

# Implications for South Asian Countries of Abolishing the Multifibre Arrangement

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Modeling results suggest that South Asia as a whole will gain from the abolition of the quotas under the Multifibre Arrangement.

Unambiguously, however, the gains from domestic reform will increase after the abolition of the Arrangement as export demand becomes more price responsive.



## Summary findings

Kathuria, Martin, and Bhardwaj provide a simple introduction to the economics of the Multifibre Arrangement (MFA) and use available empirical evidence to examine its impact on exports of garments and textiles, focusing on India. Their review of the basic economics of the MFA shows the discriminatory character of the Arrangement. While exporting countries can gain from quota rents, much of this gain is likely to be offset by losses in exports to unrestricted markets, through waste resulting from domestic rent-seeking behavior, or shared with industrial country importers. Moreover, the restrictions curtail the ability of countries to generate sorely needed employment in the labor-intensive garment and textile sectors. Recent estimates for India of the export tax equivalents of the quotas suggest that they increased in 1999, after a couple of years around lower levels.

The authors also examine the domestic policy distortions affecting the industry in India. While the abolition of quotas on international trade in textiles in 2005 will create opportunities for developing countries, it will also expose them to additional competition from other, formerly restrained exporters. The outcome for any country will depend on its policy response. Countries that use the opportunity to streamline their policies and improve their competitiveness are likely to increase their gains from quota abolition. Modeling results suggest that South Asia as a whole will gain from quota abolition, although different countries may experience different results. Unambiguously, however, the gains from domestic reform will increase after the abolition of the quota arrangement.

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This paper—a product of Trade, Development Research Group and the South Asia Region—is part of a larger effort in the Bank to understand the impact of trade distortions and analyze domestic policy responses. Copies of the paper are available free from the World Bank, 1818 H Street NW, Washington, DC 20433. Please contact Maria Lourdes Kasilag, room MC 3-321, telephone 202-473-9081, fax 202-522-1159, email address [mkasilag@worldbank.org](mailto:mkasilag@worldbank.org). Policy Research Working Papers are also posted on the Web at <http://econ.worldbank.org>. The authors may be contacted at [wmartin1@worldbank.org](mailto:wmartin1@worldbank.org), [skathuria@worldbank.org](mailto:skathuria@worldbank.org), or [anjali@winrock.ernet.in](mailto:anjali@winrock.ernet.in). November 2001. (23 pages)

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# **Implications for South Asian Countries of Abolishing the Multifibre Arrangement**

by

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# Implications for South Asian Countries of Abolishing the Multifibre Arrangement<sup>1</sup>

## I. Introduction

An important feature of the Uruguay Round agreement was the agreement by the developed countries to abolish the Multifibre Arrangement quotas<sup>2</sup> that (with their predecessors) have restricted exports of textile and clothing products from developing countries for close to forty years. This iniquitous system of quotas has violated all the fundamental principles of the multilateral trading system, and discriminated against the poorest countries and those seeking to move up from reliance on commodity trade towards an emphasis on manufactures.

While enormously welcome, the prospective abolition of these quotas will not necessarily generate automatic benefits to individual countries. Developing countries had to invest a large amount of their negotiating capital into securing the developed countries' agreement to abolish these quotas. As Mattoo and Subramanian (1999) argue, they may need to press hard to ensure that the abolition of the quotas goes according to plan.

The abolition of the quotas will create opportunities for developing countries, but will also expose them to additional competition from other, formerly restrained, exporters. The outcome for any individual country will depend heavily on its policy response. Countries that take the opportunity to streamline their policies, and improve their competitiveness, are likely to increase their gains from quota abolition.

In this paper, we start by providing a simple introduction to the economics of the MFA, using a simple diagrammatic treatment of the impacts of MFA-type quotas. In section III, we examine some of the empirical evidence, focussing particularly on India. Kathuria and Bhardwaj (1998) have recently provided some new results on the magnitude of the effective taxes imposed by the MFA on India's exports of textiles and

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<sup>1</sup> The views expressed in this paper are entirely those of the authors and should not be attributed in any manner to the World Bank (Kathuria and Martin are at The World Bank, while Bhardwaj works at Winrock International). We are grateful to DK Nair, Secretary General of the Indian Cotton Mills Federation, for numerous discussions on the subject over the last two years, which have contributed greatly to our understanding of the Indian textiles industry. We also thank Garry Pursell for useful comments and suggestions.

clothing. This paper further updates those results and, in section IV, examines the domestic distortions affecting this industry. Section V reviews some of the evidence on the likely impact of MFA abolition on South Asia, and of the implications of domestic reforms in India before and after the abolition of the MFA, and section VI concludes.

## ***II. The basic economics of the MFA***

A key feature of the quotas imposed under the MFA is that they are imposed only by a subset of countries, and only on exports from a subset of exporters. For an individual exporter, the impact of these quotas is to restrict access to the MFA importer markets, and to encourage diversion of its exports from these restricted markets to other, unrestricted, markets. An important feature of this policy regime is that the importers allow the exporters to allocate the quotas, and hence to benefit from the higher prices in the restricted markets. This is perhaps because the original system of quotas from which the MFA evolved was of such doubtful legality under the GATT.

The basic economic implications of the MFA for an individual exporter can be summarized in the simple diagram drawn from Martin and Supachalasai (1990) and presented as Figure 1. To keep the diagram simple, we base it on the widely-used Armington assumption that the products produced by the exporter of interest are differentiated from those produced by other countries. This allows us to draw well-defined import demand curves for the country's products in the restricted markets ( $D_R$ ), and in the unrestricted markets ( $D_U$ ). The horizontal summation of these two demand curves gives the global demand ( $D_T$ ) for the exports from the exporter under consideration. In the absence of any quota restrictions, as in Figure 1, the intersection of this total demand curve, and the export supply curve from the country in question, will yield the uniform price at which exports are sold.

Figure 1. Market equilibrium in the absence of quotas

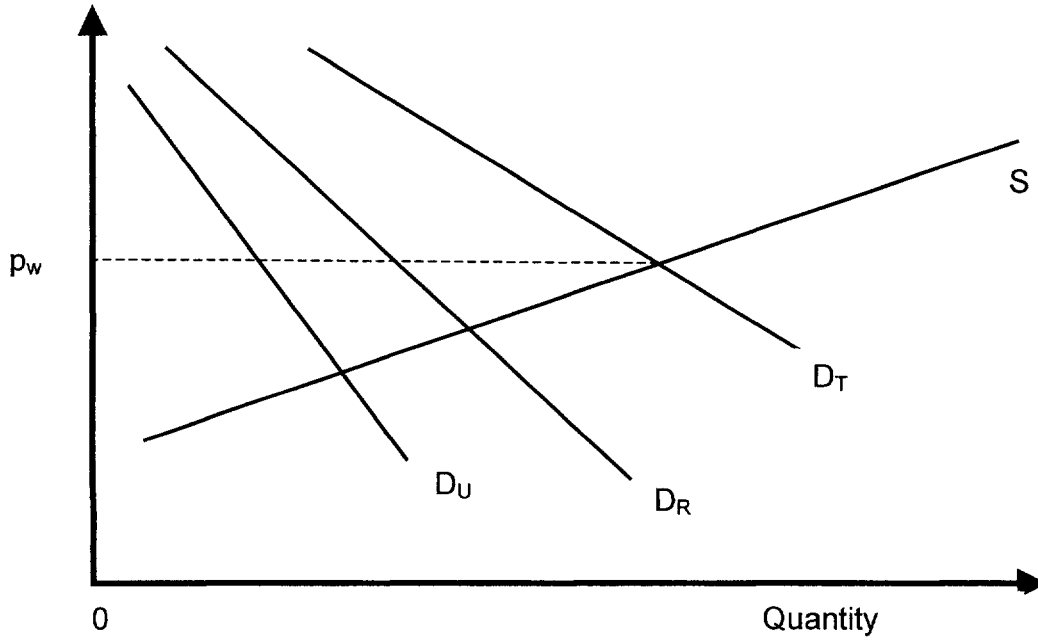
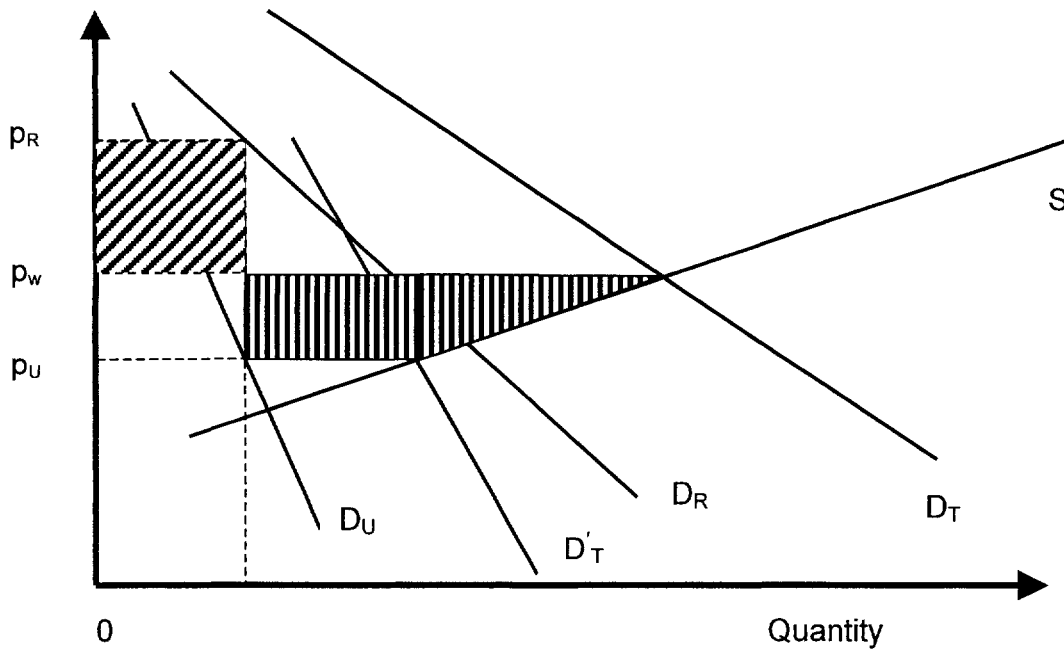


Figure 2. Market equilibrium in the presence of quotas



In the undistorted equilibrium represented in Figure 1, the same price applies in both the ‘restricted’ (the restriction, of course, comes about in Figure 2) and unrestricted markets, and the allocation of exports between the two markets depends only on the magnitude of demand in those markets. When quotas are introduced in the restricted market as shown in Figure 2, the quantity exported to this market declines. Because of the restrictions, the price received for exports to the restricted market increases from  $p_w$  to  $p_R$ . However, the price received for exports to the unrestricted market declines from  $p_w$  to  $p_U$  (which is the new world price/marginal price). Note also that the overall demand curve facing the country ( $D'_T$ ) becomes steeper, and hence less elastic, because of the zero elasticity of demand in the restricted market. Because the marginal price of output falls, the volume of output in the industry unambiguously declines. Whether static welfare increases or decreases depends upon whether the gain in the restricted market export market as compared with the situation in figure 1 (represented by the cross-hatched area in Figure 2) outweighs the losses in the unrestricted markets (represented by the vertically shaded area in Figure 2).<sup>3</sup>

The overall impact of the MFA on a country’s welfare cannot, of course, be determined simply by the static welfare impacts in Figure 2. A major problem with gains that accrue in the form of rents is that they set off what Bhagwati has termed Directly Unproductive (DUP) activities in which enterprises and individuals use real resources in the pursuit of the quota rents. Krishna and Tan (1998) point out that the systems of quota allocation used in the South Asian countries encourage such activities. Quota allocations are frequently based on historic export performance, creating an incentive for firms to increase their exports to unrestricted third markets even when these are not directly profitable, thus increasing the losses accruing in unrestricted markets. A further source of loss with the quota rents is losses to exporters through rent sharing. When export quotas are finely defined, some major importers appear to acquire sufficient market power to be able to appropriate some of the quota rents.

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<sup>3</sup> Producer welfare in Figure 1 is represented by the area between  $p_w$  and the supply curve  $S$ . The gain in welfare in Figure 2 is the area above  $p_w$  (the cross-hatched area), while the area below  $p_w$  is the loss in welfare (the vertically hatched area).



While Figure 2 provides a basis for evaluating the partial impact of quotas on a single country's exports, it is inadequate as a basis for evaluating the overall impact of the MFA on a country because it does not take into account the impact of restrictions on other countries' exports. Restrictions on other countries' exports tend to increase the demand for exports from the country of interest. It is clearly possible that some exporters might benefit in the short term from these arrangements if they are less restricted than other countries. Traditionally, small suppliers have tended to have an advantage in that they were less likely to trigger quotas than major suppliers such as India or China. However, in recent years, the key gainers in terms of restricted market access have been relatively large suppliers such as Mexico, Turkey and the Central European countries that have benefited from regional preferences granted by the major importers.

One very crude indicator of the restrictiveness of the quotas for a particular country is the share of its exports directed to quota markets. If all countries were broadly similar, one might expect the share of exports directed to quota and non-quota markets to be roughly the same.<sup>4</sup> Since each country's MFA quota levels are based on more or less arbitrary historical factors, there are good reasons to anticipate that they will result in barriers whose export tax equivalents vary considerably between exporter-importer pairs. Under these circumstances, the shares of export revenues from restricted and unrestricted markets can be expected to vary. The more competitive a country, relative to its quota allocation, the greater is likely to be the share of its export revenues that it receives from sales outside the restricted markets. A better indicator, where this is available, is the export tax equivalent of the MFA quotas that restrict exports from one supplier to a particular market.

All of the analysis to this point has been comparative static in nature. When we take a dynamic perspective on the problem, the costs of the MFA are potentially more serious. A key feature of an outward-oriented development process seems to be the identification of industries where relatively high levels of productivity can be achieved. Bernard and Jensen (1999) find that it is the expansion of such industries, rather than

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<sup>4</sup> Of course, countries are not the same, and there may be reasons, such as proximity or historical performance, for some countries to have much higher shares of exports to quota markets. However, the export share still provides a useful benchmark.

learning by doing within industries, that appears to account for the bulk of the potentially formidable gains associated with export growth. Where superior technology can be introduced into an economy with low productivity in other sectors, and hence low factor prices, such a sector is, at first, extremely profitable. When the policy environment is sufficiently accommodating, and the infrastructure adequate, such a leading sector can grow extremely rapidly. The extraordinary growth rates achieved by the clothing export industry in Bangladesh, where exports are said to have grown by around 100 percent a year for 25 years, highlight this phenomenon.

The presence, or the continuing threat, of export quotas reduces the opportunity for developing countries to use the relative ease of adopting new technology in the clothing sector as a first step on the ladder of economic development. At the other end of the product life cycle, it encourages economies like Hong Kong, whose natural comparative advantage in this labor-intensive industry has largely gone, to continue in production because of the quota rents that are available to incumbent exporters.

### ***III. Export Tax Equivalents***<sup>5</sup>

One of the major problems associated with non-tariff barriers such as quotas is their lack of transparency. The presence of a quota of a certain size provides no clear indication as to whether exports are being restricted by a large or a small amount. MFA quotas are administered by exporters, and hence the value of the scarce quotas accrues to those exporters who hold the quotas. In order to export apparel or textile goods subject to quota, exporters must either buy quotas for these goods, or pass up the opportunity of selling quotas they already hold. For many purposes, it is useful to think of an export quota as being effectively the same as an export tax in its restrictive impact on exports. The price of a quota per unit of exports is then equivalent in its impact to an export tax of the same magnitude. If we divide the quota price by the value of the good in the absence of quotas, we obtain a measure of the quota rent in proportion to the value of the export. This is potentially a very useful indicator of restrictiveness, allowing the countries imposing the protection, and those suffering from it, to know what rate of protection is

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<sup>5</sup> This section is based on an update of Kathuria and Bhardwaj (1998).

being imposed. It captures the degree of excess demand in the form of a price, given the demand and supply situation at a point of time for a particular product.

**Table 1. Export Tax Equivalents for Indian Garment Exports to the USA and the EU (Percent)**

Category	1999	1998	1997	1996	1995	1994	1993
<b>USA:</b>							
<b>Group I</b>							
Weighted average	41.71	29.06	26.49	31.3	41.2	37.8	44.1
Simple average	32.22	23.95	23.11	23.4	25.9	24.7	32.8
<b>Group II</b>							
Weighted average	31.36	5.17	5.1	0.6	0.8	9.7	5.8
Simple average	35.63	4.83	5.19	1.3	1.5	14.6	13.8
<b>Total</b>							
Weighted average	40.21	25.9	23.92	28.0	36.9	35.7	38.8
Simple average	34.84	9.18	9.67	6.4	7.2	17.1	18.5
<b>Cotton</b>							
Weighted average	n.a.	n.a.	n.a.	38.9	51.0	50.9	48.2
Simple average	n.a.	n.a.	n.a.	14.2	15.8	23.7	28.1
<b>Synthetics</b>							
Weighted average	n.a.	n.a.	n.a.	16.4	16.4	13.0	4.7
Simple average	n.a.	n.a.	n.a.	10.4	13.1	19.0	11.8
<b>EU:</b>							
<b>Total</b>							
Weighted average	18.77	14.78	15.49	18.6	14.4	13.9	14.0
Simple average	17.08	12.07	13.36	14.8	11.9	12.9	12.5
<b>Cotton</b>							
Weighted average	n.a.	n.a.	n.a.	17.4	13.3	14.1	13.7
Simple average	n.a.	n.a.	n.a.	16.2	12.7	14.3	14.3
<b>Synthetics</b>							
Weighted average	n.a.	n.a.	n.a.	22.9	16.8	9.0	14.5
Simple average	n.a.	n.a.	n.a.	12.6	10.6	11.4	10.8

The quota price corresponds to the difference between  $p_R$  and  $p_U$  in Figure 2. Export tax equivalents (ETEs) are calculated here on the basis of unit values of exports, as  $[QP/(UV-QP)]*100$ , where QP is the quota price and UV the unit value of exports<sup>6</sup>. The ETE indicates the quota premium as a percentage of the unit value of exports excluding the premium.<sup>7</sup> Kathuria and Bhardwaj (1998) give details of individual ETEs calculated for each quota category. In this paper, we only report the quotas aggregated by country or region and by fiber.

<sup>6</sup> We define the export tax equivalent (ETE) as the value of the quota divided by the price received by a producer who does not own quota for this product.

<sup>7</sup>In figure 2, the ETE is  $[(P_R - P_U)/P_U]*100$ .

In this exercise, we focussed on the two largest markets for Indian textiles and garments, the USA and the EU, which accounted for 73 percent of total textile and garments exports in 1995/96 (66 percent of garment exports in 1998/99). As a proportion of quota-restricted (MFA) markets, their share is even higher, accounting for 94 percent of total garment exports in 1998/99. For the USA as a whole, Table 1 shows that overall (weighted by value of exports) ETE, which was 38.8 percent of the unit value of exports in 1993, and 36-37 percent in 1994 and 1995, declined over the next three years, before picking up in 1999 to over 40 percent. Exports to the EU appear less restricted, with aggregate weighted ETEs being around 14 percent between 1993 and 1995, increasing to about 19 percent in 1996, and going back to that level in 1999 after declining in 1997 and 1998.

The table also displays the simple averages, which show the same trend over time as do the weighted averages. One difference worth pointing out is that the simple and weighted averages are much more disparate in the case of the USA than the EU—implying that the dispersion of individual product ETEs is much lower in the EU. Also, for 1995-1998, the simple average ETE is larger for the EU than for the USA. Finally, Table 1 shows, until 1996, ETEs for synthetics and cottons. For the USA, the ETEs for cotton products are higher. This tendency is not evident in the EU.

Exports to the US are divided into two categories, Group I and II. Group I products have quotas defined for individual products, such as gents shirts, ladies blouses, etc. For Group II, the quotas are administered for all the products (such as gloves, handkerchiefs, knit shirts, etc.) in the group as a whole—as a result, the quota premium is the same for all the products within the group, and the variations in ETE arise only from differences in unit values (see Kathuria and Bhardwaj (1998) for product-wise ETEs). For the USA, in 1995, Group II garments had seen their ETE decline sharply, but owing to the low weight of Group II in the total, the weighted average did not decline. It was only in 1996, when some of the important Group I garments (338- knit shirts and blouses) saw a sharp fall in their ETE, that the weighted ETE for Group I as well as for the USA as a whole fell. The recovery in 1999, on the other hand, relates to increases in ETEs for both Group I as well as Group II products (especially Group II).

It should also be noted that ETEs in the range of 28-40 percent for the USA are *higher than the actual tariffs* levied by the USA on imports of textiles and apparel, and give one (partial) indication of the hidden cost of the MFA, both for the exporting as well as the importing country.

The presence of substantial ETEs in the Indian garment and textiles industry is indicative of excess demand, given quota allocations. After what appears to be a temporary decline in 1997 and 1998, the ETEs for Indian garments recovered strongly in 1999. These high ETEs mean that there may be static welfare gains (see Figure 2) for India-- but which need to be set off against possible declines in prices in unrestricted markets. However, a more fundamental loss would seem to be the loss of potential output and all its associated welfare impacts in terms of employment growth, productivity growth and potentially high profits.

There is little doubt that the ETEs could have been even higher, had there been lesser domestic constraints in the operation of Indian firms. To put it another way, India has the potential to benefit substantially from the abolition of quotas in terms of increased market access, employment and output growth, and productivity gains. Policy constraints need to be eased for another and even more immediate reason—the threat of increased imports arising from the removal of domestic import restrictions with effect from April 2001.<sup>8</sup> Such constraints, which are well-known in India, are the subject of the following section.

#### ***IV. Domestic Policy Constraints in India***

Domestic policy constraints have long affected the textile and clothing industries in South Asia. These constraints are particularly severe in India, which has perhaps a stronger tradition of intervention in industry policies than other South Asian countries. Many of the distortions that reduce the efficiency of the sector are quite complex, and assessments of their impact require detailed studies of the sectors.

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<sup>8</sup> A surge of imports is, however, unlikely, given that Indian garments and textiles are largely quite cost competitive.

### Disincentives to operating in the factory mode

The garment industry is based on a system of decentralized production. This owes at least partly to the existence of labor legislation and the lack of an effective exit policy, as well as the reservation of garment (until recently) and hosiery production for the small-scale sector.<sup>9</sup> However, decentralized production also has natural advantages such as cheap labor in the subcontracted firms as well as flexibility of production. The tax regime which grants exemptions and concessions in tax payments to small-scale producers also favors the decentralized mode. The question that now needs to be addressed is whether the decentralized system of production is getting to be a constraint to investment and therefore to increased productivity and growth of the apparel industry.

Indian garment exports have been niche-based, focusing on low volume and high variety of outputs, within the broad area of fashion clothing and especially ladies outerwear. The flexibility in the Indian production system is eminently suited to meet this demand. In fact, the nature of demand and the characteristics of the production system are mutually reinforcing. The downside of relying on fabricators is that there are likely to be variations between different lots of output. This effectively *prevents India from becoming a major player in the mass market for clothing*, which demands good and consistent quality across huge volumes of a single item of clothing, such as in uniforms.<sup>10</sup> Moreover, the average quality of output, although much improved, still has not allowed it to go beyond the middle price range.

All the countries with very successful garment exports have a much lower level of subcontracting than India. As Khanna (1993: 285) points out, apparel firms in India subcontracted 74 percent of their output, compared with only 11 percent for Hongkong, 18 percent for China, 20 percent for Thailand, 28 percent for South Korea and 36 percent

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<sup>9</sup> Alam (1991), in a study of small industrial firms, found that firms deliberately minimize the size of the labor force in order to reduce the bargaining power of employees and to avoid legal obligations towards them. The most common way to do this is to separate the most labor intensive production process, ie fabrication in the case of garments, and get this work done by outside contractors. As part of the National Textile Policy 2000, garments production was de-reserved and the production of garments by large firms in India was no longer barred.

<sup>10</sup> In Khanna's (1993) study of 149 apparel manufacturers in five countries of SE Asia, manufacturers in Hong Kong and Thailand observed that Indian garments lacked consistency and uniformity in quality.

for Taiwan. All these countries have a broader base of exports, and have done very well in the market for large volumes of uniform products. Khanna also presents evidence to show that apparel firms are more productive in East Asian countries than India-- and this is due to far larger investments in machinery, even in the case of low-wage China. Even within machinery investment, Indian firms tend to invest more in sewing machines, and investment in processing and special machines form a very small part of the total.<sup>11</sup> The implication of this and the previous paragraph is that in order for Indian exports to grow substantially beyond present levels, there will be a need to change the current overwhelming reliance on fabricators.

Much of the garment industry is aware that factory investment is needed, but has been unwilling to commit itself to larger investments. This is partly because of failures of some high-profile garment factories, at least partly on account of labor problems. It is not as if there are no large organized sector firms in the country—quite the contrary. If so, what makes the garment industry so different or unable to handle the labor issue? Perhaps it is the high export orientation of the industry as well as its focus on fashion goods, wherein even a short strike can cripple the firm.<sup>12</sup> A second reason for lack of investment in factories is that the domestic fabric base is not fully compatible with the demands of factory production, with large lengths of uniform lots of fabric, which are needed for factories, not being produced in the domestic sector. This is because fabrics are sourced largely from (small) powerlooms and/or because of lack of good quality dyeing and printing facilities for fabrics.

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**Typewise Average Number of Machines installed by each Apparel Export Firm**

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

Source: Kathuria and Bhardwaj(1998), p. 17, drawn from Khanna (1993)

<sup>12</sup> In the case of non-fashion goods, since the demand for any good may last longer than for fashion goods, firms may be able to ride out a short strike, even if by selling at a discount to another buyer.

Our own judgment on this is that subcontracting is a low-risk low-capital strategy. With subcontracting, the bulk of the labor force is “outsourced”, which results in a major decline in fixed costs. Investments in equipment and factory space are also minimized. Exporters are unwilling to trade this off against an unproven and high risk strategy, unless their backs are pushed to the wall (i.e. demand for the present kind of products starts declining), which has not happened so far. Risks are high because: *One*, labor becomes a fixed cost in India owing to the grave difficulty of shedding labor in an industry where demand can be cyclical. *Two*, while investing in a large factory for garments, exporters have to make a commitment to export 50 percent of their output in perpetuity (now no longer required after de-reservation of garments in 2000). While actual exports may be more than the commitments, the obligation and the *attendant monitoring* of the export obligation (the Inspector Raj syndrome) by the authorities enhance the risk perception for the investor. *Three* (and this is more speculative), the factory mode may make the final product more expensive (albeit of higher quality), for which the off-take from the domestic market is uncertain, since it is still highly price sensitive. This may make the exporter more export-oriented than he would like to be/or the government requires him to be.

#### Fiber Bias, Product Reservation and Hank Yarn Obligation

Perhaps the most critical aspect is the policy bias against synthetic fibers. This arose from the view that “...cotton is for the masses and synthetics for the classes!”<sup>13</sup> as well as a concern for cotton producers. Man-made fibers (MMF) have always been subject to higher rates of indirect taxation vis-à-vis similar cotton based products. Moreover, domestic costs of manufacturing synthetic fibers and polyester filament yarn are high on account of uneconomic plant size in an industry where scale economies were very important. This arose from the industrial licensing policy which licensed relatively small plants for production of specified outputs with little inter-fiber flexibility. The latter policy changed with the coming of the textile Policy of 1985, which adopted a distinct multi-fiber approach. However, although the gap has narrowed, tax policies still

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<sup>13</sup> Ramakrishna (1995: 5), in a discussion paper on restructuring the textile industry.



discriminate against MMF vis-à-vis cottons, and this discrimination at the fiber stage continues into the yarn and fabric stages. For example, while the excise duty on cotton yarn in 1997-98 was 5.75%, it was 20.7% on blended yarn and 34.5% on PFY (Polyester Filament Yarn).<sup>14</sup> Moreover, imported inputs for production of PSF (Polyester Staple Fiber) and PFY are still subject to high duties (for example, in 1998, it was 25 percent on DMT, PTA and MEG and 30 percent on caprolactum).<sup>15</sup>

While the policy bias is narrowing, the differential still prevails in the following way: *one*, controls on export of cotton and cotton yarn mean that prices of raw cotton are typically below international prices, which is an implicit subsidy to the consumers of cotton; *two*, the still high import duties on synthetic yarn and intermediates; *three*, the domestic duties such as excise are lower for cotton fabrics. This combines with a trade regime that, despite improvements, remains cumbersome and imposes high transaction costs, for example, when exporters claim duty drawback on exports or want duty-free imports for exports. The combination of the cotton bias and the high transaction costs imposed by the trade regime has meant that India's production, consumption and export of textiles and garments is still heavily *weighted in favor of cotton based products*. For example, cotton exports were 83 percent by volume and 75 percent by value of all apparel exports from India in 1993, and this has fallen only slowly to 81 percent and 71 percent respectively in 1998. As against this, world exports and consumption are predominantly in the synthetic blends.

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<sup>14</sup> For details, see World Bank (1997), volume II, annex1.

<sup>15</sup> The decline in the policy bias can be seen from the gradual decline over the years in the rates of customs duty on synthetic fibers and inputs into the production of synthetic fibers. Customs duties (not including countervailing duty which is essentially the excise duty on the imported good) on the most important fibers have declined: for VSF (Viscose Staple Fiber), from 60 percent in 1987, to 25 percent in 1996; for PSF and ASF (Acetate Staple Fiber), from more than 150 percent in 1987, to 45 percent in 1996 and 32 percent in 1997. Duties on inputs such as DMT, PTA, MEG, Caprolactum and Acrylonitrile have declined from 90-195 percent in 1987 to 20-45 percent in 1996. Along with this, the domestic industry has also become more competitive, both at the input stage as well as the output of fibers. This can be seen via declining NPCs (Nominal Protection Coefficients i.e. *basic ex-factory price/cif price*) for fibers. Declining NPCs signify that domestic production is becoming more competitive and NPC less than one means that domestic production is cheaper than the international benchmark. VSF was already close to international prices by 1987 (NPC of 1.05) and has consistently had an NPC less than one thereafter. PSF and ASF, the fibers which were less competitive to begin with, have also seen a steady decline in their NPCs, from 2.5-3 in 1984 to 1.3-1.5 by 1993 (helped by the devaluation of the rupee in 1991 and a depreciation thereafter), and by 1996 all the three fibers were competitive. The inputs that go into fiber production have also witnessed declining NPCs in all cases, and at least for two of the most important (DMT and PTA), domestic prices were competitive by 1996. See Kathuria and Bhardwaj (1998: Tables 10 and 11).

The potential gains from promoting a true multi-fiber policy cannot be precisely estimated, but the possibilities are very promising. One could think of an increase in India's overall exports based on the world demand pattern of non-cotton to cotton consumption, using as a base the current value of cotton based exports. In 1998-99, 71 percent of garment exports of US\$ 5269 million and 70 percent of all textiles exports including garments of US\$ 8387 million were cotton-based. If, on the other hand, cotton-based exports had been only 50 (40) percent of total exports, and assuming no decrease in cotton exports, total exports of textiles in 1998-89 would have been US\$ 11742 (14677 if 40 percent), and garments would have been US\$ 7482 million (9352 if 40 percent). Thus, *had India's policies not been cotton-biased, its textile and garments exports could have been as much as 75 percent higher than they are today, on this count alone.* Of course the domestic bias could have been substantially mitigated had the import duty drawback and the duty free import for export system worked efficiently.

Promotion of the handloom sector has been a central feature of the textile policy in India. According to the Ministry of Textiles Annual Report of 1998-99, handlooms provide direct and indirect employment to over 12.4 million weavers. This, along with its desire to preserve culture and heritage, has meant that the Government has used several instruments to prop up the handloom sector. One of these is the reservation of 11 textile articles (such as cotton and silk sarees, dhotis, towels, lungis, bedsheets, shawls, blankets, etc.) for exclusive production in the handloom sector, according to the latest policy on this issue dated August 1996. The implementation of this policy got a boost when in 1994, the Supreme Court dismissed the petitions challenging the Handlooms (Reservations of Articles for Production) Act 1985. In 1995-96, the government inspected 63280 powerlooms and lodged preliminary complaints (FIRs) against 15 for violation of this order!

The futility of this policy can be gauged from the fact that there were, according to Government estimates, as many as 1.4 million powerlooms in India by the end of 1995. As Misra (1993) points out, the policy ignores the dismal past record of enforcement measures as well as the huge administrative machinery that is required to enforce this policy. Besides requiring this totally unproductive administration, the policy

is also a breeding ground for corruption. It is no surprise that Misra concludes that the Act has made little material difference to the state of the handloom sector. On the other hand, it has penalized domestic industry as a whole. As in the case of SSI, *foreign-made products in the form of imports can compete with these 22 items, even as domestic industry is kept out.*

Impact of the Hank Yarn Obligation: The policy stipulates that spinning mills should supply not less than 50 percent of the yarn marketed by them in the form of hanks for use by the handloom sector. Hank yarn is exempted from excise and sales tax, and opens up the possibilities of corruption, misdeclaration and so on. There have been both direct costs of this policy as well as the longer term impact on investment decisions. Misra (1993) advocates that the obligation be done away with, and if necessary independent hank reeling centers close to handloom concentrations could be set up by handloom development agencies.<sup>16</sup>

All these policy restrictions impair the efficiency of the industry and result in an upward shift in its supply curve. This in turn results in lower measured Export Tax Equivalents than would have prevailed in a less constraining policy environment (a downward shift in the supply curve results in an increase in the quota price—intuitively, it can be thought of as an increase in competition for the same quota). Removing these restrictions will be vital in the post quota world where competitiveness will be the key.

#### Key Policy Imperatives

To summarize the policy discussion, India's textile industry will benefit from policy action along the following lines:

- *Reduction of disincentives for factory mode production.* Following the recent repeal of the reservation of garments production for small-scale units, a major disincentive for factory mode production has been removed.<sup>17</sup> Policies such as these, which are

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<sup>16</sup> For details, see annex 3, World Bank, vol. 2 (1997: 10-12). Also see Misra (1993: 223-26).

<sup>17</sup> However, hosiery products are still reserved. As per the 2000 National Textile Policy, the reservation will be reviewed. See Husain Committee (1998), World Bank (1998) and Chatterjee and Mohan (1993) for more details on how the small industry policy impacted production, output, quality, etc. The Husain Committee on small-scale industry recommended complete abolition of small scale reservation in all sectors.

unique to India, have allowed China, with very similar factor endowments, to march well ahead of India in the export business. Secondly, and accompanying SSI de-reservation, introduction of a labor policy wherein labor can be retrenched if necessary, with appropriate safeguards.<sup>18</sup> Part of the pressure for these changes is already appearing from international buyers, who are demanding to see factory-type production in conditions where they can be confident about production systems and quality control, and working conditions.

- *Removal of the policy bias (high taxation) against synthetic fibers* (which is admittedly lower than in the past), thereby increasing the domestic base of synthetic fibers and providing the factories an additional source of demand, and providing an avenue to increase exports in a major way.<sup>19</sup> Cheaper domestic sourcing may also reduce the need for exporters to import synthetic fibers and would thereby reduce their transaction costs.
- *Eliminating the reservation for exclusive handlooms production* will enable large and small Indian firms to compete equally with large foreign firms (who cannot be barred from exporting these products to India), and eliminate the large administrative apparatus that polices compliance with this, thereby reducing the bureaucratic (Inspector Raj) cost imposed on firms. In a very similar vein, *eliminating the hank yarn obligation* will help. Neither policy has been successful at propping up the uncompetitive segments within handlooms. The 2000 National Textile Policy promises to review these policies “keeping in mind the needs of the handloom industry.”
- Other policies of a more generic nature will also help. For example, making imported fabrics available for export production in an effective manner: currently, there are *long delays in shipments, clearance* and there are several problems in the operation of

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<sup>18</sup> The Finance Minister’s 2001/02 Budget speech announced that the Industrial Disputes Act and Contract Labor Act will be amended. The implementation of this announcement would allow easier layoffs for firms with less than 1000 workers and facilitate contractual hiring and outsourcing of jobs.

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the duty free input for exports schemes.<sup>20</sup> In general, the transaction costs of trading remain very high, and contribute in a substantial way to the anti-export bias that still persists in the Indian economy. Finally, continued easing of trade constraints including reduction in the high rates of customs tariffs will also facilitate exports.<sup>21</sup>

## ***V. Implications of Reform***

Recent studies using general equilibrium modeling techniques have examined the implications of abolition of the MFA for South Asia. Another relevant series of studies has assessed the implications of domestic reforms in India before and after the abolition of the MFA.

Evaluating the implications of MFA abolition requires a model comprehensive enough to take into account the interactions between suppliers and their distortions, as well as the interactions between the textile and clothing sectors and other sectors of each economy. This requirement tends to lead to the use of computable general equilibrium models, which can incorporate these different features. Several such studies were conducted as part of the evaluation of the Uruguay Round, including Hertel, Martin, Dimaranan and Yanagishima (1996), and Harrison, Rutherford and Tarr (1996).

Both of these studies concluded that South Asia in total would be a significant beneficiary from abolition of the MFA. Hertel et al conclude that the gains to the region would be around \$2 billion per year. These results point to substantial overall gains that are likely to be greater, if anything, today than they were estimated to be in 1996, because of the increases in export tariff equivalents reported above, and because of completion of regional arrangements (NAFTA and Europe/Central Europe/Turkey) that have caused trade diversion away from South Asia.

Abolition of the quotas will also greatly increase the return from reforms in the domestic industry. Abolition will also increase the defensive need for South Asian countries to improve productivity in these sectors, since countries that do not reform to

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<sup>20</sup> See Nair and Kaul (1996).

increase their efficiency will face greatly increase competitive pressure, as other exporters currently repressed by the quotas will also be liberalized.

Elbeheri, Hertel and Martin (1997), examine the implications of a number of policy reforms that increase productivity in the textile and clothing industries in India. One experiment considers reforms that raise labor productivity in the clothing sector by 67 percent, to reach roughly the level enjoyed by China. Such an increase in productivity would seem a realistic goal for policy reforms such as reductions in the disincentives for operating in factory mode, and allowing FDI in the industry. The experiment was undertaken both before and after abolition of the quotas to assess the importance of prior abolition of the MFA. The welfare results were then decomposed to allocate them to their sources. The results of the experiment are shown in Table 2.

Table 2. Welfare impacts of reforms that raise labor productivity in the clothing sector  
\$US 1992 million.

	Total Welfare	Terms of trade	Allocative efficiency	Productivity
Before abolition	577	62	74	442
After abolition	1700	476	255	970

The total welfare gains in Table 2 are divided into direct impacts of productivity growth, increases in allocative efficiency, and terms of trade gains. The welfare gains resulting from productivity increases depend on the size of the sector in which the gain occurs. The gains in allocative efficiency depend upon the induced changes in quantities of exports and imports passing over trade barriers—the higher the barriers over which additional imports come, the larger the difference between the value of imports in the country and their external cost, and the larger the gains from additional imports<sup>22</sup>. The

<sup>21</sup> See World Bank (2000), Chapter 6, for details relating to India's tariffs and other trade-related policies. The study also documents the increasing use of anti-dumping practices, and argues that improving India's domestic policies will be more beneficial in the long run, as opposed to practices that increase protection and thereby the anti-export bias.

<sup>22</sup> Fukase and Martin (2000) show that this source of welfare gains can be substantial. In the case of Vietnam gaining MFN access to the US market, this accounted for 40 percent of the welfare gain.

terms of trade changes depend on the impacts of the reform on the average prices for India's exports.

Somewhat surprisingly, the terms of trade effects reported in Table 2 were positive in both of the experiments considered. Two main factors contribute to this result<sup>23</sup>. The first is that the boost to productivity in the clothing industry causes it to draw resources from other sectors. As a consequence, exports of all goods other than clothing fall, leading to an increase in the export prices received for these goods. A second important factor is that the elasticity of substitution<sup>24</sup> for clothing in the GTAP database is twice as high as for most other products (Huff *et al*, p125), making the elasticity of export demand for clothing higher than for other products. This difference in elasticities means that the terms of trade losses resulting from falls in the export price for clothing are less than the gains for other goods. In the first case in Table 2, i.e., before abolition of quotas, an additional factor comes into play. In this situation, the rent-inclusive price received for exports to quota markets does not decline even after an increase in clothing exports—rather, the quota rents received by India increase in these markets. Clearly, there is some uncertainty about whether the terms of trade effects will be positive in all cases. What is important for our purposes is whether the gains from reform rise or fall as a result of quota abolition.

From Table 2, it is very clear that the gains from reforms are much higher after abolition of the quotas. Part of this increase merely reflects the greater size of the industry after abolition of the quotas. For this larger industry, a given increase in productivity has a greater positive impact. Another substantial source of welfare gains is the improvement of the terms of trade effect resulting from abolition of the quotas. Prior to abolition of the quotas, an outward shift in the supply curve must confront a relatively inelastic demand curve. After abolition of the quotas, the overall demand curve facing the country becomes more elastic, and hence the favorable terms of trade effect much larger, which more than makes up for the loss of the quota-induced positive price effects mentioned in the

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<sup>23</sup> Another factor contributing to this outcome is the Armington specification used in the GTAP model. Because exports and products sold on the domestic market are the same, the increased demand for imports by India can be met without large increases in import prices.

<sup>24</sup> This is the key parameter in determining the export demand elasticities.

previous paragraph. The allocative efficiency effect is also larger because, after the reform, the increase in productivity allows a much greater increase in imports over India's high tariff barriers. The overall effect is to roughly triple the gains from domestic reform.

This experiment considers only the impact of improving productivity in the Indian clothing sector. The abolition of the MFA quotas agreed in the Uruguay Round will, of course, not be confined to India, but will cover all affected exporters.<sup>25</sup> While model-based research suggests that South Asia will gain from this process (Yang, Martin and Yanagishima 1997), it will face greatly increased competition in the industrialized country markets. Unless the pace of reforms is maintained, South Asia is likely to suffer severely from this increase in competition.

## ***VI Conclusions***

This study set out the basic economics of the MFA applicable to the South Asian countries, and examined the implications for domestic reform. The key to assessing the implications of this discriminatory regime is to recognize the implications of price discrimination between markets. This discrimination means that any quota gains in the restricted industrial markets must be weighed against losses in the unrestricted markets, where prices are depressed by the regime.

A key set of parameters for any evaluation of the MFA is the magnitude of the implicit export taxes that are imposed on a country's exports of textiles and clothing. These taxes were found to be substantial in an earlier study by Kathuria and Bhardwaj. Updates of these estimates suggest that the export tax equivalents of these quotas may well have declined in 1996, but appear to have increased in 1999 to an average of 40 percent in the USA and 20 percent in the EU—imposing substantial barriers to Indian exports.

The limited available evidence about impacts on South Asia suggests that the gains from domestic reform to raise productivity in these industries will greatly increase

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<sup>25</sup> The timing of the abolition of restrictions on non-members of the GATT 1947, such as China, will depend on the provisions of their entry into WTO, or on bilateral agreements they reach with the importing countries.



following abolition of the quotas. Part of the increase in the gains comes from increases in the scale of the industry experiencing the productivity gain, but another important source of gains is a reduction in the terms of trade losses associated with increased textile and clothing exports. Following removal of the quotas, important parts of world textile and clothing markets are much more price responsive. Overall, there are substantial terms of trade gains when productivity rises after the abolition of the quotas because resources are attracted into clothing and out of sectors where export demand curves are relatively inelastic. Overall gains of around \$2 billion per year were found for India alone from increasing productivity by 67 percent in the clothing sector, to bring it roughly into line with China.

Policy makers may have been prepared to accept a slow pace of reform in these sectors in the past, when opportunities were restricted. To do so in the future would mean missing out on potentially much greater direct gains from productivity improvements. In addition, it would expose these industries to much greater risk of losing ground in a fiercely competitive world market. Finally, as trade barriers start coming down following WTO negotiations, for example in India, the industries also face substantially increased competition in their home markets, which lends an urgency to domestic policy reform.

## References

- Alam, Ghayur (1991) Impact of Non-Economic Factors on Choice of Technology and Organization of Production: a study of small Industrial Firms in India. Mimeo for the ILO, New Delhi.
- Bernard, A. and Jensen, J.B. 1999. Exporting and Productivity, NBER Working Paper No. 7135, National Bureau of Economic Research, May.
- Bhagwati, J. (1988), *Protectionism*, MIT Press, Cambridge, Mass.
- Chatterjee, S. and Mohan, R. (1993): *India's Garment Exports*, Economic and Political Weekly, August 28, M-95-119.
- Elbeheri, A., Hertel, T. and Martin, W. (1997), 'Estimating the impact of trade reforms on the Indian cotton and textile sectors: a general equilibrium approach' Mimeo, World Bank.
- Fukase, E. and Martin, W. (2000), 'The effects of the United States granting MFN status to Vietnam', *Weltwirtschaftliches Archiv* 136(3):539-59.
- Hamilton, Carl B. (1990) *Textiles Trade and the Developing Countries: Eliminating the Multi-Fiber Arrangement in the 1990s*, World Bank, Washington, DC.
- Harrison, G., Rutherford, T. and Tarr, D. (1996), 'Quantifying the Uruguay Round' in Martin, W. and Winters, L.A., eds. *The Uruguay Round and the Developing Countries*, Cambridge University Press, Cambridge.
- Hertel, T., Martin, W., Yanagishima, K., and Dimaranan, B. (1996), 'Liberalizing manufactures trade in a changing world economy', in Martin, W. and Winters, L.A., eds. *The Uruguay Round and the Developing Countries*, Cambridge University Press, Cambridge.
- Huff, K., Hanslow, K., Hertel, T., and Tsigas, M. (1997), 'GTAP behavioral parameters', in Hertel, T. ed. *Global Trade Analysis: Modeling and Applications*, Cambridge University Press, New York.
- Hussain Committee (1997) Report of the Expert Committee on Small Enterprises, Chairman Abid Hussain. New Delhi.
- Kathuria, S. and Bhardwaj, A. (1998) Export Quotas and Policy Constraints in the Indian Textile and Garment Industries, World Bank Policy Research Working Paper no. 2012, Washington DC.
- Khanna, S.R. (1993) The Challenge of Global Competition in the 1990s: an agenda for enhancing the Competitive Position of the Indian Textiles and Clothing Industry. Mimeo, ICRIER, New Delhi.

- Krishna, K. and Tan, L. (1998), *Rags and Riches: Implementing Apparel Quotas under the Multi-Fiber Arrangement*, University of Michigan Press, Ann Arbor.
- Martin, W. and Suphachalasai, S. (1990) *Effects of the Multi-Fiber Arrangements on Developing Country Exporters: a Simple Theoretical Framework* in CB Hamilton (1990) (ed).
- Mattoo, A. and Subramanian, A. (1999), *India and the Multilateral Trading System Post-Seattle: Defensive or Proactive?* Mimeo, World Bank.
- Misra, Sanjeev (1993) *India's Textile Sector: a Policy Analysis*, Sage Publications, New Delhi.
- Nair, R.M. and Kaul, P. (1996) *Exporting Garments from India: Policy Paper no. 4*, Project LARGE, New Delhi.
- Ramakrishna, R. (1995) *Workshop on Restructuring of Textile Industry, Background paper*, FICCI, New Delhi.
- World Bank (2000) *India: Reducing Poverty, Accelerating Development*. Oxford University Press, Delhi, and The World Bank.
- World Bank (1998) *India Macroeconomic Update. Reforming for Growth and Poverty Reduction*. Washington, D.C.
- World Bank (1997) *India: Cotton and Textile Industries-Maximizing the Potential for Growth in a More Competitive Environment*, Vol. I and II, March 1997. Washington, D.C.
- Yang, Y., Martin, W. and Yanagishima, K. (1997), 'Evaluating the benefits of abolishing the MFA in the Uruguay Round package', in Hertel, T. ed. *Global Trade Analysis: Modeling and Applications*, Cambridge University Press, Cambridge.



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