

# TRADE LIBERALIZATION IN LATIN AMERICAN COUNTRIES AND THE AGREEMENT ON TEXTILES AND CLOTHING IN THE WTO

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## ABSTRACT

The Agreement on Textiles and Clothing (ATC) at the WTO deals with the progressive opening of the markets in high-income countries, favoring the dynamic exporters among the developing countries. This process is to be finished by the year 2005, when the whole sector is going to be under the WTO rules, and will occur in four steps, but only at the end will the majority of products be included. In fact, the scope of the liberalization, implemented up to now, has been limited because the countries have committed in non-restricted products, with small value added or with high tariff protection, adopting temporary safeguards, antidumping measures or other restrictions. During the same period the Latin American countries have liberalized their economies, which has been followed by a significant increase in their imports.

This paper aims to disentangle the effect on Latin America of the delay in the opening of the big importer markets. Specifically, it questions to what extent the increase in Latin American imports has exposed the local producers to increased competition from foreign products than would be the case if the liberalization had been carried out at the same time by both sides. A General Equilibrium Multi-country Trade Model (GTAP) is used to simulate the effects of the elimination of trade barriers on Latin American countries in relevant scenarios.

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## 1. INTRODUCTION AND OVERVIEW

The Agreement on Textiles and Clothing (ATC) at the World Trade Organization (WTO) deals with the opening of the markets for these products in high-income countries, which favors the dynamic exporters of developing countries. This process is to be completed by the year 2005, when the whole sector is going to be under the WTO rules, and is taking place in four stages, but only in the last two stages will the majority of the products be included. Up to now, products which amount to 33 percent of the imports in 1990 of the developed countries, which imposed quotas under the Multi Fiber Agreement (MFA), have been integrated into GATT 94. However, it is claimed that this opening up has been limited because the countries have committed themselves on non-restricted products, with little value added and with high tariff protection, or have adopted temporary safeguards, antidumping measures or other restrictions. During the same period the Latin American countries have been liberalizing their economies, generating a significant rise in their imports. This increase on imports occurs inside and outside regional trade agreements.

The Agreement on Textiles and Clothing (ATC) was signed in the Uruguay Round. By this agreement, countries committed to a progressive elimination of MFA restrictions within 10 years, and to totally subject this sector to the rules of the WTO by 2005. All existing quotas or quantitative restrictions would have to be incorporated into the agreement, or eliminated within the space of one year. A gradual integration was established, which would be carried out in four stages. In each stage, products grouped in four broad categories would have to be integrated: tops and yarns, fabrics, made-ups, and apparel.

The agreement established the percentage of 1990 imports (by volume) which have to be integrated into the rules of GATT 94 in each one of the stages laid down, and also formulas for increasing the rates of growth foreseen in the MFA, for the quantitative restrictions which continued in force. In the first stage (1 January 1995 - 31 December 1997) products which account at least for 16 percent of 1990 imports would have to be integrated into the norms of the WTO. In the second stage (1 January 1998 - 31 December 2001) products representing a minimum of 17 percent of 1990 imports would have to be integrated, in the third stage (January 1 2002 - 31 December 2004) representing 18 percent of imports would be incorporated, leaving the remaining 49 percent for the last stage (1 January 2005).

Finally, it was provided that the importing countries would be able to make use of a specific transitory safeguard mechanism for the products which had not yet been integrated under the rules of the GATT. This safeguard is different from those permitted by the GATT in that it could be adopted against the imports of a specific country. The importing country must show that its local industry is subject to serious damage, that this damage is the result of the rise in imports from all sources, and that there has been a substantial increase in the imports coming from one specific country against which the safeguard will be used. This safeguard can be adopted by agreement between the parties involved, or by unilateral decision of the country which imposes it.

Up to now the first two stages have been completed, so that at least 33 percent of the 1990 imports of these countries are currently integrated into the GATT. In fact, it is maintained that this integration has not led to a substantial reduction in protection in the sector. This is so because countries have integrated into the GATT products which were not subject to quantitative restrictions, products with little value added, products in which the developing countries had little comparative advantage, or products subject to high tariff levels, or else the countries have had recourse to temporary safeguards or anti-dumping rights (WTO, 1997).

The agreement laid down that those countries which maintained restrictions on textile trade within the framework of the MFA would have to notify the GATT of their integration programs. Canada, the United States, Norway and the European Union notified the GATT of their respective integration programs in the textile sector to the norms of the WTO before October 1994. Table 1 shows the evolution of their integration programs into the WTO in the first two stages of the ATC. The first part of the table shows the share in 1990's imports of the products which were integrated in the first and second stages. It can be seen that all the countries rushed to liberalize trade in products of little value added (Tops and yarns, and, to a lesser extent, fabrics), while the proportion of imports of clothing is much less. The second part of the table shows the number of quotas notified and removed in the first two stages. A large part of the integration was implemented in products which were not subject to quotas. The United States eliminated 1.7 percent of the quotas in force, the European Union 6.4 percent, Canada 9.8 percent, and Norway 94.4 percent.

In the 1990s, Latin America grew and opened up to the world. In the first half of the decade, most of the Latin American (LA) countries implemented unilateral opening policies, reducing their tariffs and eliminating other trade restrictions. Mexico joined NAFTA, the Common Market of the South (MERCOSUR) was created, and other regional agreements within the framework of ALADI were strengthened. In the period 1990-99, Latin American imports grew at an average rate of 11 percent while its exports increased at an average rate of 8.1 percent, increasing its participation in world trade (see table 2).

Over the same period, world trade in textiles and clothing increased more slowly than world trade in merchandise, while world imports grew at an average annual rate of 6 percent between 1990 and 1999, textiles grew at a rate of 4 percent, and the share of textiles in world trade declined (see table 2). In contrast, Latin America shows strong growth in the international trade of textiles and clothing. This dynamism is more pronounced in its imports, which increased at an average annual rate of 17 percent and 23 percent respectively, increasing its share in world imports and in the imports of the Latin American countries.

It can be seen that the main markets in Latin America behave differently. While MERCOSUR shows strong dynamism in imports and a decrease in its exports, Mexico shows strong dynamism in both, particularly in its exports of clothing.

This paper aims to analyze the extent to which the delay in the opening of the big importer markets may have caused an increase in the imports of the Latin American countries, and exposed their industries to greater competition than what would have been the case if both

processes of market liberalization had taken place at the same time. Also, the paper aims to discuss the role of unilateral liberalization in Latin American countries on the increase in imports

From the theoretical point of view the argument would be as follows. The imposition of voluntary restrictions on imports by the big world importers, within the framework of the Multi Fiber Agreement (MFA), is causing a reduction in the volume and a rise in the prices of imports from the leading exporters in these markets. The producers in developing countries are using the market power derived from the imposition of import quotas, raising prices and restricting their exports to the developed countries. With their exports restricted in the major world markets, the producers in leading exporter countries have an excess of supply, and this is diverted to their own domestic markets and to other markets where they are not subject to quotas. The consequence is that the price in markets which do not apply quantitative restrictions is lower than what would be the case in a free trade situation. In this international context, the opening up of Latin America to trade would have led to an increase in imports greater than that which would have occurred if international prices had been those of free trade.

To quantify these effects, it is proposed to work with a general equilibrium multi-country model, the GTAP, to simulate the effects of the elimination of the above mentioned restrictions on the Latin American countries, in three alternative scenarios. The first scenario would simulate the elimination of quotas and other restrictions to trade in accordance with the ATC. The second scenario would simulate the opening up of Latin America to trade without the rest of the world making any substantial changes in their protection of the textile sector. The third scenario would simulate the same opening up, but with a simultaneous liberalization of trade on the part of the big importers.

The paper is organized as follows. Section 2 discusses the possible effects of the elimination of quantitative restrictions on trade of textiles, of the tariffs in the Latin American countries, and of both factors simultaneously. In section 3, the model and the aggregation strategy are presented. In the next section some stylized facts on the development of the trade in textiles and clothing in Latin America are discussed. In the fifth section, the GTAP simulations are presented and the results analyzed. Conclusions are presented in the last section.

## 2. EFFECTS ON LATIN AMERICAN COUNTRIES OF THE DELAY IN THE IMPLEMENTATION OF THE ATC

Given that Latin America is a region which exports and imports textiles and clothing, the analysis of the effects on welfare of the changes in trade policy which affect the sector, should consider the effects on both flows of trade. The problem could be seen from two points of view using partial equilibrium models: first, considering Latin America as a region that imports textiles and clothing, and, secondly, as an exporter of these products.

Protectionist policies of textiles and clothing take different forms, among which the two main ones are voluntary restrictions on exports, and high tariffs. The equilibrium price in these markets is equal to:

$$P_d = P_m(1 + t_d)(1 + q)$$

where  $P_m$  is the international price,  $t_d$  is the ad-valorem tariffs which these countries impose on imports of textiles and clothing, and  $q$  is the tariff equivalent to the quota which restricts imports.

## 2.1 Effects of voluntary restrictions on exports (VER)

The imposition of VER by the big world importers upon many developing countries means a reduction in exports and a rise in the price of exports to restricted markets for exporters subject to quotas. The decrease of exports results in an excess supply that is re-directed to their domestic market and to third markets not subject to quotas. Consequently, if the conditions of demand do not change, the equilibrium price in those markets that do not apply quantitative restrictions is lower than what it would be in the case of free trade.

Indeed, with their imports restricted, the domestic prices in developed markets increase. When a country imposes a quota which limits imports of a product, the volume of imports is determined by the quota, while the domestic price of the imported good depends on demand. The equilibrium price is that at which domestic demand is equal to the volume of the quota, and is greater or equal to that which would prevail without these restrictions.

Theoretically, the advantage which a VER gives to these exporters is that it is they themselves who administer the quotas. Producers in the exporting countries use the market power derived from the imposition of the quota, they raise their prices and restrict their exports to those countries, and appropriate to themselves the rents that the quota yields. The distribution of the rents from the quotas inside these countries depends on the system under which they are administered.

This paper adopts the same assumptions as those of Yang, Martin and Yanagishima (1997). It is assumed that the possession of a quota constitutes an asset for its owner. For the exporter it constitutes an additional cost, given by the market value of the quota. It is also assumed that all the quota rents are appropriated by the exporter country<sup>2</sup>. With these assumptions, it might be thought that the quota operates as a tariff which is imposed on the exports of these goods, restricting their volume. The profits from the tariff remain in the exporting country. The level of this tariff is determined endogenously.

These effects can be seen in Figure 1, which takes the diagram used by Martín and Suphalasai (1990) and Yongzheng, Martín and Yanagishima (1996) to analyze the impact of the elimination of MFA quotas. In the Figure, the line  $D_d$  represents demand in the

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<sup>2</sup> Yang, Martin and Yanagishima (1997) pointed out that some empirical works show that in practice, in the case of the MFA, the developing countries do not always appropriate all the rents to themselves.

developed countries which impose quotas. It is assumed that these countries impose a quota which restricts demand to  $Q^*$  and the equilibrium price is  $P_d$ .

The line  $D_{rm}$  represents the demand of the rest of the world, and the broken line  $D_m$  represent world demand aggregated from both demands. The segment a-b is the sum of both demands, while b-c is the sum of  $Q^*$  plus  $D_{rm}$ . In the absence of quotas, the equilibrium price would be equal to  $P_e$  (it would be determined as the level at which supply is equal to demand where the line a-d cuts the line  $O_m$ ). In the presence of quotas, the equilibrium price  $P_m$  (where demand b-c cuts supply  $O_m$ ) is lower than the price  $P_e$ . Therefore the MFA quotas would generate a fall in the international prices of textiles and clothing in the rest of the world, and therefore the rest of the world would have a higher level of imports than what would be the case under free trade conditions. The Figure shows that the equilibrium level of imports in the rest of the world when developed countries restrict their imports is  $Q_{rm}$ , and would fall to  $Q_{rm}^*$  if the quotas are eliminated.

## 2.2 The effects of tariffs on the imports of developed countries

Developed countries do not only protect their markets with quotas, but also imposing tariffs that are much higher than those prevailing for other manufactured goods. It can be shown that when imports are restricted by a quota, tariffs do not affect the quantities imported by the developed countries, and therefore do not have any effect on the prices or quantities imported by the rest of the world. The persistence of high levels of tariff protection in the absence of quantitative restrictions would cause a deterioration in the terms of trade for the leading exporters, and an increase in imports in the rest of the world. Under these conditions, imports in the rest of the world would be greater than in the case of free trade.

However, when there is a quantitative restriction which limits imports, the only effect of a tariff is to reduce the import price. The tariff restricts domestic demand, and therefore lowers the tariff equivalent to the quota, and increases tariff revenues to importers. Consequently, the only effect of reducing tariffs on the part of the big importers is to increase the exporters' quota rents (the quantities do not change because they are given by the amount of the quota).

This effect can be seen in the same Figure. The dotted lines  $D_d^*$  and  $D_m^*$  represent demand by developed countries and demand by the world respectively, if the tariffs which protect the imports of the former are eliminated. Resulting world demand would be represented by the broken line e-f-g. The elimination of tariffs does not change the volume that the developed countries import (determined by the quota) nor the world price, but what does change is the import price in developed countries, which goes up to  $P_d^*$ . However, the international equilibrium price, in the absence of all restrictions, would be equal to  $P_e^*$ , higher than  $P_e$ .

It follows that the quotas and tariffs on the import of textiles and clothing in the big markets of the industrialized countries generates a deterioration in the terms of trade of the big exporters, a fall in the international price, and a rise in imports in the rest of the world. The mere elimination of quotas would not ensure a return to equilibrium prices without

distortions, and would not prevent Latin American imports of these products rising more than they would have done in the absence of protection.

### 2.3 Effects of trade liberalization of textiles and clothing in Latin America.

The textile and clothing markets in Latin American countries have been subject to high levels of protection. How do the foregoing conclusions change when these countries reduce their tariffs in this sector? Figure 2 is intended to illustrate this point. A tariff reduction leads to an increase in the demand for imports on the part of these countries (the line  $D_{rm}$  moves to the right to  $D_{rm'}$ ) and this generates a rise in the world demand for imports and a rise in the international price. The international equilibrium price is lower when there are quotas than when there are not. Imports would increase from  $Q_{rm}$  to  $Q_{rm'}$  if the quotas of the MFA are maintained, while this rise would be lower (from  $Q_{rm}$  to  $Q_{rm''}$ ) if the liberalization of trade was carried out simultaneously with a lifting of the restrictions of the MFA. The liberalization of trade in Latin American countries in the absence of quotas would lead to a lower increase in imports than what would be the case if the same change was carried out while the developed countries maintained protection.

The magnitude of this effect depends on the elasticity of demand in each market, and on its relative size. In an extreme case it might be thought that the Latin American countries have a small share in world trade in these products so they would not affect the international price. But the increase in imports in these countries that has taken place in recent years has been very significant, and it accounts for more than 20 percent of the increase in world trade in this sector, so this extreme assumption does not seem very realistic.

### 2.4 Effects of the removal of MFA quotas on non-restricted exporters

The second aspect to analyze is the impact that the elimination of quotas would have on Latin American exports. In fact, the Latin American countries are exporters of textiles and clothing to the developed countries and, since they are less competitive suppliers, they have been subjected to lower quantitative restrictions. To the extent that exports from the more competitive countries are restricted, domestic prices in the big importer countries increase, and Latin American products can enter those markets with higher prices than in a free trade situation.

This point is shown in Figure 3. The line  $D_m$  represents world demand, and the lines  $O_x$ ,  $O_m$  and  $O_m$  represent the supply from the leading exporters subject to quotas in the developing countries, in the rest of the world, and in the whole world respectively. The exports from the big exporters are limited by a quota ( $Q^*$ ), and hence world supply, where there is a quota in operation, is the level of the quota plus the supply from the rest of the world (the line a-b-e). The quota restricts world trade to  $Q_q$  and raises the price to  $P_q$ . Therefore, if the more competitive exporters are restricted, the rest of the world increases its exports. Once the quotas are eliminated, the world price and exports from the rest of the world fall at the same rate as the rise in exports from the exporters who had been subject to restrictions.

Finally, the partial equilibrium models analyzed in this section show isolated aspects of the problem but they do not consider the global impact in the whole economy. A major

advantage of general equilibrium analysis is to assess the net impact from policies that led to effects in opposite direction that are partially compensated.

### 3. OVERVIEW OF THE MODEL AND AGGREGATION STRATEGY

The Global Trade Analysis Project (GTAP) is a particularly suitable tool for quantifying relative magnitudes in the hypothesis in question. It has a database, a general multi-country equilibrium model, and software which allows for the simulation of alternative policies starting from initial equilibrium.

#### 3.1 Overview of the model

The model to be used is a rather standard multi-region general equilibrium model (Hertel, 1997). It assumes perfect competition in the markets for goods and factors, and considers a single type of representative consumer. The goods are homogenous, but they are differentiated according to geographic origin using a specification of the Armington type. In its version 4, the model considers four factors of production: skilled labor, unskilled labor, capital and land. Production functions are homogenous assuming constant returns to scale.

The reference year for the database is 1995. Because most of the opening-up had already taken place by 1995, this year is not the best choice as starting point for the simulations. However, it is a good point of reference, it is representative of what happened, and alternative policies can be compared to it.

#### 3.2 Country and sector coverage

The GTAP database has information on the big importers of textiles who have made use of the Multi-Fiber Agreement, on most of the exporters subject to quotas, on the bigger Latin American countries, and on those which showed the biggest increase in their imports in the 1990s. Those Latin American countries which have not yet been incorporated into the GTAP database are included in the region denominated "The Rest of Latin America".

For the purposes of this work, four groups of countries have been distinguished: importers among the developed countries which impose quotas (IMP), dynamic exporters subject to these quotas (EXP), Latin America (AL) and the Rest of the World (RW). The list of countries included in each category is given in Annex 1. The countries which comprise the first and second groups (IMP and EXP) were selected on the basis of information from the International Textiles and Clothing Bureau, WTO. In order to carry out these experiments, the world is considered as composed of the following countries or regions:

- United States, Canada
- European Union
- Developing countries with exports subject to quotas
- Argentina

Brazil  
Chile  
Mexico  
Uruguay  
Rest of Latin America  
Rest of the World

The first two regions comprise the group of importers among developed countries (IMP), the third group is the exporters (EXP), the next six are Latin American countries, and the last groups together the rest of the world.

The sectors considered are: Textiles, Clothing and Others

#### 4. LATIN AMERICA TRADE IN TEXTILES AND CLOTHIN IN 1990'S: THE STYLIZED FACTS

In the 1990s Latin America's trade in textiles and clothing was very dynamic. Its growth in exports was, to a large extent, due to the dynamism shown by Mexican exports, while there was a generalized increase in imports.

The analysis of the evolution of textiles and clothing imports in Latin America was done using Feenstra's 2000 database of world trade. This database presents data on world trade broken down by country and by product to four digits, of the Standard International Trade Classification (SITC, revision 2), for the period 1980-1997. To attenuate the variations arising from the situation prevailing in a particular year, all the indicators of specialization and growth were built comparing the average of the three years 1988-90 with the three years 1995-97. The countries and regions were grouped in four big groups using the same criteria mentioned in the previous section. Textiles were defined as in chapter 65 of the SITC, and clothing as in chapter 84.

The first fact to emphasize is the significant increase in Latin American imports of textiles and clothing in the 1990s. Table 3 shows the evolution of the coverage rate of the Latin American countries. At the end of the 1980s, seven Latin American countries appear to be net exporters: Argentina, Brazil, Colombia, El Salvador, Peru, the Dominican Republic and Uruguay. In the period 1995-1997 only three of them continued to be exporters, but with a significantly lower coverage rate (Colombia, Peru and Uruguay). This change is explained by the growth in Latin American imports which increased from 6.7 percent of world imports to 10.9 percent. The case of Mexico is the exception; it had been a net importer, and the rapid rise in its exports changed it into an exporter.

From 1988 to 1997, Latin American imports of textiles and clothing grew at an average annual rate of 12.4 percent. This rapid growth accounted for 21.5 percent of the growth in world imports (a figure that is much higher than their participation in world trade). Among them, Argentina, Brazil and Chile were the countries that made the biggest contributions to this growth, and Argentina, Brazil and Peru were the most dynamic countries (see Table 4).

Bolivia, Colombia, Costa Rica, Ecuador, El Salvador, Honduras and Uruguay also showed average annual rates of growth above 20 percent.

The second fact to emphasize is that the composition of Latin American imports by geographic origin contrasts with that of the world as a whole, and with that of other regions. In fact, if the geographic bias of Latin American imports is measured using an index of trade intensity<sup>3</sup>, it can be seen that Latin American purchases are biased towards the region itself, and from the importers among the developed countries, while the share of the big competitive exporters in these imports is much lower than what might be expected given their share in world exports (see Table 5). On the other hand, the tendency to import from the big importers is stronger in Mexico and in Central American countries due to their trade links with the United States.

The third fact to emphasize is that, during the period analyzed, the opening up of Latin America to trade contributed to a reduction in this bias, and the leading exporting countries' share in the imports of South America increased. In fact, in the 1990s, the exporting countries which were subject to restrictions in the principal world markets reoriented their sales towards Latin America, which opened up. This did not occur in Mexico or in the main importers in Central America. Mexico reoriented its purchases towards Latin America and the rest of the world, thus reducing the negative geographic bias. Therefore, while the growth in imports in the South American countries comes from the exporters, and, to a lesser extent, from the region itself, that of the Central American and Mexican importers is connected more with a growth in imports from the importing countries.

Table 6 shows a matrix with the contribution to growth in imports according to origin, for the four big regions into which the world was divided. Between 1990 and 1997, 55 percent of the growth in world imports came from the big exporters subject to quotas (EXP), and 30 percent from the big importers (IMP). In Latin America, on the other hand, only 33 percent came from the former, 32 percent from the latter, and 33 percent from Latin America itself. This last contribution is greater still in the case of textiles (39 percent).

The analysis of trade flows shows that the growth in Latin American imports in the 1990s would be partially explained by the growth in imports from the big exporting countries, and by a strong growth in imports from the region itself, and, in the case of Mexico and Central America, from the United States. Therefore, this increase cannot be attributed solely to the diversion of exports from the big exporters, and other causes ought to be investigated, such as Mexico joining Nafta, the development of sub-regional integration schemes, or the growth in demand for imports in the Latin American countries.

## 5. SIMULATIONS: STRATEGY AND RESULTS

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<sup>3</sup> Defined as the ratio between the participation of each region in Latin American imports over the participation of the same region in world trade in the sector.

This section presents the main questions, the design of the experiments and the analysis of the results.

## 5.1 Experimental Design

The simulations have been formulated to answer the following questions:

- i) To what extent is the fall in international prices caused by the maintenance of import quotas by the big importers? To answer this question it is necessary to compare a scenario of trade which includes quotas, with a hypothetical scenario in which those quotas have been totally eliminated.
- ii) The same question can be asked with respect to tariffs which are applied by developed and developing countries to trade in this sector.
- iii) How do imports of Latin American countries react to this change in quotas or in tariffs? What effect do they have on production and on the use of skilled and unskilled labor in the sectors in question? How do these measures affect welfare?
- iv) How do the above conclusions change if the Latin American countries lower their protection against imports during the period in question?

Using this model, the following scenarios were simulated:

- i) The elimination of quotas without there being a reduction in protection on the part of Latin American countries. To carry out this simulation, the problem of the elimination of MFA quotas can be thought of as the imposition of a change which brings the equivalent tariffs on the MFA quotas to zero, leaving the quantities traded to behave as an endogenous variable. This can be established as an equivalent tariff on exports (txs in the GTAP notation), as an exogenous variable, and its elimination can be simulated. In line with the aggregations set up for the purposes of this work, there will be a reduction in the equivalent tariffs which confronted the following developing countries with exports subject to quotas:

Country or Region	USA_Canada		EU	
	Tex	Clo	Tex	Clo
Export_Dev	X	X	X	X
Brazil	X	X	X	X
Chile	-	X	-	X
México	-	X	X	X
LA ots	-	X	-	X
Rest World	-	X	-	X

which are the countries whose equivalent tariffs (txs) were positive in 1995 according with GTAP4 database. Before the elimination of quotas, an increase in tariffs in Latin America is simulated, to take them to the levels prevailing at the end of the 1980s.

- ii) The reduction of tariffs on textiles and clothing, in line with the commitments assumed in the ATC (14 percent for developing countries and 21 percent for developed countries). To carry out this simulation, the same path as Yang, Martín y Yanagishima (1996) would be followed. A reduction in tariffs (tms) would be simulated, equivalent tariffs in the textile and clothing sector would be maintained as endogenous variables, and the exports of exporting countries subject to restrictions by the big importers would be maintained as a (constant) exogenous variable. In the case of Latin America, an increase in tariffs needed to reach the level of duties in force at the end of the 1980s, and their reduction by 14 percent, would be simulated simultaneously.
- iii) The reduction of protection in Latin America that occurred from 1990 to 1995 without any change in protection in developed markets. As in the previous experiment, a reduction in Latin America's tariffs (tms) was simulated. Table 7 shows the reduction in protection simulated for Latin American countries. It was estimated as the average tariff variation in Latin America using data from Free Trade Agreement (LAFTA).
- iv) The elimination of quotas and tariffs in line with the commitments of the ATC, accompanied by the reduction of protection in Latin America. In the case of Latin America the tariffs in force in 1995 would be taken, except in cases where the fall in duties over the period had been less than 14 percent, in which case a reduction in duties equivalent to the difference would be simulated. Tariffs (tms) and equivalent tariffs (txs) would be reduced, maintaining the quantities imported as endogenous.

## 5.2 Results

- i) Removal of MFA quotas according with the commitments of the ATC without any reduction of protection in Latin America (Scenario 1)

The removal of the MFA quotas would generate a redistribution of world production and trade in textiles and, fundamentally, in clothing. The big exporters among the developing countries would increase their production and their exports, and displace other exporters in the big markets of North America and of the European Union (see table 8, experiment 1). These results are similar to those in the work of Yang, Martín and Yanagishima (1997). The developing countries subject to the biggest quantitative restrictions (in this case the leading exporters from developing countries) expand their exports at the expense of the importing developed countries (the United States-Canada, and the European Union), but also of other developing countries which are less restricted (the rest of the world and Latin America, in our case).

The results show that the two hypotheses formulated in section 2 serve to explain the estimated changes in the patterns of trade in the sector. On the one hand there is a fall in the exports of the Latin American countries in line with the hypothesis which predicted that the removal of the MFA restrictions would lead to a reduction in Latin American exports, displaced in the big markets by the increase in exports from the big exporters subject to

restrictions. On the other hand, there is a reduction in imports in line with the hypothesis that the maintenance of MFA restrictions led to divert the export of leading exporters to Latin American markets. However, the effect on exports is greater, so that the removal of quotas has as a final result a fall in production in Latin America (see table 8, experiment 1). MERCOSUR and Chile would reduce their exports of clothing significantly, and their exports of textiles moderately. Otherwise, Uruguay, and to a lesser extent Argentina, would increase their exports of textiles.

Table 9 shows how the removal of the MFA quotas leads to a rise on the exports of the big exporters to the protected markets of the developed countries, accompanied by a fall in their exports to Latin America and to other markets.

Table 10 shows the effect on prices. Indeed, the prices of exports to the European Union, the USA and Canada from the leading exporters fall significantly, at the same time that they increase in their other final markets. This provokes a displacement of Latin American exports towards other markets. This effect is greater in the case of Mexico and of the rest of Latin America. Even when the latter might gain increased access to the big importers of North America and Europe on the elimination of quotas which restrict their exports, they would not be able to compete with the more competitive exporters in developing countries who currently have their exports restricted.

Similarly, the elimination of the MFA quotas would lead to a reorientation of Latin American purchases away from the big Asian suppliers and towards other regional suppliers and North America. This redistribution would be the result of the rise in the relative prices of exports from these sources (see Figure 1). In fact, in this experiment, the big Asian exporters reduce the FOB price of exports to the United States and Canada by 3 percent in the case of textiles, and by 11 percent in the case of clothing. These reductions are 2 percent and 4 percent respectively when they are oriented to the European Union. At the same time, the FOB price of exports to other markets rises 0.3 percent.

Table 12 shows the effects of the removal of the MFA quotas on welfare, measured by the equivalent variations, and on the terms of trade of the regions under consideration. The net effect for the world of the removal of the MFA restrictions is positive, but it is clearly negative for Latin America, which cannot compete with the big exporters. On the other hand, the big winners are the United States and Canada, and the big exporters subject to quotas within the framework of the MFA. Although these results point in the same direction as other previous studies, the magnitude of these effects is considerable lower.

- ii) Effects of the reduction in tariffs in line with the commitments of the ATC (experiment 2).

In the second experiment, a reduction in the tariffs of the developed countries and the developing countries in accordance with the commitments assumed in the Uruguay Round were simulated. A fall of 21 percent in the tariffs on textiles and clothing in the developed countries, and of 14 percent in the developing countries was simulated, without changing quotas or other distortions in trade. In this case the reduction in tariffs led to a rise on the demand for imports of textiles and clothing in the whole world. Since the big exporters

continue to be subject to quantitative restrictions in the markets of North America and Europe, imports from this source remain unchanged but prices go up. Besides this, imports from other sources rise. International prices of textiles and clothing rise even when the FOB prices of the big exporters who are subject to quotas are not affected.

This scenario it has much stronger effect on Latin American trade and production. Its imports increase significantly and its production falls. The removal of tariffs has a positive effect on welfare in these countries. The leading exporters among the developing countries are the big winners. In contrast, the developed countries lose welfare due to the worsening of their terms of trade.

- iii) Reduction of protection in Latin America without implementation of the commitments of the ATC (experiment 3).

The third scenario involves a fall in the tariffs of the Latin American countries without removing any other distortion on trade (see table 7). Table 8 shows the effects on production and trade. In general, the effects of the fall in tariffs in Latin America are concentrated in the region itself, and have little effect on the rest of the world (except in the case of the export of textiles to the United States and Canada, which went up 13.6 percent).

The table shows significant growth in the imports of all the countries in the region - except in Mexico whose tariffs increased – a growth which is bigger in the clothing sector. Brazilian imports of clothing rose by 75 percent, Uruguayan imports by 70 percent, and the rest of Latin America by 58 percent. In general, the growth in imports is accompanied by a lower growth in exports, except in the case of textiles in Argentina and clothing in Mexico. As a consequence, the production of textiles in Argentina, Chile and the rest of Latin America falls, as does the production of clothing throughout the region except that of Uruguay and Mexico.

In this increase of Latin American imports, the Latin American countries themselves play a very important role, as do the United States, Canada, and the leading Asian exporters, the latter mainly in the case of clothing (see table 11). In fact, the rates of growth of exports from the developing exporters to Latin America are much higher than those to the rest of the world. The opening up of Latin America without the simultaneous removal of the MFA restrictions could have accentuated the diversion of export, found in the first experiment, of the more dynamic exporters from the big protected importers to Latin America. However, another phenomenon appears which is not explained in either of the two partial equilibrium models presented: the dynamism of exports inside the region itself. As can be seen from the analysis done in section 4, Latin America exports had a strong geographic bias towards the region itself at the beginning of the 1990s. This geographic bias, along with the increased participation of Latin America in world imports of textiles and clothing, might be able to explain the dynamism of its exports inside the region. This is a result which is obtained using a specification of the Armington type, which coincides with the observed growth of the trade in textiles and clothing inside Latin America (see section 4 of this paper).

The effects on welfare are much more significant than in the two previous experiments. All regions increase their welfare except Chile, Mexico and Uruguay. Brazil is the big winner.

In the case of Mexico, this loss was due to what was simulated, a rise in the tariffs applied to the sector.

- iv) Joint implementation of the commitments of the ATC and a reduction of protection in Latin America (experiment 4)

Experiment 4 combines the three previous ones, it shows the combined effect of the liberalization of trade on the part of the Latin American countries and of the big importing developed countries.. As in the first experiment, there is a geographic re-distribution of world production from all regions to the big exporters (see table 8). Latin American production falls more than in the previous experiments. Again, Latin American imports rise substantially, but this time they are accompanied by imports from other regions. Latin America increases its exports of textiles (except Mexico) but decreases in clothing (except for Uruguay and Argentina).

In the case of Argentina and the rest of Latin America, the growth in imports is less than what follows from the mere opening up of Latin America without the removal of the MFA, which reaffirms the hypothesis of the diversion of trade. But the same thing does not happen in the other Latin American countries, and in any case the effect is small. What the simulations do show is that the opening up of Latin America attenuates that fall in exports which the removal of the MFA in the clothing sector causes, and in some cases reverses it.

In welfare terms, the United States, Canada and the leading exporters are the big winners (see table 13). Latin America as a whole loses. The increase in Latin American imports is explained to a large extent by the growth in the trade of textiles and clothing inside the region. However, in the case of the rest of Latin America, the origin of this growth is North America.

The net effect on Latin American welfare is negative, the negative effect on welfare in Latin America from the removal of the MFA is partially compensated by the improvement in welfare derived from its own trade liberalization. The combination of the two policies negatively affects all Latin American countries except for Uruguay. Chile, Mexico and the rest of Latin America show very significant falls in their production. In this case the fall in production is the result of the fall in exports (in the clothing sector) accompanied by the increase in imports (in both sectors).

To answer the question of whether the postponement of the removal of the MFA generated a diversion of trade, raising Latin American imports from the big exporters subject to these restrictions, the results of experiments 3 and 4 can be compared. Table 13 shows the variation in exports of the competitive developing countries by destination, for both experiments, and the difference. In the case of the textile sector, this diversion would only occur for Uruguay and Brazil, while in the clothing sector it would occur for all the countries with the exception of Chile.

## 6. CONCLUSIONS

In the 1990s the Latin American economies underwent a very significant process of external opening. The textile and clothing sector was not detached from this process. The tariffs fell and other barriers which restricted trade were dismantled. In this context there is a significant increase in Latin American imports of textiles and clothing, mainly of those originated in the big exporting countries and in Latin America. There is a reduction in the geographic bias, which shows that, with more open markets, Latin America reorients its purchases towards the leading exporters. This process was carried out before the worldwide liberalization of trade in textiles and clothing agreed in the ATC was made effective, so that world trade in the sector grew slowly. This paper asks to what extent the delay in the implementation of the ATC could divert trade, raising Latin American imports higher than what would have been the case if both processes had been carried through simultaneously. To answer this question, four alternative scenarios, simulated with the GTAP, were contrasted.

The simulations show that the mere removal of the MFA quotas would lead to a rise in the production and the exports of the leading exporters, which would displace other suppliers in the big markets of the developed countries, among them those of Latin America. In the same way, there would be a fall in Latin American imports, in line with the hypothesis that the MFA quotas generate a diversion of the exports of the leading exporters towards Latin America, increasing its imports. The effect on exports seems to predominate, so the final result is a fall in Latin American production. The net effect for the welfare of the world is positive, but Latin America does not seem to benefit from the implementation of the ATC. This effect may be partially attenuated by the positive effect which would be derived from Latin America's own commitments in the ATC, which would lead to a reduction in its tariffs.

The simulation of trade liberalization in textiles and clothing in Latin America gives results in line with the observed facts. Latin American imports grow significantly. The exports of the leading exporters to Latin America grow more than those to other regions, which would indicate that the liberalization of Latin American trade could have accentuated the diversion of trade caused by the MFA quotas. In the same way, there is a strong dynamism in Latin American exports to the region itself. This dynamism can be explained by the increased participation of Latin America in world imports in the sector. The effect on welfare is positive, and no big changes are observed in remuneration relative to the factors of production.

Finally, the joint implementation of both policies leads to a fall in production, and a rise in the import of textiles and clothing, and in the export of textiles in Latin America. Only in the case of Argentina and the rest of Latin America is a growth in imports less than with unilateral liberalization observed. Therefore, the delay in the implementation of the ATC would have led to a greater increase in imports that what would have been the case if both policies had been implemented simultaneously, only in these cases. The net effect on welfare in Latin America is negative, but to a lesser extent than with the removal of the MFA quotas. The negative effects of the removal of quotas are partially compensated by the positive effects of liberalization of Latin American trade.

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## ANEX 1: LIST OF COUNTRIES AND REGIONS

### 1. Importers in developed countries which imposes quotas in MFA (IMP):

European Union  
United States  
Canada  
Norway

### 2. Leading Exporters limited by quotas (EXP):

Bangladesh  
China  
North Korea  
United Arabian Emirates  
Philippines  
Haiti  
Hong Kong  
India  
Indonesia  
Macao  
Malawian  
Pakistan  
Republic of Korea  
Rumania  
Singapore  
Sri Lanka  
Taiwan  
Thailand  
Turkey  
Vietnam

### 3. Latin America (LA):

Argentina  
Bolivia  
Brazil  
Colombia  
Costa Rica  
Chile  
Cuba  
Ecuador  
El Salvador  
Honduras  
Guatemala  
Mexico  
Nicaragua  
Panama  
Paraguay  
Peru  
Dominican Republic  
Uruguay  
Venezuela  
Rest of Latin America

Figure 1: Effects from a VER and a Tariff (Source: Yang, Martín, Yanagishima, 1996, pp 302)

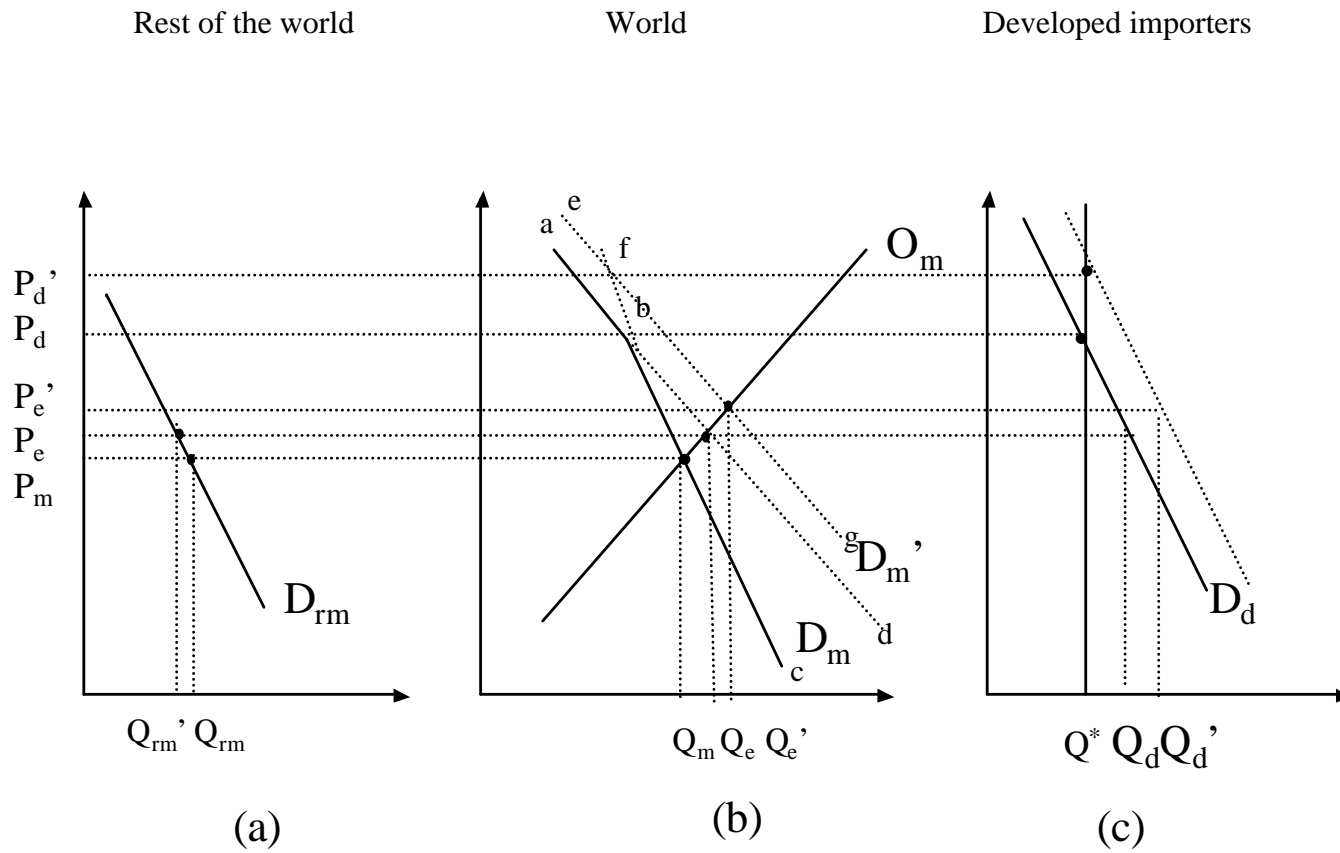


Figure 2: Trade liberalization in the rest of the world under the presence of VER (Source: elaborated from Figure 1)

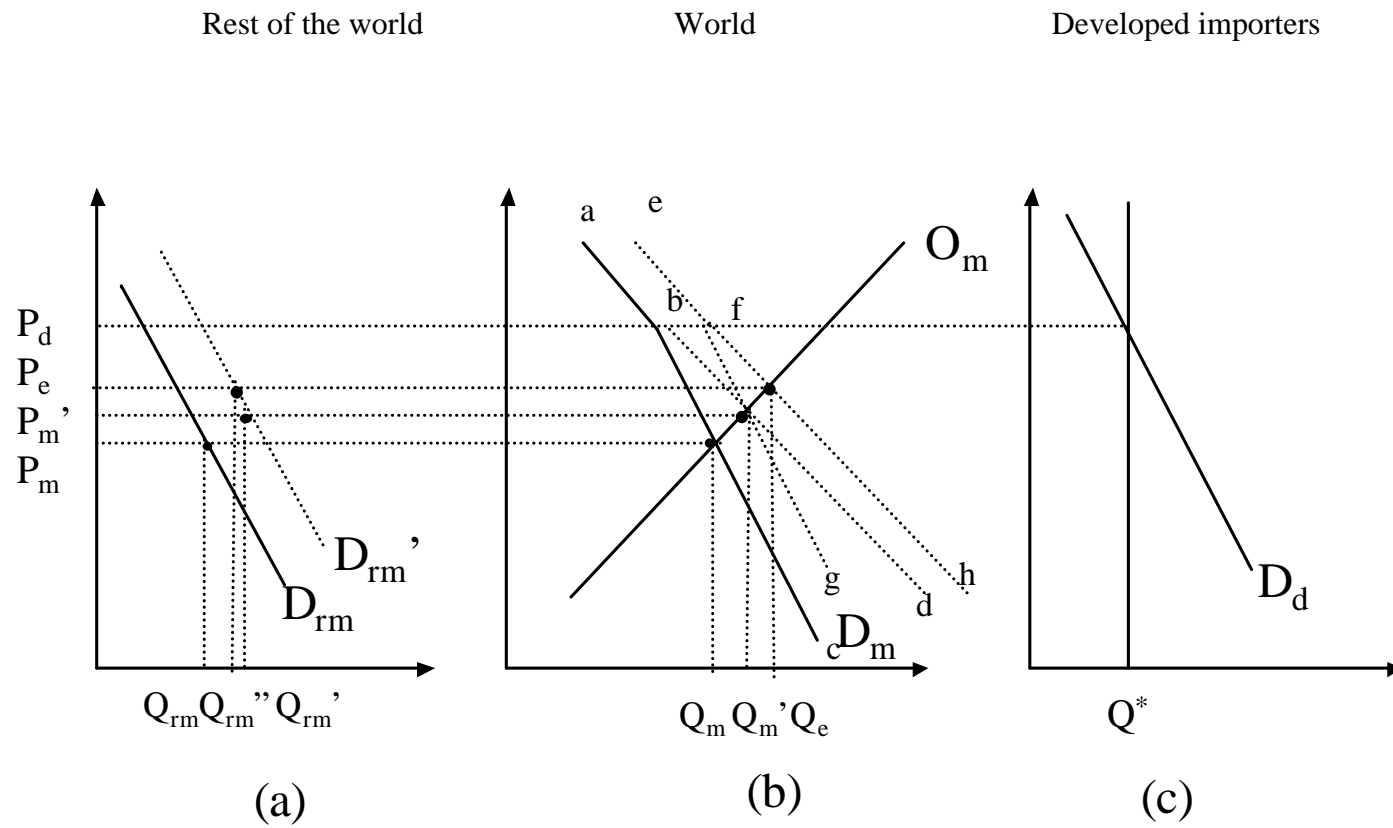


Figure 3: Effects of a VER on non-restricted exporters

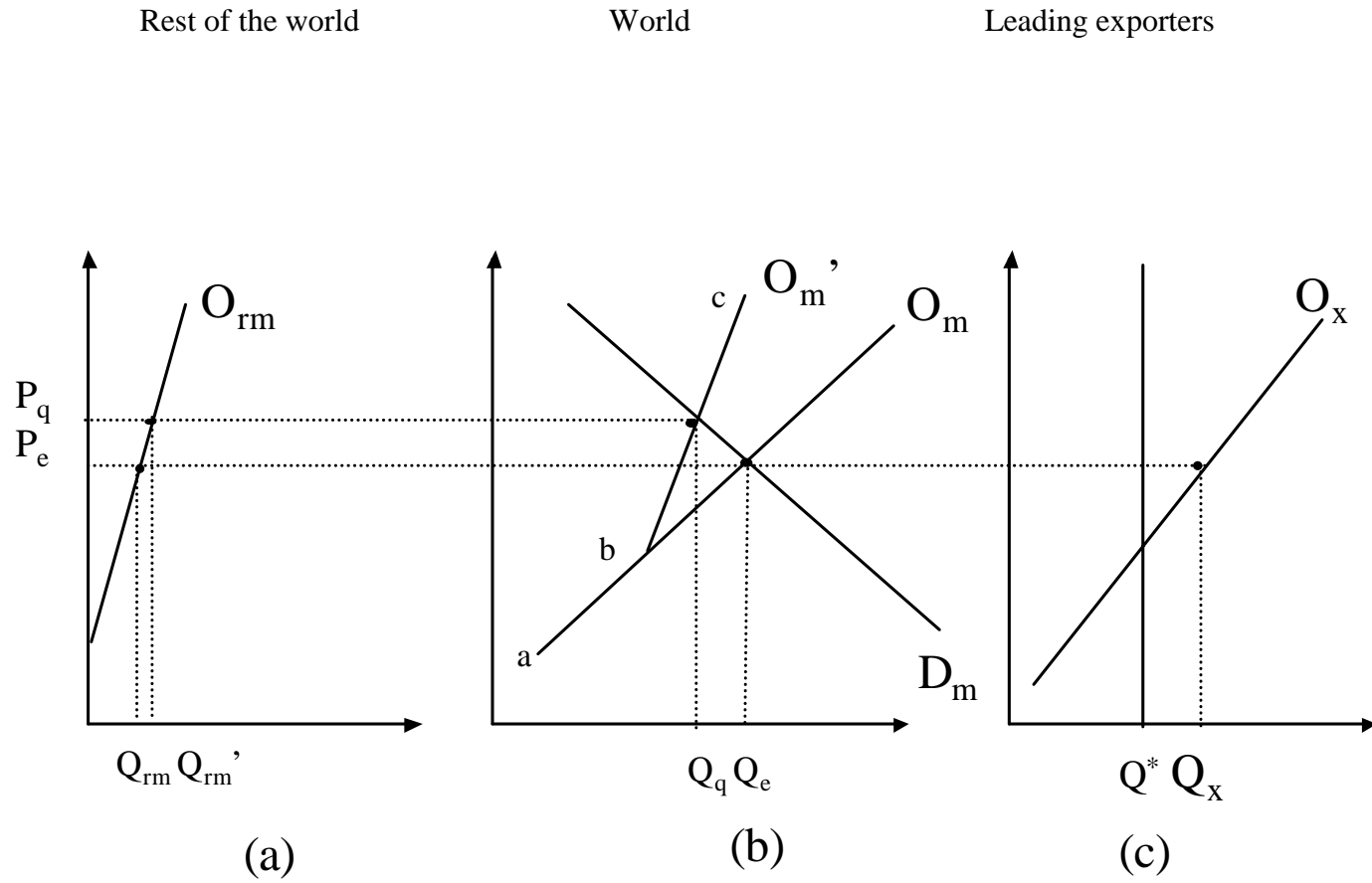


Table 1  
 AGREEMENT ON TEXTILES AND CLOTHING  
 Integration to GATT94 programs

	United States	European Union	Canada	Norway
<i>% of 1990 import integrated to GATT94 in the first and second stages</i>				
Tops and yarns	16.5	16.1	11.3	10.1
Fabric	4.2	9.5	6.4	14.3
Made up textiles products	8.7	5.3	15.5	14.7
Apparel	3.9	2.5	2.8	4.3
Total	33.2	33.3	35.0	43.3
<i>Number of MFA quotas</i>				
Total 1/	750	219	295	54
Eliminated 2/	13	14	29	51
(%)	1.7	6.4	9.8	94.4
<i>Import growth rates</i>				
Before ATC	4.6%	3.4%	5.3%	Na
After ATC	6.4%	4.5%	7.5%	Na
Increased	1.8%	1.1%	2.3%	Na

Source: WTO, TMB notifications.

1/ Total number of quantitative restrictions applied to WTO countries

2/ Include early integrated quotas according with art. 2 paragraph 15 of ATC, in the first and second stages.

Table 2  
WORLD AND LATIN AMERICAN TRADE IN TEXTILES  
AND CLOTHING, 1990-1999

Region	Average Annual Growth Rates 1990-1999		Share 1999	
	Exp.	Imp.	Exp.	Imp.
	Merchandise			
World	5.6	5.8	100	100
Latin America	8.1	11.1	5.4	5.8
MERCOSUR	5.3	12.2	5.4	1.4
Mexico	14.4	14.6	2.4	2.5
Textiles				
World	4.0	4.0	100.0	100.0
Latin America	6.7	17.4	2.2	6.3
MERCOSUR	-3.4	14.5	1.0	1.5
Mexico	15.1	19.2	1.7	3.1
Clothing				
Latin America	6.2	6.2	100.0	100.0
MERCOSUR	20.7	23.7	10.3	5.0
México	-4.3	24.0	0.2	0.3
Latin America	33.3	22.8	4.2	2.0

Source: Information from WTO and LAFTA

Table 3  
 LATIN AMERICA: SPECIALIZATION IN  
 TEXTILES AND CLOTHING, 1988-1997

	COVERAGE RATIO	
	1988-90	1995-97
Argentina	5.6	0.6
Bolivia	0.3	0.2
Brazil	4.6	0.8
Colombia	3.5	1.5
Costa Rica	0.3	0.4
Cuba	0.1	0.1
Chile	0.2	0.2
Ecuador	0.4	0.5
El Salvador	1.2	0.5
Guatemala	0.5	0.3
Honduras	0.1	0.1
México	0.5	1.1
Nicaragua	0.1	0.1
Panama	0.1	0.1
Paraguay	0.3	0.2
Peru	10.7	2.0
Rep. Dominican	1.1	0.7
Uruguay	6.0	2.3
Venezuela	0.3	0.1
Rest of America	0.4	0.4
Total LA	0.9	0.6

Source: Elaborated using Feenstra 2000 database

Table 4  
 LATIN AMERICA: EVOLUTION OF TRADE IN TEXTILES AND  
 CLOTHING, 1988-1997  
 (percent)

	Average annual variation		Contribution to variation	
	Exp.	Imp.	Exp.	Imp.
	1997/1988	1997/1988	1997/1988	1997/1988
Argentina	8.7	49.4	0.9	3.1
Bolivia	18.5	23.2	0.1	0.4
Brazil	3.5	33.6	1.0	5.6
Colombia	18.6	20.6	1.5	1.6
Costa Rica	9.9	24.6	0.5	1.0
Cuba	15.3	11.6	0.0	-0.1
Chile	-12.8	-3.0	0.5	2.8
Ecuador	27.4	23.9	0.2	0.4
El Salvador	12.0	28.3	0.2	0.8
Guatemala	6.8	17.0	0.1	0.8
Honduras	18.6	24.7	0.1	1.0
Mexico	18.3	6.2	4.0	1.8
Nicaragua	2.5	6.8	0.0	0.1
Panama	-10.7	0.8	-0.1	0.1
Paraguay	10.6	13.0	0.1	0.3
Peru	4.9	33.7	0.4	0.7
Rep. Dominican	-2.0	4.6	-0.2	0.6
Rest. of America	-3.5	-3.4	-0.3	-0.7
Uruguay	8.8	24.4	0.7	0.6
Venezuela	-3.9	6.5	-0.1	0.6
Total AL	7.2	12.4	9.6	21.5

Source: Elaborated using Feenstra 2000 database

Table 5

## LATIN AMERICA: INTENSITY OF TRADE BY ORIGIN REGION IN TEXTILES AND CLOTHING

	Textiles y Clothing			Textiles			Clothing		
	1988-90	1995-97	Variation	1988-90	1995-97	Variation	1988-90	1995-97	Variation
Latin America									
I <sub>alal</sub>	2,46	3,23	1,31	3,35	4,07	1,21	1,68	1,98	1,18
I <sub>expal</sub>	0,44	0,53	1,22	0,53	0,56	1,05	0,36	0,51	1,44
I <sub>impal</sub>	2,52	1,89	0,75	2,04	1,61	0,79	3,10	2,29	0,74
I <sub>rmal</sub>	0,21	0,17	0,79	0,29	0,20	0,68	0,05	0,06	1,21
Argentina									
I <sub>alar</sub>	6,42	6,42	1,00	7,20	6,43	0,89	5,72	6,42	1,12
I <sub>expar</sub>	0,23	0,52	2,27	0,25	0,56	2,19	0,21	0,48	2,34
I <sub>impar</sub>	1,86	0,97	0,52	1,76	0,97	0,55	2,00	0,98	0,49
I <sub>rmar</sub>	0,42	0,15	0,37	0,31	0,12	0,37	0,66	0,25	0,38
Brazil									
I <sub>alabr</sub>	7,74	3,53	0,46	8,68	3,53	0,41	6,89	3,52	0,51
I <sub>expabr</sub>	0,12	0,74	6,30	0,13	0,79	6,08	0,11	0,69	6,48
I <sub>impabr</sub>	1,79	1,22	0,68	1,69	1,21	0,72	1,92	1,22	0,64
I <sub>rabr</sub>	0,41	0,29	0,71	0,31	0,22	0,72	0,65	0,48	0,74
Chile									
I <sub>alch</sub>	4,45	3,23	0,73	4,99	3,23	0,65	3,96	3,23	0,82
I <sub>expch</sub>	0,59	0,85	1,46	0,65	0,91	1,40	0,53	0,79	1,50
I <sub>impch</sub>	1,56	1,10	0,70	1,48	1,09	0,74	1,68	1,11	0,66
I <sub>rmch</sub>	0,30	0,15	0,50	0,23	0,12	0,50	0,48	0,25	0,52
Colombia									
I <sub>alco</sub>	2,03	4,46	2,20	2,27	4,46	1,96	1,80	4,46	2,47
I <sub>expco</sub>	0,12	0,24	2,07	0,13	0,26	1,99	0,11	0,22	2,13
I <sub>impco</sub>	3,43	2,22	0,65	3,24	2,21	0,68	3,68	2,24	0,61
I <sub>rmco</sub>	0,21	0,22	1,04	0,16	0,17	1,05	0,33	0,36	1,08
Mexico									
I <sub>alme</sub>	0,51	0,70	1,38	0,57	0,70	1,23	0,45	0,70	1,54
I <sub>expme</sub>	0,41	0,36	0,88	0,45	0,39	0,85	0,37	0,34	0,91
I <sub>impme</sub>	3,12	3,01	0,96	2,95	3,00	1,02	3,35	3,03	0,91
I <sub>rmme</sub>	0,18	0,30	1,67	0,13	0,23	1,68	0,28	0,49	1,74
Costa Rica									
I <sub>alcr</sub>	2,13	1,96	0,92	2,39	1,96	0,82	1,89	1,96	1,03
I <sub>expcr</sub>	0,26	0,10	0,38	0,28	0,11	0,37	0,23	0,09	0,39
I <sub>impcr</sub>	3,14	3,42	1,09	2,96	3,40	1,15	3,37	3,44	1,02
I <sub>rmcr</sub>	0,08	0,03	0,32	0,06	0,02	0,32	0,13	0,04	0,33
Honduras									
I <sub>alho</sub>	2,22	1,07	0,48	2,50	1,07	0,43	1,98	1,07	0,54
I <sub>expfo</sub>	0,32	0,35	1,08	0,36	0,37	1,04	0,29	0,32	1,11
I <sub>impfo</sub>	2,95	3,07	1,04	2,78	3,05	1,10	3,16	3,09	0,98
I <sub>rmho</sub>	0,09	0,01	0,10	0,07	0,01	0,10	0,14	0,01	0,11

Source: Elaborated using Feenstra's 2000 database

Table 6  
 CONTRIBUTION TO GROWTH OF TEXTILES AND CLOTHING IMPORT, 1988-1997  
 (in percentages)

Destination:	EXP	IMP	AL	RM	Total
Origin:					
	Textiles and Clothing				
EXP	57.01	62.54	32.99	88.37	54.68
IMP	33.32	10.38	32.07	49.81	30.09
AL	1.83	20.54	33.18	-3.54	13.13
RM	7.85	6.54	1.77	-34.63	2.10
	Textiles				
EXP	55.4	76.8	26.0	93.5	53.8
IMP	33.2	-17.4	32.6	60.1	27.9
AL	2.9	16.0	38.9	-7.1	14.5
RM	8.5	24.6	2.4	-46.5	3.8
	Clothing				
EXP	59.3	50.0	46.3	80.0	55.9
IMP	33.4	34.8	31.0	32.8	33.2
AL	0.4	24.6	22.3	2.2	11.2
RM	6.9	-9.4	0.5	-15.0	-0.3

Source: Elaborated with Feenstra 2000 database

Table 7  
 LATIN AMERICA: TARIFF REDUCTION IN  
 TEXTILES AND CLOTHING, 1990-1995 1/

COUNTRY OR REGION	Percent Change (%)		
	Tex.	Clo.	Ots.
Argentina	25	16	4.4
Brazil	39	100	137.7
Chile	42	36	36.2
Mexico	-6	-42	-4
Uruguay	85	83	187
LA Ots.	153	167	176

Source: Elaborated using LAFTA database

1/ Weighted Average Tariff

Table 8

## IMPACT OF REMOVING THE AMF VER ON PRODUCTION AND TRADE

	Production (qo)		Export (qxw)		Import (qiw)	
	Textiles	Clothing	Textiles	Clothing	Textiles	Clothing
<i>Experiment 1</i>						
USA_Canada	-2.6	-8.6	-1.3	-8.1	-0.7	20.8
EU	-0.9	-3.7	-0.7	-6.1	-0.5	2.6
Export_Dev	5.6	19.6	4.4	32.0	7.5	2.2
Argentina	0	0	0.3	-6.8	0	-0.5
Brazil	0	-0.1	0.4	-13.7	-0.1	-0.3
Chile	-0.4	-0.6	-4.3	-17.9	-0.2	-0.6
Mexico	-5.5	-20.9	-1.6	-64.0	-3.3	-0.9
Uruguay	1.2	-0.9	2.3	-5.4	0.2	0.1
LA others	-15.5	-35.8	-0.4	-92.1	-10.7	-9.7
Rest World	-0.2	-0.5	1.7	-10.4	-0.5	-0.7
<i>Experiment 3</i>						
USA_Canada	0.2	0.9	-0.3	13.6	0.3	0.1
EU	0	0	0.1	0	0.1	0
Export_Dev	0.2	0.3	0.5	0.4	0.2	0.1
Argentina	-0.5	-0.3	-3.3	16	10.8	14.5
Brazil	0.6	-0.2	20.2	19.8	2.3	75.1
Chile	-1.2	-1.1	11.6	6.6	3.7	8.7
Mexico	3.2	4.2	1.5	-1	-11.6	-29.2
Uruguay	6.4	4.1	16.2	64.6	17.9	69.9
LA others	-12.6	-11.7	9.6	2.6	20.5	57.5
Rest World	0	0	0.2	0	0	-0.1
<i>Experiment 4</i>						
USA_Canada	-3.5	-12	0.7	11.8	0.2	33.5
EU	-1.5	-6.7	-0.7	-10	-0.9	5.6
Export_Dev	7.8	25.3	13.7	41.7	16.5	9.7
Argentina	-0.3	-0.2	1.8	23	7.9	11.5
Brazil	-1	-1.3	4.7	-19.4	7.4	95.5
Chile	-2.1	-2.8	6.6	-16.7	3.6	12.1
Mexico	-8.4	-23.8	-11.3	-70.6	-1.6	4
Uruguay	0.7	-1.2	8.1	39.8	19	81.9
LA others	-20.2	-27.1	1.6	-36	16.2	54.6
Rest World	-0.9	-1.9	6.5	-4.6	4.5	6.1

Table 9

## EFFECTS OF MFA REMOVAL ON EXPORTS BY DESTINATION (Exp. 1)

Origin	Dest. USA_ Canada	EU	Export_Dev	Argentina	Brazil	Chile	Mexico	Uruguay	Rest LA	Rest World
Textiles										
USA	-5.2	-1.3	9.4	0.5	0.5	0.2	-2.9	0.7	-10.5	0.7
EU	-5.5	-1.7	9	0.2	0.2	-0.2	-3.2	0.3	-10.9	0.3
Export_Dev	8.2	7.4	6.8	-1.8	-1.8	-2.1	-5.1	-1.7	-12.6	-1.6
Argentina	-5.6	-1.8	8.9	0.1	0.1	-0.3	-3.4	0.2	-11	0.2
Brazil	1.2	5.3	8.8	0	0	-0.3	-3.4	0.1	-11	0.2
Chile	-5.7	-1.9	8.8	0	0	-0.3	-3.4	0.1	-11	0.1
Mexico	-4.1	17.4	10.6	1.7	1.7	1.3	-1.7	1.8	-9.5	1.9
Uruguay	-5.8	-1.9	8.7	-0.1	-0.1	-0.4	-3.5	0.1	-11.1	0.1
Rest LA	-0.8	3.3	14.5	5.2	5.2	4.9	1.6	5.4	-6.4	5.4
Rest World	-6	-2.1	8.5	-0.3	-0.3	-0.6	-3.7	-0.2	-11.3	-0.1
Clothing										
USA_Canada	-30.6	-4.8	8.7	4.2	3.9	4.6	1.1	3.6	-8.7	5.1
EU	-32.7	-7.7	5.4	1.1	0.8	1.4	-1.9	0.5	-11.4	2
Export_Dev	89.2	26.3	1.1	-3	-3.3	-2.7	-5.9	-3.6	-15	-2.2
Argentina	-33	-8.1	5	0.7	0.4	1	-2.3	0.1	-11.8	1.5
Brazil	-28.8	-2.4	4.9	0.6	0.4	0.9	-2.4	0	-11.9	1.5
Chile	-33.1	-8.2	4.8	0.5	0.2	0.9	-2.5	-0.1	-12	1.4
Mexico	-66.1	31.7	8.6	4.1	3.8	4.5	1.2	3.5	-8.8	5.1
Uruguay	-33.2	-8.3	4.7	0.4	0.1	0.7	-2.6	-0.2	-12.1	1.2
LA Ots.	-94.5	-115.6	15.9	11.1	10.7	11.4	7.7	10.6	-2.7	12
Rest World	-29.3	-6.2	4.2	0	-0.3	0.3	-3	-0.6	-12.4	0.8

Table 10  
EFFECTS OF MFA REMOVAL ON IMPORT PRICES (Exp 1, pim)

Origin	USA-Canada		European Union		Other	
	Textiles	Clothing	Textiles	Clothing	Textiles	Clothing
USA_Canada	-0.2	-0.5	-0.2	-0.5	-0.2	-0.5
EU	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Export_Dev	-3.2	-11.2	-2.1	-3.6	0.3	0.3
Argentina	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Brazil	-1.7	-0.8	-1.7	-0.8	-0.1	-0.1
Chile	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Mexico	-0.5	8	-4.1	-4.1	-0.5	-0.5
Uruguay	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
LA Ots.	-1.2	26.2	-1.2	-15.3	-1.2	-1.2
Rest World	0	-0.7	0	-0.3	0	0

Table 11

## EFFECTS OF MFA REMOVAL ON EXPORTS BY DESTINATION (Exp. 3)

Dest. Origin	USA_ Canada	EU	Export_Dev	Argentina	Brazil	Chile	Mexico	Uruguay	LA Ots.	Rest World
Textiles										
USA_Canada	0,2	0,0	0,0	-0,3	16,0	6,3	0,0	14,8	0,0	0,0
EU	0,2	0,0	0,0	-0,3	15,9	6,3	0,0	15,4	0,0	0,0
Export_Dev	0,4	0,1	0,1	-0,1	16,1	6,6	6,9	15,2	12,3	0,2
Argentina	5,2	4,4	4,7	-11,4	21,1	11,3	10,2	20,4	17,2	4,0
Brazil	-5,1	4,2	6,7	-7,4	-1,9	10,8	12,0	13,9	7,4	0,1
Chile	2,8	2,1	2,4	2,3	18,9	-8,6	9,4	18,2	-3,3	1,5
Mexico	-25,4	13,3	13,1	13,6	30,9	23,4	25,6	30,9	27,6	13,5
Uruguay	27,1	13,1	16,1	-2,5	47,6	41,1	-2,9	-24,2	6,9	-9,1
LA Ots.	17,9	25,9	25,2	13,7	31,7	12,3	-0,8	25,6	22,2	23,7
Rest World	0,2	-0,1	-0,1	-0,3	15,8	6,5	6,8	15,2	12,1	0,0
Clothing										
USA_Canada	0,2	-0,4	0,0	-1,5	29,0	11,7	0,0	31,2	0,0	0,0
EU	0,6	0,0	0,0	-1,1	29,3	12,1	0,0	31,6	0,0	0,0
Export_Dev	0,7	0,1	0,0	-1,0	29,9	12,3	15,7	31,8	49,0	0,3
Argentina	6,8	6,3	6,1	-16,8	37,3	19,1	22,6	40,0	57,7	6,3
Brazil	56,2	59,6	65,2	62,7	-44,1	85,3	84,1	118,0	145,7	63,1
Chile	7,8	7,1	6,8	6,0	38,6	-11,2	23,8	41,2	24,5	5,8
Mexico	-32,4	-25,4	-25,8	-26,7	-2,7	-2,1	63,5	-2,5	30,2	-25,6
Uruguay	59,5	58,0	58,4	56,9	105,0	77,7	83,1	-51,2	109,0	49,6
LA Ots.	62,1	34,5	66,4	-28,5	-20,2	-13,1	-47,6	0,6	75,2	40,8
Rest World	0,5	-0,1	-0,2	-1,2	29,3	12,3	15,6	31,7	48,4	0,1

Table 12  
 IMPORT PRICE EFFECTS BY EXPERIMENT (piw)

	Experiment 1		Experiment 2		Experiment 3		Experiment 4	
	Tex	Clo	Tex	Clo	Tex	Clo	Tex	Clo
USA_Canada	-1.2	-6.5	0.8	2	-0.3	-0.5	-1.2	-8.2
EU	-0.4	-1.3	0.3	1.1	0.1	0.2	-0.4	-1.7
Export_Dev	0.2	0.2	-0.3	-0.6	0.1	0.2	0	-0.3
Argentina	-0.1	0.1	-0.2	-0.5	-1.2	-0.7	-0.3	-0.5
Brazil	-0.1	0	-0.2	-0.5	-0.2	-0.6	-0.3	-0.7
Chile	-0.1	0.1	-0.2	-0.6	-0.4	-0.2	-0.3	-0.5
México	-0.1	-0.3	-0.1	-0.3	0	0	-0.2	-0.6
Uruguay	-0.1	-0.1	-0.1	-0.3	-0.9	-0.7	-0.3	-0.6
LA Ots.	-0.2	-0.4	-0.2	-0.2	-0.5	-0.3	-0.3	-0.8
Rest World	0.1	0.2	-0.2	-0.6	0.1	0.2	-0.1	-0.3

Table 13

## WELFARE AND TERMS OF TRADE EFFECTS BY EXPERIMENT

	Experiment 1		Experiment 2		Experiment 3		Experiment 4	
	EV	TT	EV	TT	EV	TT	EV	TT
USA_Canada	2,914	0.1-	1,217	2	2,028	-0.5	3,490	0.1
EU	827.1	0-	943	1.1	2,461	0.2	667	0
Export_Dev	2,617.0	0	3,136	-0.6	1,779	0.2	5,025	0.1
LATIN AMERICA								
Argentina	-12.2	0-	1	-0.5	471	-0.7-	5	0
Brazil	-60.4	-0.1	24	-0.5	2,690	-0.6-	113	-0.2
Chile	-4.9	0	4	-0.6-	116	-0.2-	3	0
México	-243.7	-0.3	60	-0.3-	2,116	0-	254	-0.3
Uruguay	0.2	0	1	-0.3-	5	-0.7	0	-0.1
LA Ots.	-1,390.2	-0.4	331	-0.2	361	-0.3-	206	-0.8
Total LA	-1,711.2		419		1,285	-	580	
Rest World	-778.9	0	915	-0.6	1,958	0.2-	249	0
Total	3,828.1		3,644		12,752		7,526	

EV-Equivalent Variations

TT-Terms of Trade

Table 14

## EFFECTS ON THE EXPORTS FROM DEVELOPING COUNTRIES BY DESTINATION

	TRADE					
	LIBERALIZATION IN		MFA REMOVAL		DIFFERENCE	
	LATIN AMERICA					
	Exp. 3		Exp. 4		Exp. 3- Exp 4	
	Tex.	Clo.	Tex.	Clo.	Tex.	Clo.
USA_Canada	0,4	0,7	8,2	12,2	-7,8	-11,5
EU	0,1	0,1	10,5	1,8	-10,4	-1,7
Export_Dev	0,1	0,0	17,4	10,6	-17,3	-10,6
Argentina	-0,1	-1,0	8,1	-4,6	-8,2	3,6
Brazil	16,1	29,9	6,8	-3,1	9,3	33,0
Chile	6,6	12,3	11	37,7	-4,4	-25,4
Mexico	6,9	15,7	9,7	-1,6	-2,8	17,3
Uruguay	15,2	31,8	11,4	9,4	3,8	22,4
LA Ots.	12,3	49,0	16,2	41,9	-3,9	7,1
Rest World	0,2	0,3	18,2	22,7	-18,0	-22,4