15.45
2008	6299.690	33.05	4381.111	6.09
2009	6470.641	2.71	5187.318	18.40
2010	7785.527	20.32	4566.024	-11.98
2011	8855.270	13.74	5807.252	27.18
2012	9462.132	6.85	5466.346	-5.87
2013	10938.061	15.60	6959.256	27.31
2014	11661.675	6.62	7482.487	7.52
2015	12657.798	8.54	7781.249	3.99
2016	12667.500	0.08	7910.076	1.66
2017	13927.550	9.95	8347.736	5.53
2018	15614.451	12.11	7564.781	-9.38
2019	12876.120	-17.54	7879.612	4.16
Total		149.97		104.54
Mean Growth Rate		10.71%		7.47%
CAGR		10.10%		6.83%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 61 of HS Codes i.e. Knitted apparel and accessories, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is more than that of India's Exports i.e. Bangladesh performed better than India by having around 10.71% mean growth rate compared to around 7.47% India's mean growth rate over the period 2005-2019 leading to escalation of difference in the value of exports

between Bangladesh and India from USD 222 Million in the year 2005 to USD 4997 Million in the year 2019.

Table 29: Table Showing Comparison of Chapter 62 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019) (Woven apparel and accessories)

Year	Bangladesh's Chapter 62 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 62 Exports (USD Million)	Growth rate of Textile Exports
2005	3498.608		5075.898	
2006	4179.923	19.47	5438.100	7.14
2007	4588.550	9.78	5243.922	-3.57
2008	5649.460	23.12	5883.939	12.20
2009	5811.372	2.87	6124.697	4.09
2010	7059.025	21.47	6038.004	-1.42
2011	8222.006	16.48	7937.482	31.46
2012	9893.134	20.33	7429.975	-6.39
2013	11431.345	15.55	8743.399	17.68
2014	11980.300	4.80	9055.716	3.57
2015	13647.379	13.92	9349.940	3.25
2016	13699.090	0.38	9051.089	-3.20
2017	14853.410	8.43	8997.092	-0.60
2018	16505.268	11.12	8066.004	-10.35
2019	13445.260	-18.54	8362.199	3.67
Total		149.16		57.54
Mean Growth Rate		10.65%		4.11%
CAGR		10.09%		3.63%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 62 of HS Codes i.e. Woven apparel and accessories, the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is more than that of India's Exports i.e. Bangladesh performed better than India by having

around 10.65% mean growth rate compared to around 4.11% India's mean growth rate over the period 2005-2019 leading to escalation of difference in the value of exports between Bangladesh and India from USD 1577 Million in the year 2005 to USD 5083 Million in the year 2019.

Table 30: Table Showing Comparison of Chapter 63 of HS Codes Growth % of India's and Bangladesh Textile Exports to World post MFA (2005-2019)
(Other made-up articles, worn clothing, etc.)

Year	Bangladesh's Chapter 63 Exports (USD Million)	Growth Rate of Textile Exports	India's Chapter 63 Exports (USD Million)	Growth rate of Textile Exports
2005	285.484		2381.251	
2006	330.508	15.77	2344.685	-1.54
2007	402.229	21.70	2329.820	-0.63
2008	508.263	26.36	2421.585	3.94
2009	526.875	3.66	2318.889	-4.24
2010	686.249	30.25	2902.513	25.17
2011	956.699	39.41	3850.461	32.66
2012	1071.420	11.99	3973.042	3.18
2013	1001.855	-6.49	4712.819	18.62
2014	836.072	-16.55	4613.244	-2.11
2015	811.588	-2.93	4618.408	0.11
2016	816.350	0.59	4564.826	-1.16
2017	841.775	3.11	4960.896	8.68
2018	906.414	7.68	5229.813	5.42
2019	739.823	-18.38	5163.146	-1.27
Total		116.18		86.82
Mean Growth Rate		8.30%		6.20%
CAGR		7.04%		5.68%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

On comparison of the mean growth rates of the Chapter 63 of HS Codes i.e. Other made-up articles, worn clothing, etc., the mean growth of both the India and Bangladesh experienced upward trend in this HS Chapter, however the mean growth in the Bangladesh's Exports is more than that of India's Exports i.e. Bangladesh performed better than India by having around 8.30% mean growth rate compared to around 6.20% India's mean growth rate over the period 2005-2019.

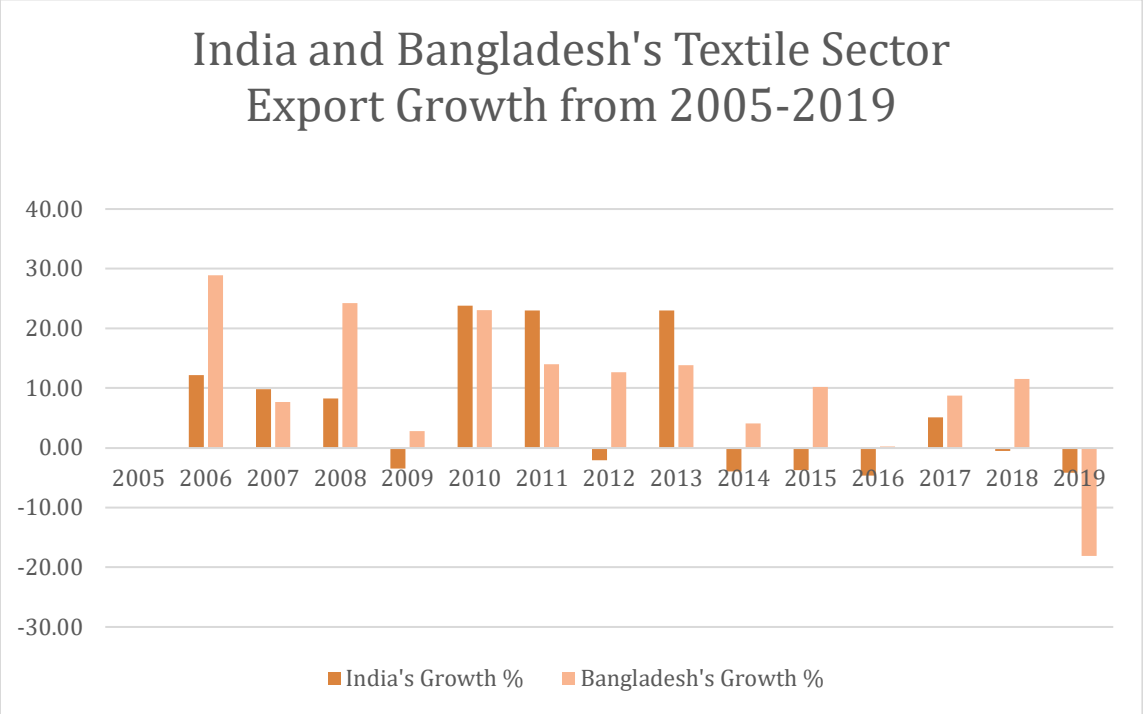
Table 31: Table Showing Growth % of India's and Bangladesh Total Textile Exports to World and the Mean Growth Rate and CAGR post MFA(2005-2019)

Value(USD Billion)

Year	India's Textile Export to World	India's Growth %	Bangladesh's Textile Export to World	Bangladesh's Growth %
2005	17.03		7.68	
2006	19.1	12.16	9.9	28.91
2007	20.97	9.79	10.66	7.68
2008	22.7	8.25	13.24	24.20
2009	21.91	-3.48	13.61	2.79
2010	27.13	23.82	16.75	23.07
2011	33.37	23.00	19.09	13.97
2012	32.68	-2.07	21.51	12.68
2013	40.19	22.98	24.49	13.85
2014	38.6	-3.96	25.49	4.08
2015	37.16	-3.73	28.09	10.20
2016	35.42	-4.68	28.15	0.21
2017	37.22	5.08	30.61	8.74
2018	37.03	-0.51	34.13	11.50
2019	35.48	-4.19	27.94	-18.14
Total		82.47		143.75
Mean Growth Rate		5.89%		10.27%
CAGR		5.38%		9.66%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database and BGMEA

The above table shows the CAGR % of total textile exports of India and Bangladesh in world and USA. The values show that Bangladesh has higher mean growth rate and higher CAGR with comparison to India. It shows that India's growth rate after the quota era is low with comparison to Bangladesh. The growth rate of Bangladesh's Textile Exports is nearly double to that of India's Textile Exports growth rate.

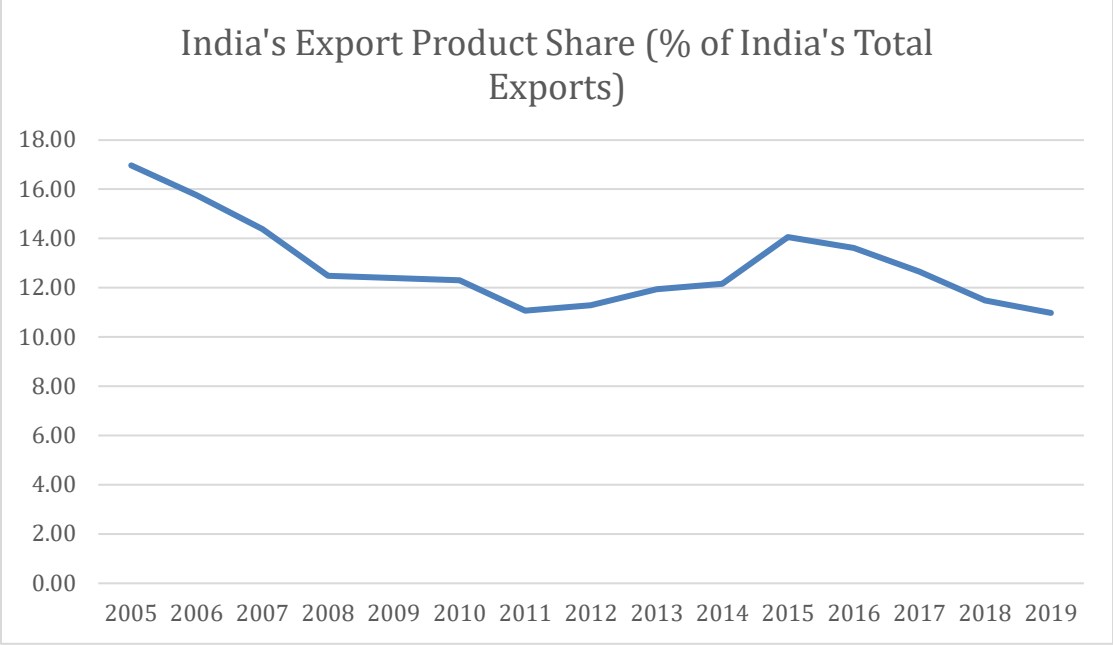


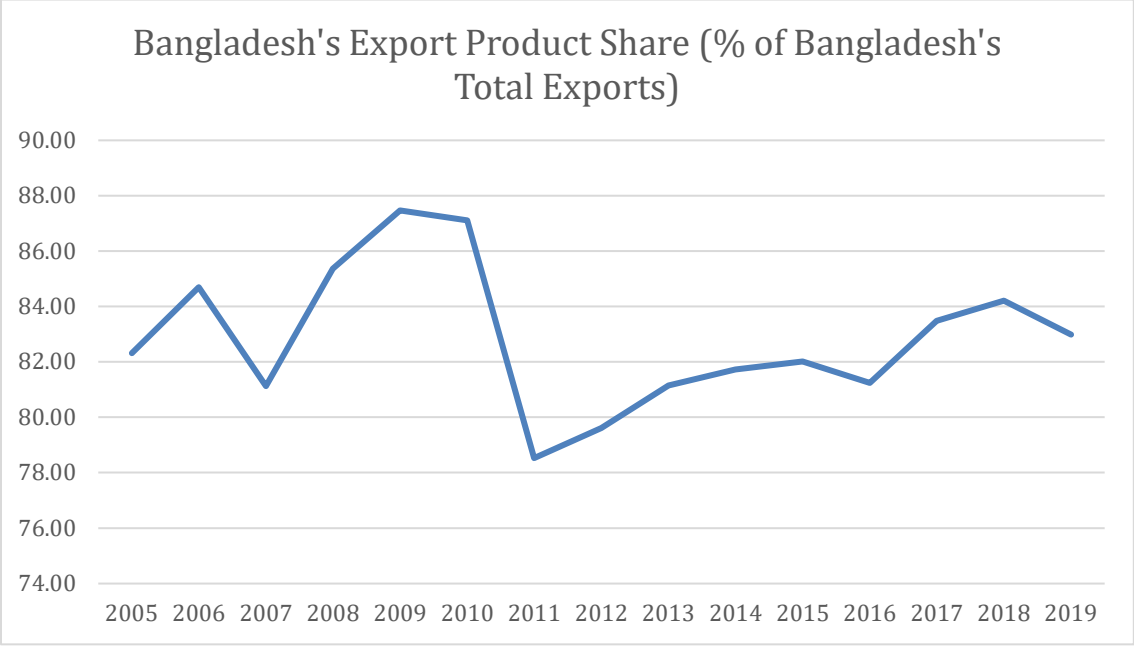
The above graph shows the percentages of growth of India and Bangladesh in world in the textile and clothing sector. On comparing India and Bangladesh it is clear that India's growth is low with respect to Bangladesh.

Table 32: Table showing India and Bangladesh's Textile export share % of Total Exports of the economy

Year	Bangladesh's Export Product Share (% of Bangladesh's Total Exports)	India's Export Product Share (% of India's Total Exports)
2005	82.32	16.97
2006	84.69	15.76
2007	81.13	14.37
2008	85.36	12.48
2009	87.47	12.39
2010	87.10	12.30
2011	78.53	11.07
2012	79.61	11.29
2013	81.15	11.94
2014	81.72	12.15
2015	82.01	14.06
2016	81.24	13.61
2017	83.47	12.64
2018	84.21	11.48
2019	82.98	10.98

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database, WITS and BGMEA


India's Export Product Share (% of India's Total Exports)
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019


Bangladesh's Export Product Share (% of Bangladesh's Total Exports)
90.00
88.00
86.00
84.00
82.00
80.00
78.00
76.00
74.00
2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019

The above graphs shows the export product share of India and Bangladesh in the respective economy's total exports. The graph depicts that Bangladesh's textile sector's share is stable at around 82% while India's share is continuously decreasing from 17% in the year 2005 to around 10.98% in the year 2019. It can be seen that after 2005 export share of Bangladesh in increased in a similar proportion in which India's exports share are decreased.

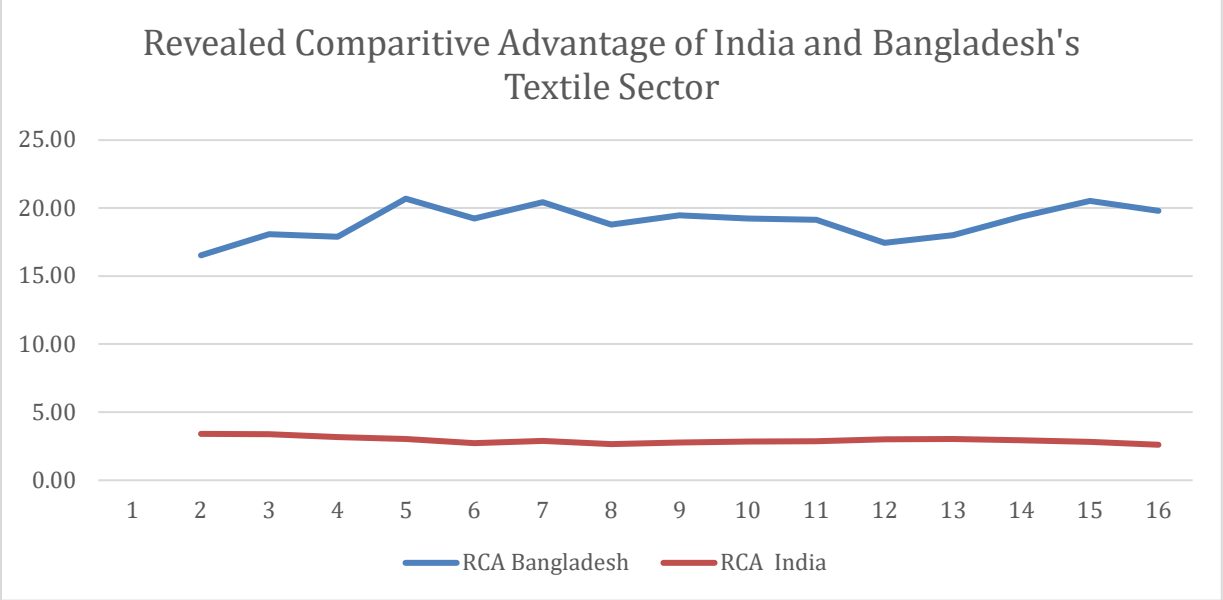
India faces strong competition in the U.S. and EU markets from Bangladesh in the post MFA period. Tax-free entry to the European markets is possible for Bangladesh products, while Indian businesses have to pay an average tax of 9.6%. The cost of labor in Bangladesh is over 25% lower than in India, and Bangladesh-made goods cost 15% lower than Indian goods. Bangladesh has historically been known for its cheap labor and now competes for price, variety and architecture (Yunus and Yamagata, 2012).

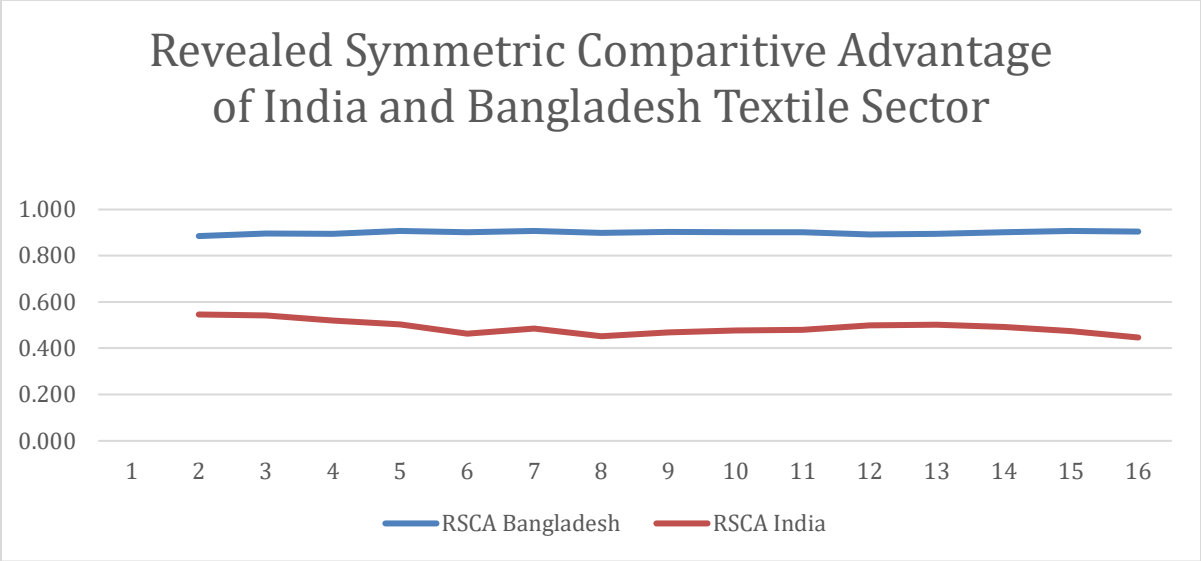
In 2007-08 there was a marginal increase of -1.2% in textile exports to overall exports. Textile exports were severely hit during the time as the US economy was slowing down significantly and Rupee was dramatically increased by 15% compared with the dollar. Particularly since April 2008, the rupee has been heavily depreciating against the US dollar, Indian textiles' export prospects continued to be adversely affected.

Table 33: Revealed Comparitive Advantage and Revealed Symmetric Comparitive Advantage of India's and Bangladesh's Textile Industry from 2005-2019

Year	RCA Bangladesh	RCA India	RSCA Bangladesh	RSCA India
2005	16.54	3.41	0.886	0.546
2006	18.06	3.36	0.895	0.541
2007	17.89	3.17	0.894	0.520
2008	20.69	3.03	0.908	0.503
2009	19.23	2.72	0.901	0.463
2010	20.43	2.89	0.907	0.485
2011	18.78	2.65	0.899	0.452
2012	19.46	2.76	0.902	0.468
2013	19.21	2.83	0.901	0.477
2014	19.12	2.84	0.901	0.480
2015	17.42	2.99	0.891	0.498
2016	17.99	3.01	0.895	0.502
2017	19.37	2.93	0.902	0.492
2018	20.52	2.80	0.907	0.473
2019	19.78	2.62	0.904	0.447

Source: Source: Author's Calculation on the basis of data obtained from UN Comtrade Database, (2015-2019 from BGMEA)





The above graphs indicate the RCA and RSCA of India and Bangladesh. It can be seen that since 2005 the graph shows that India's RCA and RSCA is constantly decreasing while there is increase in RCA and RSCA of Bangladesh. All the above growth indicators

show that Indian textile industry is lagging behind with comparison to Bangladesh in the post quota era. It indicates that after abolishment of quota Bangladesh improved its competitiveness in the world while India started losing it.

The study above shows that India can increase its post-MFA performance somewhat. Comparison of the growth rates in India during the period showed weak annual growth in the post-MFA compared to Bangladesh for textile exports and subsector exports. The highest growth in manmade textiles has been recorded in terms of annual production, followed by cotton textiles in the post-MFA period. The total exports of textiles also show low growth compared to Bangladesh during the post-MFA period. The study shows that in post MFA era Bangladesh has significantly grown while India has a decreased growth rate, lower CAGR than Bangladesh in post MFA period, export product shares of India are also decreasing constantly in the post quota era. RCA of Bangladesh has significantly increased after the abolishment of quota while India's RCA is decreasing. The overall study shows that abolishment of the quotas is a disadvantage for India and really beneficial for Bangladesh. The preferential access to the markets of the USA, EU and other developed countries have provided better growth to the Bangladesh Textile Industry as compared to the Indian Textile Industry.

Comparison on the Basis of Textile Exports as % of Economy's GDP

Table 34: Bangladesh's and India's Textile Sector Exports as % of GDP

	Bangladesh			India		
Year	GDP (USD Billion)	Textile Sector Exports	Textile Sector Exports as % of Bangladesh's GDP	GDP (USD Billion)	Textile Sector Exports	Textile Sector Exports as % of India's GDP
2005	69.44	7.68	11.06	820.38	17.03	2.08
2006	71.82	9.90	13.78	940.26	19.1	2.03
2007	79.61	10.66	13.39	1216.74	20.97	1.72
2008	91.63	13.24	14.45	1198.90	22.7	1.89
2009	102.48	13.61	13.28	1341.89	21.91	1.63
2010	115.28	16.75	14.53	1675.62	27.12	1.62
2011	128.64	19.09	14.84	1823.05	33.37	1.83
2012	133.36	21.51	16.13	1827.64	32.68	1.79
2013	149.99	24.49	16.33	1856.72	40.19	2.16
2014	172.89	25.49	14.74	2039.13	38.59	1.89
2015	195.08	28.09	14.40	2103.59	37.16	1.77
2016	221.42	28.15	12.71	2294.80	35.42	1.54
2017	249.71	30.61	12.26	2652.75	37.22	1.40
2018	274.04	34.13	12.45	2713.17	37.03	1.36
2019	302.57	27.94	9.23	2868.93	35.48	1.24

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

From the above table, it is clearly visible that the Bangadesh's Textile Sector Exports as % of the nation's GDP has been continuously rising over the period 2005-2019 while in case of India, it's the opposite with India's textile sector exports as % of nation's GDP continuously falling over the period 2005-2019.

Comparison of Textile Exports on the basis of Country's GDP Growth Rate

Table 35: Bangladesh's Textile Exports Growth Rate vis-à-vis Bangladesh's GDP Growth Rate

Year	Bangladesh's GDP (USD Billion)	Bangladesh's GDP Growth rate	Bangladesh's Textile Sector Exports	Growth rate of Bangladesh's Textile Exports
2005	69.44		7.68	
2006	71.82	3.31	9.90	28.91
2007	79.61	9.79	10.66	7.68
2008	91.63	13.12	13.24	24.20
2009	102.48	10.58	13.61	2.79
2010	115.28	11.10	16.75	23.07
2011	128.64	10.38	19.09	13.97
2012	133.36	3.54	21.51	12.68
2013	149.99	11.09	24.49	13.85
2014	172.89	13.24	25.49	4.08
2015	195.08	11.38	28.09	10.20
2016	221.42	11.89	28.15	0.21
2017	249.71	11.33	30.61	8.74
2018	274.04	8.88	34.13	11.50
2019	302.57	9.43	27.94	-18.14
Total		139.07		143.75
Mean Growth Rate		9.93%		10.27%
CAGR		11.09%		9.66%

Table 36: India's Textile Exports Growth Rate vis-à-vis India's GDP Growth Rate

Year	India's GDP (USD Billion)	India's GDP Growth rate	India's Textile Sector Exports	Growth rate of India's Textile Exports
2005	820.38		17.03	
2006	940.26	12.75	19.1	10.84
2007	1216.74	22.72	20.97	8.92
2008	1198.90	-1.49	22.7	7.62
2009	1341.89	10.66	21.91	-3.61
2010	1675.62	19.92	27.12	19.21
2011	1823.05	8.09	33.37	18.73
2012	1827.64	0.25	32.68	-2.11
2013	1856.72	1.57	40.19	18.69
2014	2039.13	8.95	38.59	-4.15
2015	2103.59	3.06	37.16	-3.85
2016	2294.80	8.33	35.42	-4.91
2017	2652.75	13.49	37.22	4.84
2018	2713.17	2.23	37.03	-0.51
2019	2868.93	5.43	35.48	-4.37
Total		115.95		65.33
Mean Growth Rate		8.28%		4.67%
CAGR		9.35%		5.38%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

Form the above two tables, it is evident that Bangladesh's Textile Sector exports have managed to perform better than the nation's GDP by having mean growth rate of textile sector exports 103% to nation's GDP mean growth while in case of India, the Textile Sector exports have achieved mean growth rate in textile exports to just 56.43% of the country's GDP mean growth rate.

Comparison of Textile Exports Growth rate with total exports growth rate

Table 37: Bangladesh's Textile Exports growth rate compared with Bangladesh's Total Exports growth rate

Year	Bangladesh Total Exports (USD Billion)	Growth Rate of Total Exports	Bangladesh Textile Exports (USD Billion)	Growth rate of Textile Exports
2005	9.33		7.68	
2006	11.69	25.29	9.90	28.91
2007	13.14	12.40	10.66	7.68
2008	15.51	18.04	13.24	24.20
2009	15.56	0.32	13.61	2.79
2010	19.23	23.59	16.75	23.07
2011	24.31	26.42	19.09	13.97
2012	27.02	11.15	21.51	12.68
2013	30.18	11.70	24.49	13.85
2014	31.19	3.35	25.49	4.08
2015	34.25	9.81	28.09	10.20
2016	34.65	1.17	28.15	0.21
2017	36.67	5.83	30.61	8.74
2018	40.53	10.53	34.13	11.50
2019	33.67	-16.93	27.94	-18.14
Total		142.66		143.75
Mean Growth Rate		10.19%		10.27%
CAGR		9.60%		9.66%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

Table 38: India's Textile Exports growth rate compared with India's Total Exports growth rate

Year	India's Total Exports (USD Billion)	Growth Rate of Total Exports	India's Textile Exports (USD Billion)	Growth rate of Textile Exports
2005	100.35		17.03	
2006	121.20	20.78	19.10	12.16
2007	145.89	20.37	20.97	9.79
2008	181.86	24.66	22.70	8.25
2009	176.77	-2.80	21.91	-3.48
2010	220.41	24.69	27.12	23.78
2011	301.48	36.78	33.37	23.05
2012	289.56	-3.95	32.68	-2.07
2013	336.61	16.25	40.19	22.98
2014	317.54	-5.67	38.59	-3.98
2015	264.38	-16.74	37.16	-3.71
2016	260.32	-1.54	35.42	-4.68
2017	294.36	13.08	37.22	5.08
2018	322.49	9.56	37.03	-0.51
2019	323.25	0.24	35.48	-4.19
Total		135.70		82.47
Mean Growth Rate		9.69%		5.89%
CAGR		8.71%		5.38%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

The above tables show that the Bangladesh's Textile Sector exports experienced growth rate similar to country's total exports growth rate while in case of India, the textile sector exports achieved growth rate of just around 60% to that of the country's total exports growth rate, thereby implying better performance of Bangladesh's textile sector exports. Textile exports growth rate could not match the total exports growth rate in India whereas in case of Bangladesh the growth rate of textile exports outnumbered the growth rate of total exports over the period 2005-2019.

Comparison of growth rate of Share in World Textile Exports Share

Table 39: Bangladesh's and India's Growth rate of Share in World Textile Exports

Year	Bangladesh's Share in World Textile Exports	Growth Rate %	India's Share in World Textile Exports	Growth Rate %
2005	1.52		3.37	
2006	1.78	17.04	3.43	1.83
2007	1.73	-2.75	3.40	-0.84
2008	2.05	18.51	3.52	3.28
2009	2.45	19.31	3.94	12.03
2010	2.61	6.76	4.23	7.38
2011	2.54	-2.94	4.43	4.78
2012	2.93	15.37	4.44	0.27
2013	3.10	5.94	5.09	14.43
2014	3.21	3.45	4.85	-4.56
2015	3.67	14.45	4.85	0.01
2016	3.95	7.59	4.97	2.33
2017	4.09	3.69	4.98	0.20
2018	4.37	6.64	4.74	-4.85
2019	3.65	-16.32	4.74	0.00
Total		96.73		36.30
Mean Growth Rate		6.91%		2.59%
CAGR		6.46%		2.46%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database

The above table shows that Bangladesh's Textile Sector exports have managed to increase their share in world textile exports by around 2.40 times over period 2005-2019 while in case of India, the same is just around 1.40 times, implying better performance of Bangladesh's Textile Sector Exports.

Impact of Preferential Access to Bangladesh on India's Textile Sector

From the comparison of the above table 38 and 39, it is clearly visible that the growth rate of Bangladesh's textile sector exports have performed in similar manner to the Bangladesh's Total Exports while in case of India the textile sector exports did not match the growth rate of the total exports growth rate of the nation.

Had India achieved similar mean growth rate as that of mean growth rate of its total exports just like Bangladesh, where the textile exports achieved growth rate which was at par with that of its total exports, in such case, India's textile exports would have contributed an additional USD 20 Billion to the economy directly, implying the notional loss for the same for the period 2005-2019.

Further, the above is supported by the data analysed in Table 1.41 above, Bangladesh achieved mean growth in the share of total world textile exports of 6.91% while India achieved less growth rate in share of total world textile exports of 2.59%. Had India achieved the similar growth rate in the share of total world textile exports to that of Bangladesh, the exports of the textile sector would have been in more by over USD 20 Billion.

2nd objective analysis

- Objective: To analyze the effectiveness of the infusion of funds in new plants and machineries through the Indian Textile Companies.

Second objective of the study is to examine the effectiveness of funds infusion for new machineries through textile industries. For achieving this objective primary data and secondary data are analyzed.

Table 40: The Govt. is providing adequate incentive/support for the growth of the industry

Do you agree that the government is providing adequate incentive/support for the growth of the industry?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	12	24.0	24.0	24.0
	No	38	76.0	76.0	100.0
	Total	50	100.0	100.0	

Source: Author's Calculation on the basis of primary data collection

The above table shows that only 24% industrialists believes that government is providing adequate incentive or funds to the industry. While 76% of them thinks that government is not supporting the industry adequately. After that the respondents were asked to specify the reason for not getting financial assistance from the government. Table below indicates the different reasons for not getting financial assistance.

Table 41: Different reasons for not getting financial assistance-

Reason for not getting financial assistance from government	(%)
Lack of awareness	27.1
Requirement of personal approach	40.08
Difficulties faced in getting financial assistance	49.2
Corruption involved in the system	51.0
Any other reason	18.4

Source: Author's Calculation on the basis of primary data collection

The above table indicates that 27.1 % of the industrialists do not have a knowledge about the various schemes of the government which shows that the industrialists are quite aware about various government schemes. A huge amount (40.08%), almost half of the industrialists believes that for getting financial assistance they need personal approach. 49.2% of the respondents said that they faced difficulties in getting financial assistance so they did not get it. 51% of industrialists said that there is very much corruption involved in the system and that is the reason for not getting financial assistance from government. 18.4% of industrialists said there are some other reasons for not getting financial assistance.

Table 42: Have you suffered from technological obsolescence?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	2	4.0	4.0	4.0
	Not Much	7	14.0	14.0	18.0
	Yes	11	22.0	22.0	40.0
	Very Much	30	60.0	60.0	100.0
	Total	50	100.0	100.0	

Source: Author's Calculation on the basis of primary data collection

The above table shows that around 82% of the industrialists are facing technological obsolescence. It shows that industry needs support for the getting new technology and machineries which will give a kick to the industry. For establishing new machineries, the industry needs support from the government like funds, loans etc. which will help them to take the industry on new heights.

Table 43: Table below shows the views of respondents on the way of development of the industry

What is the most appropriate direction for industry development in the years ahead?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Embracing new trends	14	28.0	28.0	28.0
	Expansion	32	64.0	64.0	92.0
	Move to other country	4	8.0	8.0	100.0
	Total	50	100.0	100.0	

Source: Author's Calculation on the basis of primary data collection

The above table shows that most of the industrialists i.e. 64% thinks that for industry development it needs to embrace more expansion activities. 28% of them thinks, by embracing new trend the industry can grow. 8% of them believed moving to other country is the option for them. The respondents who said that expansion is the appropriate way to develop the industry they were further asked for their plans for expansion.

Table 44: Table shows the various plans of the industrialists.

Plan for expansion	% of industrialists adopting these plans for expansion
Enhancement of high added-value production items	46.87
Expansion (diversification) of production items	65.62
Strengthening of design, research, and development functions	50
Production consolidation of specific manufacturing items in your local company	31.25
Expansion of business size through additional investments	40.06
Other ()	6.25

Source: Author's Calculation on the basis of primary data collection

The above table shows the percentages of the different expansion plans for the industry the table shows that mostly adopting plan is diversification of items. But only 46.87% of the respondents want to expand their business by enhancing high value-added production items, also only 40.06% of the respondents want to expand their business by additional investment. These results show that there is a lack of capital for investing in the industry.

Table 45 Have you received any benefit under the recently announced Govt. scheme to foot the entire 12% employer's contribution under Employees Provident Fund (EPF) and 5% Additional Duty Draw Back Scheme for garment products?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	23	46.0	46.0	46.0
	Yes	27	54.0	54.0	100.0
	Total	50	100.0	100.0	

Source: Author's Calculation on the basis of primary data collection

The above table shows that only 54% of the industrialists are benefitted under the recently announced Govt. scheme to foot the entire 12% employer's contribution under Employees Provident Fund (EPF) and 5% Additional Duty Draw Back Scheme for garment product which shows that, not a very large portion of the industry is benefitted by the new schemes.

Table 46: Effectiveness of Government Schemes

Are the different schemes launched by the government such as Technology Up- gradation Fund Scheme (TUFS), Focus Market Schemes (FMS), Focus Product Schemes (FPS) successfully implemented and are effective?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	33	66.0	66.0	66.0
	Yes	17	34.0	34.0	100.0
	Total	50	100.0	100.0	

Source: Author's Calculation on the basis of primary data collection

The data shows 66% of the textile industrialists believe that the funding schemes by government for technology upgradation, focus market scheme and focus product scheme

are neither successfully implemented nor they are effective. Which shows that there is no effect of government funding schemes on the ground level.

Association between the effectiveness of funds and financial condition of the companies

A chi-squared test, written also as a $\chi 2$ test, is a statistical hypothesis test that is valid when the chis-squared test statistics, specifically Pearson's pivotal test and its variants, are distributed under the zero hypothesis. The Pearson chi-squared test is applied to assess if the predicted frequency variations are statistically important in one or more categories of a table. The results are categorized into mutually exclusive groups in the typical implementations of this study. If the null hypothesis is valid, then a frequency distribution X2 matches the test statistics determined from the observations. The purpose of this test is to assess the probability of null hypothesis being assumed by observed frequencies. Test statistics following $\mu 2$ distribution occur when the observations are independent and normally distributed and which assumes are often justified under the central limit theorem. Often X2 experiments are performed on the null independence hypothesis of a pair of random variables on basis of observations by pairs. Chi-squared experiments are also used to test the distribution of the test statistic asymptotically approaches the distribution of X2 such that the testing statistics represent a Chi-squared distribute (if the null hypothesis is true) The analysis uses chi-square tests for analyzing results.

Chi square test for association is employed to find if there is any significant relationship between the financial condition of company and implementation of different schemes.

Table 47 Cross Tabulation

Cross-tabulation				
		Are the different schemes launched by the government such as Technology Up-gradation Fund Scheme (TUFS), Focus Market Schemes (FMS), Focus Product Schemes (FPS) successfully implemented and are effective?		
		No	Yes	Total
In recent years your company have been financially?		1	1	2
	Getting Worse	4	0	4
	Improving	14	7	21
	Stable	14	9	23
Total		33	17	50

Source: Author's Calculation on the basis of primary data collection

Table 48: Chi-Square Tests

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.563[a]	3	.464
Likelihood Ratio	3.808	3	.283
N of Valid Cases	50		

Source: Author's Calculation on the basis of primary data collection

Null Hypothesis: There is no significant relationship

The data shows there is no significant relationship between the financial conditions of company in recent years and the schemes implemented by govt. It shows that that govt. schemes are not related to financial condition of company. However, on the application of the chi square test results are obtained as p>.05 which provides that there is significant relationship between the two variables and it can be concluded that the government policies are not properly implemented to achieve the desired results.

Table 49: Chi Square Test Statistics

	The Range of Raw Material Availability Within the Country?	In Recent Years Your Company Has Been Financially (Improved/Worsen/)	Is Inflation Impacted Industry Profits?	Technological Obsolescence	Globalization Has A Positive Impact on Textile Exports of India?
Chi-Square	32.939[a]	13.625[b]	17.833[c]	39.500[d]	11.255[e]
Df	4	2	4	3	1
Asymp. Sig.	.000	.001	.001	.000	.001

Source: Author's Calculation

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.8.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.0.

c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.6.

d. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

e. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 23.5.

The significance level at Sig level 95%, p value <.05

If p < computed value, then it shows a significant difference occurs;

Otherwise, if p > computed value, then it shows an insignificant difference occurs.

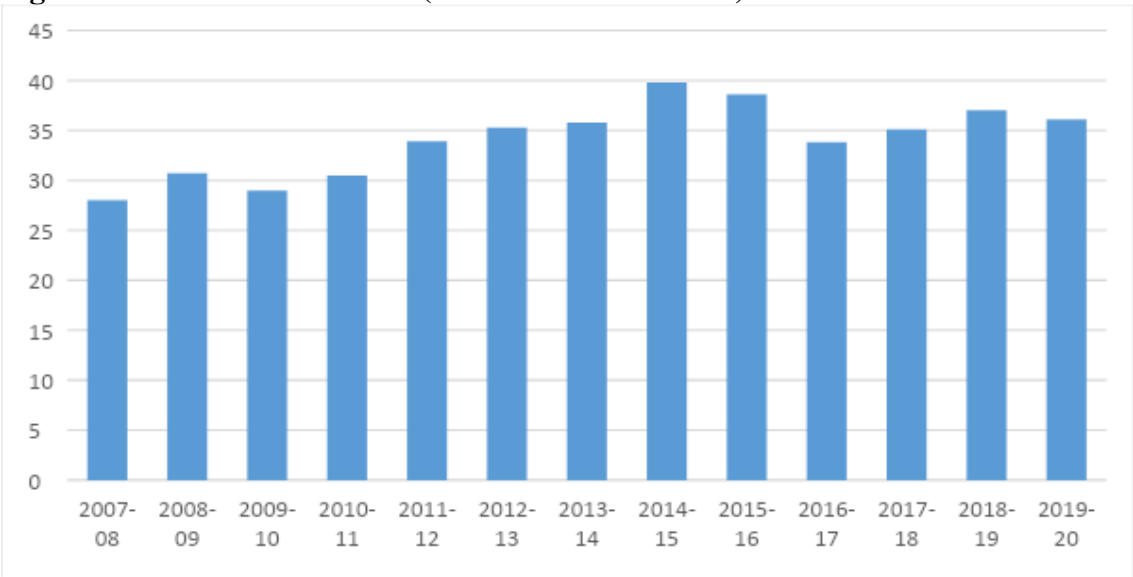
The chi square test shows that the availability of raw material in the country is significant at 5% level of significance; it shows there is enough availability of raw material within the country. Second chi-square test performed to see whether the companies in recent years have been financially improved or worsen, the results have shown that that there is significant difference between the expected and observed frequencies of companies condition in recent years at $p<0.05$ which shows that there are significant changes companies experienced in the recent years.

The third chi-square performed to see whether inflation impacted the industry or not the test statistic value shows that the test statistic is significant at $p<0.001$ which shows that inflation has significantly impacted the industry. The fourth chi square test shows that the value of the test statistic is significant which shows that the textile sector has suffered much from the technological obsolescence. Fifth, the chi square test shows that the value of test statistic is significant as $p<.05$ which shows that globalization has a positive impact on the industry.

Effectiveness of Infusion of funds in new textile machineries.

The effectiveness which has been measured through the application of Chi Square tests yielded results which provided that the results as desired have not been achieved through the upgradation of plant and machineries and investment in new plants and machineries. The businesses have experienced technological obsolescence which has led to them being unable to compete internationally and has significantly affected their core competency.

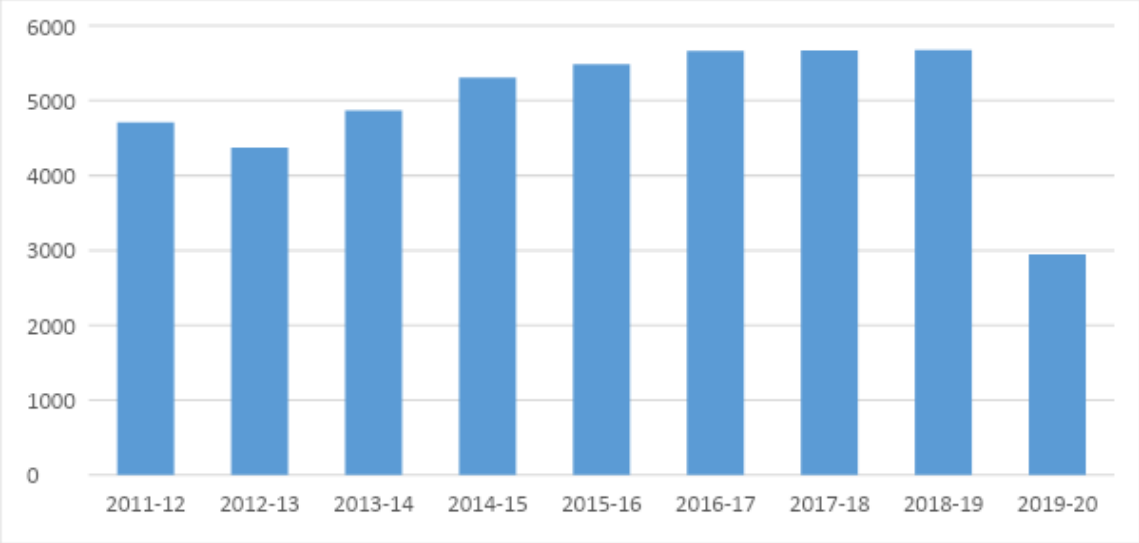
Figure 3 Production of Cotton (Value in Million Bales)



Source: IBEF,2020

The above table shows the production of cotton and fiber for financial years from 2007 to 2019. India is the top cotton producer in the country. In India cotton production rose from 28.0 million bales in FY07 to 36.1 million bales in FY19 at a CAGR of 2.1 percent. It is projected that cotton production in India in FY18 is 34.9 million bales. Cotton and fiber in this group are the major components. Man-made fiber development was also on the rise. During FY18 fiber production in India amounted to 1.319 million tons and in FY19* amounted to 0.730 million tons.

Figure 4 Production of Yarn (Million Kg)



Source: IBEF, 2020

The above table shows the production of yarn for the financial years 2011-2019. Yarn production in FY18 rose to 5,676 million kgs reflecting a CAGR of 2.69 percent since 2011. The cotton yarn was the largest share amongst the total yarn productions. Yarn production was 2,947 million kg in FY19P (Till the end of the half year of the FY)

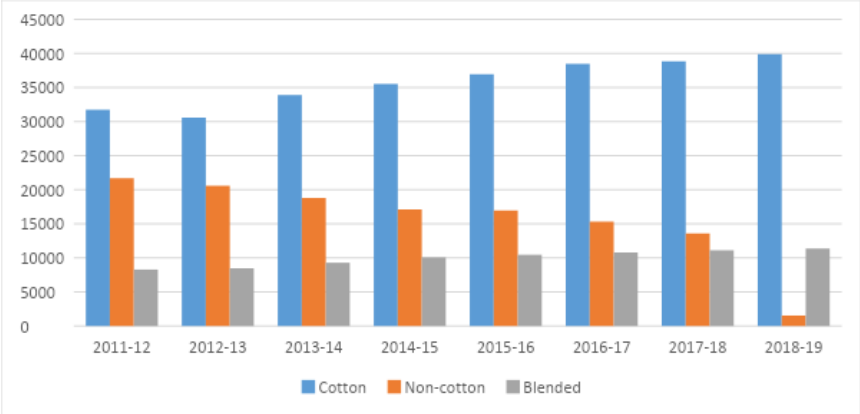
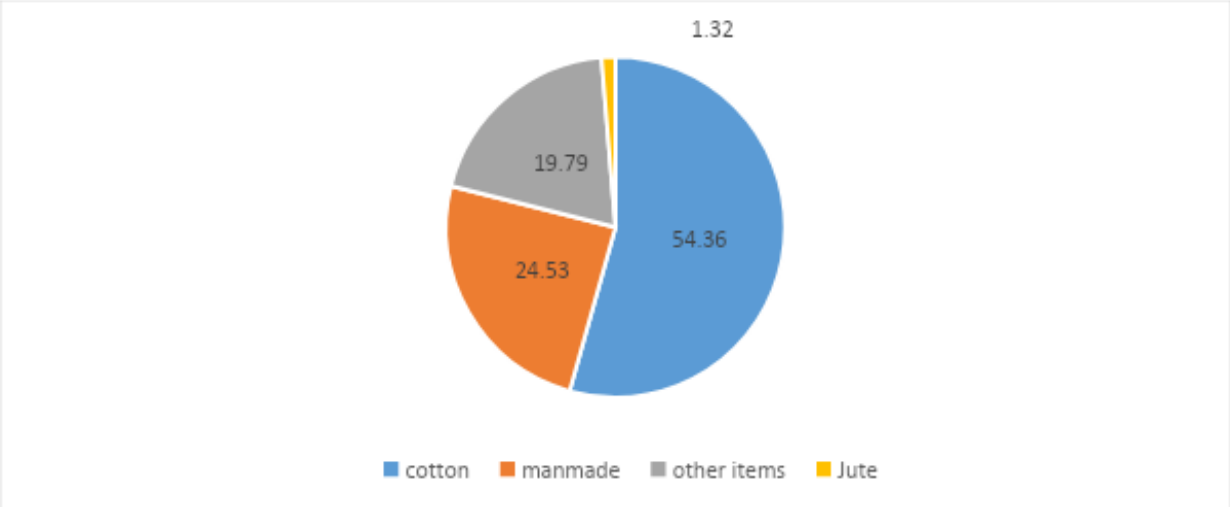


Figure 5 Production of fabric
Source: Ministry of Textiles Annual Report, 2019

The above graph showed that the cotton fabrics formed the major share of the production of fabrics in the country , higher than the Non cotton and blended fabrics.

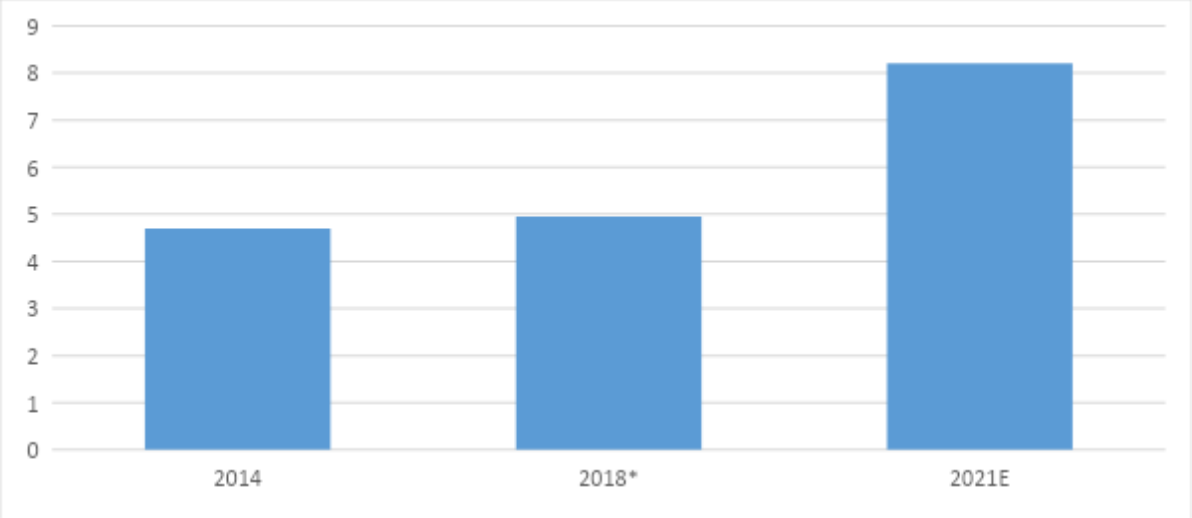
Figure 6 Share of exports of cotton, manmade , jute and other items in the garments exports from India



Source: IBEF,2019

Man Made garments had a share of 24.53 percent in exports and reached US$ 932 million in FY2019*.

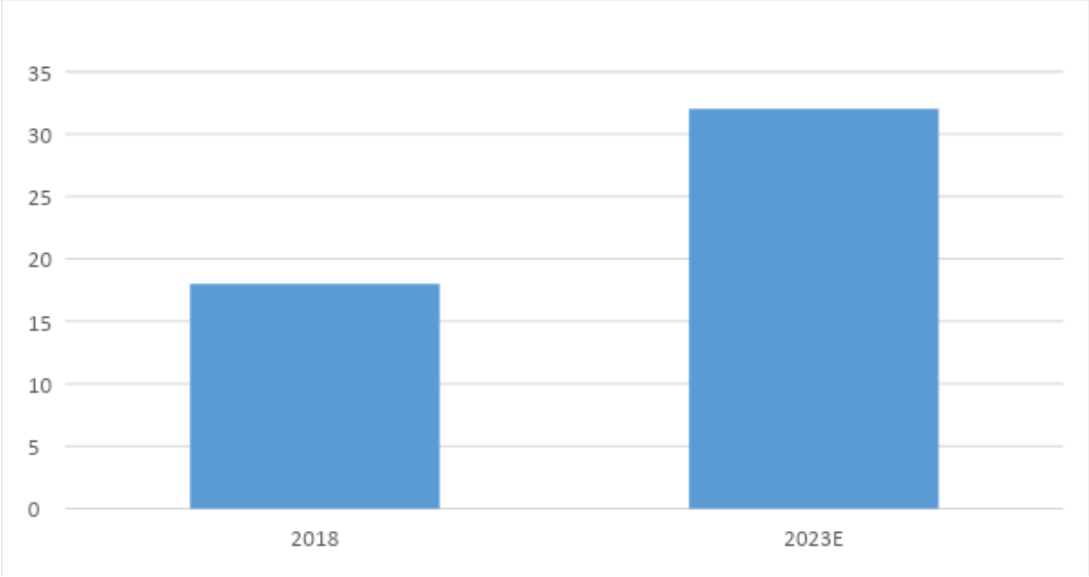
Figure 7 Indian home textile industry (US $ billion)



Source: IBEF,2019

The above figure shows the value for 2014, 2018, and the forecast value for the Indian textile industry in 2021. The domestic textile industry in India is forecast to rise by 8.3% from CAGR 4.7 billion dollars by 2014–12 to 8.2 billion dollars by 2021. The regional domestic textiles industry accounts for 7% of India. High-quality firms in the United States and the UK make India a pioneer, with two-thirds leading to their exports. In the last few years, Indian goods have earned a significant market share in home textiles worldwide. Growing household incomes, rising population and development in end-use industries like lodging, retail, healthcare, etc. will help growth in home textiles. The domestic apparel industry hit 4.95 billion U.S. dollars in 2018.

Figure 8 The Value of Technical Textile Industry For 2018 And 2023



#E-estimates.
Source: MOT, 2019

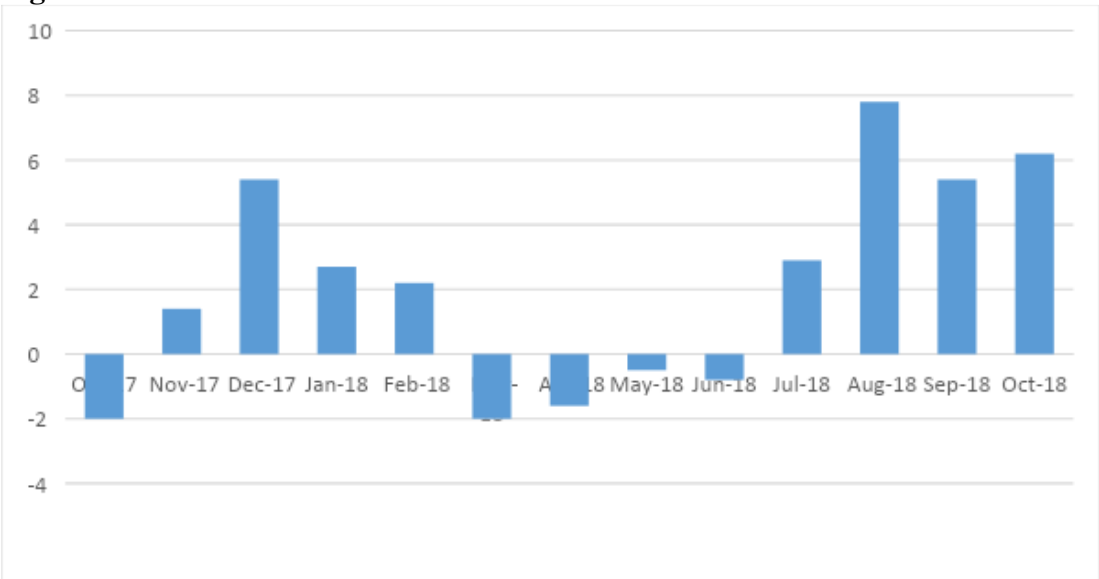
The above figure depicts the value of the technical textile industry of India for the year 2018 and 2023. In particular, thermal protective and blood-absorber materials, seatbelts and adhesive bandages are the main services of the technical textiles industry. Because of the cost-effectiveness, longevity and flexibility of technical textiles, India should be a main growth area for the technological textiles industry. Through non-woven technical textiles, the target size of the market can be achieved with healthcare industries and infra industries being its growth drivers. Through providing funds for the MSMEs and customs duty exemption, govt. aims to support the growth of the sector. The CAGR of 12.20% in FY18-23 is forecasted for the technical textile industry

Table 50 Textile Manufacture Growth Under Index of Industrial Production

Time period(oct2017-oct2018)	% of textile manufacture growth
Oct-17	-2.00
Nov-17	1.40
Dec-17	5.40
Jan-18	2.70
Feb-18	2.20
Mar-18	-2.00
Apr-18	-1.60
May-18	-.50
Jun-18	-.80
Jul-18	2.90
Aug-18	7.80
Sep-18	5.40
Oct-18	6.20

Source: IBEF Report,2019

Figure 9 % of Textile Manufacture Growth

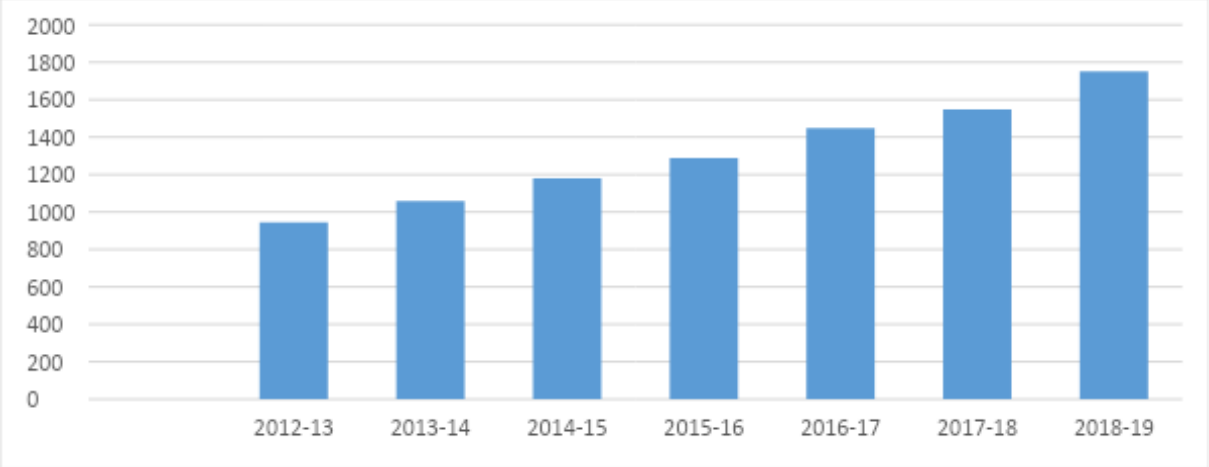


Source: IBEF,2019

The above table shows the percentages of textile manufacture growth under the index of industrial index. Textile manufacturing in India has been thriving. The size of India's

textile industry is expected to touch the US$ 223 billion market by 2021. Index of Industrial Production (IIP) is a composite indicator of the changes in the volume of production in a chosen base period (2011- 12). Manufacturing of textiles under the IIP index grew at the rate of 6.20 percent year-on-year, depicting a positive trend in October 2018.

Figure 10 Trends in per capita income in India (US $)



Source: Ministry of Textiles Report, 2019

Table 51: Indian residents shifting from low to high income groups (%) Million Household

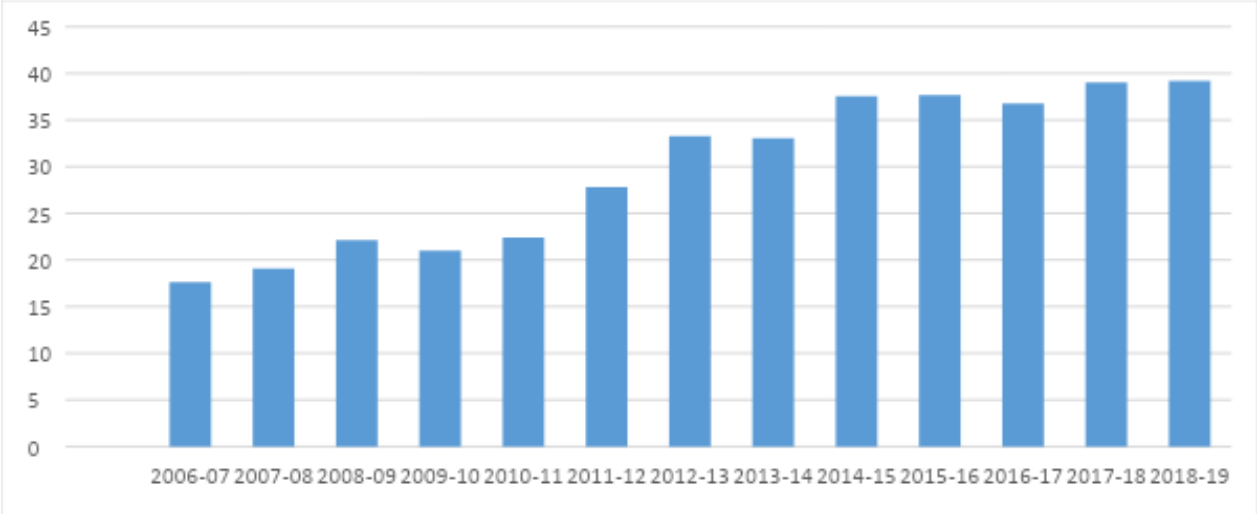
Year	Elite (%)	Aspirers (%)	Affluent (%)	Next billion (%)	Strugglers (%)
2005	42	8	3	1.5	45.5
2016	45	15	6	2.0	32.0
2017	45.3	15	6.4	2.6	30.7
2018	46	16.2	7.3	2.9	27.6
2025(forecasted)	46	20	11	4.4	18.6

Source: IBEF, 2019

The above table shows the Indian residents shifting from low to high-income groups (%) Million Household, 100%. Rising incomes have been a critical determinant of domestic demand for the sector; with incomes rising in the rural economy as well, the upward push

on demand from the income side is set to continue. The rising industrial activity would support the growth in the per capita income.

Figure 11 Growing Textile and Clothing Exports from India (US$ Billion)



Source: Ministry of Textiles Report, 2019

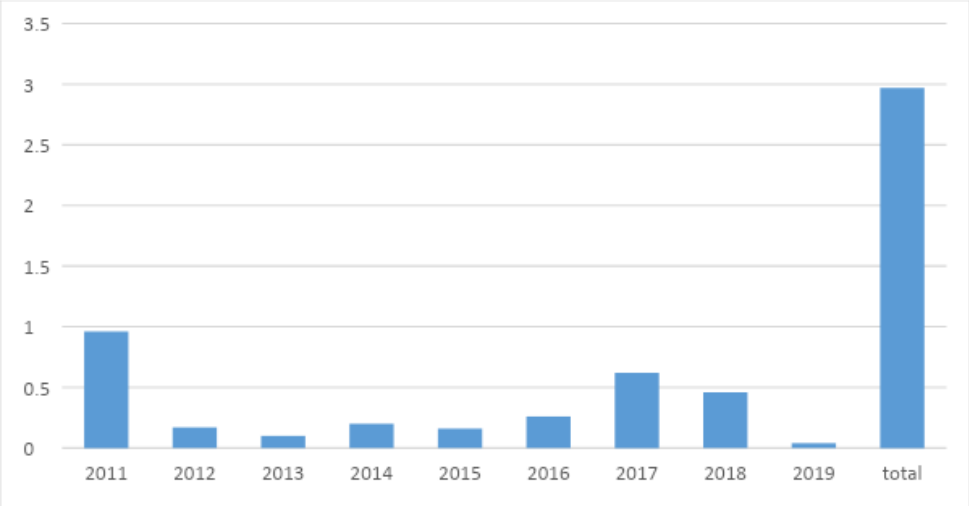
The above table shows the growing textile and clothing exports from India (US$ billion). India is the second largest manufacturing garment business in the country. Over the years, capacity building has led to the small production costs per unit in the textile industry of India, which has given the country's textile exporters a certain competitive advantage over the key worldwide competitors. In the volume of exports from this sector, over the years the good output of textile exports was expressed. In FY18, textile exportations rose by 6.90% in the period from FY06 until FY18, up to US$ 39.20 billion. In FY19 *, it contributed to US$ 21.95 billion. Africa and Latin America will be the main markets for indigenous textiles over the coming decades.

Table 52: FDI in textile (including dyed, printed) sector (US $billion)

Financial year	FDI inflows value (US $billion)	Cumulative FDI flow (US $billion)
2011	.96	2.97
2012	.17	
2013	.10	
2014	.20	
2015	.16	
2016	.26	
2017	.62	
2018	.46	
2019	.04	

Source: IBEF,2019

Figure 12 FDI inflows value (US $billion)



Source: IBEF, 2019

For the financial years 2011-2019, the following table showing the FDI movement in textiles. 100 % FDI in the sector has been approved. Cumulative textile FDI inflows totalled $2.97 billion between April 2000 and June 2018. There is a substantial growth in cooperation between global leaders and domestic companies in the textile industry in India. Operations in India have already begun with foreign apparel giants such as Hugo Chief, Liz Claiborne, Diesel and Kanz. In addition, the Gujarat Government aims to draw

Rs 5,000 crore (US$ 775 million) worth of investments along the value chain in different sectors with an extension of its textile strategy by one year.

The expenditure was rendered by providing credit at discounted rates to facilitate restructuring and upgrading of the textile industry. In 2017, a grant was given in conjunction with this program of Rs 1,400 crore ($216.25 million). Rs 2,300 (USD 355.27 million) crore is allotted for this project in line with the Union Budget 2018-19.

The analysis of primary data shows that the industrialists are not getting proper incentives funds from the government. There are different reasons for that like lack of awareness, corruption in the system, requirement of personal approach and many more. It shows that the system needs a change. Also, the industry is significantly suffering from the technological obsolescence it indicates that there is lack of new machineries and new technology which is a demand of these days as new technology brings development in the sector, inclusion of new machineries makes the production easier and faster. According to primary data the industry does not have sufficient new machineries and new technology. The mostly adopted plan for the expansion of the industry is diversification of items. But only 46.87% of the respondents want to expand their business by enhancing high value-added production items, also only 40.06% of the respondents want to expand their business by additional investment. It shows that there is a lack of capital for investing in the industry. Also, the table above shows that growth rate of the industry and export product share in the world are decreasing over the years. Further, the growth rate has not increased at a higher rate as not a large number are ready to take much risks and make investment in the research and development activities and in the high value addition items which can provide a higher boost to the Textile sector. The overall analysis of primary and secondary data indicates that there is not much effectiveness of the funds infused by the businesses for the new machineries.

3rd objective

- To highlight the need of the government support and accordingly develop a proposal for the Indian government.

The objective is achieved through interpretation of primary data.

The respondents from 50 companies were from Sole Proprietorship, Partnership firms, Private Limited and Public Limited Companies which were into manufacture and export of knitted fabrics, knitted garments, woven clothes, woven garments, home textile products, blankets, and some of them were into manufacturing and exporting other textile items. From these industries most of the industries were in industrial and commercial areas while some were operating from mixed land use areas. Most of these industries were using local standards. Only a few of them were using Japanese Industrial Standards, US standards.

Table 53: Table showing types of respondent companies

		Frequency	Percent	Cumulative Percent
Valid	Partnership Firm	5	10.0	10.0
	Private Limited company	14	28.0	38.0
	Public Limited Company	9	18.0	56.0
	Sole Proprietorship	22	44.0	100.0
	Total	50	100.0	

Source: Author's Calculation on the basis of primary data collection

Table 54: Application of Various Standards

		Frequency	Percent
Valid	European standards	1	2.0
	Japan Industrial Standards	1	2.0
	Local standards	2	4.0
	US standards	2	4.0
	Local standards	14	28.0
	Other standards (Specify)	29	58.0
	US standards & Local standards	1	2.0
	Total	50	100.0

Source: Author's Calculation on the basis of primary data collection

4.2 Chi-Square Test

Table 55 : Test Statistics

	The Range of Raw Material Availability Within the Country?	In Recent Years Your Company Has Been Financially (Improved/Worsen/)	Is Inflation Impacted Industry Profits?	Technological Obsolescence	Globalization Has A Positive Impact on Textile Exports of India?
Chi-Square	32.939[a]	13.625[b]	17.833[c]	39.500[d]	11.255[e]
Df	4	2	4	3	1
Asymp. Sig.	.000	.001	.001	.000	.001

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.8.

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 16.0.

c. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.6.

d. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 12.0.

e. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 23.5.

Sources: Authors Calculation

The significance level at Sig level 95%, p value <.05

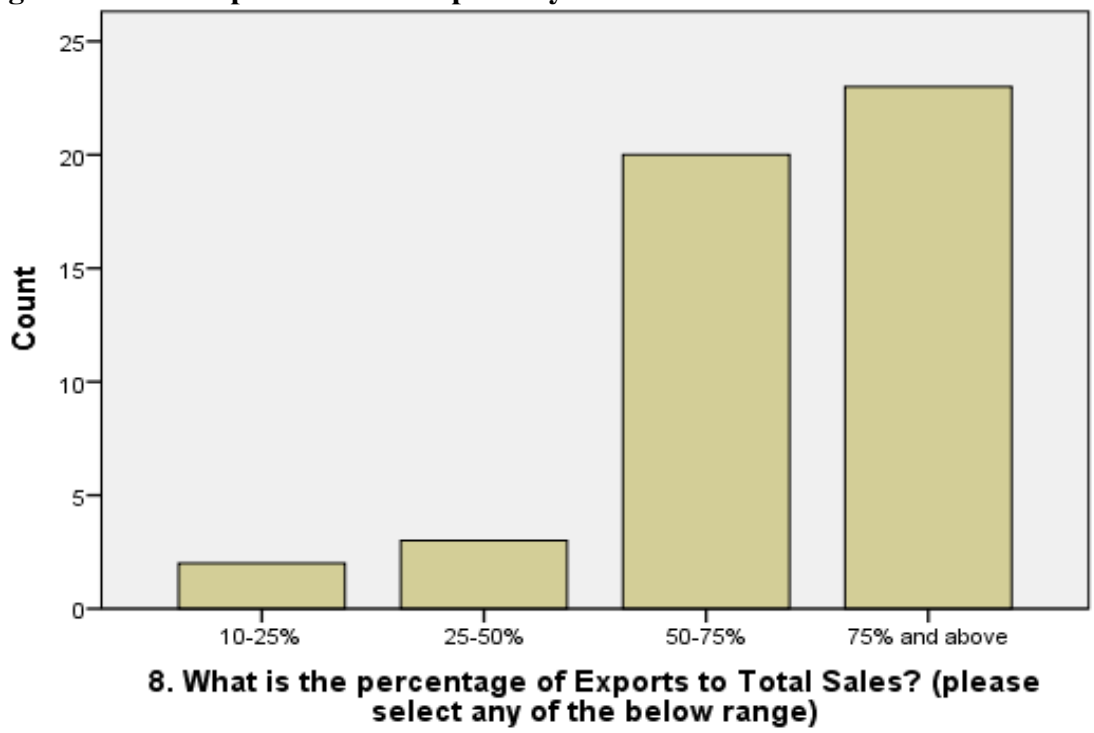
If p < computed value, then it shows a significant difference occurs;

Otherwise, if p > computed value, then it shows an insignificant difference occurs.

The chi square test shows that the availability of raw material in the country is significant at 5% level of significance; it shows there is enough availability of raw material within the country. Second chi-square test performed to see whether the companies in recent years have been financially improved or worsen, the results have shown that that there is significant difference between the expected and observed frequencies of companies condition in recent years at $p<0.05$ which shows that there are significant changes companies experienced in the recent years.

The third chi-square performed to see whether inflation impacted the industry or not the test statistic value shows that the test statistic is significant at $p<0.001$ which shows that inflation has significantly impacted the industry. The fourth chi square test shows that the value of the test statistic is significant which shows that the textile sector has suffered much from the technological obsolescence. Fifth, the chi square test shows that the value of test statistic is significant as $p<.05$ which shows that globalization has a positive impact on the industry.

Figure 13 % of Exports to sales in primary data



Source: Authors Calculation

The graph represents the percentages of exports to total sales. The graph shows that the most of the respondents exports more than 75% to their total sales. In total, it could be said that 95 % of the respondents export a good number of products to their total sales.

Table 56: Table Showing Availability of raw materials in the domestic market

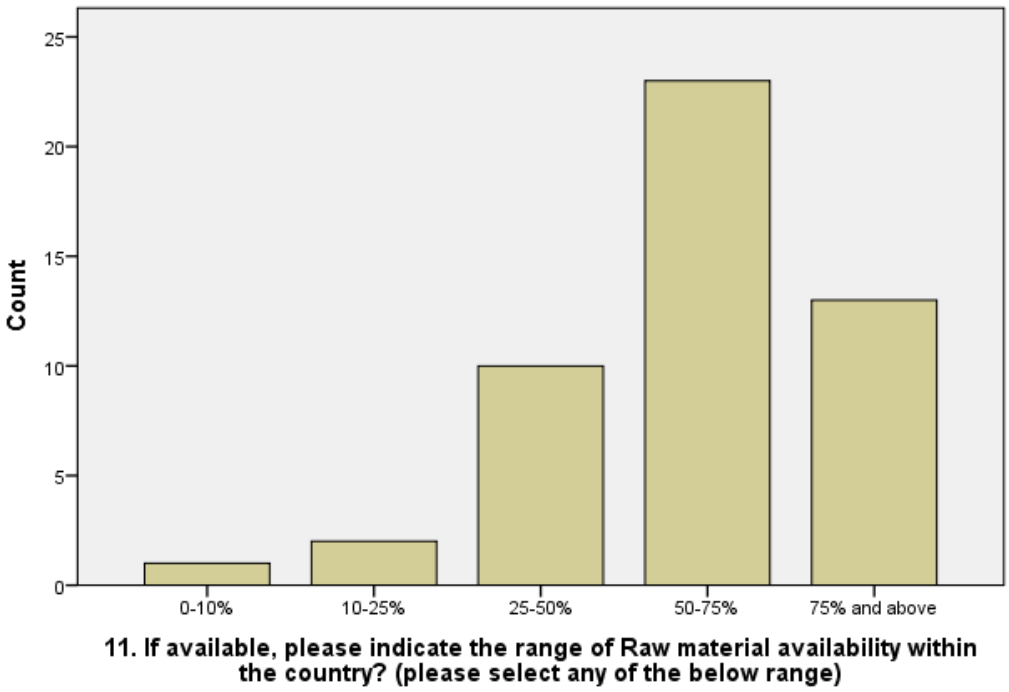
10. Availability of raw materials in the domestic market.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not available	8	16.0	16.0	16.0
	Comparatively Less Easily Available	18	36.0	36.0	52.0
	Easily Available	24	48.0	48.0	100.0
	Total	50	100.0	100.0	

Source: Authors Calculation

The above table shows the availability of the raw material in the domestic market. 48% and 36 % of the respondents said that the raw material in the domestic market is easily and less easily available respectively while only 16 % responded that the raw material is not available in the domestic market. It shows that raw material is mostly available in the domestic market.

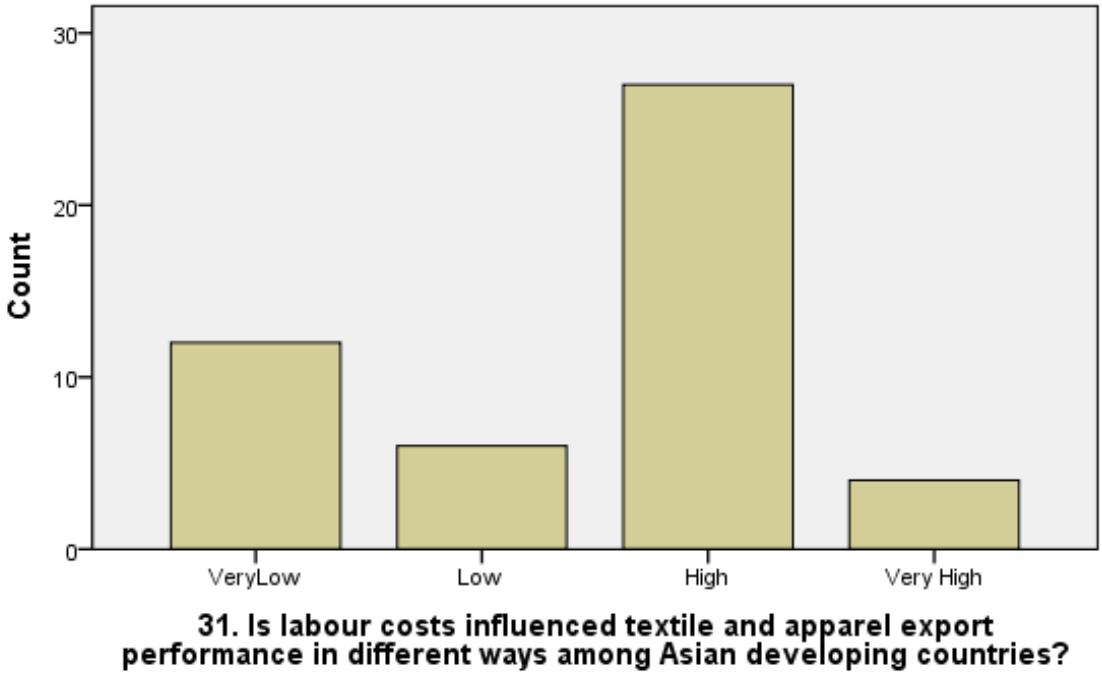
Figure 14 Raw material availability



Sources: Authors Calculation

The graph represents the range of availability of raw materials in the country. The graph shows that the range of raw materials is available mostly within the range of 50-75%. It shows that the availability of range of raw materials is good in the country.

Figure 15 Influence of Labor Cost



This graph represents the impact of labor costs on the textile apparel industry export performance among Asian developing countries. The graph shows that the labor cost has heavily impacted export performance in different ways.

Figure 16 Industrial Growth in Last Decade

This graph represents the responses to industrial growth from the last decade. Only a few respondents said that it is decreasing, most of them said it is moderate and increasing. It shows that from the last decade, the textile industry is in good condition.

Table 57: Analysis of Variable

Correlations					
Spearman's rho		Inflation Impacted Industry Profits?	Company Taking Countermeasures Against Inflation?	The Recent Years Has Industry Suffered Damage from Imitations or Pirated Products?	Your Industry Taking Countermeasures Against Imitations?
Inflation Impacted Industry Profits?	Correlation Coefficient	1.000	.197	.060	-.134
	Sig. (2-tailed)	.	.170	.679	.353
	N	50	50	50	50
Your Company Taking Countermeasures Against Inflation	Correlation Coefficient	.197	1.000	.040	-.083
	Sig. (2-tailed)	.170	.	.784	.567
	N	50	50	50	50
The Recent Years Has Industry Suffered Damage from Imitations or Pirated Products?	Correlation Coefficient	.060	.040	1.000	-.501**
	Sig. (2-tailed)	.679	.784	.	.000
	N	50	50	50	50
Your Industry Taking Countermeasures Against Imitations?	Correlation Coefficient	-.134	-.083	-.501**	1.000
	Sig. (2-tailed)	.353	.567	.000	.
	N	50	50	50	50
**. Correlation is significant at the 0.01 level (2-tailed).					

Source: Author's Calculation on the basis of primary data collection

This table represents the correlations between different variables. There is a positive correlation of .197 between the impact of inflation and the countermeasures taken against inflation. It shows that only a few countermeasures have been taken against inflation. There is negative correlation -0.501 between damage the industry suffered due to imitations or pirated products and the countermeasures taken against pirated products. It shows that there is an inverse relationship between the two variables, which means no or very few countermeasures have been taken against imitations or pirated products.

Table 58: Analysis of Variable

Correlations

Spearman's rho		GST will help in reducing manufacturing cost in the industry and as a result, the textile manufacturers will earn a high profit by contributing more to the Indian economy.	With GST's launch, the excise duty will have an input tax credit facility and it will decrease the total import cost for capital goods.	GST will restructure the input tax credit claiming process and make the entire textile industry more aggressive in the export market.	GST would enable a smoother input credit system, which would shift the balance towards the organized sector.
1. GST will help in reducing	Correlation Coefficient	1.000	-.327*	-.015	-.103

manufacturing cost in the industry and as a result, the textile manufacturers will earn a high profit by contributing more to the Indian economy.	Sig. (2-tailed)	.	.020	.919	.476
	N	50	50	50	50
2. With GST's launch, the excise duty will have an input tax credit facility and it will decrease the total import cost for capital goods.	Correlation Coefficient	-.327*	1.000	-.484**	-.158
	Sig. (2-tailed)	.020	.	.000	.272
	N	50	50	50	50
3. GST will restructure the input tax credit claiming process and make the entire textile industry more aggressive in the export market.	Correlation Coefficient	-.015	-.484**	1.000	-.042
	Sig. (2-tailed)	.919	.000	.	.771
	N	50	50	50	50
8. GST would enable a smoother input credit system, which would shift the balance towards the organized sector.	Correlation Coefficient	-.103	-.158	-.042	1.000
	Sig. (2-tailed)	.476	.272	.771	.
	N	50	50	50	50

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).
Source: Author's Calculation on the basis of primary data collection

The table shows the correlations for the impact of GST. There is a negative correlation of -.327 between high profit by GST and decrease in import cost after GST, which shows that if there is high profit by reducing manufacturing cost, then, on the other hand, there is high import cost.

With GST's launch, the excise duty will have an input tax credit facility. So, it will decrease the total import cost for capital goods and make the entire textile industry more aggressive in the export market. There is a negative correlation of -.484 between these two. It shows that if import cost will decrease due to GST, then on the other hand, the textile market won't be able to be aggressive in the export market and vice versa.

The correlation between cost reduction in manufacturing cost due to GST and a shift towards the organized sector is negative and very small value of -.103 very near to zero, it shows that there is no correlation between these two. That means these two do not have any impact on each other.

The primary data study shows that there is enough availability of raw material and high proportion of exports but on the other hand industry is suffering from labor costs, inflation, technological obsolescence, only moderate growth of industry from last decade. Correlations for the effects of GST, there is a negative association of -.368 between high GST revenues and lower GST import costs, which indicates that if there is high benefit by reducing production costs, there are high import costs on the other side. Therefore, we may assume that most companies are satisfied with the government policies to promote GST. The secondary data also shows that industry's growth in world is not increasing. From the primary data and secondary data study for the other two objectives and for the third objective shows that industrialists are not getting sufficient support from the government for the growth of the sector.

The study findings in relation to this objective indicate that many firms and accountants lacked knowledge and understanding of how to manage the taxation of different goods, since introducing GST in the textile industry, as GST has placed various tax burdens on various product groups. Khurana and Sharma (2016), who reported that India's new fiscal policy has generated economic misrepresentations in the textile and garments industry, has been presenting a similar view in the literature. Garg, (2014) reported in the literature review that textile leaders are currently faced with issues relating to GST payments, but receive them from customers after 90 days of credit periods. The businesses were thus faced with an enormous responsibility to solve these problems. It is necessary for each registered dealer to file GST returns every month, where a lack of clarification about filing procedures has turned into real problems for them in earlier months of implementation of GST. Recommendation or suggestions, particularly from traders, reveal some key information for future research or research purposes in this report. Findings show the need to concentrate more resources on the concerns or problems encountered by traders in the sector by governments or authorities, and to make improvements that mitigate challenges.

It was in this regard that Traders recommended that greater access to information and guidance on GST methods and mechanisms would help to optimize traders' learning and knowledge. Training programs or e-materials should also be made available to trade unions or dealers, who can prove that GST and its strategies to raise awareness and knowledge of traders are still missing. Therefore, the findings here indicate requirement of more interaction between government authorities and traders to enhance traders and/or people's information, understanding and learning in GST filing and taxation, helping to streamline GST filing in the country and helping to increase government revenue generation.

The whole analysis shows that textile industry is not in benefit as the growth rates, RCA and the development indicters are decreasing with comparison to Bangladesh which indicates that in spite of being second largest industry in the country, textile industry is

not supported very much. Industrialists, especially small level textile industrialists do not have approach to the government schemes. The primary data also suggests in the similar way that the industry has faced technological obsolescence in the last decade, the industrialists are not happy with GST, industry's growth is moderating which indicates that industry needs support and focus of the government to improve and growth of textile industry.

Suggestions for the government based on the responses received:

1) Ease in availing govt. schemes and benefits: The government should enable the businesses to avail the government schemes and benefits in a simple and systematic manner. For instance, availing of subsidy under TUFS, generally takes around 3-5 years on an average due to the cumbersome formalities involved in it from the date of sanctioning of loans by the bank till the date of the credit of the subsidy by the govt. The govt. can directly link it with the loans and authorize/delegate the authorities for the same to the nodal banks such as SIDBI, SBI. Further, the govt. should allow the businesses to file for any claims under various export promotion digitally without the need for any physical submission of documents.

2) Availability of funds at lower interest rates: The government should allow the availability of funds to the business at lower interest rates keeping them at par with the International interest rates which shall enable the businesses to compete internationally. The availability of loans from Financing Institutions generally varies from 10%-12%p.a. The reduction in the interest rates would enable the businesses to control the overhead costs and make expenditure for more relevant areas such as marketing, adoption of standards which shall directly impact the sales of the business.

3) Interest subvention schemes: The govt. should increase the interest subvention rates for the exporter, thereby making them more competitive. The current interest

subvention schemes are for 2% of the interest charged on maximum of Rs. 1crore loan which has been kept unchanged since past several years. Keeping with the time, this limit of Rs.1 crore along with the interest rate for subvention needs to be increased to Rs. 5 crores and 3%-4%.

4) Uniform rate of taxes across the value chain: The government should provide for the uniform rate of taxes across the entire value chain. For instance, in textile value chain, taxes are charged ranging from 5% on fabric and basic garments to 12% on the polyester based yarns and higher priced garments. Making the tax rate same across the entire value chain shall enable the businesses to manage their businesses more efficiently as it would lead to more transparency in the business dealings.

5) Encouragement of Loans with less collaterals: The govt. should provide for schemes where a qualified entrepreneur is able to invest in businesses and avail credit from the banks even in cases where the collateral coverage is not 100%. This would indirectly contribute to the economy by enabling such businesses to flourish and prosper. Certain banks such as SIDBI with very limited reach, allow for the loans with less collaterals with lot of stringent measures. Enabling of such schemes by scheduled commercial banks with comparatively reduced stringent measures should be done by the govt.

6) Infrastructure facilities: Though the infrastructure facilities viz. ports and related facilities have improved over the past few years, there needs to be done drastic improvements in the same to facilitate the export of the goods in a fast and time bound manner. The general time taken for import clearance varies from 7-10 days while for export it varies from 2-10days. This period needs to be reduced to bring it at par with the developed countries where the shipment clearances are done in few hours.

7) Investment in Research & Development: Govt. should incorporate new policies and schemes which shall support businesses in new investment in R & D facilities. This shall attract world class machinery companies in setting up their R&D facilities and manufacturing plants in the country which shall ultimately lower the capital investment of the Indian Textile companies as they would be no longer have to rely on other countries for procurement of machineries. Currently only the income tax policies allow for 100% deduction of the R&D investment to be treated as expenditure in the same year. The govt. should provide more schemes such as providing capital subsidy just like it is provided on other machineries under the TUFS schemes.

8) Decrease in Indirect Taxes: The govt. should lower the taxes paid by the Textile companies on the capital goods procured as ultimately, they are the part of the value chain which are further part of the entire textile export value chain. Currently the tax rate on machinery is 18% which should be reduced to 5%.

9) Access to new markets: The govt. needs to inculcate among the textile entrepreneurs the need to market new countries where there are such quotas are near to nil rates of duties such as the Latin American countries which can provide boost to the textile industry of the country.

CHAPTER FIVE

5 Conclusion

5.1 Introduction

The textiles industry in Indian scenario has been on the brink of changing fortunes for a difficult time over the last decade. The date of 1 January 2005 evoked a mixture of optimism, excitement and terror. The feeling of awe is attributable to Bangladesh 's rising rivalry challenge, which has modernized its textile industries in recent years and has become more economical and qualitative. The fashion and garment sector includes a wide variety of items, from high-tech nylon fibers, woolen garments, cotton linen and chemical cleaners, clothes and performance style goods. Throughout developing countries, the industry leads to jobs. For example, in the European Union (EU), the industry is controlled in a variety of regions that are heavily reliant upon this industry by small or medium-sized businesses.

In the other side, in garment manufacturing developed countries have a huge gain owing to the low cost of labor. Textiles and garments often form one of the sectors that are most likely to gain emerging countries from multilateral trade liberalization. In1974 the Multifiber Arrangement (MFA) was adopted by industrialized countries to shield the domestic economy from products from developing countries. As the name implies, this agreement expanded export controls for wool and manmade fabrics in addition to cotton. The MFA developed quotas for the export of developing countries to industrial countries, contributing to job losses and export losses to developing countries. MFA was inconsistent with the theory of free exchange and ignored multilateral framework values.

This was determined to make cloth trading the responsibility of the World Trade Organization, after the Uruguay Round of GATT. The Textiles and Apparel Arrangement i.e. Agreement on Textiles and Clothing (ATC) was imposed in effect for the eventual

abolition of quotas. ATC became the interim mechanism between the MFA and the complete inclusion in the multilateral trade structure for textiles and clothes. In four phases over a 10-year cycle (1995-2005), incorporation was planned.

This chapter analyzes the Industry 's success in the post-MFA scenario and contrasts that with its position with Bangladesh's closest competitor. At the end of this chapter the Indian textile industry is prepared to take advantage of the opportunities in the post-counting era.

5.1.1 STAGES OF PHASE-OUT OF MFA

In ATC, the phasing-out of MFA was as follows:

● 16% of the overall import amount on the day the ATC comes into force on the mentioned textiles and apparel items (January I1 1995).

● 17% on the first day of the 37th month or the end of the third year of the total amount of imports of the textiles and goods mentioned in the clothing (1 January 1998).

● 18%, on the first day of the 85th month or the end of the seventh year (1 January 2002), of the total amount of imports of textiles and clothing items mentioned.

● 49% of overall import value on the first day of the 121st month or at the end of the 10th year for textiles and apparel items mentioned above (1 January 2005)

5.2 Findings of the Study

The study has concluded objectives through secondary data and primary data. Description of these analyses is given below-

(1) Objective 1: To review the impact of the post-quota era (post 2005) preferential access by EU, USA, and other developed countries to Bangladesh on India's Textile Sector.

A comparison of the CAGR in the era under review indicates that, in the post-MFA era, the CAGR of India was less compared to Bangladesh, for both textile exports and subsector textile exports. With regard to the CAGR, in manmade textiles, cotton textiles reported the highest growth in the post-MFA period. In the post-MFA period, total exports of textiles show a low CAGR. When comparing the average export value during the study period, the mean value of exports of textiles in the post-MFA period is higher than before the time of MFA. The elevated mean valuation for the post-MFA period is due to the improved exchange rate after the abolition of the cap. Because after the abolition of quotas, there are no restrictions on export volumes to any nation.

The above review shows that India could increase its output slightly during the post-MFA era. The CAGR was led by cotton textiles in the post-MFA era, which reported the highest growth in manmade textiles. In the post-MFA period, overall exports of textiles are still showing low CAGR. The study shows that Bangladesh could remain the largest target of Indian textiles exports in the textile and prepared clothing, coir and tapestry segment, even for the time after the MFA. The goal of this analysis is to analyze the progress of exports of major textile exporters, after MFA, with a special focus on ready-made textile (RMG) industries in Bangladesh and India. The field of interest for India is the export prospects for textiles and clothes. In order to fulfil WTO commitments, India will phase out its export markets for textiles and apparel. Export opportunities are given to improve the exporting nation 's competitiveness. Export competitiveness is deemed achievable if, over a two-year (consecutive calendar) period, the global export share in a

particular product segment (defined by ITC-HS) is 3.25% or more. India has reached this ceiling in 2007 by its share of worldwide clothing and apparel exports (as illustrated by Section XI of the HS). India would also need to phase out its export sops to the sector by 2015.

Although Bangladesh remained in the post-MFA era the largest export destination, India's exports growth declined in the post-MFA era. It goes against the findings of the past polls, which foresaw India's market share in the United States to rise over the post-MFA period (Exim Bank, 2005).

Another significant point in the post-MFA era is that the UAE is the only major destination for textile exports of cotton. While India could boost production after eliminating the limit, the current review shows that Indian exports of textiles and clothing were insufficient in post-MFA era. India faces tough competition from multiple countries, especially Bangladesh, Vietnam and China, on international markets. Indian exports of textiles struggle because of the phenomenally high price of their raw materials.

The final result is also 15-30 percent higher compared with many competitive industries. The appearance on India's export basket of lower-end and low-value added products will also have influenced Indian textiles' competitiveness in the foreign sector. The absence of modern design facilities and the lack of quality value-added materials and clothing is an impediment to India 's rise in the value chain. India needs to start exporting to non-traditional developed economies in Africa, Asia CIS, and Latin America to increase its export output. Indian textile factories will benefit from the change to India of the world textile industry's exporting power, such as the availability of raw materials, especially cotton, integrated operations and design skills.

Table 59: Table Showing the Value and Growth Rate of Bangladesh's Total Exports and Textile Exports during the period 2005-2019

Year	Bangladesh Total Exports (USD Billion)	Growth Rate of Total Exports	Bangladesh Textile Exports (USD Billion)	Growth rate of Textile Exports
2005	9.33		7.68	
2006	11.69	25.29	9.90	28.91
2007	13.14	12.40	10.66	7.68
2008	15.51	18.04	13.24	24.20
2009	15.56	0.32	13.61	2.79
2010	19.23	23.59	16.75	23.07
2011	24.31	26.42	19.09	13.97
2012	27.02	11.15	21.51	12.68
2013	30.18	11.70	24.49	13.85
2014	31.19	3.35	25.49	4.08
2015	34.25	9.81	28.09	10.20
2016	34.65	1.17	28.15	0.21
2017	36.67	5.83	30.61	8.74
2018	40.53	10.53	34.13	11.50
2019	33.67	-16.93	27.94	-18.14
Total		142.66		143.75
Mean Growth Rate		10.19%		10.27%
CAGR		9.60%		9.66%

Source: Author's Calculation on the basis of data obtained from UN Comtrade database

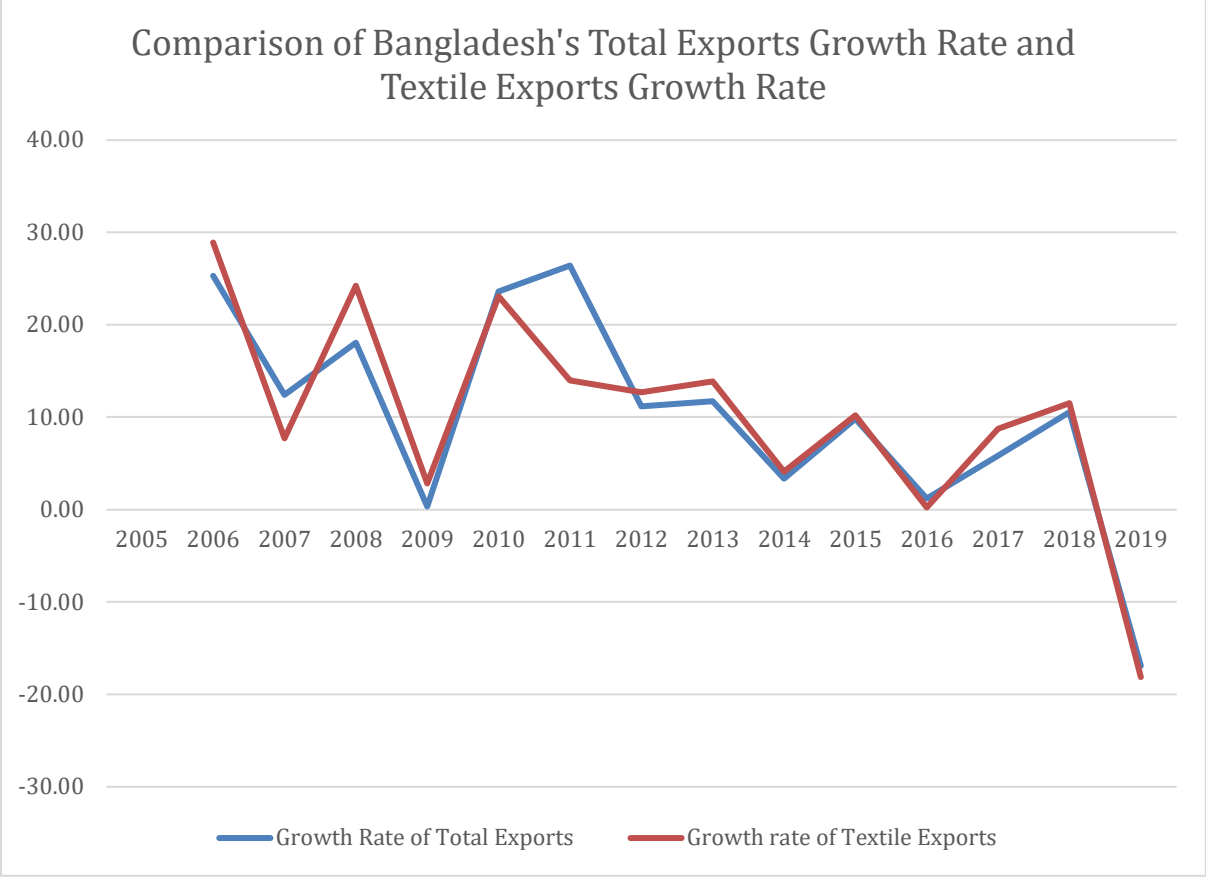
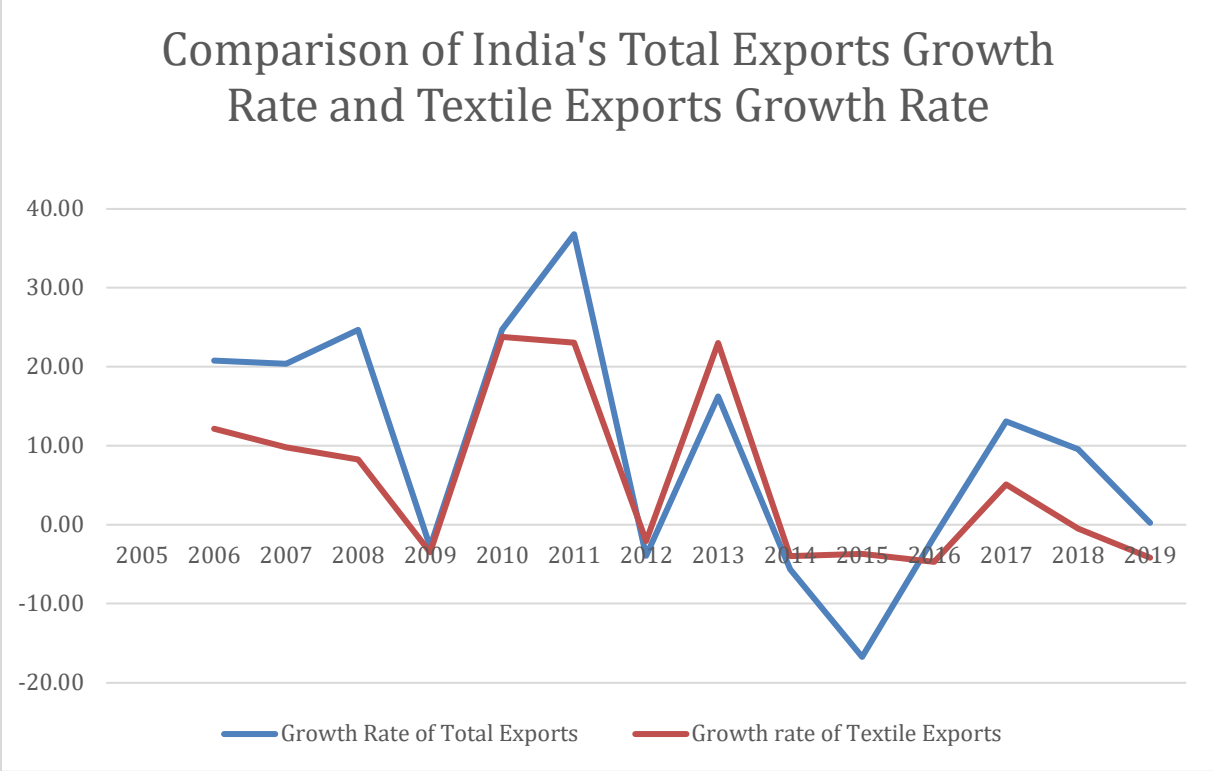

Comparison of Bangladesh's Total Exports Growth Rate and Textile Exports Growth Rate
40.00
30.00
20.00
10.00
0.00
-10.00
-20.00
-30.00
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Growth Rate of Total Exports
Growth rate of Textile Exports

Table 60: Table Showing the Value and Growth Rate of India's Total Exports and Textile Exports during the period 2005-2019

Year	India's Total Exports (USD Billion)	Growth Rate of Total Exports	India's Textile Exports (USD Billion)	Growth rate of Textile Exports
2005	100.35		17.03	
2006	121.20	20.78	19.10	12.16
2007	145.89	20.37	20.97	9.79
2008	181.86	24.66	22.70	8.25
2009	176.77	-2.80	21.91	-3.48
2010	220.41	24.69	27.12	23.78
2011	301.48	36.78	33.37	23.05
2012	289.56	-3.95	32.68	-2.07
2013	336.61	16.25	40.19	22.98
2014	317.54	-5.67	38.59	-3.98
2015	264.38	-16.74	37.16	-3.71
2016	260.32	-1.54	35.42	-4.68
2017	294.36	13.08	37.22	5.08
2018	322.49	9.56	37.03	-0.51
2019	323.25	0.24	35.48	-4.19
Total		135.70		82.47
Mean Growth Rate		9.69%		5.89%
CAGR		8.71%		5.38%

Source: Author's Calculation on the basis of data obtained from UN Comtrade Database



The above two graphs show the growth rate of Total Exports of Bangladesh and India vis-a-vis the growth rate of Textile Exports of respective country i.e. Bangladesh and India.

It shows that the growth rate of textile exports in case of Bangladesh is mostly in tandem with the growth rate of its total exports. The CAGR of the textile exports growth rate is 9.66% while the total exports CAGR is 9.60%.

On the other hand, the growth rate of textile exports of India is mostly not proportionate to its growth rate of total exports. The CAGR of the textile exports growth rate is 5.38% while the total exports CAGR is 8.71% which translates to a shortfall in CAGR of textile exports of 3.33% which can be attributed to the competition India's textile industry faced in the wake of abolition of MFA and introduction of preferential access to Bangladesh to markets of developed countries.

The shortfall in notional terms equals to loss of textile exports to the tune of USD 20 Billion approx. which India's textile exports have suffered. Had the CAGR of India's textile exports growth rate similar to its total exports growth rate as observed in case of Bangladesh, India's textile exports would had contributed an additional USD 20 Billion to the Indian economy.

(2) Objective 2: To analyze the effectiveness of the infusion of funds in new plants and machineries through the Indian Textile Companies.

Analysis of the efficacy of infusion by the Indian textile company in new plants and machinery provided below results:

• There have been broad variations on the overall annual pattern growth rate in the amount of composite and commodity categories factories.

• The industrialists in the textile sector are unable to avail the govt. schemes due to reasons such as lack of awareness, prevalent corruption, etc. The industry is significantly suffering from the technological obsolescence. The textile industry is apprehensive in investing in new R&D facilities which is hindering the optimum growth of the businesses.

• There is lack of capital availability. Very few industries are eager to employ automatic equipments and sophisticated technologies to reduce costs and which involves significant capital expenditure. The growth rate of the industry has not increased at a higher rate as very few are ready to take risks and make new investments in the high value addition items which can provide higher growth rates to the textile sector.

(3) Objective 3: - To highlight the need of the government support and accordingly develop a proposal for the Indian government.

The gravity of the subject can be understood from the below table:

Table 61: Table Showing the Comparison of Bangladesh and India's share in World Textile Exports and its Growth Rate

Year	Bangladesh's Share in World Textile Exports	Growth Rate %	India's Share in World Textile Exports	Growth Rate %
2005	1.52		3.37	
2006	1.78	17.04	3.43	1.83
2007	1.73	-2.75	3.40	-0.84
2008	2.05	18.51	3.52	3.28
2009	2.45	19.31	3.94	12.03
2010	2.61	6.76	4.23	7.38
2011	2.54	-2.94	4.43	4.78
2012	2.93	15.37	4.44	0.27
2013	3.10	5.94	5.09	14.43
2014	3.21	3.45	4.85	-4.56
2015	3.67	14.45	4.85	0.01
2016	3.95	7.59	4.97	2.33
2017	4.09	3.69	4.98	0.20
2018	4.37	6.64	4.74	-4.85
2019	3.65	-16.32	4.74	0.00
Total		96.73		36.30
Mean Growth Rate		6.91%		2.59%
CAGR		6.46%		2.46%

Source: Author's Calculation on the basis of primary data collection

Bangladesh's Share in world textile exports grew at CAGR of 6.46% from 1.52% in 2005 to 3.65% of the total world textile exports in the year 2015. India's share in world textile exports grew at CAGR of 2.46%. Had it grown at similar CAGR to that of Bangladesh

i.e. 6.46%, the India's textile exports would have been around USD 25 Billion more over the period 2005-2019.

From the primary data study, we can infer that most respondents (79%) said that the government provides inadequate incentives for the textile industry's growth. There is negative association of -0.368 between higher revenues under GST on reduction of production cost and lower GST import cost. For the GST to have positive impacts on the textile industry, this association should be positive as this negative correlation shows that the current GST policy is not benefiting the industry in the desired or expected ways.

It was found that a lot of businesses are made to incur high compliance costs due to the complex labor laws and which impacts the profitability of the business. The businesses are not much eager to invest in new research and development and new high value addition items due to the risk involved and the minimal government support in the aforesaid fields.

The businesses in general have blocked large amounts of their working capital, awaiting the govt. refunds and subsidies for quite considerable period of time. The interest rates of the banks are higher as banks only often pass on the rate cuts to the businesses making them less competitive.

5.3 Conclusion of study

1.) In terms of individual chapter wise HS Codes from Chapter 50 to Chapter 63, Bangladesh achieved better mean growth rate in Chapter 50, Chapter 51, Chapter 52, Chapter 54, Chapter 57, Chapter 61, Chapter 62, Chapter 63 while India achieved better mean growth rate in Chapter 53, Chapter 55, Chapter 56, Chapter 58, Chapter 59 and Chapter 60.

2.) On the comparison of overall mean growth rate of the total textile sector exports, Bangladesh achieved better mean growth rate of 10.27% compared to just 5.89% mean growth rate achieved by India. This low mean growth being due to the preferential access to the Bangladesh's Textile Sector.

3.) On the comparison of the Textile Exports as % of the total economy's GDP, Bangladesh fared better than India and showed increasing trend during the period 2005-2019 while India's textile sector exports continuously declined as % of the nation's GDP during the period 2005-2019.

4.) On comparison of the textile exports growth rate with the GDP growth rate of the economy, it can be noticed that Bangladesh fared better than India with its textile exports mean growth rate being 103% of the nation's GDP mean growth rate while in case of India, its textile sector was able to achieve just around 56% of the GDP's mean growth rate.

5.) On the comparison of Textile sector exports growth rate with the total exports growth rate of the economy, Bangladesh's textile sector exports achieved growth rate similar to its total exports growth rate while in case of India, the textile sector exports achieved around half the growth rate as that achieved by the total exports of the nation.

6.) On comparison of the growth of share in world textile exports, Bangladesh increased its share from 1.52% in the year 2005 to 3.65% in the year 2019 i.e. increase of 2.4 times over the period 2005-2019. On the other hand, India managed to increase its share in the world textiles exports by mere 1.4 times from 3.37% in the year 2005 to 4.74% in the year 2019.

7.) The impact of preferential access to Bangladesh on India's textile sector can be gauged from the fact that had India achieved similar mean growth rate as that of Bangladesh, its total Textile Sector Exports would have been valued at USD 475.69 Billion for the period 2005-2019 instead of the actual textile exports of

USD 455.97 Billion implying direct notional loss to the textile sector exports by around USD 20 Billion.

8.) The effectiveness which has been measured through the application of Chi Square tests yielded results which provided that the results as desired have not been achieved through the upgradation of plant and machineries and investment in new plants and machineries. The businesses have experienced technological obsolescence which has led to them being unable to compete with respect to the quality internationally and has significantly affected their core competency.

5.4 Suggestion of study

The study finds that the growth rate of the Textile Sector Exports from Bangladesh is significantly higher as compared to that of India's Textile Sector Exports since the abolition of quota era in the year 2005. Below are key points which needs to be looked after by India to ensure greater share in world textile exports and higher textile exports from the country:

1) From Comparison of Average Tariff on Import of Textile Goods between India and Bangladesh (Table 16), it shows that India has much greater value of average tariff on textile goods imported into European Union, USA and other developed countries as compared to Bangladesh. That is why, it's better to trade with Bangladesh in context of textile goods for USA, European Union and other Developed countries as compare to India. So India needs to enter into Free Trade Agreements with these countries, negotiate better terms for its textile exports into these countries markets.

2) From Table 7 we have found that in India's industrial power cost is twice as compare to Bangladesh. So this is one of the reason why Bangladesh has edge over India for lower production costs. So these costs need to be brought at par with the competitors scenario to provide the textile exporters with level playing field vis-à-vis textile exporters from Bangladesh.

3) Table 40 shows that only 24% industrialists believes that government is providing adequate incentive or funds to the industry, while 76% of them thinks that government is not supporting the industry adequately. Further, from primary data analysis, the data shows 66% of the textile industrialists believe that the funding schemes by government for technology upgradation, focus market scheme and focus product scheme are neither successfully implemented nor they are effective. The government should make it possible for businesses to make use of government schemes and benefits in a simple, easy and systematic manner which is free from middlemen.

4) The possibility of reducing taxes levied on companies, which will increase the competitiveness of the Indian Textile Sector, needs to be examined. While corporate taxes are around 31.20 per cent in India, they are only around 15 per cent in Bangladesh, which was further reduced to 12 per cent some time ago. Such a reduction will improve productivity and thus raise expansions in the textile sector of the economy.

5) The analysis of primary data shows that the industrialists are not getting proper incentives funds from the government, the term loans interest rates in India are much greater then Bangladesh. The Government needs to make availability of funding to companies at cheaper interest rates, providing these at rates which enable to fight competition in the global arena.

6) Figure 15 shows that there are huge compliance costs to textile industries, so government should reduce the pressure of complying on firms with the complicated and varied labour laws that will enable corporations to spend more on their core competencies and instead move to a better regime of self validating the compliance with the applicable government laws.

5.5 Limitations of the Study

The present study had some limitations while being carried out.

The limited sample size and the limited variables used for general analysis are also limitations of the study.

Data collection was time taking task as not all respondents answered all questions in one go, so had to pursue to get the entire questionnaire answered.

The HS Codes have been taken chapter wise and the results of individual eight digit HS codes may not be in consonance with the chapter results.

The study has been done in respect of the India's textile sector performance in comparison to Bangladesh's textile sector performance, while more developing countries like Sri Lanka, Vietnam, Pakistan, etc., can also be taken into account and a more comprehensive study be conducted accordingly.

5.6 Future of Study

This study shows the MFA impact of the considered variable. As mentioned above, only a few variables are included in the present study and taken into account. The research can, therefore, be carried out to a wide range by adding several other commodity and international variables. Labor productivity can be an area where the future research can be based.

Further, the study can be conducted considering detailed eight digit HS codes.

The study may also be conducted in the light of the FTAs currently under negotiation by the Indian Govt.

The future researches may also be carried out taking into account the other variables such as productivity of labor and the expected demographic dividend in the Indian Textile sector.

5.7 Conclusion

T&C industry has an important role in Indian economy due to its significant contribution to exports, industrial production, and employment generation. Global T&C market underwent a significant change after the MFA phase-out in 2005. Hence, the U.S., European Union and other largest consumer of T&C in the world, could diversify importing countries after 2005 like Bangladesh with low labor cost, lower interest rates etc. Therefore, it is timely to examine if India's export competitiveness of T&C in the U.S.A., European Union and other developed countries is sustainable in the long run. In order to sustain growth in textile, India need change its policies and schemes and provide a good and attractive atmosphere for textile industries.

Abbreviations

NAFTA:	North American Free Trade Agreement
MSME:	Micro, Small and Medium Enterprises
DGFT:	Director General of Foreign Trade
RoSCTL:	Rebate of State and Central Taxes and Levies
RMG:	Readymade Garments
WTO:	World Trade Organisation
ATC:	Agreement on Textiles and Clothing
CENVAT:	Central Value Added Tax
VAT:	Value Added Tax
ITC:	Input Tax Credit
USA:	United States of America
EU:	European Union
ETE:	Export tax equivalent
MOT:	Ministry of Textiles, Government of India
IBEF:	India Brand Equity Foundation
GDP:	Gross Domestic Product
BGMEA:	Bangladesh Garment Manufacturers and Exporters Association
MFA:	Multifiber Arrangements

Questionnaire

Questionnaire for the Assessment of Textile industry
Part A: General Information

1. General Information

Company Name: _____

Contact Person: _____

Address: _____

Telephone No: Landline:_____Mobile:_____

E-mail address_____Website:_____

2. In which year the unit was established? (please specify)

3. Form of organization /ownership
   i. Individual Proprietorship ☐
   ii. Partnership (Family Business) ☐
   iii. Partnership (others) ☐
   iv. Private limited company ☐
   v. Public limited company ☐
   vi. Any other (Specify)

4. Nature of business
   i. Woven Fabrics ☐
   ii. Knitted Fabrics ☐
   iii. Hosiery ☐
   iv. Readymade garments ☐
   v. Hosiery &readymade ☐
   vi. Any Other (Specify) ☐

5. Location of the unit
   i. Industrial estate ☐
   ii. Commercial area ☐
   iii. Industrial area ☐
   iv. Mixed use area ☐
   v. Any other (specify) ☐

6. Factors for choosing Location of unit (Give preference ranking of any three)
   i. Availability of labour
   ii. Transport facility ☐
   iii. Power supply ☐
   iv. Land ☐
   v. Land in industrial area
   vi. Clustering ☐
   vii. Any Other ☐ ☐ ☐
7. For production of your industry's main products, are you certified to any standards in areas for which there are no international standards?
   i. European standards ☐
   ii. Japan Industrial Standards ☐
   iii. US standards ☐
   iv. Local standards ☐
   v. Other standards (Specify) ☐
8. What is the percentage of Exports to Total Sales? (please select any of the below range)
   (1=1-10%, 2=10-25%, 3=25-50%, 4=50-75% 5=Above 75%)
9. Please indicate the category of product imported. (please select any of the below range)
   (1= Raw material, 2=Machinery, 3= Finished goods, 4= Intermediate goods)
10. Availability of raw materials in the domestic market.
   i. Easily available
   ii. Comparatively Less Easily Available
   iii. Not Available
11. If available, please indicate the range of Raw material availability within the country? (please select any of the below range)
   (1=1-10%, 2=10-25%, 3=25-50%, 4=50-75% 5=Above 75%)
12. In recent years your company have been financially?
   i. Improving ☐
   ii. Getting worse ☐
   iii. Stable ☐
13. Operating profit in the years ahead expected to "Improve"; please select the reason(s)
   i. Increase in local market sales of your company ☐
   ii. Increase in sales due to higher prices ☐

iii. Increase in sales due to export expansion ☐
iv. Reduction in personnel expenses ☐
v. Improved sales (service) efficiency ☐
vi. Reduction in other costs (improved cost competitiveness) ☐
vii. Due to positive exchange rate fluctuations. ☐
viii. Development of new products and services ☐
ix. Other ☐

14. Operating profit in the years ahead is expected to "Worsen"; please select the reason(s)
i. Decrease in local market sales of your company ☐
ii. Reduction in sales due to higher prices ☐
iii. Decrease in sales due to sluggish exports ☐
iv. Increase in personnel expenses ☐
v. Reduction in sales due to exchange rate fluctuations ☐
vi. Increase in other expenditures ☐
vii. Lack of progress in formation of sales and service networks ☐
viii. Hike in interest rates ☐
ix. Increase in fuel costs and utilities (electricity, gas, etc.) ☐
x. Other ☐

15. What is your plan(s) for procuring raw materials and parts in the future? (Select all that apply)
i. Increase in ratio of local procurement ☐
ii. Increase ratio of procurement from ASEAN ☐
iii. Maintain current ratios of local procurement ☐
iv. Other () ☐

16. What factor(s) is necessary to increase local procurement ratios of raw materials and parts? (Select all that apply)
i. Quality improvement by local suppliers ☐
ii. Cost reduction by local suppliers ☐
iii. Strict observance of delivery dates by local suppliers ☐
iv. Design changes in products manufactured by your local company ☐
v. Localization of inspection and technological certification control divisions ☐
vi. Localization of design and research & development divisions ☐
vii. Improvement in the local logistical and transportation infrastructure ☐
viii. Expansion of affiliated suppliers into the local area ☐

ix. Other ( ) ☐

17. What is the most appropriate direction for industry development in the years ahead?
    i. Expansion
    ii. Embracing new trends
    iii. Move to other country

18. If you selected “Expansion”, please select the specific business plan(s). (Select all that apply)
    i. Expansion of business size through additional investments
    ii. Enhancement of high added-value production items
    iii. Expansion (diversification) of production items Strengthening of design, research, and development functions
    iv. Production consolidation of specific manufacturing items in your local company
    v. Other ()

19. If you selected “Downsizing” or “Move to a third country (region) or withdraw”, please select the specific policy.
    i. Integrate the bases within the local country (region)
    ii. Move the production base to a third country (region)
    iii. Transfer the production of certain items to an affiliate in a third country (region)

20. Please select the reason(s) why you have decided to move (Select all that apply)
    i. Decrease in demand
    ii. Growth prospects and potential of the market
    iii. Competitive strengths of your company in the market
    iv. Absolute number of suppliers in the market
    v. Administrative and operation costs
    vi. Quality of human resources
    vii. Local competitiveness and export incentives
    viii. Manpower cost

21. Is inflation impacted industry profits?
    i. Significantly worsened
    ii. Significantly improved
    iii. Slightly worsened
    iv. Slightly improved
    v. No impact

22. If you answered “Significantly (improved/worsened)” or “Slightly (improved/worsened)”, please select the specific type(s) of impact from inflation. (Select all that apply)
    i. Increase in procurement costs

ii. Increase in fuel costs
iii. Increase in transportation costs
iv. Increase in personnel costs
v. Increase in utilities costs (electricity, gas, etc.)
vi. Increase in sales
vii. Decrease in sales
viii. Delays or changes in plans for capital investment
ix. Other ()

23. Is your company taking countermeasures against inflation?
i. Yes
ii. No

24. If you answered "Yes", please select the specific type(s) of inflation countermeasures. (Select all that apply)
i. Raised the prices of products (services)
ii. Promoted greater efficiency and cost-cutting
iii. Reduced the number of employees
iv. Downsized plants and offices
v. Reconsidered suppliers of raw materials and procurement content
vi. Introduced energy-saving equipment
vii. Reconsidered/changed production plant
viii. equipment investment
ix. Controlling operating cost
x. Other ()

25. In the recent years has industry suffered damage from imitations or pirated products?
i. Yes
ii. No

26. If you answered "Yes", what sort(s) of damage occurred? (Select all that apply)
i. Exact copy of product design and packaging
ii. Partial copy of product design Illegal use of trademarks such as the brand logo
iii. Patent infringement through diffusion of technology (usage of product technology/functions without permission)
iv. Other ()

27. Is your industry taking countermeasures against imitations?
i. Yes

ii. No

28. If you answered "Yes", what sort(s) of countermeasures are you taking against imitations? (Select all that apply)
    i. Request a stronger crackdown on imitations passing through customs
    ii. Acquire domestic intellectual property rights (registration) early
    iii. Establish a post in the company for a staff member in charge of intellectual property (imitation countermeasures)
    iv. Send warnings to manufacturers and sellers of imitations / pirated products
    v. Conduct educational activities for consumers either as a single company or in collaboration with an industrial body.
    vi. Participate in the Intellectual Property Group (IPG)
    vii. Other

29. Have you been suffered from technological obsolescence ever?
    i. No.
    ii. Not much.
    iii. Yes.
    iv. Very much.

30. Which kind of skills required dealing with globalization?
    i. Technical skills
    ii. Customer handling skills
    iii. Problem solving skills
    iv. Management skills

31. Is labour costs influenced textile and apparel export performance in different ways among Asian developing countries?
i. Low
ii. Very low
iii. High
iv. Very high

32. What are the basic policy measures which would help the Indian textile industry become more cost effective?
    i. Cheaper raw materials
    ii. Disbursement of credit
    iii. Higher availability of electricity at reasonable rates
    iv. Promoting better capacity utilization
    v. Flexible labour laws
    vi. Others ( )

33. What are the major determinant(s) which affected the High/low growth in textile export?
    i. Gross Domestic Product (GDP).
    ii. Real exchange rate.
    iii. Per capita GDP.
    iv. Population growth rate of the importers.
    v. None of the above

34. Specify the reason for not getting financial assistance from government agencies (give reason)
    i. Lack of awareness of schemes: ☐
    ii. Difficulties faced in getting financial assistance: ☐
    iii. Corruption involved in getting financial assistance:
    iv. Requirement of personal approach: ☐
    v. Any other ☐

35. What do you think about WTO's textile quotas and what do you think about the abolishment of them?
    ……

36. Is the abolishment of WTO's textile quotas positive or negative according to you?

    ……

37. If you have been affected negatively by the abolishment of WTO's textile quotas, do you have a backup plan of how to go about?
    ……
    …

38. What concretely has happened to your industry after the abolishment of the quotas?

    ……..

39. Did the WTO textile quotas that existed until January 1st 2005, effect the choice of country that you import from?

    ……
    …….

40. Did the quotas increase the companies' sizes or the number of new companies in the country?

……
…….

41. Will, or have, Bangladesh been affected by the abolishment of the WTO textile quotas from your perspective?

……
……..

42. What suggestions do you have to improve INDIA'S competitiveness against other countries, mainly BANGLADESH?

……
……
43. What do you think with the fact that industry is becoming more “regional” due to free trade agreement with Bangladesh?
……
……..

44. A huge jump in duty-free garment imports from Bangladesh under the free trade agreement has put the domestic industry in rough phase?
……
……..
45. Have you received any benefit under recently announced Govt. scheme to foot the entire 12% employers contribution under Employees Provident Fund(EPF) and 5% Additional Duty Draw Back Scheme for garment product? If yes, please give details.

……
……..

46. Do you agree that the government is providing adequate incentive/support for the growth of the industry?
    i. Yes ii No

Part B: Impact of GST on Indian textile industry

On a scale of 1-5, please indicate the degree to which you agree to the statements given below based on your experience. (1=Strongly Agree,2=Agree,3= Neither Agree nor Disagree,4=Disagree, 5=Strongly Disagree).

Statements	1	2	3	4	5
1.GST will help in reducing manufacturing cost in the industry					

and as a result, the textile manufacturers will earn a high profit by contributing more to the Indian economy.					
2. With GST's launch, the excise duty will have input tax credit facility and it will decrease the total import cost for capital goods.					
3. GST will restructure the input tax credit claiming process and make the entire textile industry more aggressive in the export market.					
4. GST would enable a smoother input credit system, which would shift the balance towards the organized sector.					
5. GST would streamline the process of claiming input tax credit thus allowing the textile industry to be more competitive in the export market.					
6. GST will help this industry in the long run by getting more registered taxpayers under a well-regulated system					

Part C: MFA and post MFA scenario.

Q.1 Do you think globalization has a positive impact on textile exports of India?

……
……

Q.2 What was the role of Textile Industry in developing Countries during the Phase of 1991-2004?

……
……

Q.3 What is the impact of post quota era (post 2005) preferential access by European Union and other developed countries to Bangladesh on Indian Textile Sector?

……
……

Q.4 What were the effects of the Multi-Fiber Arrangements (MFA) that grew out of a series of voluntary export restraints imposed by the United States and Europe on large Asian textile?

……
……

Q.5 Do you think that the textile industry needs government support to overcome the decrease in sales/revenue? If yes, what are the different support measures required?

……
……

Q.6 What are the different schemes launched by the Indian government to promote export of textile goods?

……
……

Q.7 Are the different schemes launched by the government such as Technology Up-gradation Fund Scheme (TUFS), Focus Market Schemes (FMS), Focus Product Schemes (FPS) successfully implemented and are effective?

……
……

Q.8 What is the future of the textile industry in India when compared to that of Bangladesh?

……
……

Q.9 What is the market share of the Textile industry? (Provide the figure for the period 2005-2010)

……
……

Q.10 Where you see your industrial growth from last decade?

i. Increasing
ii. Decreasing
iii. Moderate

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