Measuring Export Performance and Competitiveness of Indian Textile Products at Two-digit Level

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Abstract

The Indian textile sector employs about 100 million people and it is the country's second-largest employment provider after agriculture. Indian textile industry contributes to the GDP of India, industrial production, and total exports of goods by 4%, 12% and 10.5% respectively. The present study is an attempt to measure the export-import performances and competitiveness of eleven products of the Indian textile industry bearing code HS 50- HS 60 from 2004 to 2023. For measuring export and import performance over the period, Compound Average Growth Rate (CAGR) has been calculated and for measuring the competitiveness of products, Revealed Comparative Advantage (RCA) index of Balassa (1965) has been performed. The results showed that Ten out of eleven categories of textile exports grew with a positive CAGR ranging from 3.36% to 13.22% from 2004 to 2023. Only one category i.e., Silk has a negative CAGR of -6.04% during the same period. HS-56 grew at the highest compounded rate of 13.22% followed by a CAGR of 12.84% exhibited by HS-60. It was found that India gained a comparative advantage over 7 products: HS-50(3.57), HS-52(6.77), HS-53(3.69), HS-54(1.79), HS-55(2.57), HS-57(5.84) and HS-58(1.63). China is the largest exporter of textile products at the world level and showed a comparative advantage against all eleven products for the year 2023. Italy is known for producing luxurious and high-quality products showing a comparative advantage of 8 products HS-50, HS-51, HS-53, HS-54, HS-56, and HS-58 for the year 2023.

Keywords: Textile, Competitiveness, Performance, Export, Growth.

1. Introduction

The Indian textile industry is one of the oldest and vital parts of the economy. It contributes significantly to employment and foreign exchange profits. Under the Agreement on Textile and Clothing of the WTO in January 2005, India's exports of apparel and textiles to the global market have grown, and its competitiveness has also increased. Due to the opening up of the garment market and global textile, Indian firms are going to be the largest gainers after China (Landes *et al.,* 2005). India's textile industry employs over 100 million people and is the country's second-largest employer after agriculture. It employs almost 45 million people directly and another 55 million indirectly (PIB, Government of India 2021). Indian Textile Industry contributes to the GDP of India, industrial production, and total exports of goods by 4%, 12% and 10.5% respectively. The Indian government has established several export promotion initiatives for the textile industry. The government has allowed 100% FDI through automatic routes in Indian textile sector. Some major players in the Indian textile industry are Victoria Mills Ltd, Chiripal Group, Bombay Dyeing, The Ruby Mills Ltd, Digjam, Welspun India Ltd, Arvind Mills Ltd, Raymond Ltd, Alok Industries Ltd. Despite long years of deregulation and liberalization of the Indian textile industry, there are still many control orders/ notifications in force, low salaries, an abundance of inexpensive cotton, and a solid understanding of production methods are some of the advantages of the Indian textile sector. However, it also has certain drawbacks, such as excessive electricity costs, inadequate funding, and a lack of infrastructure, among others, which act as a hindrance to its progress. Indian textile exports consist of Cotton textiles, Ready-made garments, Textiles made from man-made fibre, Silk, Wool and Woollen goods, Coir, Handicrafts, and Jute, out of which silk and man-made textiles showed the highest growth rate. The textile policy was created in 1985, and subsequent changes in 1990 helped to strengthen India's textile sector. Later, the Indian textile industry was de-licensed and reforms on the export and fiscal front were pursued. Because of this, India's Textile exports have reached Rs. 9,23,940 million during the financial year 2007-2008 from Rs. 1,54,836 million in 1992-93 showing an annual growth of 13 per cent per annum. This period also showed a decline in the share of textile exports. There was a decline in total exports from 29% to 15 % from the financial year 1992-93 to 2007-08. Since 1994 India has negligible import content and country's proportion of global exports has also not increased (Ramaswamy and

Gereffi 2000). Textile imports increased from ₹ 13,426 million to ₹ 1,39,140 million from the financial year 1992-1993 to 2007-08. Major markets for textile import are China Taipei, Chinese republic Korea and low and middle-income countries, which is around 36% of imports in textiles. Without a doubt, under the post-quota regime, the global textile sector is expanding dramatically. The textile industry has grown significantly in some nations, including Bangladesh, Sri Lanka, and Mauritius (Chakrabarty, 2014). The Indian textile industry can improve its position in the global market by improving its competitiveness.

The amount of merchandise traded between nations is significantly influenced by the global textile industry. Developing nations are responsible for two-thirds of global textile exports. The USA, Germany, Japan, and Canada are the top importers of textiles worldwide. Asia has been the principal source for imports of textiles by both the European Union and the USA. India is one of the largest exporters of yarn. India has a lot of international opportunities in the textile sector. It makes a significant contribution to foreign exchange revenues, employment creation, and industrial production. It contributes to the employment of more than 100 million people both directly and indirectly and its share in the country's total export earnings is around 16.63%. Indian textile has the highest loomage and it contributes around 61 percent to the world loomage. India ranks first in the world for jute production, second for silk, third for cotton, fourth for cellulose fibre/ yarn, and fifth for synthetic fibres/yarns. The Indian textile sector also helps in the development of the rural economy by employing large-scale rural people in the production of fibre crops such as cotton, wool, and silk, and in crafts such as handicrafts and handlooms.

The present study comprises five sections. The first section covers the basic introduction, history of Indian textile products, composition of the Indian Textile Industry and export of different textile products to the top countries of the world. The second section covers the past studies related to the topic i.e., review of the literature. The third section covers the need, objectives, and hypotheses of the study. The fourth section presents the research methodology and analysis of the data and the fifth section concludes the study.

1.1 History of Indian Textile Industry

India is the second-largest manufacturer of textiles and clothing

worldwide. The textile industry provides not only foreign exchange earnings but also employs more than 105 million employees in both direct and indirect ways. C.N. Dawar established the first Indian textile industry in Mumbai in 1854, while Seth Ranchhodmal Chotalal established the country's first cotton spinning machine in Ahmedabad in 1861. Following this, numerous additional textile factories were established in cities like Indore, Chennai, Mumbai, and Ahmedabad. In these mills, the cloth was made using machines instead of handlooms. These devices first operated on steam before switching to electricity. Machines were used to clean the cotton, to card it and to make yarn and cloth out of it.

1.2 Composition of Indian Textile Industry

At the two-digit level, the Indian textile industry is divided into 14 major commodities. The commodities have a universal code-named Harmonised System (HS). The following table shows the Principal Commodities of Indian Textile Export at the 02-digit level.

Table I: Principal Commodities of Indian Textile Export at 02-digit level

Product Code	Name
HS50	Silk
HS51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric
HS52	Cotton
HS53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn
HS54	Man-made filaments; strip and the like of man-made textile materials
HS55	Man-made staple fibres
HS56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof
HS57	Carpets and other textile floor coverings
HS58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery
HS59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use
HS60	Knitted or crocheted fabrics

Source: https://www.intracen.org/resources/data-and-analysis/trade-statistics.

1.3 Export of Different Textile Products to the Top Countries of the World

The table II and III show export of different textile products to the top countries of the world during the year 2004 and 2023. It shows that the USA and Italy are the main importers of different products.

Table II: Export of textile products to the top countries of the world during the year 2004

Product Code	Total Export ($)	Top exporting country	Export Value ($)	% Share to top exporting country
HS 50	3,81,361	USA	1,05,255	27.59%
HS51	64,999	Italy	10,368	15.95%
HS52	24,82,097	Bangladesh	2,52,384	10.16%
HS53	1,64,302	Belgium	22,618	13.76%
HS54	9,57,424	UAE	2,93,527	30.65%
HS55	7,75,361	UAE	1,01,036	13.03%
HS56	51,862	USA	7,980	15.38%
HS57	7,95,707	USA	3,51,394	44.16%
HS58	1,11,600	USA	19,713	17.66%
HS59	73,813	UAE	13,740	18.61%
HS60	46,234	UK	7,712	16.68%

Source: https://www.intracen.org/resources/data-and-analysis/trade-statistics.

Table III: Export of textile products to the top countries of the world during the year 2023

Product Code	Total Export ($)	Top exporting country	Export Value ($)	% Share to top exporting country
HS 50	1,16,684	USA	36,076	30.91%
HS51	1,72,623	Italy	25581	14.81%
HS52	64,93,090	Bangladesh	21,78,543	33.55%
HS53	4,34,125	China	87,267	20.10%
HS54	17,95,181	Turkey	2,63,727	14.69%
HS55	16,77,955	Turkey	2,21,395	13.19%
HS56	5,48,931	USA	1,50,225	27.36%
HS57	18,11,075	USA	10,47,981	57.86%
HS58	3,67,069	Italy	50,460	13.74%
HS59	4,63,692	USA	1,95,144	42.08%
HS60	4,58,816	Sri Lanka	2,24,495	48.92%

Source: https://www.intracen.org/resources/data-and-analysis/trade-statistics.

The table II and III shows that for the products HS51, HS52, HS56 and HS57 top most exporter countries remain the same both in the years 2004 and 2023. For these products, their position remains number one in 2004 and 2023. These countries are Italy, Bangladesh, and the USA. For the products HS50, HS54, HS55, HS58, and HS59 the top exporting country has changed from the year 2004 to 2023. Belgium and UK fall in position of HS53 and HS60 products respectively from number one in the year 2004 to number 11 and 14 respectively in the year 2023 (https://www.intracen.org/resources/data-and-analysis/trade-statistics). High export taxes and the collapse of Britain's textile industry are the main causes of the fall in exports to these countries.

2. Review of Literature

Despite being a vital component of the Indian economy, textile industry has not expanded significantly (Ramachandran, 2001). Some of the production chain weak points have been identified, along with major productivity export barriers and regulatory adjustments. The Indian textile industry has miles to go before it can face the rigours of free trade (Pohit and Bhide, 1998). If concerted efforts are made to make it internationally competitive India and China can become a major player in the world markets. Several past studies have been done on textile industry including factors affecting the export performance (Sharma and Dhiman, 2016, Wang et al., 2013, Tandon et al., 2016, Kaur and Rao 2009), evaluating the textile industry's competitiveness (Gautam and Lal ,2020, Sharma and Dhiman 2016, Kumar and Singh 2015, Verma, 2002). Since 1994, India's proportion of global exports has remained unchanged (Ramaswamy and Gereffi 2000) due to slowdown in the import growth of India's major markets, namely, EU and United States and due to uneven government policy in the post-1947 (Verma 2002). Arumugam (2017) has suggested some measures for Indian textile and apparel industry like large investments are needed in capacity building and other Requirements from government namely new scheme of Technology Upgradation Fund Scheme (TUFS) at the earliest. Extending TUFS assistance that government will not intervene against exports, price or other market movements, for any products. Kumar and Singh (2015) examined the Indian textile industry's export performance and competitiveness in comparison to the global market. The competitiveness and export performance of the Indian textile sector from 2010 to 2013 were the main topics of this study. The Revealed Comparative Advantage (RCA) of eleven distinct textile product groups

is used to calculate export competitiveness. Seven of the eleven goods had a competitive advantage, whereas the other four did not have competitive advantage. Silk, cotton, vegetable textile fibers, paper yarn, woven fabric, synthetic filament, synthetic staple fibers, carpets and other textile floor coverings, and special woven or tufted fabric, lace, tapestry, etc. are the commodities that are more competitive in the global market. Cotton, carpets, and other textile floor coverings are the commodities with the highest RCA value that are doing reasonably well on the global market. Bedi (2009) examined government programs and policies for the sector by examining pertinent papers. It examined different ways to increase the industry's efficiency and competitiveness and offered some insights into the adjustments needed in various governmental measures. Numerous factors were examined in the study, including the number of intermediaries involved from the factory stage to consumer stage, the stages of processing, production sectors, retail marketing, and their competitiveness. The condition and prospects of technological textiles in India were also examined. The effects of liberalization have been examined by Nordås (2004), who focused on recent advancements in supply chain management in the apparel and textile industries while also accounting for recent managerial and technological advancements in the fields. For MFA (ATC) product categories, Samar Verma (2002) studied India's competitive performance in the US and EU markets. It has illustrated how the international trading climate is evolving, which will probably have a big effect on the world's textile and apparel trade. The study has identified areas that need government policy action to increase the industry's competitiveness. To unleash this latent potential, the Indian industry—particularly the apparel sector—needs a number of critical legislative changes. Furthermore, it seems that market access will play a bigger role in converting competitiveness into export performance given the changing character of the global trade environment. According to Ganesh (2002), the domestic textile industry's competitive advantage stems from evading excise duty, which has caused the better organized sector units to shift their focus from the home market to exports. However, if exporting units are denied access to the local market, they become vulnerable. Although it may be too late for the government to resolve the issues it has caused, the budget recommendations for 2002–03 are at least a positive start. According to Ramachandran (2001), textile output has not increased significantly while being a highly important sector of the Indian economy. In order to increase production and

exports in the textile and apparel industry, he identified weak points in the production chain, major barriers to productivity and exports, and necessary regulatory adjustments. Indian textile companies would confront both internal and international rivalry in the next years, Chandra (1999).

It is suggested that creating long-term differentiated competencies will be necessary for Indian enterprises to remain competitive. Saha (1982) examined a few key elements that have significantly impeded the industry's expansion and rendered the government's textile strategy ineffectual, creating a conundrum.

3. NEED OF THE STUDY

Various past studies have been conducted on the Indian textile trade (Arumugam 2013) which focused on what has to be achieved and what need to be done to make Indian industry competitive at international level. Some other studies have also been conducted to find out cost and competitiveness of Indian textile industry (Paul and Mote 1967) there are some other studies (Saha 1982) which analysed some important factors that hampered the growth of textile industry and made the government policy ineffective. But there are very few published past studies to find out export performance and competitiveness of Indian textile industry (Kumar and Singh 2013) with the help of which we can judge about the performance of Indian textile industry so the purpose of this study is to determine the competitiveness and export performance of goods from the Indian textile sector. Hence the study aims to achieve the following objectives.

- To study the composition and direction of Indian textile imports and exports.
- To examine the Export performance of Indian textile products at 02 digits level.
- To examine the Import performance of Indian textile products at 02 digits level.
- To study the Competitiveness of Indian textile products and their comparison with the world's major players in textiles.

3.1 Formulation of Hypotheses

The present section discusses the formulation of various hypotheses to achieve the objectives of the study. In this study, an analysis of export performance and competitiveness of eleven products of the Indian textile industry from code HS 50- HS 60 from 2004 to 2023 has been taken. These eleven products are named silk, wool, cotton, textile fibres, manmade filaments, man-made staple fibres, wadding, carpets, special woven fabrics, coated covered and laminated textile fabrics, knitted and crocheted fabrics. The export/ Import performance can be found with the help of the CAGR growth rate in this period.

Export and Import Growth

A product is said to be performing good at export and import level if its market share grows over the period 2004-2023. Mukherje and Mukherjee (2012) gave a summary of the export performance of three major commodities: cotton, electronics, and gems and jewelry. They also pointed out critical policy changes that may have an effect on both domestic production and the demand for these products abroad. The findings demonstrate that the manufacturing sector's overall success in India has a significant impact on many facets of the economy, with employment being one of the primary areas of benefit. For Multi-Fibre Arrangement (Agreement on Textile and Clothing) product categories, Verma (2002) has studied India's competitive performance in the US and EU markets. It has also shown how the global textile and apparel sector will probably be impacted by the shifting international trading landscape. The study has identified areas that need government policy action to increase the industry's competitiveness. According to the study's findings, the Indian apparel industry urgently needs a number of regulatory changes to unleash its potential. Furthermore, it seems that market access will play a bigger role in converting competitiveness into export performance given the changing character of the global trade environment.

H1: There is a significant export growth of Indian textile products and their market.

H2: There is a significant import growth of Indian textile products and their market.

Competitiveness

Competitiveness is concerned with the productivity and the purpose of this study is to determine the competitive advantage of textile items made in India. Paul and Mote (2012) concluded that to increase the competitiveness of Indian products, exports should be improved in the global market. They also discovered that prices for the identical products vary between Indian manufacturers and their competitors. According to the study, Indian mills' fixed costs and, consequently, their requirement to realize a larger contribution, might have been decreased by an improvement in the wage productivity relationship. According to Kumar and Singh (2015), the majority of textile sector products have a competitive edge in the global market. And since the majority of the items' export growth is positive, the Indian textile industry still has a lot of room to grow in the global market. In present study Revealed Competitiveness Analysis has been done with other competitive countries of textile industry (Gautam and Lal ,2020).

H3: Indian textile products have a competitive advantage over the other countries in textiles.

4. Research Methodology and Findings

The present section highlights the research methodology and findings of the study

4.1 Research Design

This study examines the competitiveness and export performance of eleven Indian textile industry goods from codes HS50–HS60 from 2004–2023. These products are named silk, wool, cotton, textile fibre, manmade filaments, man-made staple fibres, wadding, carpets, special woven fabrics, coated covered and laminated textile fabrics, knitted and crocheted fabrics. The performance of textile industry can be found with the help of CAGR growth rate in this period. RCA has been performed to measure the competitiveness of Indian products.

Compounded Annual Growth Rates (CAGR)*:* The compound annual growth rate, or CAGR, is calculated by taking the nth root of the total growth rate, where n is the number of years in the complete time period. It indicates the increasing or decreasing trends of imports and exports of textile products.

$$\text{CAGR} = 100 * \left(\left(\frac{XijKt2}{XijKt1} \right)^{\frac{1}{t2-t1}} - 1 \right)$$

Where

X is the value of export of product K from country i to destination j

t1 is the start year of the series

t2 is the end year of the series

A CAGR value of less than 0 shows contraction and a value of more than 0 shows growth.

Revealed Comparative Advantage (RCA): The Revealed Comparative Advantage (RCA) metric of Balassa (1965) can be used to analyze competitiveness. Balassa's index is defined as a country's share of world commodity exports divided by its share of total world exports. The index for commodity j and country i is calculated as follows:

$RCA = [X_{ij}/X_i] / [X_{aj}/X_a]$

Where, X_{ij} = Export of product j from country i

X_i = Total exports coming out of the nation

X_{aj} = Total export of product j from the world

X_a = Total exports from the world

In order to measure export performance, RCA provides a straightforward interpretation that compares a country's market share of commodities with its average proportion of global exports. The nation has a demonstrated comparative advantage in that specific product if its value is higher than unity.

4.1.1 Sampling*:* Sampling involves using a small number of items out of the population in order to make conclusions about the whole population. The present study employed a sampling design based on secondary data as follows: Number of years * Number of products * Number of countries = 20 * 11 * 3 = 660.

The present study will attempt to analyze the export performance and competitiveness of eleven products of the Indian textile industry from code HS50- HS60 for the period 2004 to 2023. Time series secondary data gathered from numerous government agency publications serve as the primary foundation for this analysis. The secondary data was tapped mainly from the following sources: International Trade Centre, Ministry of Commerce & Industry, Ministry of Textile, Cotton Textile Export Promotion Council, Confederation of Indian Textile Industry, and WTO reports.

4.2 Trend of Textile Exports for the period ranging from 2004 To 2023:

India's export of textile industry consists of many commodities but in the study only 11 main commodities are taken. The textile commodities have universal two digit Harmonized System (HS) code. In the study the HS code 50 to HS code 60 is considered. The detail of HS codes wise products is given in Table I.

From Figures 1 and 2 it is clear that Export of Silk (HS 50) increased in 2005 after that is decreases over the period. Export of HS 51 continuously increased till 2011 then decreased till 2013 after that it showed a mixed trend but overall, there was an increase. The export of HS 52: Cotton continuously increased till 2013 after that it decreased with some exceptions. Export of HS 53 continuously increased till 2021 and it decreased in the last two years. Export of HS 54: Man-made filaments; strip and the like of man-made textile materials increased initially till 2011 then it created the up-down trend. Almost same pattern was followed by the export of HS 55: Man-made staple fibres. The Export of HS 56: Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof formed the upward trend with some exceptions. HS 57: Carpets and other textile floor coverings showed the overall upward trend of export. Export of HS 58: Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery showed an increased trend by 2014 after that it showed a downfall trend. Export of HS 59: Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use has unique pattern, till 2014 it increased, after that it formed U pattern till 2021 but overall, it had increasing pattern. Export of HS: 60 Knitted or crocheted fabrics has upward trend except last two years.

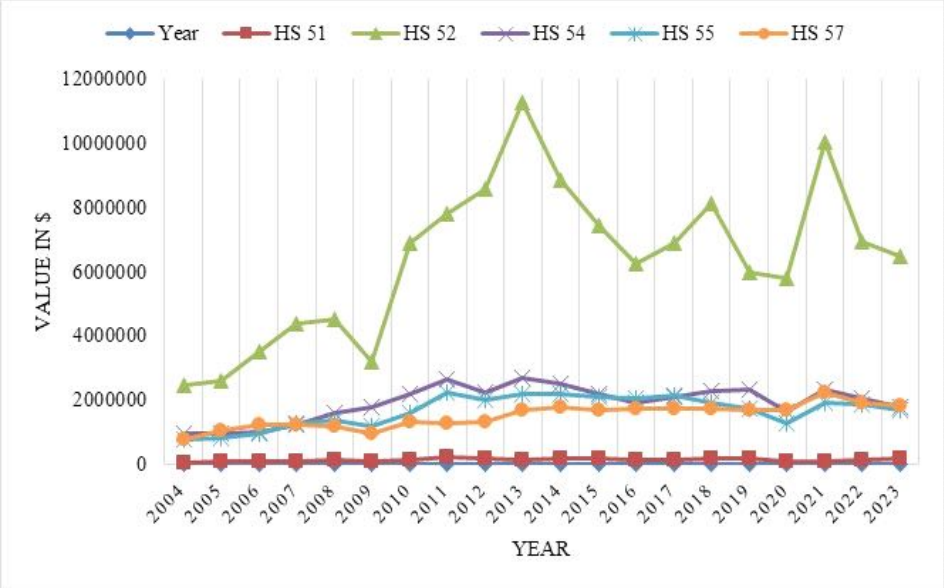

Figure 1: Trends in Indian Textile Exports From 2004-2023

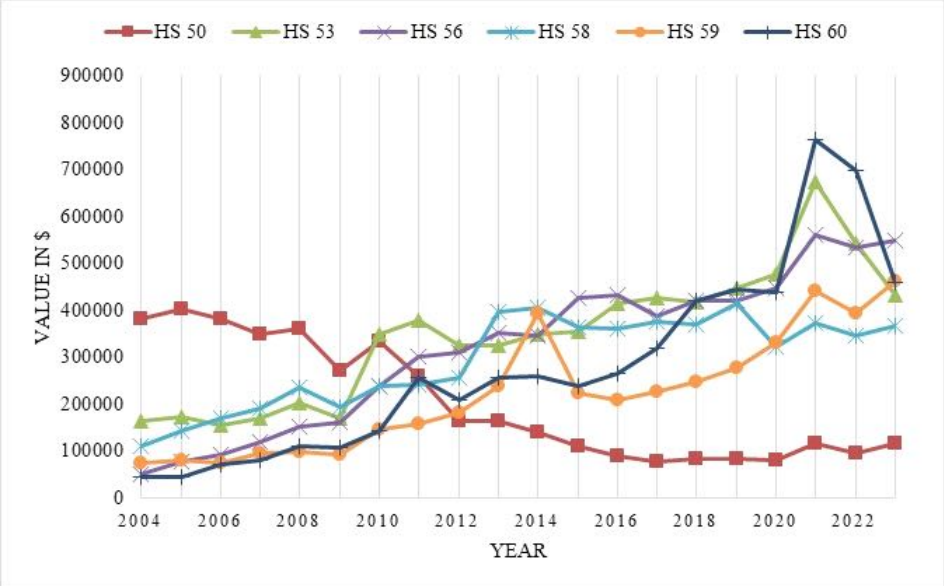

Figure 2: Trends in Indian Textile Exports From 2004-2023

Source: Author's compilation based on data collected from https://www.intracen.org/resources/data-and-analysis/trade-statistics

4.3 Trend of Textile Import for the period ranging from 2004 To 2023

Figures 3 and 4 reflect that import of Silk HS 50 increased in 2005 after that it decreased and showed a major downfall in the year 2020

then rose in 2022 and then again showed a fall in 2023. Import of HS 51: Wool, fine or coarse animal hair; horsehair yarn and woven fabric has up-down pattern with mixed trend. The import of HS 52: Cotton has showed a many rises and downfall and showed a V shaped pattern. Import of HS 53: Other vegetable textile fibers; paper yarn and woven fabrics of paper yarn continuously increased with some exception in 2020. Import of HS 54: Man-made filaments; strip and the like of man-made textile materials showed an increased trend till 2019 then after showing a downfall in 2020 again it increased till 2023. Import of HS 55: Man-made staple fibres had upward trend with some exceptions. The Import of HS 56: Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof formed the upward trend with some exceptions in the year 2020. HS 57: Carpets and other textile floor coverings showed the overall upward trend of export except the year 2019-2020. Import of HS 58: Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery has upward trend except the year 2020. Import of HS 59: Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use had upward trend till 2018 then formed V pattern. Import of HS: 60 Knitted or crocheted fabrics has upward trend except the year 2020.

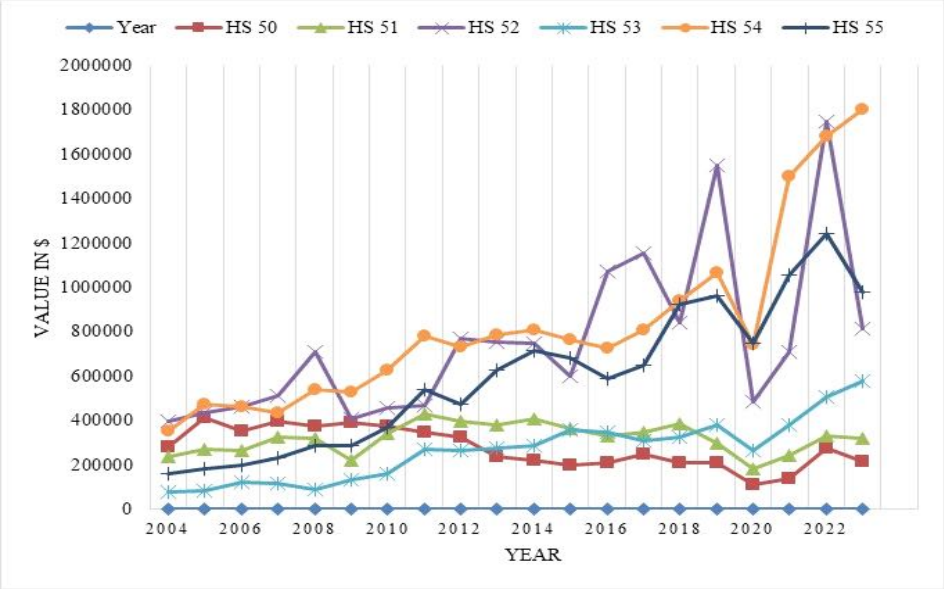

Figure 3: Trends in Indian Textile Import From 2004-2023

Figure 4: Trends in Indian Textile Import From 2004-2023

Source: Author's compilation based on data collected from https://www.intracen.org/resources/data-and-analysis/trade-statistics

4.4 Compounded Annual Growth Rate (CAGR) of Textile Exports

Ten out of eleven categories of textile export grown with positive CAGR ranging from 3.36% to 13.22% during the period of 2004 to 2023. Only one category i.e., Silk has negative CAGR of 6.04% during the same time period. Negative CAGR of silk is due to non-availability of yarn (Goswami, 2006). From the table below it is very clear that HS 56: Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof grew at the highest compounded rate of 13.22% followed by HS 60: Knitted or crocheted fabrics, HS 59: Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use at 12.84% and 10.16% of CAGR respectively. Other categories having positive CAGR grew by less than 10% and HS 54: Man-made filaments; strip and the like of man-made textile materials grew at minimum positive CAGR of 3.36%. Overall, the export of textile products has positive CAGR.

Table IV: Compounded Annual Growth Rate (CAGR) of Textile Exports.

Product Code	Name of Product	CAGR (2004-2023)
HS50	Silk	-6.04
HS51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	5.28
HS52	Cotton	5.19
HS53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	5.25
HS54	Man-made filaments; strip and the like of man-made textile materials	3.36
HS55	Man-made staple fibres	4.15
HS56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	13.22
HS57	Carpets and other textile floor coverings	4.42
HS58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	6.47
HS59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	10.16
HS60	Knitted or crocheted fabrics	12.84

Source: Author's compilation based on data collected from https://www.intracen.org/resources/data-and-analysis/trade-statistics

4.5 Compounded Annual Growth Rate (CAGR) of Textile Imports

As far as the import of textile products is concerned the trend is almost similar to export. Ten out of eleven categories of textile import grown with positive CAGR ranging from 1.54% to 14.69% during the period of 2004 to 2023. Only one category i.e., Silk has negative CAGR of 1.42% during the same time period. From the table below it is very clear that HS 60: Knitted or crocheted fabrics grew at the highest compounded rate of 14.69% followed by HS 53: Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn, HS 56: Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof, HS 57: Carpets and other textile floor coverings at 11.23%, 10.99% and 10.46% of CAGR respectively. Other categories having positive CAGR grew by less than 10% and HS 51: Wool, fine or coarse animal hair; horsehair yarn and woven fabric grew at minimum positive CAGR of 1.54%. Both Export and import of textile products have positive CAGR with an exception of Silk which has negative CAGR. Hence **H1**: There is a significant export growth of Indian textile products and their market and **H2**: There is a significant import growth of Indian textile products and their market have been accepted.

Table V: Compounded Annual Growth Rate (CAGR) of Textile Imports

Product Code	Name of Product	CAGR (2004-2023)
HS50	Silk	-1.42
HS51	Wool, fine or coarse animal hair; horsehair yarn and woven fabric	1.54
HS52	Cotton	3.88
HS53	Other vegetable textile fibres; paper yarn and woven fabrics of paper yarn	11.23
HS54	Man-made filaments; strip and the like of man-made textile materials	8.99
HS55	Man-made staple fibres	9.98
HS56	Wadding, felt and nonwovens; special yarns; twine, cordage, ropes and cables and articles thereof	10.99
HS57	Carpets and other textile floor coverings	10.46
HS58	Special woven fabrics; tufted textile fabrics; lace; tapestries; trimmings; embroidery	6.55
HS59	Impregnated, coated, covered or laminated textile fabrics; textile articles of a kind suitable for industrial use	6.99
HS60	Knitted or crocheted fabrics	14.69

Source: Author's compilation based on data collected from https://www.intracen.org/resources/data-and-analysis/trade-statistics

4.6 Revealed Comparative Advantage

A revealed comparative analysis has been done for four countries for the years 2019 and 2023 shown in the table VI and VII below. It was found that India gained a comparative advantage over 7 products named HS-50, HS-52, HS-53, HS-54, HS-55, HS-57, and HS-58. The results showed products HS-51, HS-56, HS-59 and HS-60 have comparative disadvantages as their values are less than one. China showed good growth in textile products it is the largest exporter of textile products at the world level with a 43.5% share of global export in the year 2020. The results showed that in the year 2019, they had a comparative advantage of 10 products out of 11 products which increased in the year 2023 and China showed a comparative advantage against all the eleven products. On the other side results of Vietnam country showed a decrease in the comparative advantage of 4 products in the year 2023 against the comparative advantage of 5 products in the year 2019. Italy is known for producing luxurious and high-quality products showing a comparative advantage of 8 products both in the year 2019 and 2023.

Table VI: Comparative analysis of products from HS-50-60 for the year 2019.

Product code	RCA (India)	RCA (China)	RCA (Vietnam)	RCA(Italy)
HS50	2.45	3.74	3.86	4.93
HS51	.831	1.39	.038	5.96
HS52	6.20	1.89	3.85	.78
HS53	4.93	1.95	.48	1.85
HS54	2.63	3.22	1.55	1.33
HS55	2.81	2.57	1.27	.978
HS56	.896	1.66	1.06	2.06
HS57	6.27	1.18	.770	.455
HS58	`1.89	3.15	.676	1.43
HS59	0.625	.23	1.96	1.47
HS60	.705	3.84	.978	2.26

Source: Author's compilation based on data collected from https://www.intracen.org/resources/data-and-analysis/trade-statistics

Table VII: Comparative analysis of products from HS-50-60 for the year 2023.

Product code	RCA (India)	RCA (China)	RCA (Vietnam)	RCA (Italy)
HS50	3.57	3.13	4.52	5.70
HS51	.824	1.25	.162	6.5
HS52	6.77	1.41	2.95	.779
HS53	3.69	1.72	.256	2.23
HS54	1.79	3.65	.115	1.17
HS55	2.57	2.58	.974	.950
HS56	.985	1.736	.712	1.98
HS57	5.84	1.65	1.09	.48
HS58	1.63	3.24	.668	1.51
HS59	.905	2.30	1.60	1.55
HS60	.66	6.87	1.63	1.09

Source: Author's compilation based on data collected from https://www.intracen.org/resources/data-and-analysis/trade-statistics

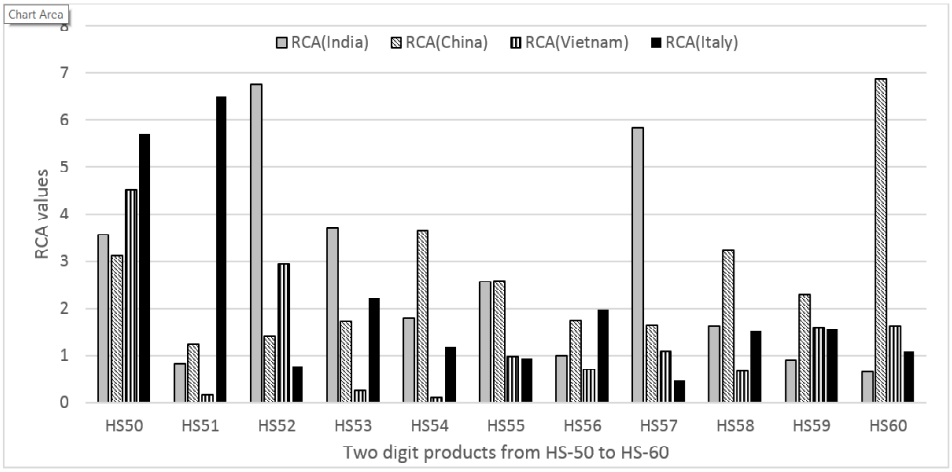

Figure 5: Comparative RCA of India, China, Vietnam and Italy for the year 2023

Source: Author's compilation based on data collected from https://www.intracen.org/resources/data-and-analysis/trade-statistics

Figure 5 shows the revealed comparative analysis of four countries (India, China, Italy and Vietnam) for the year 2023. This figure shows that for HS-52, HS-53 and HS- 57 India has highest RCA as against China, Vietnam and Italy. Hence **H3:** Indian textile products have a competitive advantage over the other countries in textiles has been accepted. China has a highest RCA for the five products having code HS-54, HS-55, HS-58, HS-59 and HS-60 as compared to other three countries. And Italy has the highest RCA for HS-50 and HS-51 as compared to India, China and Vietnam. The slower growth of textile products in India as compared to China is due to less modernisation of Indian infrastructure in textile products (Singh and Lal, 2014) while China has invested heavily in modernising its textile infrastructure and its good and stable policy implications**.** China has a competitive advantage against India because of high quality and diversity of its products, large-scale production, and efficient infrastructure services (Lu and Karpova 2011).

5. Conclusion

The Indian textile industry is a critical contributor to export earnings and the second-largest employer. Ten out of eleven categories of textile exports grew with a positive CAGR ranging from 3.36% to 13.22% from 2004 to 2023. Technology played a vital role in the growth of the textile industry like the use of automated machines and looms

reduced human error and helped in increasing productivity. Digitization of the Indian textile industry generated more employment opportunities, increased consumer surplus and productivity (Kanupriya 2020). Only one category i.e., Silk has a negative CAGR of -6.04% during the same period. The negative CAGR of silk is due to the non-availability of yarn and inadequate infrastructure (Goswami, 2006). The increased demand for synthetic products and intensified competition from synthetic and blended fibers are other causes of slowing down the growth of silk production. Lockdown due to pandemic disrupted the labour availability and transportation for silk production. It was found that India gained a comparative advantage over 7 products named HS-50, HS-52, HS-53, HS-54, HS-55, HS-57, and HS-58. Technology advancement helps in the improvement of the comparative advantage of the Indian textile industry (Gautam and Lal,2020). India showed good growth in textile products but compared to China still, it is lagging because of outdated infrastructure, limited access to technology, power shortages and inadequate transportation. On the other side, China also enjoys a large-scale production economy advantage as compared to India. China is performing well for HS-60 because of high quality and diversity of its products, large-scale production, and efficient infrastructure services. Low-cost nation Vietnam has shown a drastic improvement in textile exports, it showed a comparative advantage of 5 products in the year 2023. Italy is known for producing luxurious and high-quality products showing a comparative advantage of 8 products both in the year 2019 and 2023. High-quality products, substantial creativity and the ability to execute a cooperative strategy are the factors for the competitive advantage of textile products in Italy. For India to improve competitiveness in weaker product areas like HS-51 our government should focus not only on introducing high-yield wool breeds but also on promoting the use of advanced spinning and processing technology and for products HS-56 our government should encourage research for nonwoven products by providing various subsidies. Not only this improving the logistics network to reduce export lead time would also help in increasing the competitiveness of Indian products in weaker areas.

In India, a temporary decline in textile export has been seen in the year 2022-23 due to recession in some parts of the world but few cotton textile products have been imported duty-free from India under the India-ASEAN free trade agreement showing a stable supplier of

cotton to the many countries of the world. Signing Free Trade Agreements, India, UK and EU will show some optimism for Indian textile products. Improving the quality of products, adopting advanced technology, expanding the market area, and ensuring sustainability can strengthen the Indian textile industry at the global level.

Research Implications, Limitations and Future Research

The present research paper indicates the need for providing various labour training programs and use of developed technology to remain competitive at the world level. Paper also indicates the need for various incentive plans like tax benefits and subsidies for increasing the productivity of textile industries. More attention needs to be attached to the issues of sickness of textile industry.

Present study has a narrow scope as its focus was on showing the trends of export performance, greater emphasis could be given to external factors affecting the export performance and competitiveness of textile products. So Future research can be undertaken taking into consideration various external factors affecting the performance of textile products like recession, inflation, pandemics etc. As the study focused on measuring the export performance of selected products of Indian textile industry it can provide a base for many future studies like making strategies for improving competitiveness of Indian textile products. Future research can also be conducted by comparing competitiveness of Indian textile products with some of the other developed countries like U.S. and Canada.

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