The Expiration of the Multi-Fiber Arrangement: An Analysis of the Consequences for South Asia

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Prepared for a select group of
U.S. government agencies interested
in issues of trade and South Asia

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Foreword

This report is the result of collaboration between students in the Master of International Public Affairs program in the Robert M. La Follette School of Public Affairs at the University of Wisconsin–Madison and a select group of U.S. government agencies interested in issues of trade and South Asia.

This effort provides La Follette School students the opportunity to improve their analytical skills by applying them to an issue with a substantial international component and to contribute useful knowledge and recommendations to their client. To be sure, the opinions and judgments presented in this report do not represent the views, official or unofficial, of either the La Follette School or of the client organization for which the report was prepared.

I am grateful to Wilbur R. Voigt whose generous gift to the La Follette School supports the school's workshop projects in which reports like this one are produced. With his support, we are able to finance the production of the final reports, plus other expenses associated with the projects.

The La Follette School offers a two-year graduate program leading to a Master of Public Affairs or a Master of International Public Affairs degree. Students in both programs develop analytic tools with which to assess policy responses to macroeconomic issues, evaluate implications of policies for efficiency and equity, and interpret and present data relevant to policy considerations.

The authors of this report are enrolled in Public Affairs 860: Public Affairs Workshop, International Issues, the capstone course in the international public affairs program. The workshop provides students with practical experience applying the tools of analysis they have acquired in three semesters of coursework to examine real-world problems and (where relevant) to propose feasible solutions to clients in the public, nongovernmental, or private sector. Most of the semester is spent *doing* analysis in the form of projects that culminate in reports such as this one. While acquiring a set of analytical skills is important, it is no substitute for learning by doing.

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Executive Summary

With the elimination of the Multi-Fiber Arrangement on 1 January 2005, some countries will benefit, and some might suffer. This report analyzes the consequences of the elimination of the Multi-Fiber Arrangement (MFA) for the South Asian countries of Nepal, India, Pakistan, Bangladesh, and Sri Lanka. India and Pakistan are likely to be winners with the expiration of the MFA. Nepal is expected to suffer losses in the garment and textile industry without the protection of quotas. The effects of the MFA expiration on the Bangladeshi and Sri Lankan garment and textile industry are ambiguous.

The Indian textile industry should be able to compete reasonably well in the post-MFA world, and general opinion is that India will be better off than other South Asian countries. At the same time experts in the region believe that India will not be as competitive as China. India's inability to compete with China is mainly attributed to the absence of technological progress and to rigid labor laws.

Pakistan is seen as a winner from the MFA phaseout. The Pakistani government and private sector appear to be ready to take advantage of Pakistan's domestic production of cotton and low labor costs to achieve potential gains post-MFA. In addition, favorable trade agreements with the United States and European Union will provide benefits for the Pakistani garment and textile industry.

The expiration of the MFA is likely to have a negative impact on Nepal's economy. In a quota-free world, the Nepalese garment industry confronts a competitive environment and a difficult political situation. Small firm size, lower labor productivity, high cost of transportation, lack of government support, and political instability are likely to have adverse effects. Dominated by small firms, the industry lacks technological sophistication and skilled labor. Furthermore, labor productivity is lower in Nepal compared to the other South Asian countries. Nepal's difficult geographical terrain increases transportation time and cost significantly.

A prediction of the outcome for Bangladesh is difficult to make. It has captured niche markets, which will protect it from any immediate implosion of its textile and apparel industries. In addition, Bangladeshi wages are competitive internationally. However, Bangladesh's ability to rationalize production will play a significant role in enabling it to maintain its current position, especially in the face of increased competition from India and China. Specifically, increased competitiveness includes maintaining political stability among labor, greater access to the U.S. textile and apparel market, and increased foreign direct investment. Bangladesh's heavy reliance on imported material is also a concern.

The Sri Lankan textile and apparel industry has also captured niche markets that should protect the industry for a short time after the MFA expiration. Although the tsunami in December 2004 devastated parts of the country, the textile and apparel industry was largely unaffected. Beyond the devastation, the industry may benefit from an increase in resources from donor countries and preferential access due to sympathetic governments and businesses. However, the Sri Lankan garment and textile industry suffers from uncompetitive wages, diseconomies of scale in the industry, and heavy reliance on imported materials.

The expiration of the MFA will also affect the United States. U.S. producers of garments and textiles will suffer losses. Since the United States employs nearly half a million textile workers, there is potential for significant job losses. Consumers will benefit, however, as the annual cost of the MFA to U.S. consumers is estimated at $70 billion. In addition, there will probably be changes in U.S. outsourcing behavior with a few big chains streamlining their supplier networks.

1. Introduction

Between 1974 and the end of 2004, apparel and textile trade worldwide was governed by the Multi-Fiber Arrangement (MFA). The MFA is the offspring of a decade-and-a-half of earlier, short-term agreements on the export of textiles and apparel among developed and developing countries. The MFA codified these agreements into a more comprehensive system covering nearly "1000 different allotments [and] encompassing scores of categories" from 47 countries (Collins 2003, 49). Under its guidelines "individual quotas were negotiated which set precise limits on the quantity of textiles and apparel which could be exported from one country to another. For every single product a quota was specified" (Collins 2003, 110).

As part of the Uruguay Round of negotiations in 1994, the World Trade Organization took responsibility for administering the MFA. Negotiators agreed that the MFA would be eliminated and full liberalization would be implemented on 1 January 2005. This was accomplished with the Agreement on Textiles and Clothing, which replaced the MFA and created a system for the gradual elimination of quotas on apparel and textiles. Stepped quota phaseouts were scheduled for 1995, 1998, 2002, and 2005, when all quotas were to be eliminated. In addition, the United States agreed to reduce its tariff barriers, from a "trade weighted average of 17.2 percent ad valorem in 1994 to a trade weighted average of 15.2 percent ad valorem in 2004," phased in during the ten years (Evans and Harrigan 2004, 2).

This report analyzes the consequences of this transition for the South Asian countries of Nepal, India, Pakistan, Bangladesh, and Sri Lanka. As Table 1 illustrates, effects on South Asian economies are potentially profound: the textile and apparel industry contributes significantly to the gross domestic product and employment in these countries and is an important source of foreign currency, helping to provide macroeconomic stability.

Table 1
South Asian Statistics

General Statistics by Country					
	India	*Pakistan*	*Bangladesh*	*Sri Lanka*	*Nepal*
Gross domestic product (purchasing power parity), 2004 estimate	$3.3 trillion	$347 billion	$276 billion	$81 billion	$40 billion
Trade as percentage of gross domestic product, 2004	33%	43%	35%	78%	48%
Foreign direct investment net inflows (balance of payments, current U.S. dollars), 2003	$4.2 billion	$534 million	$103 million	$229 million	$15 million
Inflation, consumer prices (annual %), 2003	4%	3%*	6%	6%	6%
Estimated unemployment rate	9.2% (2004)	8.3% (2004)	40%** (2003)	7.8% (2004)	47% (2001)
Political climate	Stable	Stable	Stable	Stable	Unstable
Textile and Apparel Statistics by County					
	India	*Pakistan*	*Bangladesh*	*Sri Lanka*	*Nepal*
Textile, apparel industry as percentage of gross domestic product	4%	9%	N/A	7%	N/A
Textiles and apparel exports as percentage of total exports	35%	72%	75%	44%	50%
Textile and apparel employment as percentage of labor force	6%	3%	3%	8%	1%
Hourly wages: textile	57 cents	34 cents	25 cents	40 cents	NA
Hourly wages: garment	38 cents	41 cents	39 cents	48 cents	30 cents
Reliance on imported inputs	Low (third largest world producer)	Low (fourth largest world producer)	High	High	High

* The World Development Indicators data on inflation (consumer prices) for 2004 is only available for Pakistan and shows a steep rise to 7 percent. (World Bank Group 2005)

** Includes underemployment.

Sources: Central Intelligence Agency. World Factbook 2005, (gross domestic product, unemployment for all countries); World Development Indicators (trade, foreign direct investment net inflows, inflation for all countries); Garment Association of Nepal; Appelbaum, 2004 (Pakistan); and World Bank, 2003 (Nepal).

As garment and textiles are important economically and, in particular, as the labor-intensive garment and textile industry employs large numbers of workers, disruption or adjustment in the industry is cause for concern politically. At the firm level, each country is likely to face economic adjustment challenges in the form of increased competition and consequent pressure to reform production processes and outputs. There is also likely to be significant political adjustment at the national, regional, and international levels. Governments may face pressures to alleviate some adverse short-term effects of adjustments. This report investigates the likely nature of these adjustments, that is, the severity of the challenges for different players and the ability of governments to manage the transition.

Section 2 introduces basic economic analysis to set the foundation for understanding the potential effects of the expiration of the MFA, reviews expert opinion on the probable consequences of MFA expiration, and surveys the global press to see what has been reported about the MFA expiration and its likely consequences. Section 3 is the heart of our analysis. We discuss which countries are likely to benefit, which countries will not, and why. Using the latest data, we address in Section 4 the impact that MFA expiration is likely to have on the United States and the specific role that South Asia is likely to play in this. Section 5 concludes the report with some geo-political considerations.

2. Pre-Expiration Predictions

This section surveys pre-expiration opinion and knowledge of the likely effects of the MFA expiration. From this foundation, we build a more nuanced analysis in Section 3. Section 2 is divided into four sub-sections. Section 2.1 is a presentation of pure economic theory for quotas in general—their effects on prices, consumer and producer surplus, and government revenue. (Appendix A illustrates the effects of such quotas are illustrated in greater detail.) This section will aid in understanding the fundamental economic theoretical basis for MFA-expiration effects. Section 2.2 details expert opinion of the MFA-expiration aftermath. The intent of this section is to provide a more empirical, fact-based basis on which to think about the MFA-expiration problem. Section 2.3 reviews press opinion on the MFA expiration. The aim is to provide a less scholarly but more intuitive basis for understanding post-MFA effects. We found it useful to distinguish among regional media in the analysis as each region seemed to concentrate on different problems. Finally, section 2.4 synthesizes the previous sub-sections into a concise review of what are, generally speaking, the expected effects of the MFA expiration on South Asia.

2.1 Predictions Using Economic Theory: A Simple Quota Model

Import quotas increase prices in the importing country by restricting supply in that market. The result is a reduction of consumer surplus, an increase in producer surplus for the quota-imposing country, an increase in rent revenues for whichever government commands the import licenses, and a net social deadweight loss resulting from the quota-induced distortion of behavior (see Appendix A) (Krugman 2003, 200). Eventually, domestic producers may also benefit in terms of market power as foreign producers are unable to adjust their supply levels in response to an expansion of the demand due to changes in variables other than price (taste, income, etc.).

Quota rents and quota-generated trade distortion will occur only when quotas are binding and sufficiently low. Under the MFA, U.S. imports were trade distorting. Throughout the 1990s, about 40 percent of garment and textile imports to the United States exhausted the quota restrictions (Evans and Harrigan 2004). That said, the restrictiveness of a quota differs from country to country, and its trade distorting effects vis-à-vis any given country are thus diverse.

In general, however, the quota model yields the following predictions about the effects of MFA expiration:

- a decrease in prices and an increase in imports of textile and apparel products in the formerly restricted, developed-country markets.

- transfers of income from domestic producers to consumers in developed countries—that is, an increase of consumer surplus and loss of developed-country producer surplus.
- loss of quota rents for governments of exporting countries, which constitutes a transfer from governments in the developing world to consumers in the developed world; and
- efficiency gains in eliminating the deadweight loss generated by the quota-generated distortions in allocation. All else equal, the elimination of quotas should reduce trade inefficiencies on both the producer and consumer side.

To predict the reallocation of textile and apparel production among developing countries, a simple Ricardian analysis suggests that a country will produce and export goods in which the country has comparative advantage. A country has a comparative advantage in producing a good if the opportunity cost of producing that good relative to other goods is lower in that country than in other countries. This depends on factor endowments of each country and factor requirement characteristics of the produced good. The textile and apparel industries are labor intensive, and the basic input is cotton. Thus, according to the Ricardian model, it is expected that countries with larger labor forces and higher production of cotton will benefit most with MFA expiration, increasing their production and exports of textiles and apparel.

2.2 Expert Opinion on the Consequences of a Quota Regime Expiration

The MFA expiration is expected to have the following general effects on South Asia, according to the pre-expiration academic literature:

- **Benefit to consumers**. Elimination of quotas will benefit consumers, basically due to lower prices (Tyagi 2003). This prediction is shared by most experts. Speer (2002) predicts price reductions between 50 cents and $2 per unit. Using a global computable general equilibrium model, Chadcha (2001) predicts an increase in apparel exports and declining prices.
- **Increased trade**. MFA expiration will enlarge world trade of textile and apparel products, and developing countries will further gain market share. Diao and Somwaru (2001) predict that world apparel trade will increase twice as quickly as textile trade in the post-quota world. Another general model presented by Avisse and Fouquin (2001) predicts a more balanced growth in global trade in textiles and apparel of about 10 and 14 percent respectively.

- **Production shift to low-cost countries**. Production will be reallocated away from high-cost countries that were producing only to take advantage of their quota. Predicted big losers are countries in which more than three-quarters of all apparel exports are in highly restricted quota categories, such as Lesotho, Haiti, Honduras, El Salvador, Nicaragua, and Kenya (Okun 2004). Pakistan, Vietnam, South Korea, Hong Kong, Taiwan, and some other countries with preferential access to U.S. and EU markets will also benefit (Moore 2003, Jones 2003). Lankes (2002) simulates quota removal in a general model and predicts a reallocation of production to the detriment of developing-country exporters that have been "effectively protected" from more competitive suppliers by the quota system.
- **Regional gains and losses**. Avisse and Fouquin (2001) simulate quota removal in a model that predicts an 87 percent export increase for China and a 36 percent export increase for South and Southeast Asia. The model also predicts exports losses for Latin America and countries participating in the North American Free Trade Agreement, of 39 percent and 27 percent respectively.
- **MFA was especially burdensome for some countries**. The export tax equivalent of quotas assesses the extent to which exports are restricted. The degree of restrictiveness of a quota can serve as a useful (albeit imprecise) yardstick in broadly predicting the likely impact of its removal. The higher the estimated export tax equivalent for any particular country, the greater the likely benefit to that country. Flanagan (2003) classifies India, Pakistan, Bangladesh, and Sri Lanka in the group of "countries seriously held back, almost across the board, by quotas today," while Nepal fits in the category of "countries whose quotas have been a valuable tool, now threatened." Nordãs (2004) presents a simulation using a general equilibrium model for the world economy, which is particularly suitable for trade policy analysis. The result for the base year, 1997, indicates higher export tax equivalent for China, India, Bangladesh, and Sri Lanka. Kathuria and Bhardwaj (1998) estimate for 1996 that Indian exporters paid an export tax equivalent between 16 percent and 39 percent in the U.S. market and between 17 percent and 23 percent in the EU market.
- **Shift to lower value products**. As quotas are measured by quantity, not value, manufacturers seek to produce the highest value products possible under a given quota. Experts thus expect a shift to production of lower-value products.
- **Reduction in intra-regional trade**. Under MFA, manufacturers engaged in regulatory arbitrage (purchasing goods in one market for immediate sale in another at a higher price) by shipping slightly altered

items that fall under a different category in which more quotas can be obtained. For example, sleeveless jackets are shipped as vests with the arms attached out-of-country (Collins 2003, 112). Thus experts expect a decrease in intra-regional textile trade as a result of decreased incentives for regulatory arbitrage and a decreased need for re-shipment.

- **Shift from Latin America to South Asia**. Small exporting countries were at an historical advantage in the MFA system because they were less likely to bump up against quota limits than bigger countries like China and India. Since the mid-1990s, in the past decade of the MFA, however, relatively large suppliers like Mexico, Turkey, and Central European countries benefited from the quota system as they were given preferences by the dominant importing countries (Martin 2001, 5; Hertel et al. 1996; Harrison, Rutherford, and Tarr 1996). Thus, experts expect a rejuvenation of market share for South Asia vis-à-vis these countries and regions. Moreover, Terra (2001) estimates that apparel production of restrained exporters will increase by almost 20 percent, and their textile production will increase by around 6 percent. At the same time, Terra predicts that the market share of non-quota-constrained exporter countries (Mexico, African, and Caribbean countries) will decrease.
- **Incentive to rationalize production**. As market share is fixed, quotas have reduced the incentive to upgrade technologically to capture market share, thereby stunting productivity growth. Quotas have also kept exporters like Hong Kong in the textile and apparel business long past the time when manufacture in Hong Kong made sense from a pure labor-cost perspective (Bernard and Jensen 1999). Greater post-MFA competition will provide incentives to upgrade facilities and to rationalize production processes. India, in particular, will likely benefit from reforms aimed at generating more efficient factory-produced outputs of consistent quality. The MFA encouraged a highly decentralized organization in India that focused on the capture of niche markets. Garment exporters in India subcontract much more of their output than do other countries in the region, which tend to focus more on mass production of uniform products. "Apparel firms in India subcontracted 74 percent of their output, compared with only 11 percent for Hong Kong, 18 percent for China, 20 percent for Thailand, 28 percent for South Korea and 36 percent for Taiwan" (Martin et al. 2001, 10-11).
- **Within-country competition should increase**. In addition to increasing competition between countries, MFA expiration will likely increase competition within countries, reducing tendencies toward oligopoly that were the consequences of the quota system.

2.3 What is Happening and What is Likely to Happen According to the Popular Press

To get a sense of non-academic, popular opinion, we reviewed the popular and trade press, which we group into three main areas: Asian, U.S., and European. We analyze how the press in each region reported about the likely effects of the MFA expiration for each of the five South Asian countries. We note where press opinions seem to diverge. Overall, the Asian and European press had the most articles analyzing the effect of the MFA. The U.S. press had the fewest articles regarding the expiration of the MFA. In fact, practically the only time the MFA is mentioned in the U.S. press is in regard to China or trade concessions to countries struck by the tsunami in December 2004.

The news coverage largely foretold gains for India and Pakistan, although there was significant variation about the predictions about the extent of the gains. The predictions for Sri Lanka and Bangladesh are mixed, with some sources predicting doom and other sources forecasting gains. Nepal is considered to be a significant loser with the expiration of the MFA, but the popular press does not focus much attention on Nepal.

2.3.1 India and Pakistan

The popular and trade press largely support the predictions that India will be better off with the expiration of the MFA with Pakistan also benefiting to a lesser degree. The Asian press presents an optimistic future for India and Pakistan while the European press is more skeptical and presents a more sober review. The European press nevertheless predicts gains for India and Pakistan; however, the predicted gains are varied among sources. The U.S. largely focuses on China with only minimal comments regarding India.

Asian press

Most of the Asian press provided predictions that India and Pakistan would benefit from the expiration of the MFA. Most predictions were not supported with overwhelming evidence or facts regarding the industry. Any facts presented supported the optimistic predictions for both countries.

India should gain market share in the United States with the expiration of the MFA, the press prognosticated. Some predictions indicated that India would increase its share of the U.S. market from 4 percent in 2002 to 17 percent by the end of the decade. A study by Exim Bank makes a slightly less optimistic prediction: India could increase its share in the U.S. and EU textiles markets.[1] In addition, India's government supports the industry and unveiled a plan that expects garment exports to reach $50 billion by 2010 (Ipye 2005).

[1] From 8.4 percent ($1.5 billion) of the U.S. market and 3.2 percent ($1.9 billion) of the EU market in 2005 to a share of 13.5 percent ($5 billion) and 8 percent ($8 billion) respectively by 2014 (*Financial Times*, 18 March 2005).

The Times of India supported the positive predictions for India's industry, citing an increase in investment.[2]

The press also predicted gains for the Pakistani garment and textile industry.[3] The predictions are supported by anecdotal evidence and reasoning rather than support from credible studies.[4]

The press did caution India and Pakistan, although the warning for India favored Pakistan. A study by the Associated Chambers of Commerce and Industry warned that China and Pakistan may capture the country's global textile market share after the expiration of the MFA if India fails to enact massive reforms and modernize its textile sector (*Financial Times*, 1 January 2005). *Asia Pulse* voiced similar caution for Pakistan. Citing Will Martin at the World Bank, the article indicated that while the potential exists for Pakistan, the nation must improve efficiency and quality to remain competitive without quotas (*Asia Pulse*, 25 February 2004).

European press

The European press provided facts that support positive predictions for the two countries. The European press was more balanced about the Indian textile and garment industry but still indicated the country's industry will gain. J.C. Penney told Alok, Mumbai-based Welspun, and other regional suppliers that it would reduce the number of its supplier countries from 53 to 23, and that 80 percent of procurement would be sourced from five countries such as India, China, and Vietnam. In addition, Wal-Mart, Gap, and Target said they would increase the amount of textiles sourced from India from $1.3 billion to $2.5 billion in two years. Target plans to increase Indian sourcing fivefold from $200 million (*Financial Times*, 6 January 2005).

The European press provided the same limited predictions and a flood of facts for Pakistan. *The Economist* predicted that Pakistan's strengths would allow it to compete in the global market due to low labor costs, a raw-material base

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[2]There has been significant investment in the apparel industry to the tune of approximately $500 billion, by both domestic and foreign investors. Investment has been in new textile plants and new technologies that will increase competitiveness and productivity. Furthermore, *The Times of India* reports that the apparel industry is importing skilled labor from the United States and Europe. (*The Times of India*, 8 March 2005).

[3]The *Financial Times* predicted Pakistan as a "winner"; however, long-term market share would depend on cost, quality, and timely delivery (*Financial Times*, 18 March 2005).

[4]The *Dawn* reported that continuous investment in technology gives Pakistan a competitive position. In addition, more than $2 billion has been invested in Pakistan's textile industry. In addition, the article reported that "exports are expected to reach $13 billion, a significant increase from $8 billion in 2004"; however, no study was cited to support the expectation (*Dawn*, 1 January 2005).

in both cotton and synthetic fibers, and large-scale investment in the past few years. Pakistan was seen as a particularly good global competitor in bed linen and towels (*The Economist*, 11 November 2004).

The favorable predictions for Pakistan were based on industry capacity, good investment levels, and strong U.S. and international support for the country. The capacity of the Pakistani garment and textile industry was expected to increase in the near future. For example, the Kohinoor factory in Pakistan planned to triple its capacity of 200 sock-making machines. In addition, the Kohinoor factory was to triple its workforce to 1,200. The Pakistani textile and garment industry has benefited significantly from U.S. aid in connection with the fight against terrorism. Textile manufacturers have together overseen investments of up to $4 billion in their businesses since 2001, when Pakistan became a key ally in the war on terrorism. International aid through the World Bank and International Monetary Fund has followed the U.S. lead. The *Financial Times* reports that U.S. economic aid and support for Pakistan through the World Bank and International Monetary Fund has brought financial stability. Due to this support, the Pakistani rupee has appreciated by up to 10 percent since 2001. This makes imports of new textile equipment more affordable (*Financial Times*, 7 May 2004).

The European press did provide a more varied analysis, some predicting reduced gains in India and losses in the Pakistani industry. Facts were presented more than predictions, although *The Economist* did provide one prediction for India’s industry. A report by the consulting company McKinsey suggested that without further reforms, the growth rate of India’s textile exports would not exceed 8 percent a year (*The Economist*, 11 November 2004). The *Financial Times* provided facts to support the less optimistic view for the Indian textile and garment industry. The problems stem from labor force issues in India. Most of the companies (more than 90 percent) in the fabric-weaving segment of the industry are labor-intensive and small. In addition, the garment sector has few large companies: 20 companies have sales of more than $50 million. Moreover, opportunity is limited to improve productivity due to inflexible labor laws (*Financial Times*, 6 January 2005).

The *Dawn* newspaper reported a possible loss for the Pakistani textile and garment industry (*Daw,n* 16 February 2005) while the *Financial Times* just provided a word of caution. A slowdown in Pakistani garment exports will severely affect more than 200,000 jobs and thousands of small-scale garment units. Consolidation is seen as important to the success of the Pakistani textile and garment sector. The chair of Nishat Textile Mills, the largest textile factory in Pakistan, warned that the performance of textile businesses in Pakistan would depend on inefficient small firms merging with efficiently run larger companies (*Financial Times*, 7 May 2004).

U.S. press

The U.S. press mentioned India and Pakistan in passing, but the real emphasis was on China and protecting the U.S. textile and garment industry in general. There should be intense competition for the U.S. textile industry. In addition, India and Pakistan are expected to gain in the post-quota world, but China was expected to be the big winner (*The Washington Times*, 26 December 2004). *The Wall Street Journal* emphasized the effect from China and mentioned India. It reported that China should capture approximately 50 percent of the U.S. clothing market and suggested that India could possibly quadruple its share of the U.S. market to 15 percent *(The Wall Street Journal Eastern Edition*, 20 December 2004). *The Washington Times* emphasizes the loss to the U.S. textile and garment industry and India's possible gain. Low-cost raw materials, labor costs, and logistics make India one of the countries that will gain with the expiration of the MFA in addition to China. These gains will be at the expense of companies in the United States, Europe, and smaller, less-efficient countries, such as Mexico, Turkey, and Indonesia (*The Washington Times*, 26 December 2004).

2.3.2 China

In the hope of preventing high unemployment, U.S. textile firms have asked the Bush administration to continue limiting imports of Chinese products. The industry has requested that limits be imposed in 2005 on imports of Chinese trousers, underwear, shirts, blouses, and other products. The current administration does appear to be sympathetic to the industry's requests and has agreed to consider imposing the new limits. Experts agree, however, that while the limits may postpone a surge of Chinese imports, they will not stop them (*Washington Post*, 31 December 2004).

It is important to note that these limits have been sought only for Chinese imports. In the meantime, other big textile producers such as India and Pakistan will have the opportunity to penetrate the U.S. market.

China's competitive advantage is considerable. China's estimated average wage of 68 cents per hour is higher than in Bangladesh, India, and Pakistan, but China remains cost-competitive because it is more productive (*Washington Post*, 17 November 2004).

There are those, however, who do not think that all business will shift to China. Importers prefer to rely on a mix of suppliers, and new trade barriers may still disrupt the flow of goods (*Washington Post*, 31 December 2004). These barriers may come in the form of protectionist policies implemented by the U.S government. Importers based in Latin American countries have started production processes in China but have not moved permanently due to uncertainty as to how the Bush administration will respond to demands for protectionism (*The Wall Street Journal Eastern Edition*, 7 July 2004).

2.3.3 Sri Lanka and Bangladesh

The extent of press coverage of Sri Lanka and Bangladesh differs between Europe and the United States. Most of the Asian press still addresses the effect of the MFA expiration on Bangladesh and Sri Lanka; however, the amount of European press is more limited. The U.S. press attention to the region is negligible except as an afterthought in the wake of the tsunami.

Asian press

The Asian press provided mostly predictions for Sri Lanka and Bangladesh without facts about the industry supporting the predictions. The predictions were mixed for both countries. The Board of Investment of Sri Lanka provides a balanced prediction laced with optimism for the industry. The board reported that roughly one-third of Sri Lanka's exports are manufactured by 25 large-scale manufacturers. These firms are in a better position to restructure and survive in a global marketplace. The situation for small- and medium-scale enterprises is more critical because they employ the most people in the industry (Board of Investment of Sri Lanka 2005).

The *Indian Express* provided a balanced view about the future of the Sri Lankan textile and garment industry. There are two views regarding the future of the garment industry in Sri Lanka. The first is based on control of export share by industries. Data show that the top 12 percent of the garment firms control 72 percent of exports, indicating that larger firms dominate the industry. It is argued that these firms are in a position to take advantage of the expiration of the MFA. On this assumption, a five-year strategy for the industry forecasts a 12 percent growth during the next three years. In addition, these firms could expand and consolidate by acquiring small- and medium-size companies or by subcontracting with them (*Financial Express* [owner of *Indian Express*], September 22, 2004).

The second view argues that the size of the companies that control the majority of the exports is irrelevant because the Sri Lankan industry is not competitive enough. This school argues that the threat from China will be overwhelming because the global share of garment production from China is expected to increase to 50 percent by 2010. Moreover, the share controlled by other Asian countries is expected to shrink from the current 32 percent to 20 percent by 2010. The intense competition within the rest of Asia will not allow Sri Lanka to be a successful competitor in the global marketplace. From the domestic supply side, the inadequate development of backward linkages, weak forward integration, low labor productivity, and increasing production costs are factors that show the lack of competitiveness in the Sri Lankan garment industry. Those who argue on these lines calculate that at least 100,000 workers will lose jobs (*Financial Times*, 22 September 2004).

The most significant effects on the Sri Lankan garment and textile industry are the actions taken by foreign governments in response to the tsunami. Europe has provided favorable trade agreements for Sri Lankan textiles. Moreover, the U.S. Congress may pass favorable trade legislation with Sri Lanka,[5] and because more than 90 percent of Sri Lankan garments and textiles go to the EU and U.S. markets, the negative effects of MFA expiration should be somewhat tempered if the legislation passes.

The future for the Bangladeshi garment and textile industry is similarly difficult to determine. There is more attention focused on Bangladesh than Sri Lanka in the Asian press. This is evident in both the number of articles and reporting of trade data for Bangladesh. Predictions vary. A U.N. Development Programme report suggests that Bangladesh may lose income or value addition of $1.2 billion in the garment sector if export demand declines due to the expiration of the MFA. However, income may rise by $420 million if export demand increases (*Dhaka Courier*, 25 March 2005). Some sources presented a more dire fate for Bangladesh. The Asian Development Bank chief economist indicated that "Bangladesh has not prepared as well and is very likely to suffer huge losses, with major social costs" (*AFX News*, 22 September 2004).

The trade data the press presented would initially support the negative predictions for Bangladesh; however, the most recent data make it inconclusive. The reduction in prices is not a good sign for the garment sector in Bangladesh. The garment exporters of Bangladesh have been asked by major international buyers to reduce the prices of their products by an average 12 percent to stay competitive in the world market. Bangladesh garment exporters have been asked by retail giants like Wal-Mart and J.C. Penney to match price reductions by other competitors like Pakistan (Xinhua News Agency, 17 January 2005). In addition, the trade data reported in January 2005 was not promising for the garment industry. Textile manufacturers in Bangladesh had a 21 percent decline in garment exports in January, which may signal a loss in business (*AFX News*, 15 March 2005).

European press

The European press also focused more on Bangladesh than Sri Lanka. In addition, the European press presented a less optimistic view for the Bangladeshi garment and textile sector than the Asian press. The *Independent* predicted negative consequences to the Bangladesh economy due to the MFA expiration: exports from Bangladesh will probably fall by as much as 50 percent, and unemployment likely will rise by approximately 13 percent (*Independent*, 31 December 2004). *The Economist* was

[5]Most U.S. textile companies will continue their contracts with Sri Lankan suppliers despite the MFA phaseout. "They have been touched by the situation in Sri Lanka and would keep on supporting the nation," U.S. Senator John Corzine said in the *Daily News*, adding that with the MFA coming into play, most U.S.-based companies were to terminate their contracts in Sri Lanka and look to other countries. "However, with the devastation of the tsunami in Sri Lanka, most U.S. companies would continue doing business with Sri Lanka until further notice" (*Indo-Asian News Service*, 13 January 2005).

also fairly negative about Bangladesh's ability to survive without the quotas. According to an International Monetary Fund report, the potential loss to Bangladesh's exports from quota elimination could be 25 percent. The facts reported by *The Economist* supported the pessimistic view for the country. The industry grew from 400,000 people and 800 factories in 1990 to nearly 2 million people and 4,000 factories in 2000. A Goldman Sachs survey found that 86 percent of European buyers and all American buyers were already negotiating price cuts. Bangladesh was second only to India among countries where buyers expected to increase procurement in 2005. The garment industry's lack of backward linkages is definitely cause for concern, as is the fact that its raw materials are all imported, putting a premium on labor costs, productivity, and transport (*The Economist*, 11 November 2004).

U.S. press

There was no word about Sri Lanka or Bangladesh in the U.S. news until after the tsunami. The North Carolina press had a few articles condemning the use of trade relief for the Sri Lankan textile industry. A spokesperson from the U.S. textile and garment industry believed that aid to the countries struck by the tsunami should not be borne by the workers in the U.S. textile and garment industry. Thousands of jobs in North Carolina would be lost due to favorable trade agreements with countries stuck by the tsunami (*News and Record*, 8 February 2005).

2.3.4 Nepal

The effects of the MFA expiration on Nepal are basically not mentioned in the popular or trade press, probably due to several factors. First, general consensus is that Nepal will suffer a net loss in the industry. Second, Nepal is a relatively small country and fairly insignificant in the region compared to China, India, and Pakistan. Finally, the current political situation receives the most attention from the press. The few articles found are from Asian newspapers.

Nepal is in a state of panic. After continuous growth of the garment industry during the last two decades under the quota regime, Nepali garment exporters feel the competitive crunch. Nepal is at a competitive disadvantage due to higher transportation costs, unskilled labor, low productivity, heavy reliance on raw materials imports, and a narrow export base. Nepali manufacturers fear they would lose out with large players such as India and China, and with Bangladesh and Sri Lanka.

The vice president of the Garment Association of Nepal, Prashant Pokharel, says "We are on the verge of a life and death situation" (Dhakal 2005). The association president echoes those sentiments: "This industry is as good as dead unless some miracles happen and quota system is revived in some form" (Gautam and Lamsal 2005). Thus, the saving grace of the Nepali garment industry may have to depend on legislation pending in the U.S. House and Senate that would provide duty-free status to Nepali garment exports.

2.4 Main Expectations and Predictions

This section summarizes the above sections describing the quota model, expert opinion, and press coverage to highlight the main expectations for the effects of the end of the Multi-Fiber Arrangement. This two-part section examines predictions for who is expected to win and who is expected to lose, and then calculates the expected effects on production within countries. Table 2 outlines the expected winners and losers by country.

Table 2
Expected effects on South Asian (and Other) Countries

Country	Win/Lose Market Share			Rationale
	Quota	Expert	Press	
India	Win	Win	Win	Large cotton producer; large country; quota restrictions were particularly onerous for India.
Pakistan	Win	Win	Win	Low labor costs; large cotton producer; government support.
Nepal	Lose	Lose	Lose	Gained from MFA; lack of clear competitive advantage; dependent on imported raw materials; higher lead time; lower productivity; political instability.
Sri Lanka	Win	Win	Indeterminate	Quota restrictions onerous; highly successful in ready-made garment niche market.
Bangladesh	Win	Lose	Win (Bangladeshi press) Lose (Foreign press)	Low labor costs; quota restrictions onerous; highly successful in ready-made garment niche market; under price pressure; high level of government involvement in industry; producers highly organized within trade associations.
China	Win	Win	Win	Relatively high labor costs, but productivity more than compensates.
Latin America, Turkey, Indonesia	Lose	Lose	Lose	Relatively high labor costs.
United States	Consumers gain; producers lose	Consumers gain; producers lose	NA	Least controversial expectation is that major market consumers will gain from the increased global competition. Producers in major markets cannot compete on wages, and the few producers that exist are mortally endangered.

There is consensus among the quota model, expert opinion, and the popular press that India is poised to gain from the expiration of the MFA. In the main, gains are to come simply because the quota restrictions India faced were rather severe. With the elimination of such quotas, and given India's population, absolute gains will be sizable. Of course, all of this is also true with regard to China. Thus, the main uncertainty in regard is how India and its rivals will divide the newly available market share. This depends on a couple of factors:

- **India's Productivity**. Although India has lower labor costs than China, the higher productivity of labor of China makes the latter more competitive. Thus, the magnitude of India's market share will depend on its ability to make its production more efficient.
- **Political Uncertainty**. Under conditions where there is political uncertainty in the trade relationship among major supplying and demanding countries, retailers may choose to diversify the country origin of their suppliers to minimize risk. In particular, continued political uncertainty and concerns about the possibility of the United States suddenly imposing trade protections on Chinese imports tend to temper desire to source production in China. Thus, India will benefit vis-à-vis China to the extent that its trade relationship with the United States and European Union is seen as more stable.

The fate of other South Asian countries is more uncertain than India's. Pakistan, Bangladesh, and Sri Lanka have low labor costs relative to India (and China), and their quotas under the MFA were rather restrictive. This means each of these countries could gain from the MFA expiration. Much depends, however, on how they will be able to position themselves in relation to India.

Nepal seems to be the only certain loser in South Asia. Its quota under the MFA was generous, and thus it benefited from the MFA regime. With the MFA expiration, it is not in a competitive position relative to most other South Asian countries.

The new competition (both within-country and internationally) should provide more incentives to upgrade technology. Under the MFA, if a country was absorbing its full quota allocation, then there was little incentive to increase the productivity of production. Poor productivity spelt no reduction in market share since the quota fixed market share. With MFA expiration, poor productivity and high costs are likely to cause a reduction in market share. Thus incentives to upgrade technology and rationalize production processes are increased.

3. Country Analysis

This section provides an in-depth and more nuanced analysis of the impact of MFA-expiration on South Asia. We group the countries into three categories: winners, losers, and ambiguous. In the winners category are India and Pakistan, countries that we consider are most likely to gain from MFA expiration. Although India is more likely to gain than Pakistan, there is still question about the magnitude of gain for India, given competition from China. The loser category contains only Nepal, the South Asian country most likely to lose from MFA expiration. In the ambiguous category are Bangladesh and Sri Lanka, countries where we consider the evidence on prospects to be mixed.

3.1 Winners: India and Pakistan

Most experts believe that the Indian textile industry will be able to compete reasonably well in the post-MFA world, and general opinion is that India will be better off than other South Asian countries. At the same time, experts in the region believe that India will not be as competitive as China. India's inability to compete with China is mainly attributed to the absence of technological progress and to rigid labor laws.

Pakistan, on the other hand, is not seen as a clear winner from MFA expiration. It does, however, appear to have a great deal of potential to be a winner. Both the Pakistani government and the private sector appear to be ready to take advantage of Pakistan's domestic production of cotton and low labor costs in order to achieve potential gains post-MFA.

3.1.1 India

The textile and garment industry in India is one of the leading industrial sectors in the economy, second only to the agricultural sector. The industry contributes 4 percent to gross domestic product and 14 percent to total industrial production. Furthermore, the industry employs 30 million workers and earns 35 percent of India's foreign exchange (Hashim 2004).

Fragmentation of the Industry

Fragmentation is a major concern for the Indian textile industry. The textile industry can be broadly divided into the mill sector and the non-mill or decentralized sector. The mill sector consists of textile mills that utilize modern looms and are responsible for large-scale production. Smaller firms are categorized as the non-mill or decentralized sector. There is great variation in production levels; production of a single small-scale firm can be as little as 5 meters a day. The decentralized sector accounts for 95 percent of production and is the main source of employment and export earnings (D'Souza 2003). Although it is hard to predict whether smaller firms will be able to compete in the long run, the obvious argument for smaller firms being driven out of the sector is that they will be unable to compete due to diseconomies of scale and technological disadvantages (Hashim 2004).

Weak Technological Progress

China is able to produce textiles and garments in bulk and of consistent quality, which gives it an advantage over India where textile products vary significantly in quality because production processes are not uniform (Martin, Kathuria, and Bhardwaj 2001).[6] Upgrading existing technology is therefore a prerequisite for access to international markets. Furthermore, access to new markets in the long term will be achieved through production, sourcing, and marketing networks.[7]

Labor Laws

Although the Indian textile industry does not expect to face massive layoffs as a result of MFA expiration, the industry is lobbying the government to change labor laws. The industry has cited labor laws as the main reason for not being able to adopt assembly-line manufacturing methods. Labor policy in India favors organized labor and has a great deal of support from the political left. Retrenchment (reducing labor due to fall in demand) is not permitted; for an export-oriented industry, this can be quite burdensome. Labor policy is perhaps the most significant hindrance to India increasing its international competitiveness.

Reasons for Optimism

Despite weak technological progress, fragmentation of industry, and rigid labor laws, India may do fairly well. India has a cost advantage in cotton production and is self-sufficient in backward linkages in the production process. India ranks third in the world in the production of raw cotton, with approximately 14 percent of total world production. Furthermore, the textile industry does not have to depend on other countries to supply necessary inputs. The backward linkages in the production process, namely raw material production, spinning, weaving, and fabric production, are all carried out in India (D' Souza 2003).

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[6]Indian garment exports are generally low volume and focus on a variety of outputs, especially on fashion clothing and women's outerwear (Kathuria, Martin, and Bhardwaj 2001). The Indian production system is well suited to meet this sort of demand. The downside, however, is that exporting fabricators are effectively preventing India from becoming a leading player in the mass clothing market. There tends to be a great deal of variation across different batches of output, and the mass clothing market demands consistent good quality across huge volumes of a single item of clothing.

[7]It is clear that to be competitive, the textile industry has to enhance its production processes and achieve economies of scale. For instance, advances in technology can facilitate assembly-line automated production that will not only ensure that economies of scale are achieved but also that product quality increases and delivery lead times decrease. Experts therefore recommend that the textile industry focus on technological progress instead of focusing simply on market access via the World Trade Organization (Kathuria and Bhardwaj 1998).

Furthermore, most experts in the textile industry believe that in the post-MFA world, foreign direct investment will increase substantially in the sector (D' Souza 2003). Global retailers like Ikea, J.C. Penney, Nike, Reebok, Wal-Mart, and Marks & Spencer have been outsourcing manufacturing activities to India for a number of years. Additionally, the textile industry has seen several joint ventures and the opening of stores by foreign retailers. Domestic firms are also looking to enter into joint ventures with European manufacturing units.[8] The basic idea is to export semi-processed fabric from India to Europe, process it further in Europe, and then sell it under the "Made in Europe" label.

Indian firms are also looking to establish manufacturing units in other countries like Bangladesh and Nepal (Martin, Kathuria, and Bhardwaj 2001). This would lead to what is called triangle-type manufacturing. Indian firms would receive orders from U.S. or European buyers and would shift some production activities to units based in some other South Asian country with lower costs and less rigid labor laws.

Wages are often cited as a reason to be optimistic of India's chances in the international market. However, although China's estimated average wage of 68 cents per hour is higher than the average hourly wage in India, China remains cost-competitive because its workers are more productive due to technological advances (*Washington Post*, 17 November 2004).

Pressure on the Indian Government

The textile industry has been putting pressure on the Indian government to modify domestic policy, the justification being that the industry needs to restructure itself to compete in the post-quota market. At present, Indian firms are tempted to outsource production to other countries because labor laws in other countries are less rigid and allow firms to be more competitive. Owners of Indian textile firms argue that if labor laws were more pro-trade, they would not have to move to other countries to gain a competitive advantage.

Fortunately for the textile industry, the government has an interest in ensuring the well-being of the textile sector because the textile industry plays a significant role

[8] Numerous small- and medium-sized enterprises in the European Union are the primary buyers for small-scale firms in India. These small-scale firms have a niche market that may be sustainable in the future. Global competition could, theoretically, lead to small- and medium-sized enterprises being driven out of business in Europe. This is unlikely, however, as the EU government has provided protection to these enterprises, and there is no indication that this protection will be removed in the near future.

in the Indian economy. For this reason, the government gives substantial consideration to the interests of this sector when formulating policies.[9]

It is useful to remember, however, that any reform will not only involve undoing policies that have existed for decades but also that these policy changes have to take place within a democratic framework. Economic reform policies will enhance the role of the market, and the state's discretionary authority will be weakened to a great extent. In a country like India, which has historically favored state-led development strategies, this is no easy task. Moreover, the current administration is by no means stable and is continuously having to make concessions to the political left. The leftist parties in India are against economic reform policies that promote international trade and have historically been opposed to an open economy.

3.1.2 Pakistan

The textile sector is a significant industry in Pakistan in terms of export value. Textiles (including apparel) account for approximately 72 percent of total export value.

Obsolete Machinery and Absence of Diversification

Pakistan's textile and apparel industry faces the challenge of obsolete machinery and export concentration in low-value-added products. The obsolescence of Pakistani technology is especially strong in the ginning and power looms of the weaving sector's family-owned firms.[10] Such ginning machines are only one-fifth as productive as machines in the developed world. The government has, however, been promoting improvements in this sector through implementation of standards, gin saw upgrades, pneumatic control system installation, and loan programs for the weaving sector to upgrade from power looms to auto looms.

The Pakistani government is also encouraging diversification in terms of inputs (with more reliance on synthetic fibers) and products to reduce the concentration in low-value-added products. In addition, the government is trying to reduce the high reliance on cotton. For instance, the government has proposed a goal that entails increasing spinning utilization devoted to synthetic fiber up to 40 percent

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[9] India's government recognizes the importance of technological progress in the textile industry and has made some moves in this direction in the form of the Textile Upgradation Fund Scheme, a plan introduced in 1999 by the Ministry of Textiles to enable firms to purchase competitiveness-enhancing machinery. Furthermore, the fiscal and tax incentives that were being given to the small-scale industry sector to encourage the establishment of large-scale firms have been recently removed (Martin, Kathuria, and Bhardwaj 2001)

[10] The textile and apparel industry in Pakistan is composed mainly of small and medium enterprises that are generally family owned. This unorganized sector represents between 80 percent and 90 percent in each sector (spinning, weaving, and garment-making). The remainder of the industry is characterized by a group of large, vertically integrated mills.

(U.S. International Trade Commission [hereafter USITC] 2004). Spinning utilization devoted to synthetic fiber was, in 2004, at 18 percent. There is also some concern about Pakistan's specialization in terms of product and market destination. Pakistan has positioned itself as a mass producer in men's garments, and cotton towels and bed linen,[11] the vast bulk of which is exported to the former quota markets of the United States and European Union.[12] The government is pushing for product diversification into the more profitable sectors such as women's wear (Appelbaum 2004).

Trade Agreements

Finally, Pakistan is working to obtain special treatment in its main export markets, the United States[13] and the European Union.[14] Pakistan is asking the United States for initiation of talks on a free-trade agreement. In 2003, the two countries signed the Trade and Investment Framework Agreement, which was intended as a prelude to signing a free-trade agreement.[15] Pakistan also benefits from a special generalized system of preferences status in the European Union, instituted to provide incentives for the campaign against drug production and trafficking. This system covers more products than the normal trade regime (around 7,200) and allows access to the EU market duty-free (European Commission 2005). Pakistan also maintains ties with China that are related to investments in the textile sector[16] and supplies large quantities of grey cotton cloth to China (USITC 2004).

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[11]Textile made-ups are the most dynamic sector with a wide variety of cotton towels and bed linen production. Pakistan is a competitive global competitor in this sub-sector, running second to China in export value. Although most of these products are made by the unorganized sub-sector of small manufacturers, the higher-quality market segments are supplied by large, vertically integrated firms equipped with the latest machinery (USITC 2004).

[12]In 2001, 48 percent of textile exports and 87 percent of apparel exports were destined for quota markets.

[13]Pakistani exports to the United States in 1997-2001 show a clear increasing trend, from 22 percent to 30 percent of the total textile and apparel exports of Pakistan (USITC 2004).

[14]In 2001, Pakistani textile exports to the European Union represented 56 percent of total textile and apparel exports (USITC 2004).

[15]In December 2004, U.S. President George W. Bush, talking with Pakistan's President Pervez Musharraf, promised to begin negotiations on a free trade agreement between the United States and Pakistan. The commerce minister for Pakistan said that while the U.S. government has not yet responded to the call, there are "positive indications" that negotiations would begin (*Pakistan Newswire*, 1 February 2005; *Financial Times*, 22 September 2004).

[16]The Export-Import Bank of China has extended a $200 million line of credit for financing equipment replacement and the modernization and capacity expansion of Pakistan's textile industry; the Chinese government offered Pakistan $25 million for investment in joint ventures in 2002; China is planning to set up an industrial park in Pakistan that would print silk cloth and convert it into garments for re-export, and Pakistan has allocated land in Karachi for this purpose (USITC 2004). Data of U.S. market shares between 1997 and 2005 for Pakistan and China show that Pakistan is the only South Asian country that does not display a competitive relationship with China (see Appendix B).

Reasons for Optimism

Pakistan has several reasons to be optimistic regarding its competitiveness post-MFA. Pakistan is the fourth largest cotton producer in the world (USITC 2004). This means that, unlike Bangladesh and Sri Lanka, it does not have to depend on other countries for its raw material. Furthermore, labor costs in Pakistan for textile production are among the lowest in the world: labor costs were approximately 34 cents per hour in 2002.

Moreover, both the government and the textile industry took steps to ensure competitiveness well before MFA expiration was even proposed. The private and public sectors collaborated to form the National Textile Institute (Faisalabad) in 1959[17] and the Textile Institute in Pakistan in 1994.[18] Furthermore, Pakistan's government proposed Textile Vision 2005. This strategy involves loans to upgrade and expand equipment,[19] interest rate and tax policy reforms, the promotion of product and market diversification, and encourages adoption of uniform standards.

3.2 Loser: Nepal

The expiration of the MFA is likely to have a negative impact on the Nepalese economy. In a quota-free world, the Nepalese garment industry confronts a strong competitive environment and a difficult political situation. Small firm size, low labor productivity, high cost of transportation, lack of government support, and political instability are likely to have adverse effects.

In the early 1980s, Indian business interests established the ready-made garment industry in Nepal to circumvent quota restrictions. However, during the past two decades, Nepalese entrepreneurs have established themselves in the industry. Today, Nepalese own almost 90 percent of garment companies operating in Nepal.[20] Garments are a major export industry, accounting for almost 50 percent of total exports. However, Nepalese garment exports have declined from about $188 million in 2000 to $106 million in 2004. A recent report suggests that

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[17]The National Textile Institute (Faisalabad) was originally founded in 1959 by the government and some private companies, but since 1993 is managed by the All Pakistan Textile Mills Association.

[18]The Textile Institute in Pakistan (Karachi-Sindh) was founded in 1994 by a group of leading textile industrialists, members of the All Pakistan Textile Mills Association, and the government of Sindh, to offer professional education in textiles and to respond to industry needs.

[19]The spinning sector was the most favored by investment: it received 47 percent of the $4 billion investment in the textile industry between 1999 and 2003. Pakistan has the third-largest capacity of short-staple spindles for spun yarn in the world (5 percent of global capacity with 8.6 short-staple spindles), after China and India.

[20]About 51 percent of these industries are registered as sole proprietorship, 40 percent are partnerships, and about 9 percent are foreign joint ventures (Shakya 2001).

garment exports have continued to decline since the expiration of the MFA.[21] Since 1 January 2005, Nepalese garment exports have amounted to $16.7 million. This is a significant decline from $32 million in the same period last year (*Kat-mandu Post*, 5 April 2005).[22] Similarly, the number of garment firms has decreased from about 1,000 in 1994-95 to about 100 in 2004 (Gautam and Lamsal 2005).

3.2.1 Lack of Technological Progress and Low Productivity

The decline in exports reflects the inability of the Nepalese garment industry to compete in the post-MFA world. Dominated by small firms,[23] the industry lacks technological sophistication and skilled labor. Furthermore, labor productivity is lower in Nepal than in the other South Asian countries. For instance, value added per worker in Nepal is half that of India. Bangladesh and Sri Lanka also have higher productivity compared to Nepal (World Bank 2003).

3.2.2 Arduous Geographical Terrain

Nepal's difficult geographical terrain increases transportation time and cost significantly. Furthermore, lead times are greater in Nepal than in other South Asian countries: compared to 135 days of average lead time in Nepal, India's lead time is 34 days, and Bangladesh and Sri Lanka have lead times of 105 days and 100 days respectively.

3.2.3 Reliance on Single Market

The Nepalese garment industry is excessively dependent on one primary market, the United States, which accounts for more than 80 percent of Nepalese garment exports. Even in this narrow market base, the products are limited to a few categories, such as women's dresses, men's shirts, and cotton trousers and shorts. Together, these three categories account for almost 60 percent of the entire apparel output. Therefore, any change in composition of the U.S. imports is likely to affect the Nepalese garment industry.

3.2.4 Political Situation

Despite the disadvantages mentioned above, Nepal is the only South Asian country that provides no government incentives for garment exports. Moreover, the increasing intensity of the Maoist insurgency and political instability has damaged the Nepalese garment industry. The decline in Nepalese firms since 1995 parallels the rise of political violence.

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[21] According to the Garment Association of Nepal, garment exports have declined by an average of 48 percent since January 2005. Exports declined by 46 percent in January 2005, 66 percent in February 2005, and 41 percent in March 2005.

[22] Nepal exported garments worth $6.8 million in January, $4.4 million in February, and $6.2 million in March, compared to $11.3 million, $9.9 million, and $16 million for the same months in 2004.

[23] An average firm employs approximately 250 workers (World Bank 2003).

Thus, the Nepalese garment industry lacks technological advantages relative to the rest of the region and suffers from too unstable a political environment to compete effectively in the post-MFA world. The viability of the Nepalese garment industry will depend on whether it will be granted duty-free status in the U.S. market and whether there will be spillover effects (outsourcing) from India. Both of these conditions, however, are extremely uncertain.

3.3 Ambiguous: Bangladesh and Sri Lanka

It is difficult to predict the outcome for Bangladesh and Sri Lanka. Both countries have captured niche markets, which will protect them from any immediate implosion of their national textile and apparel industries. However, their ability to rationalize production will significantly affect their positions, especially in the face of increased competition from India and China. Specifically, increased competitiveness for both countries requires maintaining political stability among labor, greater access to the U.S. textile and apparel market, and increased foreign direct investment. Bangladesh in particular must develop the backward linkages of production to produce a higher proportion of apparel and textile inputs.

3.3.1 Bangladesh

The apparel industry[24] in Bangladesh is the largest industry in the manufacturing sector and the biggest earner of foreign exchange (Quddus 1999?). In 2003-2004, woven garments and knitwear accounted for $5.7 billion (75 percent) of Bangladesh exports (Bangladesh Bank, n.d.). The ready-made garment industry began in Bangladesh with nine firms in 1977-78 exporting around $1 million. During the next 25 years, the number of firms grew to more than 4,000. Furthermore, since 2003 some large U.S. retailers have made substantial investments in the Bangladeshi apparel industry: Bangladesh exports to Wal-Mart grew 18 percent to almost $900 million in 2003 and were expected to increase by 30 percent in 2004 (*Christian Science Monitor*, 3 November 2004).

Falling Prices

Firms in Bangladesh have experienced a recent surge in demand, which increased both firm size and national exports. Although Bangladesh’s most significant textile and apparel exports, knitwear and ready-made garments, grew in 2004, concerns exist about falling prices in an increasingly competitive international market.[25] Bangladeshi apparel producers were under price pressure by large U.S. retailers like Wal-Mart and J.C. Penney to cut prices by 12 percent in 2003 to match recent

[24] The Bangladeshi apparel industry is divided into woven garments and knitwear commodities. Woven garments include ready-made garments such as T-shirts, shirts, jackets, and trousers. Knitwear includes items such as sweaters.

[25] The increase in order quantities parallels the demand for lower prices.

reductions by competitors (Xinhua General News Service, 17 January 2005). In 2005, textile prices have fallen by 10 percent (Xinhua News Agency, 16 February 2005). However, Bangladesh has many trade associations that are proactive in developing competitive textile and apparel industries. Furthermore, Bangladeshi wages are internationally competitive and Bangladeshi firms could remain competitive if the government and trade associations focus on expansion of niche markets such as the ready-made garments and knitwear sectors.[26]

Imports of Raw Material

A second concern for Bangladesh is the high level of importation of raw materials. The ready-made garment sector is highly dependent upon imports of yarn and cloth for its production requirements. A high percentage of its total fabric requirements is imported. Bangladeshi imports have created significant trade deficits and these import requirements severely limit its ability to reduce production costs to stay competitive. Furthermore, fabric demand is increasing rapidly because of Bangladesh's success as the world's largest exporter of ready-made garment.[27] However, if the textile industry is able to develop backward industrial linkages, Bangladesh could reduce its import demands and increase employment.

Access to U.S. Markets and Foreign Direct Investment

The greatest international concern for Bangladesh is access to the U.S. apparel market and increased foreign direct investment.[28] If the Bangladesh government

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[26] Bangladeshi firms have formed several associations, such as the Bangladesh Garment Manufacturers and Exporters Association (BGMEA), the Bangladesh Knitwear Manufacturers and Exporters Association, and the Bangladesh Textile Mills Association. The BGMEA is the only government-recognized trade body that represents the export-oriented garment manufacturers and exporters of Bangladesh. These associations have called on the government to utilize diplomatic channels to expand export markets, lower tariff barriers, and increase competitiveness. To illustrate, the Bangladeshi government banned the import of yarn through land borders. The ban was initiated to assist in the development of backward linkages in the apparel sector and decrease Bangladeshi reliance on Indian yarn imports. The ban was rescinded (Haider 2002). Further, to meet international demands for reduced prices, exporters have urged the government to reduce the banking service costs from 5 percent to 6 percent, which is much higher than other exporting nations (Xinhua General News Service, 17 January 2005).

[27] Bangladesh's textile exports to the United States have up to a 16 percent duty (Holmes 2005). In 2001, the United States charged $331 million in tariffs on Bangladeshi exports of $2.4 billion (*Christian Science Monitor*, 3 November 2004). Bangladesh is seeking to expand its duty-free markets to sustain export growth with the expiration of the MFA. In February 2005, Bangladesh and the United States signed a finalized draft of Trade and Investment Framework Agreement, which set the stage for a negotiation of a full-fledged free trade agreement. The draft covers topics such as removal of non-tariff barriers, implementation of intellectual property rights, promotion of trade and private investment, improvement of workers' rights and pursuit of World Trade Organization talks on the basis of the Doha Development Agenda devised at the WTO's Doha Round of talks (Xinhua News Agency, 16 February 2005).

[28] According to the Asian Development Bank, Bangladesh has relied on MFA-quota-restrained markets, principally the United States and European Union, for 94 percent of its textile and clothing exports (*AFX-Asia*, 22 September 2004). The United States is Bangladesh's largest

and peak organizations are unable to gain greater access to the U.S. market, it could lead to economic instability as unemployment increases. Massive layoffs in Bangladesh could spark massive demonstrations and social upheaval, which would scare away foreign investors (*AFX-Asia*, 22 September 2004).[29]

3.3.2 Sri Lanka

Although textiles are a significant industry in Sri Lanka, garments are much more important than textile production, representing about 90 percent of the garment and textile exports in 1999 (Knutsen 2004).

High Wages and Diseconomies of Scale

At the national level, the two most significant problems are high wages in relation to productivity levels and diseconomies of scale in the garment industry sector. Lack of investment in physical capital plays a significant role in low productivity levels.[30] In addition, most of the Sri Lankan garment industry consists of small companies.[31] The apparel firms in Sri Lanka could survive with the expiration of the MFA, with changes in the industry. There would need to be significant mergers and acquisitions or the formation of peak organizations with the ability to coordinate the sprawling textile and apparel industry. With increased economies of scale, the Sri Lankan textile firms could increase investment and improve productivity to compete internationally.

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single-country market, absorbing $2.2 billion in FY2002-2003. During the FY2002-2003, Bangladesh exported 33 percent of its exports to the United States. Specifically, in 2002-2003, the United States imported 47 percent of Bangladesh's woven garments, worth $1.5 billion, and 21 percent of Bangladesh's knitwear, worth $350.8 million. The European Union is Bangladesh's largest customer, absorbing 50 percent of its exports in 2002-2003, during which EU countries imported $3.3 billion worth of textile products from Bangladesh. Germany, the United Kingdom, and France imported 13 percent, 12 percent, and 6 percent of Bangladesh's total exports in 2002-2003 respectively. Specifically, in 2002-2003, Germany imported 14 percent of Bangladesh's woven garments, worth $443 million, and 20 percent of Bangladesh's knitwear, worth $328 million. The United Kingdom imported 11 percent of Bangladesh's woven garments, worth $370 million, and 12 percent of Bangladesh's knitwear, worth $205 million. France imported 6 percent of Bangladesh's woven garments, worth $198 million, and 11 percent of Bangladesh's knitwear, worth $189 million (Export Promotion Bureau 2004).

[29]The textile and apparel industry in Bangladesh employs around 1.8 million workers, 90 percent of whom are poor women. The ready-made garment sector employs nearly half of Bangladesh's industrialized workforce (Xinhua General News Service, 23 December 2004). The Asian Development Bank states, however, that the abolition of the MFA quotas will reduce output and increase unemployment (*AFX-Asia*, 22 September 2004). Bangladesh officials fear that the economic slowdown in 2005 will spur social upheaval. It is projected that Bangladesh will lose much of its market share due to poor labor productivity and infrastructure.

[30]There has been a lack of investment in technology in the Sri Lankan garment industry: "More than half of the firms in the industry work on old sewing machines" (Dent and Tyne 2001).

[31]Thirty-three of the 891 garment factories in Sri Lanka employ more than 1,000 workers (Dent and Tyne 2001).

Reliance on Imports

Another potential problem for the Sri Lankan garment industry is its heavy reliance on imported material.[32] The increased valuation of the Sri Lankan currency due to foreign aid should alleviate this potential problem in the short run. In addition, negotiating favorable trade agreements in the region would significantly help Sri Lanka, considering its reliance on imports.[33]

Niche Markets

Sri Lanka can also build on its success in niche markets. Some analysts will point to the successful niche markets that continue to do well without rents from quotas.[34] The Sri Lankan garment sector can be competitive internationally in these niche markets. If the rest of the sector can identify niche markets and produce competitively, then the garment sector could continue to grow.

Trade Agreements and Foreign Direct Investment

At the international level, the impact of trade agreements and foreign direct investment could determine the success of the garment industry in Sri Lanka. The significant flow of resources into the country following the tsunami could dramatically improve productivity directly or indirectly. In addition, securing access to the European and U.S. markets through trade agreements would allow Sri Lanka to retain advantages over countries without such access. Both international and industry factors will determine the future of the garment industry in Sri Lanka.

This analysis would predict that the effects of the MFA expiration will likely not adversely affect the Sri Lankan economy in the immediate future. The viability of the Sri Lankan garment sector in the long run will depend on productivity gains from technological investment. The presence of niche markets in apparel and the possibility of favorable trade agreements with the European Union and United States, a possibility enhanced by the tsunami, may buy Sri Lanka time to adapt to the new textile and garment industry without the MFA.[35] In addition, the relatively good business climate and geographic location should aid Sri Lanka in its transition to a post-MFA world.

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[32] The Sri Lankan garment industry imports a significant portion of the materials needed to produce garments. Nearly 65 percent of all material inputs were imported (Dent and Tyne 2001).

[33] According to its government in 2002, Sri Lanka was pursuing free trade agreements in the region as well. The government was broadening the Indo-Lankan Free Trade Agreement to enhance access to the Indian market. In addition, negotiations to establish a free-trade agreement with Pakistan were nearing completion (Government of Sri Lanka 2002).

[34] An excellent example of a niche market in Sri Lanka is lingerie, where Sri Lankan firms are a major supplier for Victoria's Secret (*The Economist,* 11 November 2004). Many analysts would agree that Sri Lanka could continue to provide specialty or fashion goods and women's intimate apparel such as bras and underwear.

[35] Such trade agreements would help tremendously because about 95 percent of Sri Lanka's garment exports go to the United States and European Union (Dent and Tyne 2001).

4. Impact on the United States

This section examines the general impact of the MFA on U.S. retailers and on countries in South Asia.

4.1 General Impact: Restructuring of U.S. Retailers

The MFA favored large U.S. multinational retailers with the capacity and global reach to manage and profit from the quota system. Small apparel firms were vulnerable to losing access to quotas, but large firms with multiple production sources in many countries were able to source production to countries with available quotas. Moreover, because of the specific rules and restrictions in the MFA, an apparel retailer had to source in several countries with quota access to create an entire clothing line. Retailers that were unable to diversify in this way (i.e., small, domestic retailers) were subject to increased revenue risks, considering the volatility of fashion. The MFA quota system “tended to winnow out potential competitors and thus make the rewards of success all the greater,” artificially creating “cartel-like dynamics in the industry” (Collins 2003, 113). This cartel-like system has exacerbated the suppression of smaller firms as market advantages flowed to large multinational corporations. With expiration, then, we expect decentralization of production as the cartel-like conditions give way to new opportunities for smaller, non-international retailers.

4.1.1 Loss of U.S. Production

Even the U.S. garment trade has yet to adjust fully to a quota-free world. “People still don’t really believe it is going to happen,” Laura Jones of the U.S. Association of Importers of Textiles and Apparel said in July 2004. “They are stunned because they have lived with the system so long. It is an enormous shock to realize it is about to disappear” (*Financial Times* 19 July 2004).

As Table 3 shows, the potential exists for significant job losses. If, at the extreme, all textile manufacturing is shifted overseas, up to half a million jobs would be threatened. This does not mean, of course, that all such jobs would be lost, but a large portion is vulnerable.

Table 3
U.S. Textile Employment, 2003

Occupation Title	Employees	Estimated Median Hourly Wage
Sewing Machine Operators	251,370	$8.53
Hand Sewers	15,490	$8.76
Tailors, Dressmakers, and Custom Sewers	31,540	$10.43
Textile Bleaching and Dyeing Machine Operators and Tenders	22,960	$10.44
Textile Cutting Machine Setters, Operators, and Tenders	27,300	$9.90
Textile Knitting and Weaving Machine Setters, Operators, and Tenders	45,860	$11.32
Textile Winding, Twisting, and Drawing Out Machine Setters, Operators, and Tenders	56,140	$10.73
Total	**450,660**	

Source: Adapted from U.S. Department of Labor, Bureau of Labor Statistics, 2003, http://www.bls.gov/oes/current/oes_51pr.htm.

According to the National Council of Textile Organizations, a group of U.S. textile manufacturers, in the three months following the expiration of the MFA, 17 mills closed and 17,000 textile jobs were lost (NewsHour, 11 April 2005).

4.1.2 Benefits to U.S. Consumers

Quotas have inflated clothing prices by creating scarcity and rents, price premiums that act as taxes on trade. The annual cost to U.S. consumers has been put at $70 billion and has fallen hardest on poor families, which spend a relatively large share of income on clothing. Each job saved by quotas in the U.S. industry is estimated to have cost consumers an average of $170,000 (*Financial Times*, 19 July 2004).

4.1.3 Change in U.S. Outsourcing Behavior

Wal-Mart and a few other big chains dominate distribution in the United States, which, as the world's biggest clothing market, absorbs about a third of all imports. MFA expiration now allows them to stop shopping around in many different countries and streamline drastically their supplier networks (*Financial Times*, 19 July 2004).

The U.S. Association of Importers of Textile and Apparel expects its members to buy most of their supplies from five or six countries by 2007, down from about 50 today. For most, China will be the supplier of choice, followed by India and then Pakistan. (*Financial Times*, 19 July 2004).

4.2 Impact from South Asia[36]

The U.S. International Trade Commission released January 2005 import data in April. This is our first data point for the post-MFA world as it relates to the United States. Analysis of the new data yielded the following conclusions:

- All countries except Nepal increased their exports to the United States in January 2005, as compared to January 2004.
- All of these increases were higher than the predicted level of exports, the level one would expect when extrapolating from the 1997-2004 trend.[37]
- Only Sri Lanka achieved statistically significant increases.[38] That is, only Sri Lanka's export levels were unusual enough to suggest an MFA-expiration effect.
- Although the January 2005 data are not at all unexpected, they indicate continuation of China's trend of China is increasing its exports to the U.S. exponentially.[39]

Taken together, these data suggest that the United States can expect increased imports from this region generally and that China will continue to increase its market share. Sri Lanka, which we have found to be an ambiguous case, comes out ahead in this preliminary analysis.

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[36] Data in this section were obtained from the U.S. Department of Commerce's Data Web service (dataweb.usitc.gov). The data extracted from this service was the customs value of imports under North American Industry Classification (NAIC) code 315 (apparel manufacturing) from South Asia and China. Data are monthly, from January 1997 through January 2005. NAIC 315 is apparel but not, strictly speaking, textiles. NAIC does not include textiles shipped to the United States for sewing into their ultimate, consumable product. The designation includes: (31511X) hosiery and socks; (315221) men's and boys' underwear and nightwear; (315222) men's and boys' suits, coats, and overcoats; (315223) men's and boys' shirts (except work shirt); (315224) men's and boys' trousers, slacks, and jeans; (315228) men's and boys' other outerwear; (315231) women's and girls' lingerie, loungewear, and nightwear; (315232) women's and girls' blouses and shirts; (315233) women's and girls' dresses; (315234) women's and girls' suits, coats, tailored jackets, and skirts; (315239) women's and girls' other outerwear; (315291) infants' apparel; (315292) fur and leather apparel; (315991) hats and cap; (315992) gloves and mittens; (315993) men's and boys' neckwear; (315999) other apparel accessories. For more information on the NAIC 315 designation, see http://www.census.gov/epcd/naics02/def/NDEF315.HTM.

[37] By extrapolating the trend seen between 1997 and 2004, we imputed the January 2005 datum. The difference between this predicted number and the actual number can be interpreted to be the extent to which the MFA expiration has affected U.S. imports from these countries.

[38] Each prediction for 2005 generated from the 1997-2004 trend is associated with a standard error. Comparing the actual datum with the predicted datum for each country allows for something like a test of significance. Using a one-tailed test ($p<.10$), only Sri Lanka achieves significance. Bangladesh was close to significance.

[39] The U.S. press has appropriately focused on the impact of China, whose exports to the United States in this category dwarf those of South Asia: Chinese apparel exports to the United States in January 2005 were more than twice all the South Asian countries combined. Though the January 2005 number for China does not significantly diverge from its predicted value, the trajectory of Chinese exports during the past few years is impressive, suggesting that if one is concerned about the loss of U.S. jobs in textiles, China should be the focus.

5. Conclusions

5.1 Winners, Losers, and Ambiguous

We find India and Pakistan to be the most likely of all the South Asian countries to gain from the expiration of the MFA. India will gain because the quota restrictions on it were relatively severe, because it produces its own cotton, and simply because if its size. Pakistan will likely increase its market share as well because it also produces a lot of cotton, because it has cheap labor, and because it has a government actively promoting the industry.

Due to rugged terrain, lack of a port, political instability, poor productivity, and the fact that MFA quotas tended to favor it, Nepal is very likely to lose market share in textiles.

Bangladesh and Sri Lanka are more uncertain cases. Bangladesh has cheap labor costs, but it must import its raw materials, limiting its ability to compete on price. Sri Lanka suffers high wage costs and a reliance on imports of raw materials, but it benefits from its concentration in some niche markets and the market-access windfall resulting from the tsunami.

5.2 Some Geo-Political Considerations

This report has taken an economically oriented approach to the analysis of the MFA expiration. In closing we introduce a few, highly speculative points that could influence how the effects of the MFA expiration eventually plays out.

There has been some talk of India imposing voluntary export restraints to give the region some time to adjust. It will, however, be extremely difficult for India to actually implement such restraint. Indian textiles face enormous competition from China. Although India is a major player in the region, it is still a developing country with limited resources.

Last, severe competition from Chinese textiles could affect U.S. policy in South Asia. The U.S. government has come under significant pressure from domestic textile manufacturers to put limits on Chinese imports. This could provide South Asian countries with a small but significant advantage in the U.S. market.

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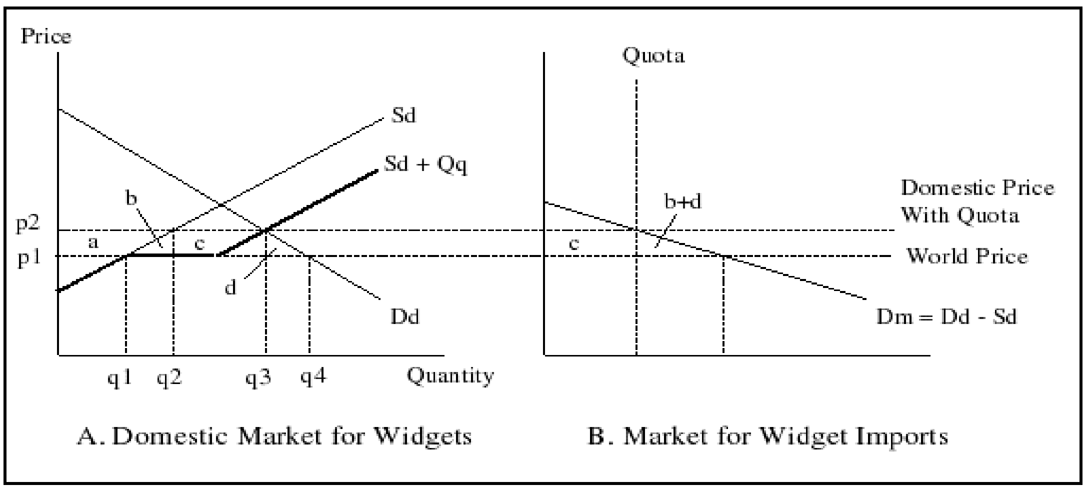
Appendix A:
A Simple Quota Model: Developed Country Perspective

An import quota limits the quantity of a given widget that may be imported. In illustration A of Figure 1, the effect of the quota on the domestic market for the widget is represented by the bold supply line. Notice that this supply curve diverges from Sd, the supply curve of domestic producers. The result of the quota is an increase in the domestic price from p1 to p2 (where the Sd + Qq curve meets the domestic demand curve, Dd). The quota is q3 - q2.

In illustration B of Figure 1, the vertical line represents the level of imports imposed by the quota. The domestic price with the quota is found where the Quota line crosses the demand for imports curve (Dm).

Figure 1: Effects of an Import Quota



Source: McGraw Hill, Higher Education

The welfare effects are the following:

Area	Welfare effect
a	A transfer from consumer to producer surplus.
b+d	Deadweight loss /net national losses.
c	Revenue effect. This goes to whomever controls the import licenses, in the case of the MFA, the exporting countries.

Appendix B:
Country Correlations on Percentage of U.S. Market Share

Table 4 describes the extent to which a gain in market share for exports to the United States by one country is correlated with a loss (or gain) in market share by each other country. Where there is a high negative correlation, the relationship between the two countries concerned may be said to be competitive.

Table 4
Correlations for Share of U.S. Market

	Bangladesh	China	India	Nepal	Pakistan	Sri Lanka
Bangladesh	1.00	-0.14	0.20	0.16	-0.22	0.46
China	-0.14	1.00	-0.32	-0.69	0.30	-0.38
India	0.20	-0.32	1.00	0.56	0.00	0.46
Nepal	0.16	-0.69	0.56	1.00	-0.02	0.40
Pakistan	-0.22	0.30	0.00	-0.02	1.00	-0.36
Sri Lanka	0.46	-0.38	0.46	0.40	-0.36	1.00

Note: Data in this section were obtained from the U.S. Department of Commerce's DataWeb service (dataweb.usitc.gov). The data extracted from this service was the customs value of imports under North American Industry Classification (NAIC) code 315 (apparel manufacturing) from South Asia and China. Data are monthly, from January 1997 through January 2005. NAIC 315 is apparel, but not, strictly speaking, textiles. NAIC does not include textiles shipped to the United States for sewing into their ultimate, consumable product. The designation includes: (31511X) hosiery and socks; (315221) men's and boys' underwear and nightwear; (315222) men's and boys' suits, coats, and overcoats; (315223) men's and boys' shirts (except work shirt); (315224) men's and boys' trousers, slacks, and jeans; (315228) men's and boys' other outerwear; (315231) women's and girls' lingerie, loungewear, and nightwear; (315232) women's and girls' blouses and shirts; (315233) women's and girls' dresses; (315234) women's and girls' suits, coats, tailored jackets, and skirts; (315239) women's and girls' other outerwear; (315291) infants' apparel; (315292) fur and leather apparel; (315991) hats and cap; (315992) gloves and mittens; (315993) men's and boys' neckwear; (315999) other apparel accessories. For more information on the NAIC 315 designation, see http://www.census.gov/epcd/naics02/def/NDEF315.HTM.