

# CHAPTER 2: REVIEW OF THE LITERATURE<sup>1</sup>

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The extent of the impact of the removal of the MultiFiber Agreement (MFA) quotas on world textile and apparel trade patterns is likely to depend on a number of factors including the degree of restraint imposed by the quotas. This chapter first reviews analytical studies that have looked at the direct impact of quota elimination on the global pattern of textile and apparel trade and production. Second, it discusses the different competitiveness factors identified in the literature as potentially affecting post-2005 trade patterns.

## Impact of Quota Removal

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MFA quotas are quantitative restrictions that have a number of characteristics. First, they are applied on a discriminatory basis to some exporting countries but not to others. Second, they are negotiated on a bilateral basis rather than imposed globally and, therefore, differ from country to country in terms of product coverage and degree of restrictiveness. Third, they involve limits on exports, transferring rents (generated by these restraints) from the importing country to the exporting country.<sup>2</sup>

A large body of literature attempts to predict or to quantify the likely impact of the removal of quantitative restrictions.<sup>3</sup> Different approaches have been used to address the issue (table 2-1).<sup>4</sup> Diao and Somwaru (2001) estimate that over the 25-year period following the ATC implementation, the annual growth of world textile and apparel trade would be more than 5 percent faster than in the absence of the ATC.<sup>5</sup> According to their simulations, this acceleration translates into about \$20 billion more trade in the short run (upon implementation) and as much as \$200 billion in the long run (25 years). They also predict that, consistent with the trend in the historical data, world apparel trade will increase twice as fast as textile trade in the post-quota world. Similar results are reported by Avisse and

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<sup>1</sup> A detailed list of references cited in this chapter appear at the end of this chapter.

<sup>2</sup> As with other voluntary export restraints (VERs), the quantitative restraints on textiles and apparel are not “voluntary” in that they are imposed by the importing country (e.g., the United States or the EU) pursuant to bilateral agreements with each exporting country. The difference between what the exporter is able to charge in the foreign market and the world market as a result of a VER is referred to as economic rent. For more on this, see USITC (2002, pp. 23-43).

<sup>3</sup> This chapter reviews only recent analytical studies. These studies use different types of analytical tools, the characteristics of which are summarized in table 2-1. For references and review of earlier works, see OECD (2003).

<sup>4</sup> Most of the analytical studies surveyed in this chapter are based on a 1995 or 1997 database. Despite some adjustments, the results contained in those studies are derived primarily by using trade patterns and other information for those years. Trade patterns may be quite different when quotas are actually lifted in 2005.

<sup>5</sup> That is, if world textile and apparel trade is expected to grow 8 percent annually in the 25 years following 2005, then, the new annual growth rate in the model is about an 8.5 percent average.

**Table 2-1**  
**Characteristics of selected analytical studies relating to the ATC**

<b>Authors</b>	<b>Database</b>	<b>Model Characteristics</b>	<b>Policy Simulations</b>	<b>General Results</b>
Francois and Spinanger (2001)	GTAP 4 (Base year 1995) Quota prices for Hong Kong for 1998/99	Standard Static GTAP model and parameters	Quota removal plus Uruguay Round trade liberalization in the context of China's WTO accession. (Focus: Hong Kong)	Textile and clothing exports from Asia (especially south Asia) increase substantially. Preferential access to the United States and the EU would be reduced and there would be a shift in demand away from countries like Mexico and Turkey. Sub-Saharan Africa's exports would also drop.
Terra (2001)	GTAP 4 (Base year 1995)	Standard Static GTAP model and parameters	(i) Quota removal and (ii) Quota removal plus tariff reductions (Focus: Latin America)	Developing countries subject to the biggest quantitative restrictions would expand their exports at the expense of the importing developed countries, but also of other developing countries which are less restricted (i.e., Latin American countries). MERCOSUR and Chile would reduce their exports of clothing significantly, and their exports of textiles moderately. Effects would be stronger in (ii) than in (i).
Avisse and Fouquin (2001)	GTAP 4 (Base year 1995)	Standard Static GTAP model and parameters	Quota removal	Output share of Asia increases from 12 percent to 18 percent. China's exports would increase by 87 percent, South and Southeast Asia's would increase by 36 percent. Latin America and NAFTA would lose 39 percent and 27 percent, respectively.
Diao and Somwaru (2001)	GTAP 5 (Base year 1997); 25 year baseline	Counterfactual analysis using an intertemporal version of GTAP	MFA phase-out simulated by improving the efficiency of textile and apparel exports from constrained countries. Other trade barriers on textile and apparel imports are reduced by 30 to 40 percent in all countries. They econometrically estimate that a percent increase in apparel trade shares is associated with a 3.3 percent increase in per capita income.	The annual growth of world textile and apparel trade would be more than 5 percent higher. Market share of developing countries as a whole would increase by 4 percentage points following the ATC. China would gain almost 3 percentage points of the world Textile and apparel market, while other Asian countries would capture more than 2 percent. Non-quota developing countries are predicted to lose about 20 percent of their markets (equal to 2.3 percentage points of world total textile and apparel markets) to the restrained ones.

**Table 2-1--Continued**  
**Characteristics of selected analytical studies relating to the ATC**

<b>Authors</b>	<b>Database</b>	<b>Model Characteristics</b>	<b>Policy Simulations</b>	<b>General Results</b>
Matoo, Roy, and Subramanian (2002)	Data collected by the authors.	Partial Equilibrium. ETEs derived from Kathuria and Bharadwaj (2000). Leontief production. Export elasticities from 1 to 5.	Interaction between the ATC and the AGOA rules of origin for Mauritius and Madagascar	Under the current AGOA system, the apparel exports of Mauritius and Madagascar would be about 26 percent and 19 percent lower, respectively, following 2005. If AGOA's rules of origin requirement is eliminated, the decline in Mauritius's exports would be only 18 percent, and Madagascar's exports could increase.
Lankes (2002)	GTAP 5 (Base Year 1997)	Standard Static GTAP model and parameters	Quota removal	Total export revenue loss attributed to the MFA quotas estimated to be \$22 billion for developing countries and \$33 billion for the world as a whole.

Source: Compiled by Commission Staff.

Fouquin (2001), who find that, as a result of the ATC, the global trade in textiles and apparel would be about 10 percent and 14 percent higher, respectively.

Although the elimination of MFA quotas is predicted to result in an increase in global trade, the impact is likely to differ among countries and regions. For each country, quota elimination represents both an opportunity and a threat: an opportunity because markets will no longer be restricted and a threat because other suppliers will no longer be restrained and major markets will be open to intense competition.<sup>6</sup> For instance, Lankes (2002) argued that the ATC may lead to a reallocation of production to the detriment of developing-country exporters that have been “effectively protected” from more competitive suppliers by the quota system.<sup>7</sup>

The degree of restrictiveness of a quota can then serve as a useful, albeit imprecise, yardstick in broadly predicting the likely impact of its removal.<sup>8</sup> Being able to determine which countries are quota-constrained and which are not is useful in understanding how particular countries will fare following quota elimination. In the existing literature, the degree of restrictiveness of an MFA quota is often measured in terms of its “export tax equivalent” (ETE): MFA quotas are administered by the exporting countries and impose a cost on exporting firms that is exactly analogous to an export tax.<sup>9</sup> In order to export, a firm in a

<sup>6</sup> See Kathuria and Bhardwaj (1998).

<sup>7</sup> At the same time, he also estimates the total export revenue loss attributed to the MFA quotas to be \$22 billion for developing countries and \$33 billion for the world as a whole.

<sup>8</sup> See, for example, Nathan Associates, Inc (2002).

<sup>9</sup> Kathuria, Martin, and Bhardwaj (2001). See also, USITC (2002).

quota-constrained country has to obtain or purchase a quota (or an export license). The more restrictive a quotas is, the higher this tax will be.<sup>10</sup>

ETEs are obviously zero for non-restrained products or countries. Flanagan (2003) pointed out that, although as many as 73 countries are included in the quota system, some do not fully utilize their quotas. Elimination of an unfilled or non-binding quota has little effect on a country's ability to export because it could have continued to export to the quota limit in any case.<sup>11</sup>

Many estimates of ETEs exist, and they vary for different countries and timeframes. Francois and Spinanger (2001) estimate that Hong Kong clothing exporters face an implicit export tax of up to 10 percent for goods intended for the U.S. market and 5 percent for the European Union (EU) market.<sup>12</sup> Kathuria and Bhradwaj (1998) report that in 1996, Indian exporters to the United States paid an ETE of 39 percent (cotton based) and 16 percent (synthetics), versus 17 percent (cotton based) and 23 percent (synthetics) in the EU market. In USITC (2002, table 3-3), the import-weighted ETEs for U.S. imports were estimated to be about 21 percent for apparel, and those for nonapparel textile categories were around 1 percent.

In general, the literature reveals that Asian countries are relatively more constrained than other regions. Flanagan (2003) categorizes countries into groups depending on how "quota-constrained" they are in terms of the number of product categories where quotas seriously limit demand. In the group of "Countries seriously held back, almost across the board, by quota today" are Bangladesh, China, Hong Kong, India, Indonesia, Pakistan, Philippines, Korea, Sri Lanka, and Thailand. At the other end of the spectrum, countries such as Nepal, Oman, Qatar, and United Arab Emirates (UAE) are categorized as "Countries whose quotas have been a valuable tool, now threatened." According to Flanagan, China, India and Indonesia have shown the most consistent and widespread near-saturation of quotas for yarn, fabric, and garments.

Many analysts predict that the market shares of quota-constrained suppliers will increase markedly following 2005.<sup>13</sup> Terra (2001) predicts that apparel production of the restrained exporters, as a whole, will increase by almost 20 percent, and their textile production will increase by almost 6 percent (table 2-2). Meanwhile, Terra estimates that the market shares of non-quota-constrained suppliers (e.g., Mexico as well as African and CBI countries) will shrink, predicting a fall in the exports of Latin American countries, which will be displaced

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<sup>10</sup> If these restraints are binding, the prices of these products are expected to rise in the importing country. Exporters who have licenses to export are able to capture economic rents by increasing the export prices of their products. An increase in the restrictiveness of a quota will raise the price for the good, which then makes the quota license more valuable and the export tax equivalent higher. See USITC (2002) for more on this.

<sup>11</sup> Nathan Associates (2002). Many studies have defined a binding quota on the basis of quota utilization, where utilization is measured by the ratio of actual imports to quota allotment. Utilization can be difficult to measure and quotas might be binding despite relatively low utilization rates, for reasons such as inefficient administration of quotas. See USITC (2002, p. 32) and Trella (1998).

<sup>12</sup> They also report that the ETE for Hong Kong textile exporters is 1 percent.

<sup>13</sup> See, for example, Nathan Associates (2002).

**Table 2-2**  
**Textiles and apparel: Likely impact of removing the MFA quotas on production and trade<sup>1</sup>**

*(Percent change)*

Region	Production		Trade	
	Textiles	Apparel	Textiles	Apparel
Importers:				
United States and Canada . . . . .	-2.6	-8.6	-1.3	-8.1
EU . . . . .	-0.9	-3.7	-0.7	-6.1
Exporters:				
Restrained exporters . . . . .	5.6	19.6	4.4	32.0
Argentina . . . . .	0	0	0.3	-6.8
Brazil . . . . .	0	-0.1	0.4	-13.7
Chile . . . . .	-0.4	-0.6	-4.3	-17.9
Mexico . . . . .	-5.5	-20.9	-1.6	-64.0
Uruguay . . . . .	1.2	-0.9	2.3	-5.4
Other Latin America . . . . .	-16	-35.8	-0.4	-92.1
Rest of the World . . . . .	-0.2	-0.5	1.7	-10.4

<sup>1</sup> Based on 1995 data.

Source: Terra (2001).

by the big exporters subject to restrictions. MERCOSUR and Chile are predicted to reduce their exports of clothing significantly and their exports of textiles moderately.

Avisse and Fouquin (2001) estimate that Asian apparel exports will rise by 54 percent and their share of the world market will increase to 60 percent (table 2-3) from 40 percent in 1995 (the base year). Chinese apparel exports, in particular, will rise by 87 percent, and their share of world apparel exports will rise by more than 10 percentage points. Both South Asia's and Southeast Asia's apparel exports also will experience substantial gains, increasing by 36 percent, combined. On the other hand, Latin American apparel exports are predicted to decrease by 39 percent. Asian countries will also experience some increases in textile exports: China's exports will increase by 9 percent and South Asia's by 22 percent. Avisse and Fouquin estimate that Chinese production will rise by 70 percent, and that of other Asian countries, by 26 percent. Within a broadly unchanged level of global output, Asia's share will rise from 12 percent to 18 percent.<sup>14</sup> North American production of apparel will decline by 19 percent and European production will drop by 11 percent in the estimates.

Diao and Somwaru (2001) provide similar estimates. According to their dynamic model, world market share of developing countries as a whole will increase by 4 percentage points following the ATC. China gains almost 3 percentage points of the world textile and apparel market, and other Asian countries will capture more than 2 percentage points (table 2-4). Current non-quota holding developing countries are predicted to lose about 20 percent of their markets (equivalent to 2.3 percentage points of total world textile and apparel markets)

<sup>14</sup> Avisse and Fouquin also predict that the rise in Chinese apparel output will increase the production of textiles in Asian newly industrialized economies (NIEs) and to a lesser extent Japan, which together supply around 80 percent of Chinese textile imports.

**Table 2-3**  
**Apparel: Likely impact of removing the MFA quotas on apparel exports<sup>1</sup>**

Region	Percent change
NAFTA .....	-27
Latin America (exclude Mexico) .....	-39
EU .....	-19
Mediterranean Basin and CEECs .....	-5
Asian NICs .....	18
China .....	87
South and South-East Asia .....	36
World .....	14

<sup>1</sup> Based on 1995 data.

Source: Avisse and Fouquin (2001).

**Table 2-4**  
**Textiles and apparel: Simulated shares of world total exports for selected countries/regions**

Region	(Percent)				
	2005	2010	2015	2020	2025
Developing countries .....	59.57	60.2	61.32	62.41	63.49
China .....	19.69	20.50	21.24	21.91	22.52
India .....	4.40	4.43	4.57	4.72	4.88
Other Asia .....	13.00	13.68	14.18	14.70	15.22
Middle East .....	5.03	5.22	5.39	5.57	5.76
Eastern Europe .....	6.50	6.02	5.80	5.59	5.38
Mexico and Caribbean .....	6.09	5.51	5.32	5.14	4.96
Industrial countries .....	40.43	39.80	38.68	37.59	36.51
North America .....	6.61	6.31	6.13	5.95	5.77
European Union .....	14.39	13.91	13.48	13.06	12.65

Source: Diao and Somwaru (2001)

to the restrained ones. Nathan Associates (2002, p. 12) contends that this trend is already well under way, citing as an example the fact that, between the first quarters of 2001 and 2002, China's market share increased by 5 percentage points while other suppliers' market share declined.

In addition to the costs of quotas themselves, the nature or the quality of the quota administration system can also restrict an individual country's exports, and lead to quota "underfill." Whalley (1999) points out that many developing countries have built costly domestic administrative structures around the internal allocation of MFA quotas.<sup>15</sup> Krishna and Tan (1998) present empirical evidence that the costs of the export license system within the restrained countries are significant and that both the license cost and hidden

<sup>15</sup> See also Yang (1999).

administrative costs are added to the price of the product prior to its entering the foreign market.<sup>16</sup> These extra inefficiency costs will be eliminated when the quotas are removed and will be likely to intensify the estimated effects of the ATC.<sup>17</sup>

## Determinants of Trade Patterns in the Absence of Quotas

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The MFA has, at least partly, led to the spread of apparel industries across a wide range of countries around the world.<sup>18</sup> Over time, as quotas have become more restrictive in one country, investment has flowed to initially unconstrained countries which, in turn, became restrained causing investment to flow again elsewhere. For instance, constraints on Korean exports have generated investment flows to ASEAN nations (Thailand, Philippines, Malaysia, and Indonesia), while quotas on Indian exports have led to investment flows to countries like Nepal. The MFA was considered an opportunity for those latter countries to get foreign investment and to start up an apparel industry. It has been argued that the end of the MFA could lead to a consolidation to larger, established, low-cost exporters.<sup>19</sup>

Similarly, Birnbaum (2001) and Tait (2002) assert that without quotas, customers will no longer need to divide their orders among several countries, but will concentrate in those countries where they can operate best. Someya, Shunnar, and Srinivasan (2002) contend that the exporting success of some Middle Eastern countries (e.g., United Arab Emirates) in recent years is mainly attributable to the presence of Far-Eastern (quota-restrained) foreign investors that are using those countries as export platforms. They predict that the textile and apparel exports from these countries will be subject to substantial risk, as the post-quota world will offer little justification for continued export from the Middle East, given that they offer neither the geographic closeness of the Mediterranean to the EU market nor the low costs of Asian exporters. Similarly, Kheir-El-Din and Abdel-Fattah (2000) argue that Bahrain will lose its attractiveness to fabric producers because it has neither low-cost raw materials nor low wage costs.<sup>20</sup> Dowlah (1999) warns that with the removal of quota restrictions, investors might find it economically advantageous to withdraw their production

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<sup>16</sup> See also Trela (1998), who argues, for instance, that not permitting trade in licenses provides protection for existing firms against more efficient producers and that past performance criteria for allocating quota volumes can result in firms producing at suboptimal scale.

<sup>17</sup> See, for example, Verma (2002) and Kathuria and Bhardwaj (1998).

<sup>18</sup> Trela (1998) and Whalley (1999).

<sup>19</sup> See, for instance, Trela (1998) and Whalley (1999). Whalley (1999) points to China and other Asian countries as potential gainers, and notes that China already accounts for 60 percent of developing country exports.

<sup>20</sup> They note that in general the prospects for exporters of textiles and apparel in Gulf Cooperation Council (GCC) countries are not encouraging. With no preferential agreements either with the EU or the United States, these countries are vulnerable to loss of market share, particularly in the apparel sector, which requires low-cost labor. In the manmade-fiber fabrics, however, they may continue to enjoy advantages because of domestic petroleum-based industries that supply critical inputs.

facilities from Bangladesh and export directly from their home countries.<sup>21</sup> Whalley (1999) asserts that from that point of view, the prospects for smaller country suppliers in a post-MFA world would seem rather bleak to some observers. However, Whalley (1999) also presents another point of view, arguing that “the threat of becoming entangled with MFA restraints has restrained the growth of textile and apparel exports from Africa. As latecomers to the MFA, these countries would receive only small MFA quotas; and the argument is that the removal of the MFA opens up new growth opportunities for them in manufactured exports.”

A number of factors have been identified in the literature as likely to be important in determining the new patterns of trade, and affecting location and sourcing decisions in the quota-free world. Factors that could give countries competitive advantages in terms of supplying textiles and clothing are discussed below.

### ***Business Climate and Infrastructure***

Tait (2002) asserts that purchasers are likely to concentrate on four or five politically and financially stable countries. Factors that are considered important include: respect of basic human ethics such as minimum wages; absence of child or forced labor; and good working conditions. In addition, Birnbaum (2002b) argues that current and future sourcing decisions depend in great part on which countries offer the best facilities and greatest logistical advantages. Tait (2002) also stresses the importance of infrastructure that supports the buying process ( e.g., good telecommunications, ease of import and export documentation and procedures, international logistics companies, quality controllers, and test centers).

### ***Proximity to Markets***

Proximity to the export market, or the ability to quickly respond to changes in market conditions is considered to be an important determinant of the pattern of trade.<sup>22</sup> Tait (2002) asserts that in the post-2005 world, buyers will choose suppliers in terms of reliable delivery and lead times. Birnbaum (2001) notes that since U.S. buyers are increasingly demanding “quick response” services, distant factories will find it harder to satisfy customer requirements. In particular, he reports that shipping time from Sri Lanka, Bangladesh, and India to the United States averages 28 days, compared to 2 days from Mexico or Canada.

Tait (2002) reports that Romania, the Czech Republic, and Hungary are all within 1 or 2 days by road freight to the EU (all relatively low cost) and, therefore, would likely be suppliers to European firms. Hyvarinen (2001) argues that the post-MFA outlook for Morocco and Tunisia is good due to their proximity to the EU markets. In particular, he points out that as a fabric exporter, Tunisia will probably preserve its EU market share because of the Euro-

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<sup>21</sup> However, pointing to Bangladesh’s past performance (such as high quota utilization rates), he concludes that it has been quite successful in exploiting the MFA regime by achieving considerable marketability and consumer acceptance in the sophisticated markets in the United States and the EU. A formidable factor that will continue to help the Bangladesh clothing industry is the existence of cheap labor, which helps it to compete successfully in low-cost, high-quality products.

<sup>22</sup> Hummels (2001) estimates that each day of increased ocean transit time between two countries reduces the probability of trade by as much as 1.5 percent. He also reports that an ocean voyage of 20 days is equivalent to a 16 percent tariff.

Med agreement, under which European yarn is shipped to Tunisia for processing into fabrics and garments.<sup>23</sup> Kheir-El-Din and Abdel-Fattah (2000) make a similar argument, saying that Middle Eastern and North African apparel producers around the Mediterranean will be able to enjoy market shares in fast-moving, high-value items, helped in large measure by the logistical advantage of being close to the European market. The ongoing Euro-Med partnership agreements will further consolidate this advantage because of outward processing opportunities offered under the agreements. However, Someya, Shunnar, and Srinivasan (2002) suggest that the market proximity enjoyed by Mediterranean countries could be eroded quickly by decreasing communication and transport costs.

### ***Market Access***

In general, suppliers that are not constrained by quotas and/or benefit from preferential trade agreements have an advantage over quota-constrained, as well as other non-constrained, suppliers. The market position of U.S.-preferred suppliers (e.g., those shipping under NAFTA, AGOA, and CBERA) is highly dependent on quotas, constraining Asian and Chinese exporters.<sup>24</sup> The same is true for preferred suppliers to the EU, which are shielded from Asian suppliers by the MFA quotas. Birnbaun (2001) notes that, even without quotas, U.S. import duties assessed on garment imports from nonpreferred suppliers still average 18 percent, which would constitute an advantage for preferred suppliers. Hyvarinen (2001), on the other hand, argues that, although preferential access to European and U.S. markets will not be completely removed (since preferential tariffs will remain), it would be somewhat diluted with the 2005 elimination of MFA quotas and the extension of such privileges to a larger group of countries.

Francois and Spinanger (2001) argue that the “protective shield” will disappear gradually as quotas are phased out, and preferred supplying groups will probably see dramatic increases in competition from Chinese and other Asian exporters. They assert that preferential access to North America (by Mexico) and Europe (by Turkey and Eastern European countries) will be reduced considerably when quotas are eliminated (and as tariffs are reduced) for competing exporters, and there will be a shift in demand away from these countries to other suppliers (e.g., Asian countries). They predict that Mexico stands to be the largest loser among exporting countries (table 2-5).<sup>25</sup> Turkey, as well as the Eastern European countries, could also experience losses for this reason.

In the context of AGOA, Matoo, Roy, and Subramanian (2002) argue that African countries will be exposed to competition from other developing countries and that apparel exports may drop by as much as 30 percent after the dismantling of the MFA quotas. However, they assert that the actual impact will depend on the structure of the AGOA rules of origin. Using

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<sup>23</sup> Kheir-El-Din and Abdel-Fattah (2000) note, however, that keen competition in fabrics is to be expected from Thailand and Malaysia, which have regularly exceeded their quotas to the EU.

<sup>24</sup> Nathan Associates (2002).

<sup>25</sup> Terra (2001) also predicts that Mexican apparel exports would drop by as much as 64 percent post-2005.

**Table 2-5**  
**Textiles and apparel: Likely impact of the Uruguay Round Agreement on quantity exported<sup>1</sup>**

*(Percent change)*

<b>Country</b>	<b>Textiles exports</b>	<b>Apparel exports</b>
Australia/New Zealand	-2.94	-7.89
Japan	5.67	-0.46
Korea	6.66	-14.08
Indonesia	14.33	31.72
Malaysia	5.84	5.92
Philippines	11.5	3.03
Singapore	5.79	-22.02
Thailand	20.01	36.01
Vietnam	-1.53	1.91
China	6.67	26.97
Hong Kong	6.25	8.87
Taiwan	8.57	1.23
India	9.89	108.69
Sri Lanka	17.19	50.34
Rest of South Asia	33.63	76.65
Canada	-4.97	-21.59
United States	-1.85	10.75
Mexico	-6.32	-33.71
Latin America	3.19	-15.48
West Europe	-3.62	-11.23
Central and Eastern Europe	-2.02	-12.94
Turkey	3.24	-10.7
Africa and Middle East	-2.82	-18.89
Rest of the World	-0.2	-17.39

<sup>1</sup> Based on 1995 data.

Source: Francois and Spinanger (2001, Table 6 - scenario urg).

a simple partial equilibrium model, they show that, under the current AGOA rules of origin, the quota removal will decrease Africa's apparel exports by over 30 percent. However, if AGOA were to provide unrestricted access, the negative impact could be nearly fully offset. As examples, they show that, under the current AGOA system, the apparel exports of Mauritius and Madagascar will decrease by about 26 percent and 19 percent, respectively. But if AGOA is modified to eliminate the rules of origin requirement, the decline in Mauritius's exports would be only 18 percent, and Madagascar's exports could actually be higher than they are currently, despite the elimination of the MFA.

### ***Labor and Management***

While the MFA has led to some of the spread of textiles and apparel activities across a wide range of countries around the world, some analysts have noted that the emergence of new suppliers might have been simply part of a natural evolution of the comparative advantage

from high-cost to low-cost suppliers.<sup>26</sup> For instance, Yang (1999) points out that Japan lost its comparative advantage in labor-intensive textiles and apparel in the 1970s and that over the last two decades, the Newly Industrialized Economies (NIEs) of Hong Kong, Korea, Singapore, and Taiwan have also rapidly shifted away from these products, while China and other low-wage economies have emerged as major suppliers.<sup>27</sup> He even contends that in the past few years China itself has shown signs of export diversification (at the expense of textiles and apparel).<sup>28</sup>

Gereffi (2003) argues that the East Asian NIEs illustrate the process of industrial upgrading among developing countries. Because of domestic labor shortages, high wages, high land prices, and, external constraints (tariffs and quotas), they have moved smoothly and rapidly through the manufacturing stages from assembly to original brand-name manufacturing. As they began to move production offshore, they devised ways to coordinate and control their sourcing networks, and focused on the more profitable design and marketing segments within the apparel commodity chain. In this new international division of labor, skill-intensive activities were retained in East Asia, and labor-intensive activities were relocated. Whether the removal of the quotas will reverse these shifts is unclear.

Trela (1998) argues that the principal reason for upgrading is that, when faced with volume restrictions on their exports, producers can expand their sales value by moving up-market into higher quality lines within quota categories. For example, despite (or because of) the MFA quotas, Hong Kong succeeded in establishing a reputation for quality fabrics and fashion sophistication.

### ***Raw-Material Inputs***

The availability of local or regional raw material greatly improves a country's ability to respond to orders with shorter lead times. As purchasers consolidate and rationalize their sources, the degree of vertical integration in countries or firms becomes an important competitiveness factor. For instance, Dowlah (1999) identifies inefficient upstream sectors as a major obstacle for future growth in the Bangladesh clothing industry.<sup>29</sup>

Spinager (1999) notes that the MFA kept major European producers of high-quality textile inputs from establishing large spinning and fabric manufacturing facilities in countries with high productivity and low labor costs, such as those in Asia. Indeed, European companies were not certain that, given the existence of quotas, such facilities would be able to produce at adequate capacity levels. Once quotas are eliminated, it is quite possible that these producers will invest in this part of the world.

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<sup>26</sup> See, e.g., Gereffi (2002). He explains the recent trade shifts by arguing that the most labor-intensive segments of the apparel commodity chain are being located in countries with the lowest wages.

<sup>27</sup> Yang argues that the declining share of the NIEs in the global apparel market is due to the high labor intensity. As real wages increase and labor skills upgrade, they lose most of their comparative advantage in apparel (while maintaining it in textiles).

<sup>28</sup> Yang stresses, however, that China still needs strong growth of labor-intensive industries to absorb its massive labor surplus in rural areas and unemployment in urban areas.

<sup>29</sup> Dowlah also argues that survival in the quota-free world would depend on the diversification of the exported product mix to include high-value and high-fashion products, in which Bangladesh has not yet been successful.

Phasing out the MFA may be expected to have a favorable impact on fiber production by increasing the long-term demand for, and hence the price of, textile fibers. Lankes (2002) and the IMF/World Bank (2002) suggest that MFA quotas and tariffs reduce the demand for fiber crops. They report that the full liberalization of world trade in textile and clothing will boost cotton exports by 9 percent in sub-Saharan Africa (about US\$132 million). Kheir-El-Din and Abdel-Fattah (2000) argue that as cotton producers and yarn exporters, Egypt and Syria stand to gain after 2005. They contend that the MFA phase-out is likely to have two distinct effects: an output effect arising from increases in the volume of textile and apparel output and, hence, fiber input, and a substitution effect resulting from elimination of the distortions between fibers created by the MFA. For cotton producers, the substitution effect may be relatively large, since it has been reported that the MFA has imposed an implicit tax of about 20 percent on cotton products relative to manmade-fiber products. These effects may be of particular importance for major cotton producers such as Egypt and Syria.

### ***Level of Service Provided and Reliability of Supplier***

According to Birnbaum (2002b), today's sourcing decisions are increasingly based on which factories can best meet customers' ever-increasing requirements. He notes that buyers go to China because Chinese factories give the customers what they want, from patternmaking to final stock garment shipment.<sup>30</sup> Tait (2002) has argued that the level of service required by buyers is evolving and that a "full package from design to delivery of the finished product, inclusive of fabric and trim sourcing, right down to the delivery of store-ready items to individual shops" is now in demand. As an example, she cites India, where apparel parks of factories, housing the whole value and supply chain, are being established to help improve the industry's competitiveness.

### ***Domestic Demand***

The growth in domestic demand in Asian countries, particularly in China, might lessen the dramatic changes in trade patterns after 2005. Flanagan (2003) argues that rich countries' wealth (and therefore the people's ability to buy clothes) is not growing as quickly as the world's middle-income countries – especially in the world's two most populous countries (China and India). He argues that faster economic growth would be accompanied by even faster growth in apparel purchases and apparel importing. As an illustration, he points out that in 2001, China's retail sales of apparel grew twice as fast as its economy.<sup>31</sup>

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<sup>30</sup> Birnbaum (2002).

<sup>31</sup> In the past 10 years, China's economy in real terms has grown 142 percent (over five times as fast as that of the United States) and India's has grown 77 percent (over three times as fast).

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