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**COTTON TEXTILE INDUSTRY IN INDIA,  
IN THE WAKE OF MFA PHASE-OUT**

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Nilanjan Banik and Saurabh Bandopadhyay<sup>1</sup>

## Abstract

The present paper has three broad objectives. First, identifying sectors in the textile industry where India has a comparative advantage or disadvantage. Second, examining India's position vis-à-vis its competitors. And third, to identify factors responsible for the relatively poor performance of the textile sector.

## Introduction

For India, the textile industry is important. It is important from the perspective of generating employment (next only to agriculture) and foreign exchange earnings (accounting 30% of India's merchandise exports). In terms of value addition, the industry stands next only to chemicals, accounting for 12.5% of the manufacturing value addition.<sup>2</sup> Indian households spent 16% of their income (1996 figure) on textiles, as compared to 6%-7% of income by citizens of Japan, the USA, Sri Lanka and the Philippines (Venkatesan et al., 1999). In view of its national importance, this study intends to look at the changes in Effective Rate of Protection (ERP) on the Indian textile industry and forecast its output response in the absence of quota restriction from 2005. In the process of identifying the *sunrise* and *sunset* segments within the textile sector, the objective is to test the hypothesis that a fall in ERP

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for the *sunset* segment is going to be harmful, and there is a need for protecting the same.<sup>3</sup> On similar grounds, it is necessary bringing down ERP for the industries performing well, i.e., for the *sunrise* segment.

However, there is a caveat to this hypothesis. Going by the commitments of globalization and liberalization (as enshrined in the WTO Agreement), it may be difficult for a member-nation to carry on with protection. The short-run solution lies in way of providing subsidies. This is possible, as the present agreement requires a fall in subsidy at aggregate level (two-digit level) and not at a higher disaggregated levels (say at a six-digit or eight-digit level), like the case for agricultural inputs. For instance, it is perfectly possible for the government to give a higher amount of subsidy in the production of red colour pure cotton shirts (representing a six-digit level of classification) and yet show a fall in subsidy in the production of cotton (representing a two-digit level of classification). This happens when the government gives a higher amount of subsidy for producing red colour cotton shirts at the cost of cutting subsidy by a greater amount for producing other items, say, blue colour cotton shirts, at the same disaggregated level. To put it simply, the government can cross-subsidise production at a disaggregated level provided it can show a fall in subsidy at a higher aggregated level.

Unfortunately, in the long run such a solution is not viable. Besides being a cause of distortion, excessive protection can cripple domestic industry. What is needed is to make the *sunset* segment of the textile industry efficient. This study enumerates ways of achieving this objective.

We have used the Relative Export Competitiveness Index (REC) and the Revealed Comparative Advantage Index (RCA) for identifying *sunset* and *sunrise* segments in the textile industry. ERP is calculated following Corden's Method, concentrating only on tradable inputs. The paper is divided into five sections. Section 1 deals with Multi-Fibre Arrangement (MFA). Section 2, looks at those sectors in which

3. Sunrise segment refers to that sector, share of whose items in India's export basket rise at a faster rate than share of that commodity in world export basket. And, sunset segment refers to that sector, share of whose items in India's export basket rise at a slower rate than share of that commodity in world export basket.

India has a competitive advantage or disadvantage. In Section 3, the exercise is carried out regarding calculation of Effective Rate of Protection. Section 4, examines India's position vis-à-vis its competitors and deals with conclusion and policy prescription.

### Section 1

Since 1995, MFA has been taken over by the Agreement on Textiles and Clothing (ATC).<sup>4</sup> ATC provides a blueprint for removal of restrictions on textile exports originating mainly from developing nations. The integration process is to be carried out in four stages. The integration process is represented schematically below in Box 1.

**Box 1: Four short steps toward freeing textile trade**

Step	Percentage of products to be brought under GATT (including removal of any quotas)	How fast remaining quotas should open up, if 1994 rate was 6 per cent
Step 1 1 Jan 1995 (to 31 Dec 1997)	16 per cent (minimum, taking 1990 imports as base)	6.96 per cent year
Step 2 1 Jan 1998 (to 31 Dec 2001)	17 per cent	8.7 per cent per year
Step 3 1 Jan 2002 (to 31 Dec 2004)	18 per cent	11.05 per cent per year
Step 4 1 Jan 2005 Full integration into GATT (and final elimination of Quotas)	49 per cent (maximum)	No Quotas Left

Source: WTO; *Trading into Future*, 1997

4. MFA is a framework for bilateral agreements or unilateral actions establishing quota-limiting imports into countries whose domestic industries face serious damage from rapidly increasing imports. From its inception MFA dealt with textile exports originating mainly from developing nations.

From Box 1, the first phase calls for integrating product categories accounting (at least) 16 per cent of the importing countries total volume of textile and clothing imports (with 1990 as a base year), into WTO. Article 2.6 of the ATC Agreement states that, 'the products to be integrated shall encompass products from each of the following four groups: tops and yarns, fabrics, made-up textiles products and clothing'. On 1 January 1995, 16 per cent of textiles and clothing exports was thus liberalized. This however does not imply that 16 per cent of textiles and clothing export from any country that face MFA restraints will be liberalized. For, liberalization may include products that any specific nation does not export. For example, in case of India, 90 per cent of its exports will be liberalized only during the last phase of the integration process. At the beginning of the second phase, an additional 17 per cent will come into the existing framework and by the end of 95th month (with start of the third phase) a further 18 per cent will be added. By the end of ten-year period, all product categories will be free from all restrictions.

Regarding growth of quotas, the ten-year period starting from January 1995 is divided into three stages of 3, 4 and 3 years respectively. Article 2.13 of the ATC Agreement says, 'during stage 1 of this Agreement (from the date of entry into force of the WTO Agreement to the 36th month that it is in effect, inclusive) the level of each restriction under the MFA bilateral agreements in force for the 12-month period shall be increased annually by not less than the growth rate established for restrictions, increased by 16 per cent'. This does not mean quotas will grow by 16 per cent. It means that quotas otherwise growing by 6 per cent (see Box1) will now grow by 6.96 per cent. During the second phase starting 1st January 1998, the rate of growth of quotas will be 25 per cent of 6.96 per cent, at a rate of 8.7 per cent. The third phase starting 1st January 2002 will see growth rate of quotas at a rate of 27 per cent of 8.7 per cent, i.e. at a rate of 11.05 per cent per year.

In the Box 2, we catalogue the quota phase-out procedure for India.

### Box 2 : Phasing out of Quota

Country Category	Products	Segment	Pre-WTO Quota growth	Post-WTO Quota growth		
				1995	1998	2002
<b>CANADA</b>						
1A	Anoraks, Wind Jackets	KT/WVN	6%	6.96%	8.7%	11.05%
2	Winter Outwear	WVN	6%	6.96%	8.7%	11.05%
5	Trouser, Bib and Brace Shorts	KT/WVN	6%	6.96%	8.7%	11.05%
6	Trousers for ladies and Gents Shorts for Gents	KT	6%	6.96%	8.7%	11.05%
9	Under Wear (Under Pants, Briefs, Panties, Slips Petticoats, etc.)		6%	6.96%	8.7%	11.05%
<b>NORWAY</b>						
1	Anoraks, Wind Jackets	KT/WVN	5%	5.8%	No Quota Left	
2	Winter Outwear	WVN	5%	5.8%	No Quota Left	
<b>USA</b>						
237	Play Suits, Sun Suits, Wash Suits, Creepers, Rompers, etc. of Cotton and Man-Made Fibres	KT/WVN	7%	8.12%	10.15%	12.89%
239	Infant Wear of Cotton and Man-Made Fibre	KT/WVN	7%	8.12%	10.15%	12.89%
334/634	Other Coats M & B	KT/WVN	6%	6.96%	8.7%	11.05%
335/635	Coats and Jackets W & G	KT/WVN	6%	6.96%	8.7%	11.05%
336/636	Dresses Including Uniform	KT/WVN	6.5%	7.54%	9.43%	11.97%
338/339	Knit Shirts M & B, Knit Blouses W & G	KT	4%	4.64%	5.8%	7.36%
340/640	Gents Shirts	WVN	5%	5.8%	7.36%	9.34%

341	Ladies Blouses	WVN	4%	4.64%	5.8%	7.36%
342/342	Ladies Skirts	KT/WVN	6%	6.96%	8.7%	11.05%
345	Sweaters	KT	7%	8.12%	10.15%	12.89%
347/348	Trousers Slacks, Shorts M & B, W & G	KT/WVN	7%	8.12%	10.15%	12.89%
351/651	Night Shirts Pajamas and other Night Wear	KT/WVN	6%	6.96%	8.7%	11.05%
641	Ladies Blouses and Shirts W & G	WVN	6%	6.96%	8.7%	11.05%
647/648	Trousers / Slacks M & B, W & G	KT/WVN	6%	6.96%	8.7%	11.05%
<b>EUROPEAN UNION</b>						
4	Knitted Shirts, T-Shirts	KT	4.5%	5.2%	6.5%	8.25%
5	Jerseys, Pullovers, Slipovers, Waistcoats, Twin sets, Cardigan, Bed Jackets and Jumpers, Anoraks, Windcheaters	KT	5%	5.8%	7.36%	9.34%
6	Trousers for Ladies and Gents, Shorts for Gents	WVN	5%	5.8%	7.36%	9.34%
7	Ladies Blouses	KT/WVN	2.5%	2.9%	3.62%	4.59%
8	Gents Shirts	WVN	2.75%	3.19%	3.94%	5%
15	Ladies Jackets	WVN	6%	6.96%	8.7%	11.05%
24	Night Shirts, Pajamas, Bathrobes, Negligees, Dressing Gown, etc.	KT	6%	6.96%	8.7%	11.05%
26	Ladies Dresses	KT/WVN	4%	4.64%	5.8%	7.36%
27	Ladies Skirts	KT/WVN	4%	4.64%	5.8%	7.36%
28	Ladies Suits and Ensembles	WVN	5%	5.8%	7.36%	9.34%

Source: Apparel Export Promotion Council, New Delhi

Note: Here KT ⇒ Knitted and WVN ⇒ Woven

During transitional phase, although there will be relaxation of existing quotas, some categories in which we had no restrictions earlier may come under restrictions. This is because importing countries will be practising restrictions according to the formula cited above, but these restrictions must be applied uniformly to all countries. The rationale behind carrying out the process in four phases is to give sufficient adjustment time both to exporting and importing nations.

### *Quota in its Present Form*

Indian apparel export faced major quantitative restrictions in the USA, European Union and Canada. Earlier, Indian exports faced quota restrictions in Norway, but by the beginning of January 1997 it ceased to exist. The USA has already announced its integration programme, and it is noticed that more than 90 per cent of the quota restriction that was there in the US, would remain till January 1st, 2005. The European Union has announced only the first two stages of integration programme with very few products of India's interest integrated into the WTO framework. During the first phase of ATC, EU integrated a few handloom garment products. It is very unlikely that the EU would integrate any more products during the entire phase-out period. Therefore, barring a few products, the integration programme is of little relevance to India. Practically all the existing quotas on Indian cloth export would continue till 2005. In short, the integration programme is severely back-loaded. Details regarding our integration programme are there in the appendix.

## **Section 2**

### *India and MFA Phase-Out*

The question that whether removing quota restriction will benefit India depends upon binding nature of quota for any specified product category. Removing quotas is essential, especially when it is binding. It harms both the exporting and importing nations; with consumers of the former paying higher prices and producers from the latter cannot export to their full potential.

A study carried out by Martin and Supachalasai (1990) showed that developing nations incur a loss of US \$2 billion or 10 per cent the value of their total clothing exports as a result of quota restriction. Therefore, lifting quota restrictions will benefit India in those markets in which it has a binding export function. Martin (1996) in his paper focused on estimating quota-rent and Export Tax Equivalent (ETE) for Indian garments and textile exports.<sup>5</sup> The higher the rent, greater is overall welfare loss for India.

A more restricted market also causes efficiency loss, diverting trade from efficient to inefficient producers. With more restrictive markets, values of ETE are large. For example, in terms of market access the US is more restrictive for Indian textile products than EU. In the US, the average ETE for textile products was 28 per cent in 1996, for EU it was 19 per cent during the same year (see Kathuria et al., 1998).

But, there is a caveat to this. MFA is a boon for the less competitive producers. True, in most instances, MFA has gone against the interest of developing nations, by restricting their exports to big markets like the US and EU. But the MFA has also helped to guarantee to the developing nations that they are assured a fixed quota for supplying products to some niche markets. Since MFA is a bilateral agreement, quantum of trade is given, irrespective of how competitive any nation is vis-à-vis competitors. Hence, greater market access (with MFA phase-out) will become a gainful proposition only for the most competitive industries. So, it is useful to examine how competitive we are in the textile sector.

We measure our competitiveness in two different ways. First, by calculating RCA of three main textile products, namely, cotton textiles, wool, silk and synthetic textiles and textile products (all at a three-digit level).<sup>6</sup> Secondly, by measuring REC, defined as the ratio of

5. ETE is the rent that exporters collect in way of selling their quotas. It is defined as value of quota divided by prices received by a producer not having quota for any given product. Concept of quota rent arises when quotas are binding.

6. RCA is ratio of the share of a product in country's export to its share in world export. If the ratio is greater than one it implies Indian exports are competitive.

India's textile exports in world's textile exports to share of India's textiles in its total export. The idea behind calibrating competitiveness using two different methods is to examine consistency in our calculation process. The results are outlined in Table 1.

**Table 1: Competitiveness of Indian Textile Exports**

SITC Code	Commodity	RCA		REC		World Exports
		1990	1997	1990	1997	
263	Cotton	7.85	4.22	6.12	2.74	Decreasing
651	Textile Yarn	3.10	5.66	3.96	6.02	Stagnant
652	Cotton Fabric Woven	6.25	8.52	6.11	6.84	Increasing
653	Woven Man-Made Fibre Fabrics	1.22	3.00	1.69	2.59	Increasing
654	Other Woven Textile Fabrics	4.23	4.19	2.44	2.03	Increasing
655	Knitted etc. Fabrics	1.89	1.23	0.65	0.52	Increasing
658	Textile Articles not elsewhere specified	7.24	8.35	4.20	5.97	Increasing

Source: UNCTAD database

Except for certain products, namely cotton, other woven textile fabrics, and knitted fabrics, in all other categories competitiveness has increased for Indian products. In both methods the trends are similar, reflecting robustness of the result. With a fall in ERP, likely to happen going by the WTO commitments, it is these two sectors that are going to suffer the most. Going by the hypothesis that inefficient industries require greater protection, ERP for these sectors should be higher than other sectors.

### Section 3

#### *Conceptualizing Effective Rate of Protection*

The rate of effective protection is defined as the proportionate increase in value addition for any industry, possible as a result of giving tariffs

protection to both its inputs and outputs. The rationale behind its estimation is to calibrate resource allocation effects of tariffs, besides gauging actual protection that any industry enjoys. When tariffs are imposed, it not only protects the domestic industries (by enabling them to raise the output price) but also raises their manufacturing cost by raising prices of inputs (as prices of inputs rises because of tariff). So, it is essential to gauge actual protection (benefit less cost) and hence the need to calculate the ERP.

The basic formula for measuring the rate of effective protection,  $\tau_e$ , is as follows:

$$\tau_e = (\tau_1 - \omega\tau_2)/(1 - \omega)$$

Where,  $\tau_1$  = tariff rate on output

$\tau_2$  = tariff rate on input

$\omega$  = proportion of total price accounted for by inputs

Any given industry will usually face a variety of tariff rates on its output and certainly the several inputs that it buys, so that both  $\tau_1$  and  $\tau_2$  are measured as weighted averages rather than simple average in tariff regulations. The import weight and the value-added weight used for calculating ERP are specified as follows:

Group	Import Weight	Value Added Weights
Cotton Textiles	0.10	1.29
Woollen Textiles	0.14	1.08
Art, Silk and Synthetic Textiles	0.14	1.08
Jute, Hemp, Mesta Textiles	0.44	0.73
Other Textiles	0.01	1.08

Source: Paper presented by Pooja Mehta and Rajesh Mehta, at a ICRIER sponsored seminar on trade and development, New Delhi (1993).

Certain observations are important in this context. When inputs are supplied locally, their prices may not rise by full amount of tariff. This is true when there is not enough demand for given inputs. Again, it would be wrong to assume from a lower  $\omega$  a fall in tariff rates, since domestic input supplies can become expensive because of inflation. Therefore, price inflation in the input market is also included as a factor.

### Assumptions

The theory of effective protection makes several assumptions. First, the country imposing tariffs is a small economy, i.e., a price taker. Hence domestic prices are nothing but world prices plus tariff for the imports. Second, imports are assumed to be perfect substitutes for the imports competing sector in which ERPs are calculated. Finally, there is a fixed co-efficient relationship between final outputs and inputs, i.e., the production function is of Leontief type.

### Methodology

In our study, we estimated the effective rate of protection in the following way:

$$ERP_j = (V_j^* / V_j) - 1$$

Here,  $V_j = 1 - \sum a_{ij}$

And  $V_j^* = (1+t_j) - \sum a_{ij} \times (1+t_i)$

Substituting the values for value added, in the original equation yields,

$$ERP_j = \{t_j - \sum a_{ij} \times (1+t_i)\} / (1 - \sum a_{ij})$$

Where,  $V_j^*$  = value added in  $j^{\text{th}}$  industry in presence of tariff

$V_j$  = value added  $j^{\text{th}}$  industry in absence of tariff

$a_{ij}$  = amount of  $i^{\text{th}}$  input used for producing one unit of  $j^{\text{th}}$  output

$t_i$  = tariff imposed on  $i^{\text{th}}$  (input) commodity

In this form, we estimated ERP for Indian cotton textile industries from 1993-94 till 2004-2005, marking the termination of MFA

phase-out. To forecast ERP, the model structure included only growth of final stage output, growth of intermediate input and wage share. In this process, different growth scenarios are estimated by taking into account time series data for related variables. Total duties are calculated by summing up excise duties and import duties.

#### **Data Source**

The data regarding input is taken from a 60-sector input-output table constructed by the Planning Commission as a Technical Note to the Eighth Five Year Plan. Regarding production data, different issues of Annual Survey of Industries, published by Ministry of Commerce, have been consulted. The latest available figure for this is 1994-95. The tariff rates for various input-output sectors have been derived from the Public Finance data published by the Centre for Monitoring Indian Economy. Data regarding foreign exports is taken from the International Trade Statistics, United Nation. Data regarding Wholesale Price Index, used for deflating tariff figures, is sourced from Index Numbers of the Wholesale Prices in India, Ministry of Industry, Government of India.

#### **Statistical Analysis**

The basic equations are linear in regressors. The number of observations is for a period of 21 years, starting from 1973-74 (the period from which data for intermediate input is available) and continuing till 1993-94. As the latest input figures have been till 1991-92, intermediate input figures for the later years, i.e., till 2004-2005 are estimated to be based on their growth rates over previous years, i.e., from 1973-74 till 1991-92. This is done incorporating relative changes in inflation rate. Similarly, wage share growth rate is forecasted assuming the same rate of growth from 1973-74 till 1993-94 (the latest available figures for wage rates). Tariff figures are deflated with the Wholesale Price Index. Based on this assumption, growth of final stage output is estimated for following three sectors.

The basic equations are:

$$\text{For cotton textiles, } Y(\text{CT}) = 21.26 + 32.30\text{IN} + 74.68\text{WS}; R^2 = 0.81; \\ \text{DW} = 2.03 \\ (1.85)(**) \quad (2.49)(**) \quad (2.74)(**)$$

$$\text{For woolen textiles, } Y(\text{WT}) = 38.62 - 2.59\text{IN} + 85.48\text{WS}; R^2 = 0.76; \\ \text{DW} = 1.98 \\ (0.233)(-) \quad (0.431)(-) \quad (1.92)(**)$$

$$\text{For textile products, } Y(\text{TP}) = 13.26 - 74.03\text{IN} + 55.70\text{WS}; R^2 = 0.94; \\ \text{DW} = 2.21 \\ (3.22)(**) \quad (3.88)(**) \quad (2.96)(**)$$

Here, CT stands for cotton textile, WT stands for woolen textile, TP stands for textile products, IN stands for Intermediate Inputs and WS stands for wage share.

#### **Regression Results and Methodology**

The parentheses below each variable give value of *t* statistics and significance level of each variable. Note, (\*\*) implies the respective variable is statistically significant at 10 per cent level of significance, while (-) indicates that the variable concerned is not statistically significant. D-W statistics in all the cases is well above their lower limits, suggesting absence of first order serial correlation in the model. This holds true at 5 per cent level of significance. Also, moderately high  $R^2$ , significant *t* statistics and insignificant *F* statistics, points out absence of multicollinearity in the system. The method of estimation is OLS. From estimated equations, it become apparent wage share has a positive impact in all product segment while impact of intermediate input is different in different sets of textile products. The impact is positive for cotton textiles, while it is negative for textile products. The variable is not statistically significant in woolen textiles.



## Results

Calculation of effective rate of protection for different segments of textile industries is given in Table 2:

**Table 2: Effective Rate of Protection for different segments of Textiles Products**

Years \ Products	Cotton Textiles	Wool, Silk and Synthetic Textiles	Textile Products
1993-94	19.05	42.66	66.25
1994-95	39.34	35.00	30.65
1995-96	28.67	34.60	40.52
1996-97	17.55	32.64	47.73
1997-98	10.26	29.97	49.68
1998-99	11.14	21.86	32.58
1999-2000	9.01	19.36	19.63
2000-2001	7.99	17.22	26.37
2001-2002	7.03	15.33	23.47
2002-2003	6.19	13.64	20.89
2003-2004	5.44	12.14	18.60
2004-2005	4.79	10.80	16.55

Source: Our calculation IS based on Input-Output Tables (1989) and CMIE data on commodity trade

The above table shows ERP has fallen for the Indian textile industry. The result is not a digression, when taking into account the ongoing process of trade liberalization and India's commitment at the WTO to bring down its tariff rates.

### Limitation of the Study

Theoretically speaking, calculation of ERP should include other forms of non-tariff barriers, like effect of quotas, licensing and subsidies. Also, technology as a factor effecting growth of intermediate input

usage could not be captured. As secondary data is hard to come by and given the constraints at collecting primary data, we have not included their effects while calculating ERP. Another limitation of the study is that it corresponds to input data at a higher level of aggregation. This has been done, as tariffs on input at a higher disaggregated level are not available.

### Inferences

From the estimation, it is found that there exists an inverse relation between tariff cost of protection and production of output. The correlation co-efficient between output and tariff cost in case of cotton textiles is -0.34, for woolen textile it is -0.55 and for silk textiles is -0.48. Negative sign indicates that a progressive reduction in duty of fibres is expected to generate demand, as there will be a fall in their prices. An inverse relation has also been observed between production and ERP, implying that with rise in competitiveness exports will increase. The correlation co-efficient between production and ERP in case of cotton textiles is -0.54, for woolen textiles it is -0.97 and for silk textiles it is -0.77. Therefore, with a more protective regime both competitiveness and production will fall.

The result is more prominent for cotton, implying the sector is protected and hence less competitive. This becomes evident from the fact that between 1991 and 1998, both China and India registered a negative growth in exports of cotton textile. However, while India's growth rate declined by 51 per cent, China had a fall of only 18 per cent. On the other hand, South Korea and Hong Kong recorded a positive growth of 5 per cent and 20 per cent respectively. India could not maintain price competitiveness in international market. Therefore, the hypothesis, a greater ERP for a sector makes it inefficient, holds true.

However, such a proposition of giving long-term protection to inefficient units may not be a viable option. Presently, India possesses comparative advantage in production of cotton yarn, woven man-made fabrics, textile yarn and knitted textile articles not elsewhere specified. Unfortunately, the government policies at present are not congenial for the development

of these sectors. For example, excise duty on viscose and synthetics adversely affected competitiveness in the woven man-made fabrics. Here, share of Indian exports has fallen despite an increase in world exports share of this commodity. It is important to examine factors that have led to the poor plight of the Indian textile sector. This has been done in the next section.

#### Section 4

##### *India and its Competitors*

India's main competitors in textile exports are and will be China, Korea, Taiwan and Hong Kong. This is true under the assumption that developed nations are unable to come with enough labour saving technologies to outweigh labour cost advantage that developing nations enjoy at present. The success of the Indian garment industry in international arena is because of its ability to handle small and detailed orders, wealthy craftsmanship and availability of indigenous skill at a low price. The present structure does not permit to undertake any large-scale operation. This is due to rigid labour laws. The existing law does not permit retrenching workers even after paying them adequate compensation. The amendment to the Industrial Disputes Act, 1947 made it difficult for the loss making firms employing more than 100 workers to close down. As a result garment manufacturers prefer subcontracting small-time producers who do their jobs, instead of hiring labours in their factory. Even if do they hire, they prefer to keep the size of the labour force less than 100.

Unfortunately, the problem with the Indian knitting garment sector originates from its greater dependence on unorganized sector. Being small-scale in nature, it is characterized by poor infrastructure, low capitalization, outdated technologies, inadequate presence of market research in spotting new market, lesser fund availability to add on existing capacity, and a little or no investment in research and development.

The unorganized nature of the Indian export has prevented growth in this sector. There are very few factories, which can be called world class, either in the type or in numbers of machinery installed. The

small-scale structure, otherwise suitable for handling orders in small quantities, may prove to be binding once scope of selling increases with MFA phase-out. With world fashion market demands changing with every season, export production has to keep up with the changes in the fashion world. In India, most of the textile and garment trade takes place through retailers, who do not always keep pace with the changing tastes and preferences in the international fashion scene. As a result, they fail to cater to world demand. It is hardly surprising therefore that Indian exports never feature in any major international fashion shows in the EU or in the US.

Regrettably, requisite investment necessary to rebuild this sector is not forthcoming. A cross-country survey conducted by Khanna (1993) points out, India is way behind in terms of carrying out investment in this sector. Table 3 points this out :

**Table 3: Machinery and Investment Levels by Apparel Exports Firms (Unit Nos.)**

Country	Total Machines	Manual Machines	Power Machines	Investment ('000)	Investment ('000\$) per machines
South Korea	258.08	6.14	240.33	722.19	2.79
Taiwan	264.62	0.15	264.46	579.21	2.18
Hong Kong	698.12	4.35	688.76	2456.64	3.51
China	605.15	1.5	603.65	943.86	1.5
India	119.28	37.26	75.39	29.76	0.25
Thailand	572.32	0	572.32	722.25	1.26

*Source: Individual country surveys by Khanna (1993)*

The above highlights the low level of investment in Indian garment industries. The average investment in machines per textile firm in India is \$ 27690 compared to an initial average investment of \$ 2.5 million in Hong Kong and nearly \$ 1 million in China. This in turn reflects

smaller size of the Indian firm, with an average of 119 machines per firm as against 698 in Hong Kong and 605 in China. It also reflects lower levels of investment per machine, with investment in India being only \$ 250 per machine versus \$ 3510 in Hong Kong and \$ 1500 in China. Even on account of the average number of machines per firm, India loses out. This is due to Indian firms having a much higher proportion of manual machines, as well as the fact that even their power machines are less sophisticated. In South Korea, Taiwan, Hong Kong and China, average number of processing machines in any apparel export firm is 31, 13, 28 and 35 respectively, against 5 in India. Table 4 demonstrates this:

**Table 4: Type of Machines Installed in the Indian Apparel Industries**

Country	Precutting Machines	Cutting Machines	Sewing Machines	Special Machines	Processing Machines
South Korea	2.9	12.3	134.3	77.5	31.0
Taiwan	2.6	7.5	185.1	49.5	12.8
Hong Kong	2.3	13.2	455.4	112.7	27.9
China	2.3	13.2	450.5	104.8	34.4
India	0.0	2.3	103.7	8.6	4.6
Thailand	2.0	12.8	460.8	72.4	21.9

*Estimated on basis of data from Textiles Committee, Mumbai for India. For other countries, from individual country surveys.*

*Source: Khanna (1993)*

The same applies in the case of the number of special machines any apparel firm possesses. While in India, on average, only 9 special machines are in place, it is around 78 in Korea, 50 in Taiwan, 113 in Hong Kong and 105 in China. Most investments in India are made for installing sewing machines, while special and processing machines form a meager share of total investment, unlike its competitors.

Low cost of labour is not going to help India balance out inefficiencies. While India's labour is cheaper than most countries, it is not cheaper

than in China; which is its main competitor. According to a cost comparison carried out by New York-based Weiner International Incorporated, in 1993 the wage cost per hour in China was 40 cents, while in India it was 60 cents. The problem becomes serious considering that most of Indian production comes from the unorganized sector. Since unorganized sector pay less wage than the organized mill sector, therefore labours working in mills have wages more than 60 cents. It implies production in the organized sector is less competitive vis-à-vis their Chinese counterparts. The worrisome aspect of the Indian textile industry is the falling labour productivity during the period following liberalization. In case of the textile group as a whole, four out of seven industries, namely cotton garments and clothing; handloom cotton textiles; cotton khadi, and powerloom cotton textile, witnessed fall in total factor productivity by 0.67%, 1.88%, 3.87% and 0.01%, respectively (Das, 1999).

India's industrial policy also contributes to the decline in India's competitiveness. Garment manufacturing in India is at present reserved for the small-scale industry (SSI) sector. This has been a discouraging factor as units willing to invest above Rs. 3 crore have to obtain permission from the government. There is an export obligation also, that requires 50 per cent of the output produced (in value terms) to be exported.

On the other hand, the nations we compete with have no barrier for investment. Investment is high even in low wage countries. Hence the argument, more investment in capital will drive out labour does not stand strong. Higher investment by reaping higher economies of scale can result in more labour employment, than merely operating under veil of small-scale enterprises with labour-intensive mode of production. Therefore, what is necessary is higher investment in Indian textile units and removal of factors such as reservation policy and rigid labour laws.

The Indian garment industry is also less diversified. Although China outweighs India in terms of cotton production, it has taken appropriate steps to increase variety of its textile products. It is the largest producer of cotton and cotton yarn, the second largest producer of wool, and yet by 2000. Man-made fibers are expected to constitute 30 per cent of all fibers produced in China. In a world of rapidly changing tastes,

such variability and flexibility in production is essential for acquiring any competitive edge. Interestingly, with phasing out of MFA, major markets will emerge in the higher segments, where China already has a competitive advantage.

For diversifying the fabric base, it will be necessary to ensure availability of man-made fabrics in sufficient quantities to apparel manufacturers at a competitive price. The readymade garments sector is the most important segment, talking about textile exports from India. In value terms it accounts more than 40 per cent of our textile exports. Indian readymade garments industry mainly manufacture cotton-made apparel. For instance, during 1997, cotton-made garments constituted 83 per cent by volume and 75 per cent by value of Indian garments exports. Unfortunately, the world preference is for synthetic made garments. Percentagewise, 80% of the world trade in apparel is done in man-made fibres and synthetic fibres. India predominantly produces cotton-made garments because of higher domestic demand. However, if it wants to look beyond domestic market, diversification is necessary. Table 5 shows synthetic consumption as proportion of total consumption of different fibres during 1992 was roughly 70 per cent in Korea, 66 per cent in Germany, 62 per cent in Japan, 56 per cent in the US, 44 per cent in Indonesia, 42 per cent in Thailand, but only 18 per cent in India.

**Table 5: Consumption of Textiles in 1992 (%)**

Country	Cotton	Wool	Cellulosics	Synthetics
India	72	2	8	18
China	60	5	4	31
Pakistan	88	2	1	9
Indonesia	43	1	12	44
Malaysia	35	4	-	61
Thailand	50	1	7	42
Korea	22	4	4	70
US	37	2	5	56
Germany	17	6	11	66
Japan	26	6	6	62

Source: World Bank (1997)

There are reasons for greater cotton consumption here. Indian agro-climatic conditions favours cotton production and availability of cheap labour does the rest. Although India is a major producer of cotton (accounting for 12 per cent of the total world production in 1993), yet its yield per hectare at 294 kgs. is one of the lowest in the world (only 49 per cent of the world average), showing some sign of inefficiency (Gangopadhyay et al., 1996).

The situation is bit different in the world market. Looking at the international demand structure, rapid industrialization after World War II and presence of temperate climate in the developed part has increased demand for synthetic products relative to cotton. Currently, only 10 per cent of India's textile export is attributable to synthetics, implying tremendous scope for India to increase its export in synthetics. So far as synthetic inputs are concerned, India possesses competitive advantage in their production. For example, naphtha and natural gas, the main ingredients for producing synthetic fibre, are abundantly available in India. Hence, the reason for India to look beyond cotton-made garments and concentrate more on man-made and synthetic fibre (in compliance with the world demand) is merited.

Talking about the endogenous problem, there is need to revive the Indian mill sector. Presently, India imports considerable amount of fabrics needed for our garment industry. However, this cannot be a long-term solution. It is necessary to strengthen the mill sector and remove all policy distortions going against its operation. Latest figures as on March 2000 show there are 342 cotton or man-made fibre textile mills lying close in India (parliamentary question-answer session, 2000). Measures capping restrictions on firm size and requirement for licences to produce synthetic items has gone against the mill sector.

The gain of distorted policy in favour of handloom and against the mill sector was taken by the powerloom sector. The powerloom did not have any government support that the handloom sector had; however, it did not have any restrictions placed on the organized mill sector. Gradual decline in importance of the mill sector is also reflected in its declining contribution in our export share. Table 6 illustrates this:

**Table 6: Contribution of Mill Sector in Apparel Exports**

Year	Cotton			Total (Percentage Value)		
	Mill	Powerloom	Handloom	Mill	Powerloom	Handloom
1985-86	58.5	33.5	8.0	52.4	40.4	7.2
1986-87	50.2	43.9	5.9	44.0	50.8	5.2
1987-88	43.7	51.0	5.3	39.0	56.3	4.8
1988-89	38.1	56.5	5.4	33.1	62.2	4.7
1989-90	38.3	57.3	4.4	30.5	66.0	3.5
1990-91	38.2	58.6	3.2	28.6	69.0	2.4
1991-92	28.5	68.2	3.2	22.1	75.4	2.5
1992-93	25.2	71.5	3.3	20.4	76.9	2.7
1993-94	23.6	73.9	2.5	19.6	78.3	2.1
1994-95	21.0	76.9	2.0	17.1	81.2	1.6
1995-96	22.9	75.5	1.6	18.5	80.3	1.3

Source: ICMF, Annual Report, 1997-98.

The increased importance of the powerloom vis-à-vis the mill sector is quite apparent. The production of fabrics irrespective of where they are produced and for the purposes they are produced require a post-weaving and knitting treatment. The logic behind such treatment is to enhance durability and colour fastness of the fabric. Before the advent of the powerloom sector, composite mills carried out such treatment themselves. Now, in 85 per cent cases powerloom sector carries out such an operation.

A fallacy of the government policy is to keep higher incidence of taxes on man-made and synthetic fibres. For example, during 1997-98, the excise duty on cotton yarn was only 5.75 per cent as against 20.7 per cent for blended yarn and 34.5 per cent for polypropylene

filament yarn (PFY). Removal of such policy distortion is necessary. The Indian yarn has been a typical example of discriminated commodity. The government protected downward weaving by restricting export of cotton yarn. Moreover, imported inputs for production of polyester staple fiber (PSF) and PFY are still subject to high duties (Roy, 1998).

#### **Government Action**

To find ways and means of revamping the textile sector the government of late has taken various steps. Prominent among three are: allowing zero-duty import of products required for designing garments; starting a technology upgradation fund scheme for helping and modernizing the fund-scarce textile units; permitting import of capital goods needed for apparel manufacturing units at a concessional rate (5 per cent less than the actual duty); and announcing the new export entitlement (quota) policy for the period 2000-2004 beforehand so as to minimize rent-seeking activities in the quota market<sup>7</sup>

Understanding the declining competitiveness of the textile sector, the government last year formed a committee headed by the former Textile Secretary, Mr. S. Satyam. The Satyam Committee Report, already submitted to the government, made some important recommendations. Important among them are:

- Deregulate the textile sector. In this regard the report says, "it will be incongruous to talk about its revival in the current context of liberalization, especially in the backdrop of globalization, without dismantling the regulatory regimen". Government henceforth should stop operating as a regulator and instead become a facilitator.
- Labour laws should be made more flexible. Companies should have the right to retrench excess labour without seeking government approvals as long as they pay 60 days average wages for every completed years of service instead of the present practice of 15 days.
- Modernization of the textile sector. The fear that modernization is

7. This paragraph is based on parliamentary question-answer session.

harmful to labour is wrong. "Such developments in other sectors have not been harmful to labour interests; they only benefit them. There is, therefore, no reason why textile industry labour should become an impediment to the development process," the report said.

- Diversification of the textile sector. For instance, there is a large scope to enter the technical textile area. In this context, the report says, "it is mind boggling to realize that textile can actually cover fields like agriculture, automobiles, aviation, environmental protection, furniture, medical, mining, pharmaceuticals and transportation".
- And, about fiscal measures the report states, "the fiscal policy for the textile sector should be aimed at stimulating demand with rational and lower tax structure, resulting in reduction of prices of fabrics and garments and making them cost effective".

The government is yet to implement any of these recommendations, but in all probability will deregulate, decontrol and de-reserve the textile sector in line with the recommendations of the Satyam Committee Report.

## **Section 5**

### ***Conclusion***

Therefore, taking full advantage from complete phase-out of market restriction requires not only increasing competitiveness and better marketing network (that India presently lack) but also calls for removing distortion arising out of incorrect government policy. Besides removing reservation for small-scale industry in the garment segment, it is needed to remove restrictions on raw material imports and rationalize existing excise rates on different types of fibres and fabrics.

To sum up, the following policy options can help Indian garment industry to face new challenges in a better way. First, to make labour laws more flexible, where it is possible to retrench a labour after giving him adequate compensation. Second, abolish the reservation of small-scale industry in the garment sector. Third, remove policy bias against

production of synthetic fibre. Fourth, to reduce transaction cost like, delays in shipment and clearance, involved in importing fabrics. Fifth, developing brand equity if possible through foreign tie-up, as the countries like Thailand, Indonesia and others are doing. In this regard, it will be beneficial to include garment industry in the list of industries for automatic approval for foreign direct investment. And last, to follow recommendations of the Satyam Committee Report.

**APPENDIX**

**Products (apparel) liberalized during the second phase**

Category / Importing Country	Products
<b>USA</b>	
239	Babies apparel except diapers cotton and man-made fibre
839	Babies apparel silk blend and vegetable fibre
349	Body supporting garments, cotton
359	Footwear cotton
859	Footwear silk blends and vegetable fibre
330	Handkerchiefs, cotton
630	Handkerchiefs, man-made fibre
631	Hosiery, man-made fibre
832	Hosiery, silk blend vegetable fibre
<b>Canada</b>	
4	Women's and girl's ensembles
6	Tailored collar knitted and woven shirts
7	Children's blouses and shirts woven
8	Children's blouses and shirts knitted
8	Women's and girl's knitted blouses and shirts

**Products (apparel) liberalized during the third phase**

Category/Country	Products
<b>USA and Canada</b>	
6116101520	Gloves vegetables fibre knitted impregnated w/out 4 crocheted cotton residue
6116101820	Gloves fibre knitted impregnated w/out 4 crocheted cotton residue
6116102520	Gloves vegetables fibre knitted impregnated w/out 4 crocheted cotton residue
6116103510	Gloves impregnated /rubber fibre knitted cotton residue due knitted
6116104510	Gloves ≥ 50% man-made fibres textile knitted impregnated with 4 crocheted
6116106010	Gloves ≥ 50% man-made fibres textile knitted impregnated without 4 crocheted
6116107010	Gloves impregnated /rubber fibre knitted impregnated w/out 4 crocheted residue
6116922010	Gloves pre-exist mach cotton pile fabric w/out 4 crocheted, knitted
6116922020	Gloves pre-exist mach cotton nap fabric w/out 4 crocheted, knitted
6116922030	Gloves pre-exist mach cotton fabric w/out 4 crocheted, knitted
6116922040	Gloves pre-exist mach cotton knit fabric w/out 4 crocheted, knitted
6116922050	Gloves pre-exist mach cotton fabric w/out 4 crocheted, knitted
6116922060	Gloves pre-exist mach cotton knit fabric with 4 crocheted, knitted
6116922070	Gloves pre-exist mach cotton knit fabric without 4 crocheted, knitted
6107910010	Men's robes and dressing gown knitted
6107910020	Boy's robes and dressing gown knitted
6108910030	Women's negligees, bathrobe's etc. of cotton knitted
6108910040	Girls' negligees, bathrobe's etc. of cotton, knitted
6115190010	Panty hose and tights and hose of cotton, knitted
6117106010	Shawls scarves muffler's cotton knitted

6117200010	Ties, bow ties and cravats of cotton knitted
6203221000	M/B judo karate oriental martial art uniform knitted
6116910000	Mittens and mitts of wool or fine animal hair knitted
6116931510	Gloves synthetic fibers $\geq$ wool 23% without 4 crocheted knitted
6116931520	Gloves synthetic fibers $\geq$ wool 23% with 4 crocheted knitted
6116936010	Gloves synthetic fibers $\geq$ wool 23% with 4 crocheted knitted
6115190020	Panty hose and tights of wool knitted
6117101000	Shawls scarves mufflers mantilla's veils wool knitted
6117102010	Shawls scarves mufflers mantilla's veils wool man-made fibres knitted
6117200020	Ties, bow ties and cravats wool knitted
6116932010	Gloves synthetic fibers not $\geq$ wool 23% without 4 crocheted knitted
6116932011	Gloves synthetic fibers not $\geq$ wool 23% with 4 crocheted knitted
6116905020	Gloves artificial fibers without 4 crocheted knitted
6116905040	Gloves artificial fibers with 4 crocheted knitted
6116999030	Gloves artificial fibers sub man-made fibres residue knitted
6107920010	Men's bathrobe, dressing gown man-made fibres knitted
6107920020	Boy's bathrobe, dressing gown man-made fibres knitted
6107920030	Women's negligee, bathrobe, etc. of man-made fibres knitted
6115120000	Panty hose and tight synthetic fibers single yarn knitted
6117102000	Shawls scarves muffler's etc. of man-made fibers knitted
6117102030	Shawls scarves muffler's etc. of vegetable fibers knitted
6117200030	Ties, bow ties and cravats of man-made fibers knitted
6104192080	W/G suits containing less than 70% by weight silk knitted
6104192090	W/G suits of other textile materials knitted
6103493018	M/B trousers breeches of other silk knitted

6103493020	M/B trousers breeches of textile knitted
6104292044	W/G trousers breeches of textile material knitted
6104693030	W/G trousers breeches of silk material knitted
6104693032	W/G trousers breeches of textile nesoi material knitted
6112192080	W/G trousers breeches of < 70% silk material knitted
6117900050	Parts trousers shorts < 70% silk material knitted
6107294020	M/B night shirts of textile materials with < 70% silk material knitted
6108392020	W/G night residues of textile materials with < 70% silk material knitted
6207290030	M/B night shirts and pajamas of textile materials
6115190040	Panty hose and tight cotton with < 70% silk waste knitted
6117106020	Shawls scarves and mufflers of textile material nesoi knitted
6116103530	Gloves impregnated tic subject to cotton or man-made fibres residue
6116999050	Gloves of silk count containing < 70% silk waste knitted
6101900050	M/B overcoats of < 70% silk knitted
6101900060	M/B overcoats etc. of textile materials nesoi knitted
6103292030	M/B overcoats etc. of textile materials nesoi knitted
6112192020	M/B jackets for track suits containing < 70% silk waste knitted
6201190050	M/B overcoats containing < 70% silk waste knitted
6102900025	W/G overcoats containing < 70% silk knitted
6102900030	W/G overcoats etc. of textile materials nesoi knitted
6104292018	W/G overcoats containing < 70% silk waste knitted
6104292020	W/G overcoats of textile materials nesoi knitted
6104392050	W/G suit type jackets containing < 70% silk waste knitted
6104392090	W/G suit type jackets of textile materials nesoi knitted
6112192030	W/G jackets for track suits containing < 70% silk knitted



6117900040	Parts coats and jackets < 70% silk knitted
6103292054	M/B shirts of textile materials nesoi knitted
6104292053	W/G blouse count of < 70% silk knitted
6104292054	W/G blouse of textile materials nesoi knitted
6105903050	M/B shirts of < 70% silk knitted
6105903060	M/B shirts of textile materials nesoi knitted
6106902050	W/G blouse of < 70% silk knitted
6106903040	W/G blouse of textile materials nesoi knitted
6109902015	M/B t-shirts of textile materials of < 70% silk
6109902030	W/G of textile materials of < 70% silk
6110900084	M/B pullovers and similar art containing < 70% silk knitted
6110900086	W/G pullovers and similar art containing < 70% silk knitted
6110900088	M/B pullovers and similar art of textile materials knitted
6110900090	M/B pullovers and similar art of textile materials knitted
6112192050	W/G pullovers and similar art of textile materials knitted
6112195060	M/B shirts for track suits containing < 70% silk knitted
6114900010	W/G shirts for track suits containing < 70% silk knitted
6117900030	Tops containing < 70% silk waste knitted
6104292030	W/G of skirts containing < 70% silk knitted
6104292032	W/G of skirts of textile materials nesoi knitted
6104592050	W/G skirts containing < 70% silk knitted
6104592090	W/G skirts of textile materials nesoi knitted
6103194070	M/B suits of silk containing < 70% silk waste knitted
6103194080	M/B suits of textile materials nesoi knitted

Note: M/B stands for Men and Boys; and W/G stands for Women and Girls.  
Source: Apparel Export Promotion Council, New Delhi

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