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**Integration of the Americas: Welfare  
Effects and Options for the Mercosur**

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## **INTEGRATION OF THE AMERICAS: WELFARE EFFECTS AND OPTIONS FOR THE MERCOSUR \***

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### **ABSTRACT**

The purpose of this paper is to assess the costs and benefits of the creation of the Free Trade Area of the Americas (FTAA) and other integration options for the MERCOSUR with the other countries in the hemisphere. The GTAP, a multiregional, multisector CGE model is used to simulate the effects of several scenarios that are currently on debate.

The existing preferences, granted by previous agreements under the framework of the Latin American Integration Association (LAIA), and the preferential treatment granted by the USA through the Generalized System of Preferences (GSP), the Caribbean Basin Initiative (CBI) and the Andean Trade Preference Act (ATPA) are taken into account. The analysis decomposes the effects of the FTAA in order to assess the importance of market opening and market access and identifies the net effect of trade creation and trade diversion. Additionally, the FTAA initiative is decomposed in possible subregional agreements among the countries involved (MERCOSUR – Andean Community, MERCOSUR – USA, etc.). The assessment includes the estimation of the welfare effects in case the agreement does not include the agricultural sector. All the results are presented for the MERCOSUR as a bloc and for each of its members.

### **RESUMEN**

El objetivo de este artículo es estimar los costos y beneficios para el MERCOSUR de la creación del Área de Libre Comercio de las Américas (ALCA) y otras opciones de integración con los países del hemisferio. A los efectos de simular los efectos de distintos escenarios de integración se utilizó un modelo de equilibrio general computable multisectorial y multiregional, el GTAP. Se introdujeron las preferencias vigentes en la ALADI, en el SGP, la iniciativa para el Caribe y las preferencias para los países andinos de Estados Unidos. El análisis descompone los efectos del ALCA en el efecto apertura, efecto acceso y creación y desvío de comercio. Asimismo, el ALCA es descompuesto en los distintos acuerdos subregionales: MERCOSUR-CAN, MERCOSUR-EEUU, etc.). Se estiman los efectos sobre el bienestar en el caso en que el acuerdo no incluya al sector agrícola. Los resultados son presentados para el MERCOSUR como bloque así como para cada uno de sus miembros.

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# **Integration of the Americas: Welfare Effects and Options for the MERCOSUR**

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## **1. Introduction**

During the nineties, there was a powerful surge of new regionalism and its characteristics have been discussed by several authors (Ethier, 1998; Devlin and French-Davis, 1999; Devlin and Estevadeordal, 2001). Against this background, a number of regional agreements in the Americas emerged or were restructured, like the Southern Cone Common Market (Mercado Común del Sur - MERCOSUR), the North American Free Trade Area (NAFTA), the Andean Community of Nations (CAN), the Caribbean Community (CARICOM) and the Central America Common Market (CACM). There were also several bilateral trade agreements between Latin American countries, like those signed by Chile with MERCOSUR, with Mexico and with the Andean countries, and the one between MERCOSUR and Bolivia.

The movement towards regional trade agreements is still going on. At present, MERCOSUR is involved in a number of trade negotiations with different countries or groups of countries. The most important of these negotiations are those that have to do with the Free Trade Area of the Americas (FTAA), those leading towards a free trade agreement with the European Union (EU), and the multilateral negotiations in the framework of the World Trade Organization (WTO). The FTAA is the most ambitious initiative in the Americas, and it comprises 34 countries in the hemisphere.

In addition to this, MERCOSUR has to renegotiate its partial agreements with Mexico and the CAN in the framework of the Latin America Integration Association (LAIA), in order to avoid perforations in its Common External Tariff (CET). In fact, the negotiations with the CAN have a more ambitious purpose, to reach a free trade agreement similar to those signed with Chile and Bolivia. If such an agreement were achieved, it would practically complete a South American Free Trade Area (SAFTA). However, if the FTAA negotiations are successful, the preferences obtained through sub regional agreements will eventually vanish.

The purpose of this study is to assess the impact of the elimination of tariffs within the FTAA on the MERCOSUR countries, and to look at MERCOSUR's other options for trade agreements within the Americas. A number of questions can be raised about these negotiations. What would be the impact of market opening in each country? What is the effect of improved market access, particularly to the USA? How do the results change if the FTAA excludes the agricultural sector? Is trade creation more important than the expected trade diversion? Are all the MERCOSUR countries affected in the same way by the integration options the bloc is facing? The simulation exercises described in this chapter set out to tackle these and other related questions.

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From a theoretical point of view, it is well known that the effects on welfare of a preferential trade agreement are ambiguous, both for the countries involved and for the rest of the world. Even if theory may help to predict the direction of the possible welfare effects, the final result is an empirical question. Computable general equilibrium (CGE) models have become the main tools for the *ex ante* analysis of the effects of preferential agreements. This study uses the model developed by the Global Trade Analysis Project (GTAP) for the quantitative analysis of the effects of the elimination of trade barriers within the FTAA on the MERCOSUR countries. The effects on each of the MERCOSUR countries are considered, as well as the overall impact on the regional bloc.

In the next section a brief review of the theoretical approach to free trade areas is presented. Section 3 deals with the version of the GTAP model that was used, the aggregation criteria and the simulation strategy. In section 4 the issue of the existing preferential tariffs is set out, and the simulation results are presented in section 5. Finally the main conclusions are drawn in section 6.

## **2. Trade creation and trade diversion in a Free Trade Area: the theoretical approach**

The FTAA is a complex agreement among 34 countries in the hemisphere, which are already linked up by a net of bilateral and/or sub regional preferential agreements. The FTAA would erode the effects of the intricate system of preferences currently in force, and would establish a free trade system that would give clearer signals for investment location and resource allocation in the long run. This, in turn, would enhance growth and facilitate economic stability in the region, especially for the small economies where uncertainty about the permanence of preferences does not provide sufficient incentive for long term investment.

In this section, a review of the theory is presented in terms of the expected results from a static model with perfect competition. This approach might be considered too restrictive as the empirical evidence shows that the main effects of a free trade area are dynamic, or are associated with the exploitation of economies of scale or with increased competition in small markets where non-competitive structures prevail. However, even though several papers on the FTAA have dealt with these dynamic effects (among them Monteagudo and Watanuki, 2001, CEI, 2002 and Diao and Somwaru, 2001), none of them has taken into account the more basic issue of the magnitude of the actual policy change (considering previous preferences) or the analysis of its different components.

In a static model with perfect competition, the effects on welfare of a free trade area are trade creation, trade diversion, market access and terms of trade. In a world where there are preferential trade agreements in existence prior to the formation of a free trade area, the extension of preferential treatment to new partners creates different effects that should be examined. On the one hand, the costs of existing trade diversion might decrease and, at the same time, the access effect might also decrease for those partners whose exports were already receiving the benefit of preferential treatment. When analyzing an agreement such as the FTAA, these effects can be isolated by adopting an appropriate simulation strategy. In this section, the rationale for the simulation design is discussed.

*Trade creation and trade diversion.* These are the effects of a free trade area from the point of view of the importing country, when the terms of trade are not affected. A free trade agreement induces imports from a more efficient partner that substitute for domestic production, and this leads to an increase in welfare because resources are allocated more efficiently (trade creation). It is also possible that the increased imports from a partner substitute for imports from a more efficient non-partner (trade diversion). Therefore, the joint impact of both effects may be measured by a simulation that captures the effect of the unilateral opening of MERCOSUR to imports from the FTAA partners, without considering the reciprocal opening of those partners. If the effects of this opening on the terms of trade are negligible, the net effect of trade creation and trade diversion for any particular partner can be approximated in this way.

*Terms of trade.* The approach described above seems to be appropriate for analyzing the global effects of the opening of the MERCOSUR members *vis-à-vis* the rest of the FTAA because, from a global perspective, they are small countries. However, the MERCOSUR is not a minor supplier in the case of some export sectors, and this approach does not seem to be appropriate for analyzing the effects of the largest partners in the FTAA. Using the GTAP model, the net effect on the terms of trade for each bilateral agreement can be isolated.

*Market access.* When a country participates in a free trade area it opens its own domestic market while at the same time obtaining preferential access to the markets of the other partners. Wonnacott and Wonnacott (1981) emphasize the importance of improved market access as a result of preferential agreements. Harrinson *et al* (1997 and 2001) find that market access is the main motivation behind Chile's involvement in trade negotiations, as the possibilities of increasing its efficiency by opening its own domestic market would be modest because its tariff is uniform and low. This effect can be measured for the MERCOSUR by simulating the opening of its FTAA partners without the compensation of its own domestic market opening.

While the trade creation, trade diversion and terms of trade effects have been widely analyzed, the market access effect is frequently disregarded, so it is useful to go into further detail on this subject. Preferential access to the other partners' markets can have strong positive welfare effects in the exporting country, but it can have a negative impact on the importing country. In turn, the net welfare effect on the FTA could be negative, so the analysis can be clarified by considering two extreme cases (figures 1 and 2). Let us assume the case of a free trade area with rules of origin that limit trade deflection. It is a small region, so world prices are exogenous (represented by a horizontal line in figure 1 ( $P_w$ )).

*FTA reduced protection*<sup>3</sup>. A large exporting partner (country LX) improves its access to the market of a small importing partner (country SM). In this case, the country LX can satisfy all the import demand from country SM at its own domestic price ( $c_1-q_1$  see left hand side, figure 1). If domestic price does not change in country LX, the free trade area does not have any effect on its consumption or domestic production. Country LX will reduce sales to its own domestic market to the same extent that it will increase its exports to country SM. At the same time, country LX will start importing from the rest of the world the necessary quantity to fully satisfy the excess demand in its domestic market ( $O-c_o$ , right

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<sup>3</sup> Originally this concept was introduced by Grossman and Helpman (1995). In the study by Vaillant and Ons, which is included in this volume, a complementary approach on this topic is presented.

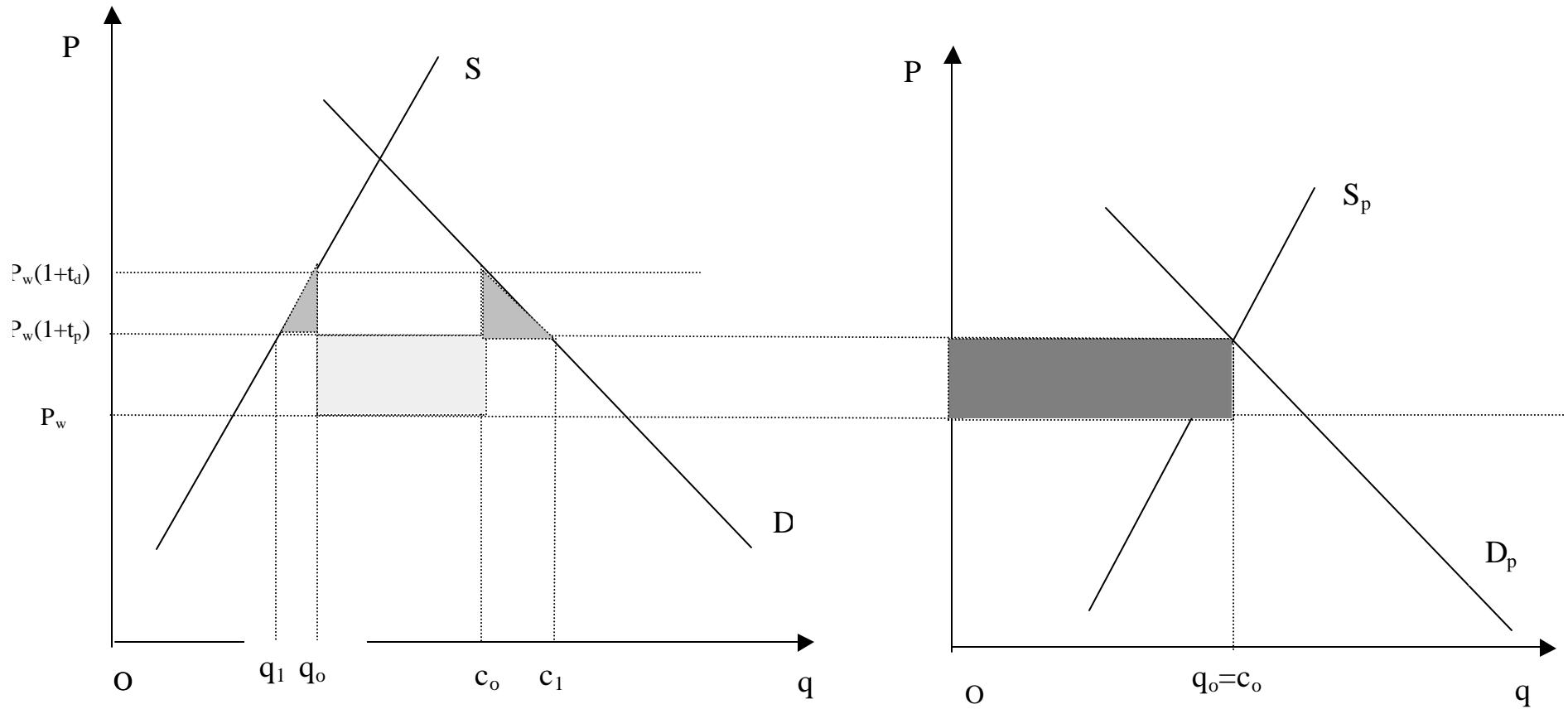
hand side, figure 1). Imports and tariff revenue increase in country LX, and its welfare gain will be equal to the total amount of its imports multiplied by the tariff (striped rectangle, right hand side, figure 1). In country SM there will be a welfare gain from trade creation and a welfare decrease from trade diversion (dotted rectangle), as imports from country LX **substitute for** imports from third countries.

REDUCED PROTECTION

FIGURE 1

COUNTRY SM

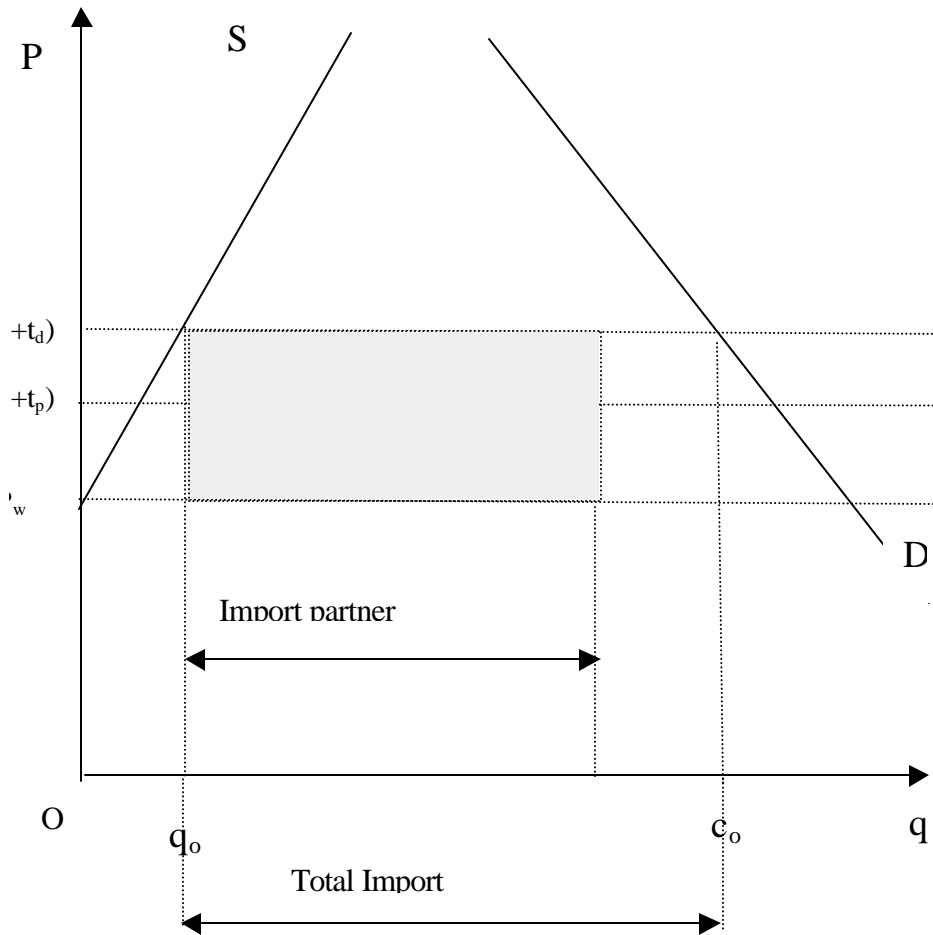
COUNTRY LX



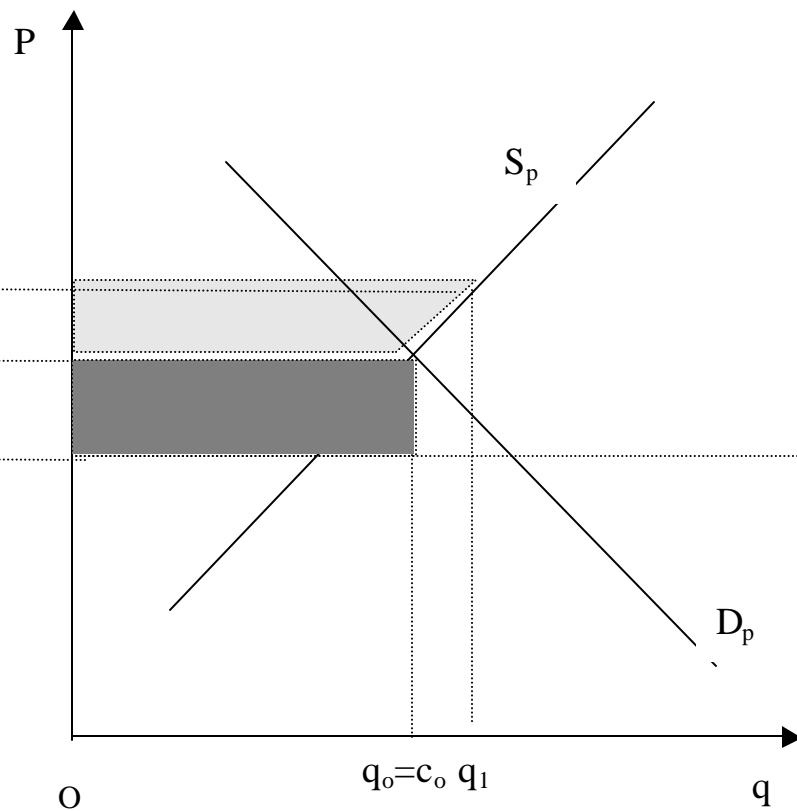
ENHANCED PROTECTION

FIGURE 2

COUNTRY LM



COUNTRY SX





The welfare loss in the free trade area that is due to trade diversion is equal to the tariff in country LX multiplied by imports of SM before the creation of the free trade area (lower than the subsequent imports). Therefore, under these conditions, the net result of the free trade area is clearly positive. Country LX (the exporting country) gains from the trade diversion of country SM (the importing country), which means a redistribution of benefits within the area, and it also benefits from trade creation. The free trade area increases its imports from third countries, and its tariff revenue. The rest of the world increases its exports to the free trade area, so its welfare also increases. Consequently, there is a welfare gain for the free trade area members and for the rest of the world.

*FTA enhanced protection.* The exporting country is small (country SX) and the importing country is large (country LM), so production in the former is not sufficient to satisfy import demand from the latter, see figure 2, where  $O-q_0$  (right hand side) is smaller than  $c_0-q_0$  (left hand side). Again, country SX increases its imports from the rest of the world to satisfy its own domestic demand; its domestic price does not change and domestic demand is satisfied by imports, so tariff revenue increases (striped rectangle on the right hand side, figure 2). Furthermore, the producer's price increases to equal the domestic price in country LM ( $P_w(1+t_d)$ ), production rises and so do exports to country LM ( $q_1-q_0$ ). Prices do not change in country LM, the quantities imported are maintained and there is no trade creation, but there is trade diversion (dotted rectangle, right hand side, figure 2). In country SX, producer surplus increases but there is an inefficient allocation of resources. The net effect on welfare in the exporting country SX is positive (tariff revenue increases and so does producer surplus). However, the producer surplus increase plus the revenue increase in country SX (striped rectangle plus dotted area on the right hand side, figure 2) do not compensate for the welfare loss from trade diversion in country LM (dotted rectangle, left hand side). Therefore, the free trade area has a net negative effect due to the efficiency loss of a reallocation of resources to the production of goods that could be purchased at a lower cost in the rest of the world. There is a redistribution of benefits within the area, and a negative effect on the rest of the world, which is discriminated against.

In between these two extreme cases, there are numerous possibilities: a free trade area can reduce protection in the importing country when this is a small country that adopts its partner's prices, or protection can increase in the exporting country when it is a small country.

MERCOSUR can be thought of as a small country in the FTAA, it imports manufactured goods and it is more protected than the USA. In contrast, the USA is a large country importing agricultural products, and it has higher protection than the MERCOSUR for those types of goods. In the first case one can expect a welfare improvement for the area as a whole, an ambiguous effect on the MERCOSUR, and a clearly positive effect on the USA. In the case of the agricultural sector the second situation would hold, the MERCOSUR would improve its welfare while the USA would suffer a clear trade diversion effect that cannot be offset by the MERCOSUR welfare gains.

If a free trade area is created on top of previous preferential trade agreements, the existing preferences will be eroded. In the country that was already importing from its partners, trade diversion can be reduced, but for the country that exported to the region, the gains associated to regional market access diminish. If it is a *reduced protection* free trade area, the exporting country loses in terms of market access. In this case, the importing country increases its welfare because trade diversion is reduced and there is trade creation,

but the country that exported to the free trade area loses. If the free trade area is *enhanced protection*, trade diversion increases in the importing country and the welfare of the exporting country does not change.

These issues can be discussed in the case of the effects of the FTAA on the MERCOSUR through an appropriate simulation strategy. By simulating a unilateral discriminatory opening of each MERCOSUR country *vis-à-vis* all the other partners of the FTAA, the trade creation or trade diversion effects can be approximated. The effects on the other MERCOSUR partners would be the costs associated to the erosion of preferences plus the income effect derived from the greater efficiency. The effects on the other FTAA partners would measure the access gains. In turn, the market access effect can be evaluated by simulating the opening of the other FTAA partners without the compensation of the domestic market opening in the MERCOSUR countries.

### **3. The model**

#### **3.1 The GTAP model**

The study carried out in this paper requires a multi-country model, as the regional integration options for MERCOSUR bring about changes for its members, for each of the potential partners, and for third countries that are not involved in the agreement. For this reason, the model developed by the Global Trade Analysis Project (GTAP) at Purdue University was chosen for the empirical work. This model has the advantage of comprising a database and the appropriate software to facilitate the simulations. The database (version 5) contains information on 66 regions or countries and 57 sectors or commodities for the year 1997, which is quite appropriate for this study. The base year is a good reference point to illustrate the situation prior to the beginning of the negotiations. In addition, the model has disaggregated data for three of the MERCOSUR partners (Argentina, Brazil and Uruguay), so the bloc can be analyzed not only from a global perspective but also from the point of view of countries with very different interests. Furthermore, the country data allows the disaggregation of a large number of the countries involved in the FTAA negotiations.

The model developed by the GTAP is very well known (Hertel, 1996). The standard version of this model (used in this paper) is static and assumes perfectly competitive markets for goods and factors, but it admits differentiation by geographic origin in the goods market. There are five production factors in the model: capital, skilled labor, unskilled labor, land and natural resources. The last two of these are specific for each sector. The institutions considered by the model are government, producers and a representative regional household.

The representative regional household collects all the income generated by a representative agent in the region (factor payments and taxes) and distributes it through a nested utility function. At the first level, total income is allocated to private expenditure, per capita government expenditure and savings. At the second level, private consumption is allocated to different commodities assuming a Constant Difference Elasticity (CDE) utility function. It is a non homothetic utility function so it is more flexible for representing consumer behavior than more common functional forms such as the Cobb-Douglas or the CES functions. The government spends its income on consumer goods, assuming a Cobb-

Douglas utility function. Thus, each good or sector has constant shares in total government expenditure. Savings are exhausted in investment, and the model is investment-driven as investment is a constant budget share. As this is a static model, investment does not have any impact on production, but is a component in final demand.

On the production side, a nested technology separable function with constant returns to scale is assumed. At the first level, a Leontieff function is adopted, which combines a fixed quantity of a composite of value added and intermediate inputs. At the second level, domestic and imported intermediate inputs are combined using an Armington function (Armington, 1969). Finally, an Armington function combines imported goods from different regions in a composite imported good. Additionally, a Constant Elasticity of Substitution (CES) technology function combines the five factors of production to obtain value added. Thus, the optimal mix of labor, capital, land and natural resources is independent of the prices of intermediate inputs. The elasticity of substitution between intermediate inputs and primary factors is zero. All the elasticities used are the default values provided by the GTAP model.

The GTAP database provides tariff data for 1997. It includes some non tariff barriers but it does not consider some preferential agreements in force at that time. In this study, tariffs were adjusted to take into account the preferences within MERCOSUR, among the LAIA countries, and those granted by the USA to the countries in the FTAA. These adjustments in the GTAP benchmark are described in section 4 of this paper.

### **3.2 Aggregation Strategy**

Because this study focuses on MERCOSUR, three of its members were considered separately (Argentina, Brazil and Uruguay, but not Paraguay, because data were not available in the GTAP database). Five more countries/regions were considered in order to evaluate the effects on other relevant FTAA partners. The European Union (EU) was also individualized and all other countries were gathered in a single group. Thus, the GTAP data were aggregated into the following 10 countries/regions:

- 1) Argentina
- 2) Brazil
- 3) Uruguay
- 4) Chile
- 5) CAN (Colombia, Venezuela, Peru and the rest of the Andean Pact)
- 6) USA
- 7) Rest of NAFTA (Mexico and Canada)
- 8) Rest of FTAA
- 9) EU
- 10) Rest of the World

Consequently, in this study, the FTAA will be considered as an agreement involving four large regions, MERCOSUR (Argentina, Brazil and Uruguay), the rest of South America (Chile and the CAN), NAFTA (Canada, Mexico and the US), and the Central American and Caribbean countries (Rest of FTAA).

The FTAA countries account for 39% of the world's GDP and 30% of its trade. The countries involved in the FTAA negotiations are remarkably asymmetrical as regards their relative size, the levels of development they have achieved, and their specialization

patterns. MERCOSUR can be seen as a relatively small bloc negotiating with countries or regions that hold a significant share of world trade and production. Together, NAFTA represents 33% of world production and 25% world trade, while MERCOSUR's share is far less than 5%. The disparities between MERCOSUR and its potential partners are not only quantitative, significant differences can also be found in the trade specialization pattern of each region.

In order to analyze the impact of the FTAA, ten sectors were considered. The classification of sectors adopted in this paper is based on that suggested by CEPAL (2001). However, some changes were introduced to take into account MERCOSUR's main interests as regards market access and the level of protection for each sector in the US (which is the largest potential market for MERCOSUR exports). Consequently, the following aggregation was finally adopted:

- 1) Agriculture
- 2) Mining
- 3) Beef and dairy products
- 4) Milling
- 5) Sugar
- 6) Other food, beverages and tobacco
- 7) Other traditional manufacturing
- 8) Manufactured goods based on natural resources and large economies of scale
- 9) Durable goods and manufactured goods that facilitate the diffusion of technical progress
- 10) Services

Table 1 shows the revealed comparative advantages for MERCOSUR as a whole and for each of its members, for the rest of South America, for NAFTA, for the rest of the FTAA, and for the FTAA as a whole. The MERCOSUR has strong comparative advantages in all agricultural sectors and food, while it has clear disadvantages in manufacturing and services. However, there are some differences for each member: Argentina has clear advantages in agricultural goods and milling, Brazil in milling and sugar, Uruguay in beef and dairy products and milling. On the other hand, NAFTA shows advantages in agricultural products, manufactured goods that diffuse technical progress, and services, while the rest of South America has advantages in agricultural products, mining and fuels, sugar, food, beverages and tobacco, and manufactured goods based on natural resources and with economies of scale. The FTAA in general has comparative advantages in agricultural products, milling, sugar and services.

The differences or similarities in specialization patterns might suggest that negotiations could be easier when complementarity is found, because potential gains in welfare are greater when comparative advantages are strong. However, nations usually grant more protection to sectors that are not competitive by themselves, for social, political or strategic reasons. Therefore, to get an idea of the difficulties that the negotiations will encounter, other aspects need to be considered. In particular, the present level of protection for each sector should be examined.

A comparison of the average tariff prevailing in the MERCOSUR countries with those in the NAFTA countries shows a remarkable difference, both in the level of protection and in its distribution by sector (see table 2).

**Table 1**  
**Revealed comparative advantages**

|  | Argentina | Brazil | Uruguay | MERCO-<br>SUR | Rest South<br>America* | NAFTA | Others<br>FTAA** | Total<br>FTAA | EU    | ROW   |
|--|-----------|--------|---------|---------------|------------------------|-------|------------------|---------------|-------|-------|
| 1 Agriculture                            | 5,811     | 3,775  | 3,227   | 4,404         | 3,435                  | 1,363 | 1,587            | 1,774         | 0,710 | 0,832 |
| 2 Mining                                 | 1,406     | 1,116  | 0,024   | 1,160         | 5,200                  | 0,584 | 0,834            | 0,856         | 0,170 | 1,890 |
| 3 Beef & dairy                           | 3,784     | 2,300  | 11,651  | 3,196         | 0,334                  | 0,741 | 0,709            | 0,874         | 1,539 | 0,550 |
| 4 Milling                                | 23,853    | 7,569  | 8,526   | 12,843        | 0,931                  | 0,665 | 0,706            | 1,511         | 0,747 | 0,949 |
| 5 Sugar                                  | 1,335     | 15,336 | 0,120   | 10,156        | 2,531                  | 0,144 | 1,002            | 1,610         | 0,740 | 0,899 |
| 6 Other food                             | 2,504     | 1,301  | 2,294   | 1,732         | 3,209                  | 0,781 | 0,962            | 1,013         | 1,258 | 0,742 |
| 7 Other trad. manufact.                  | 0,598     | 0,895  | 1,729   | 0,837         | 0,508                  | 0,585 | 0,635            | 0,648         | 0,886 | 1,315 |
| 8 Manuf. based on Nat.<br>res. w/sc. ec. | 0,710     | 1,162  | 0,567   | 0,990         | 1,345                  | 0,874 | 0,899            | 0,905         | 1,191 | 0,870 |
| 9 Manuf. tec. diffusion                  | 0,446     | 0,585  | 0,132   | 0,520         | 0,077                  | 1,185 | 1,090            | 1,052         | 1,022 | 0,948 |
| 10 Services                              | 0,613     | 0,713  | 1,597   | 0,721         | 0,785                  | 1,157 | 1,144            | 1,116         | 1,024 | 0,909 |
| Total                                    | 1,000     | 1,000  | 1,000   | 1,000         | 1,000                  | 1,000 | 1,000            | 1,000         | 1,000 | 1,000 |

\* Includes Chile and CAN

\*\* FTAA except Mercosur

**Table 2**  
**Average MNF tariff**

|  | Argentina | Brazil | Uruguay | Chile | CAN  | USA  | Rest of<br>NAFTA | Rest of<br>America |
|--|-----------|--------|---------|-------|------|------|------------------|--------------------|
| 1 Agriculture                            | 8.5       | 8.7    | 9.8     | 12.0  | 11.4 | 13.2 | 5.0              | 12.8               |
| 2 Mining                                 | 0.1       | 4.7    | 0.2     | 11.2  | 5.0  | 0.4  | 0.2              | 1.0                |
| 3 Beef & dairy                           | 17.3      | 19.0   | 22.5    | 10.9  | 18.5 | 14.6 | 50.1             | 22.0               |
| 4 Milling                                | 12.6      | 12.5   | 13.2    | 11.1  | 18.6 | 4.6  | 8.0              | 20.3               |
| 5 Sugar                                  | 19.7      | 18.4   | 19.5    | 19.8  | 17.6 | 52.9 | 4.9              | 19.8               |
| 6 Other food                             | 16.4      | 16.7   | 17.4    | 11.2  | 17.5 | 10.7 | 19.3             | 15.7               |
| 7 Other trad. manufact.                  | 20.1      | 19.4   | 19.3    | 11.0  | 16.9 | 8.8  | 15.5             | 13.9               |
| 8 Manuf. based on Nat. res.<br>w/sc. ec. | 10.5      | 8.1    | 9.3     | 11.0  | 9.7  | 3.4  | 6.4              | 7.9                |
| 9 Manuf. tec. diffusion                  | 15.4      | 18.5   | 12.7    | 10.9  | 16.7 | 1.9  | 5.5              | 12.4               |

The average tariff in NAFTA is much lower than in MERCOSUR. However, some sectors in the NAFTA countries show higher average tariffs than any sector in MERCOSUR. An example is the beef and dairy products sector, which has an average tariff of 30.7% in NAFTA, but reaches 40% in Mexico and almost 70% in Canada. Similarly, in the NAFTA countries the average tariff for the sugar sector is twice the average tariff in the MERCOSUR. On the other hand, MERCOSUR has significantly higher protection for most manufacturing products than that imposed by the NAFTA countries. This is particularly true in the case of non-traditional manufactured goods (sectors 7, 8 and 9).

The observed differences in the level of protection by sector point to the sensitivity of each sector when facing the possibility of future liberalization. Therefore, stiff resistance can be expected in the NAFTA countries against the trade liberalization of some of MERCOSUR's main exports (beef, dairy products, sugar, other agricultural products).

As can be seen, the MERCOSUR countries are specialized precisely in those sectors where the US imposes the highest average tariff. Therefore, it is easy to see that negotiations about sensitive sectors will not be easy. In fact, the US has clearly stated that the treatment for the agricultural sector is a matter of multilateral negotiation, so it should be addressed within the framework of the WTO and not in regional negotiations. At the same time, Brazil is particularly interested in maintaining protection as high as possible in some manufacturing sectors.

## **4. Preferential trade agreements**

### **4.1 Background**

The wave of regional trade agreements (RTA) characteristic of the "new regionalism" has been particularly intense among the countries of the Western hemisphere (Devlin and Estevadeordal, 2001). The countries involved in the FTAA negotiations are linked by a complex array of RTAs, which should be considered when assessing the possible impact of the creation of the FTAA.

The Latin American countries' willingness to follow an integration path was declared as long ago as 1960 with the creation of the Latin American Free Trade Association (LAFTA), which was reformulated and renamed the Latin American Integration Association (LAIA) in 1980. However, trade liberalization made little progress until the 1990s, when the "third generation" agreements came into being (LAIA, 1997). This new type of agreement aimed at the liberalization of trade flows among the participants through the phasing out of tariffs and the establishment of very short lists of exceptions. Most members of LAIA became involved in the negotiation of bilateral agreements of this kind, which has given rise to a complicated network of reciprocal preferences.

The integration wave moved further ahead for the Andean countries (Bolivia, Colombia, Ecuador, Peru and Venezuela), which revived the former Andean Pact and became the Andean Community (CAN), a free trade area that is intended to become a customs union. Similarly, Argentina, Brazil, Paraguay and Uruguay created the MERCOSUR as an imperfect customs union, and they made significant progress in the

deepening of the integration process, despite the macroeconomic instability prevailing in recent years.

Table 3  
Main regional trade agreements in the Americas

| Agreement  | Date of<br>signature | Entry<br>into force |
|--|----------------------|---------------------|
| <i>Customs unions</i>                                    |                      |                     |
| Central American Common Market (CACM) <sup>1</sup>       | 1960                 | 1961                |
| Andean Community <sup>2</sup>                            | 1969                 | 1969                |
| Caribbean Community (CARICOM) <sup>3</sup>               | 1973                 | 1973                |
| Southern Cone Common Market (MERCOSUR) <sup>4</sup>      | 1991                 | 1995                |
| <i>Free trade agreements</i>                             |                      |                     |
| Chile - Mexico <sup>5</sup>                              | 1991                 | 1992                |
| Chile – Venezuela  | 1993                 | 1993                |
| North American Free Trade Agreement (NAFTA) <sup>6</sup> | 1992                 | 1994                |
| Chile – Colombia   | 1993                 | 1994                |
| Costa Rica – Mexico                                      | 1994                 | 1995                |
| Group of Three (G-3) <sup>7</sup>                        | 1994                 | 1995                |
| Bolivia – Mexico   | 1994                 | 1995                |
| Chile – Ecuador  | 1994                 | 1995                |
| Chile – MERCOSUR   | 1996                 | 1996                |
| Canada – Chile   | 1996                 | 1997                |
| Bolivia – MERCOSUR                                       | 1996                 | 1997                |
| Mexico – Nicaragua                                       | 1997                 | 1998                |
| Chile – Peru   | 1998                 | 1998                |
| CACM – Dominican Republic                                | 1998                 | 1999                |
| CARICOM – Dominican Republic                             | 1998                 | 1999                |
| CACM – Chile   | 2000                 | 2001                |
| Mexico – Northern Triangle <sup>8</sup>                  | 2000                 | 2001                |
| <i>Canada – Costa Rica</i>                               | 2001                 |                     |
| <i>CACM – Panama</i>                                     | 2002                 |                     |

<sup>1</sup> Members: Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua. In 1990 it was reactivated and in 1993 the creation of a customs union was decided.

<sup>2</sup> Members: Bolivia, Colombia, Ecuador, Peru and Venezuela. In 1996, the original Andean Pact was revised and its name was changed to Andean Community.

<sup>3</sup> Members: Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Sr. Kitts and Nevis, St. Lucia, Sr. Vincent and the Grenadines, Suriname, Trinidad and Tobago and Montserrat.

<sup>4</sup> Members: Argentina, Brazil, Paraguay and Uruguay. In 1995 the (imperfect) customs union came into force.

<sup>5</sup> Agreement was substantially revised and upgraded since 1999.

<sup>6</sup> Members: Canada, Mexico and the United States.

<sup>7</sup> Members: Colombia, Mexico and Venezuela.

<sup>8</sup> Northern Triangle includes El Salvador, Guatemala and Honduras.

Sources: Devlin and Estevadeordal (2001), Salazar-Xirinachs (2002) and SICE.

Other countries in the hemisphere were also actively involved in negotiating RTAs in the 1990s (Salazar-Xirinachs, 2002). Costa Rica, El Salvador, Guatemala, Honduras and Nicaragua restructured the CACM, created in 1961, in order to turn it into an effective customs union. The same thing happened to the CARICOM, created in 1973 among the English-speaking countries of the Caribbean. These customs unions have negotiated free trade agreements with other countries in the hemisphere, and MERCOSUR has done the same. Some individual countries like Chile and Mexico have also been very active in pursuing bilateral free trade agreements within the region and outside it.

Last but not least, the USA has also given proof of its willingness to pursue RTAs by creating the NAFTA with Canada and Mexico and, more recently, by reaching a free trade agreement with Chile (still in the process of completing all formalities). Furthermore, the USA has been one of the driving forces in the FTAA process.

As a consequence of this proliferation of agreements in the Americas (see table 3), a full array of reciprocal tariff preferences is in force. In addition, the Generalized System of Preferences (GSP), which is applied by the USA and Canada on imports from the other countries of the hemisphere, also grants preferential access to those markets. Finally, the USA gives special treatment to some particular countries and some selected items, as in the cases of the Caribbean Basin Initiative (CBI) and the Andean Trade Preference Act (ATPA). To sum up, the tariffs applied on a considerable proportion of trade flows within the hemisphere are a long way from the Most Favored Nation (MFN) tariffs, which are usually taken as benchmark in the assessment of trade liberalization.

#### **4.2 The treatment of tariff preferences**

The GTAP database used in this study includes the MFN tariffs enforced in each country in 1997. Therefore, those tariffs do not take into account most of the existing preferences granted through bilateral or regional agreements among the FTAA countries. The case of NAFTA is an exception, since the GTAP database includes the tariff liberalization among its members, as well as the prevailing tariffs for the items still protected.

If the existence of preferential tariffs is not considered in the FTAA simulations, the effects of this hemispheric agreement will be overestimated since the GTAP tariffs are higher than the tariffs applied to a significant proportion of current trade flows. For this reason, a special effort has been made in this study to consider the main preferential regimes in force among the FTAA countries.

First of all the GSP was considered, so a zero tariff was applied to 6.3% of USA imports from FTAA countries. Second, the preferences granted through the CBI and the APTA were included (only the *ad valorem* portion). These regimes accounted for 8% of total USA imports from the FTAA countries. Third, all the reciprocal preferences granted under the LAIA framework were considered (including the liberalization of intra-bloc trade in the Mercosur and the CAN). On the other hand, the existing preferences within the CARICOM were not taken into account. The methodology used for the calculation of residual tariffs can be found in the Appendix.

When these adjustments were made, the average tariff actually applied to trade with particular partners was much lower than the tariff available in the GTAP database (see table



4). The difference is particularly large in the case of the MERCOSUR countries, which have liberalized their reciprocal trade almost completely.

Table 4  
Average tariffs (GTAP and residual preferential tariffs)

| PARTNER       | IMPORTING COUNTRY OR REGION |       |        |       |         |       |       |       |             |       |      |       |               |       |              |       |
|---------------|-----------------------------|-------|--------|-------|---------|-------|-------|-------|-------------|-------|------|-------|---------------|-------|--------------|-------|
|               | Argentina                   |       | Brazil |       | Uruguay |       | Chile |       | Andean Com. |       | US   |       | Rest of Nafta |       | Rest of FTAA |       |
|               | PREF                        | GTAP  | PREF   | GTAP  | PREF    | GTAP  | PREF  | GTAP  | PREF        | GTAP  | PREF | GTAP  | PREF          | GTAP  | PREF         | GTAP  |
| Argentina     |                             |       | 5.88   | 21.79 | 2.07    | 11.95 | 5.29  | 10.92 | 8.09        | 12.83 | 3.24 | 4.96  | 6.09          | 9.90  | 9.76         | 9.73  |
| Brazil        | 0.00                        | 15.47 |        |       | 2.01    | 12.10 | 4.61  | 10.82 | 9.86        | 12.46 | 3.94 | 5.22  | 5.42          | 7.43  | 10.92        | 10.91 |
| Uruguay       | 0.00                        | 15.64 | 1.02   | 14.97 |         |       | 3.99  | 10.52 | 8.02        | 13.58 | 1.78 | 2.70  | 0.59          | 8.63  | 13.84        | 13.95 |
| Chile         | 3.50                        | 13.57 | 0.35   | 7.15  | 4.08    | 13.87 |       |       | 3.34        | 13.03 | 3.00 | 3.60  | 4.47          | 13.00 | 11.36        | 11.41 |
| And. Com.     | 1.31                        | 6.99  | 4.42   | 6.53  | 0.00    | 2.15  | 5.54  | 10.68 | 1.72        | 13.98 | 2.15 | 3.57  | 1.16          | 5.29  | 7.19         | 7.18  |
| US            | 9.84                        | 9.83  | 10.43  | 10.43 | 6.21    | 6.20  | 9.37  | 9.37  | 9.98        | 9.98  |      |       | 1.16          | 1.16  | 12.28        | 12.23 |
| Rest of Nafta | 10.05                       | 13.23 | 8.13   | 9.55  | 1.31    | 7.45  | 5.05  | 10.22 | 13.34       | 13.38 | 0.41 | 0.41  | 2.60          | 2.60  | 8.40         | 8.40  |
| R. of FTAA    | 3.90                        | 3.90  | 4.27   | 4.27  | 9.30    | 9.47  | 9.60  | 9.64  | 11.54       | 11.55 | 2.63 | 10.50 | 5.18          | 5.18  | 12.20        | 12.20 |
| Europ. Un.    | 12.00                       | 11.98 | 10.69  | 10.69 | 9.52    | 9.52  | 8.57  | 8.56  | 7.98        | 7.97  | 2.16 | 2.16  | 4.98          | 4.98  | 9.19         | 9.19  |
| R. of World   | 10.34                       | 10.32 | 9.37   | 9.37  | 9.12    | 9.11  | 9.05  | 9.05  | 10.72       | 10.71 | 3.26 | 3.26  | 5.56          | 5.56  | 10.81        | 10.81 |
| Mercosur      | 0.00                        | 15.48 | 5.35   | 21.05 | 2.04    | 12.02 | 4.99  | 10.87 | 9.18        | 12.62 | 3.73 | 5.09  | 5.30          | 7.93  | 10.67        | 10.66 |
| Nafta         | 9.87                        | 10.30 | 10.10  | 10.31 | 5.55    | 6.36  | 8.31  | 9.57  | 10.55       | 10.55 | 0.41 | 0.41  | 1.19          | 1.19  | 11.68        | 11.64 |

Source: Prepared with data from GTAP, Hemispheric Trade and Tariff Database, IADB, LAIA and USITC.

In the case of the CAN, the intra-bloc tariff decreases from 14% to 2%. Other agreements among the LAIA countries also have significant effects on the level of tariffs applied to reciprocal trade. This can be clearly seen in the case of Chile, which has signed agreements with most other LAIA members.

Finally, it should be noted that, on average, tariffs applied by the USA do not change significantly, except in the case of the Rest of FTAA (mainly due to the CBI preferences). However, tariff reduction can be quite considerable for some particular sectors, since all the three regimes included (GSP, CBI and APTA) are applied to selected items, and these are mostly concentrated in a few sectors.

*Comparison of simulations with and without preferential tariffs*

The differences between GTAP and preferential tariffs suggest that the simulation of the impact of the FTAA might be greatly affected if the previous RTAs in the hemisphere were disregarded. In order to assess the significance of this question, two simulations were carried out. In the first, the FTAA liberalization was simulated starting from the GTAP tariffs, just as they are available in the GTAP database. In the second, the FTAA is simulated taking into account the above-mentioned preferential regimes, so the starting point is lower than in the first case. The results in terms of equivalent variations are presented in table 5.

As was expected, the impact of the FTAA is overestimated when the GTAP tariffs are used in the benchmark. If the actual preferential tariffs are used, the gains are clearly lower for all the countries involved in the agreement except the USA and the rest of NAFTA. At the same time, the losses for the countries that do not participate in the agreement are also lower when preferential tariffs are used.

Table 5  
**FTAA simulations with GTAP tariffs or preferential tariffs**  
 Equivalent variations as % of consumption

| Countries / regions | FTAA with GTAP tariffs | FTAA with preferential tariffs |
|---------------------|------------------------|--------------------------------|
| Argentina           | 0.89                   | 0.28                           |
| Brazil              | 1.00                   | 0.25                           |
| Uruguay             | 1.38                   | -0.04                          |
| Chile               | 0.40                   | -0.12                          |
| Andean Community    | 0.89                   | 0.23                           |
| US                  | 0.08                   | 0.10                           |
| Rest of Nafta       | 0.19                   | 0.20                           |
| Rest of FTAA        | 3.92                   | 1.10                           |
| European Union      | -0.09                  | -0.05                          |
| Rest of the world   | -0.08                  | -0.04                          |
| <i>MERCOSUR</i>     | <i>0.97</i>            | <i>0.26</i>                    |
| <i>TOTAL</i>        | <i>0.05</i>            | <i>0.03</i>                    |

It should be noted that in the cases of Uruguay and Chile the FTAA would even generate a welfare loss if the actual tariffs were considered. The reason for this is the importance of the existing preferences both countries enjoy in the market of their main trading partners. Clearly, Uruguay would be harmed by competition from other countries in the Brazilian market, so the *market access effect* in its favor (due to MERCOSUR) would be lower. Chile, in turn, has preferential access to most hemispheric markets, and this situation would be eroded by the FTAA. Similarly, the countries gathered in the Rest of FTAA would see their gains significantly reduced from the hemispheric agreement since their present preferential access to the USA market would be severely eroded.

The opposite is true in the case of the USA, which increases its welfare. The reason for this is that this country improves its access to the other hemispheric markets while the conditions to access its own market do not change significantly because of unilateral preferences already granted to the other partners. The USA suffers smaller losses due to trade diversion in favor of its regional partners and at the same time obtains greater gains through improved market access to the other partners.

Similar reasoning explains the results for the European Union and the rest of the world. The negative impact they receive from FTAA creation is lower than could be expected if there were no previous preferences. When the latter are considered, the negative trade diversion effect would be smaller, so their total loss is reduced.

The comparison of these sets of results clearly indicates the need to take into account the existing preferential agreements in the hemisphere. Therefore, all the simulations presented in the following sections of this paper were carried out including the preferential tariffs in the benchmark.

## 5. Simulation results

If the *ex ante* assessment of the effects of a free trade area is a complicated task, it becomes even more complex when the whole array of previous agreements is taken into account. A general equilibrium model is a very useful tool for carrying out this analysis but its results cannot be easily interpreted. On the one hand, the effects of an agreement with several participants can be conceived of as the sum of results of multiple bilateral agreements among them. Even though the final completion of the FTAA depends, to a large extent, on the possibility of reaching an agreement between Brazil and the USA, each bilateral agreement adds its own complexity. The result of each bilateral agreement is the sum of the direct effects on each partner of the opening of its own market and of improved access to the market of the other partners, plus indirect effects on third countries. On the other hand, from a theoretical point of view, in a static model the result depends on the balance between trade creation, trade diversion, terms of trade and market access. Consequently, in this section the FTAA simulation is broken down into several components so as to facilitate the interpretation of results.

*FTAA: trade creation, trade diversion, terms of trade and market access.*

In order to analyze the possible effects of the FTAA on welfare, a 100% tariff reduction in every country of the hemisphere was simulated. In a way it could be said that this

experiment does not capture the full impact of the FTAA, as it does not take into account the possible removal of non-tariff barriers. However, the tariff has been the main instrument under consideration in recent trade negotiations as non-tariff barriers, although quite important as a protection device, are very difficult to measure and thus very hard to agree upon. Furthermore, the total liberalization of trade in the hemisphere is not very likely because in most agreements the protection of sensitive sectors is preserved, even between developed countries like Canada and the USA.

The impact of the FTAA was simulated breaking it down in the following components:

*Opening of each of the three MERCOSUR partners vis-à-vis the rest of the FTAA countries.* The sum of these three simulations is equal to the effect of the simultaneous opening of the three MERCOSUR countries to the other FTAA partners. In the country that opens, the welfare effect captures the net effect of trade creation, trade diversion and terms of trade variation. Simultaneously, the welfare effect on the other partners captures the result of the erosion of preferential market access. Thus, when Argentina opens its domestic market to the new partners in the FTAA, the other MERCOSUR countries lose their preferences in the Argentine market. In theory, this effect can be conceived of as a reduction in the market access effect, as there are more partners that can benefit from trade diversion in that country.

The results of these simulations are presented in table 6. The net welfare effect of MERCOSUR opening up to other FTAA countries is negative. MERCOSUR would lose \$418 million while the other FTAA partners would have positive welfare effects and the main winner would be the USA. Argentina would be the country with the largest losses because the opening of the Brazilian market would erode existing MERCOSUR preferences, and the net effect of trade creation and trade diversion from Argentina's own opening would be positive but minimal. In the case of Brazil the net effect is also negative but less so, because even though it loses from increased competition in the Argentine market, this is partly offset by the net trade creation that occurs due to the opening up of its own market. Finally, the net losses for Uruguay are considerable, like in the case of Argentina, because the market access loss is much higher than the positive trade creation gain. Therefore, in all three countries the estimated results show that the welfare reduction that occurs due to the deterioration of market access within MERCOSUR is only partially offset, in the case of Brazil, by the net trade creation stemming from greater competition in its own market.

*Access for each MERCOSUR country to the markets of the new FTAA partners.* Again, the sum of these three simulations is the total market access effect for MERCOSUR. This access effect can be separated into two components: a) the improvement in market access for a given MERCOSUR country in the other FTAA countries, and b) the indirect effect on the other MERCOSUR partners. When a country obtains preferential market access, all the countries excluded are harmed. By adding up the effects of the three simulations, the net effect of the simultaneous improvement in market access for the MERCOSUR countries is obtained. In most cases, a positive effect can be expected, but it will be lower than when market access improvement is limited to each individual country, as the gains from market access are partly offset by the increased competition with the other partners. This actually happens in Brazil and Uruguay, but in Argentina the better access conditions of its MERCOSUR partners generate a positive effect.

*Creation of a free trade area among the other countries of the FTAA.* In this case the welfare effect on the MERCOSUR countries is clearly negative. If the other FTAA countries liberalize their reciprocal trade, the MERCOSUR would be discriminated against. In the simulations carried out, the net welfare effect on MERCOSUR of a free trade area among the other FTAA countries would be negative but rather small (MERCOSUR would lose \$900 million).

Table 6  
**Welfare effects on MERCOSUR, equivalent variations**  
(Millions of US dollars)

| Scenario                                   | Argentina | Brazil | Uruguay | MERCOSUR |
|--|-----------|--------|---------|----------|
| 100% tariff reduction within FTAA          |           |        |         |          |
| 1- MERCOSUR opening to                     |           |        |         |          |
| The rest of FTAA                           | -292      | -104   | -22     | -418     |
| Argentina                                  | 4         | -278   | -7      | -282     |
| Brazil                                     | -284      | 191    | -17     | -110     |
| Uruguay                                    | -12       | -17    | 2       | -27      |
| 2- Market access of MERCOSUR to            |           |        |         |          |
| the rest of FTAA                           | 509       | 2.077  | 42      | 2.629    |
| Argentina                                  | 479       | -54    | -7      | 418      |
| Brazil                                     | 29        | 2.135  | -1      | 2.163    |
| Uruguay                                    | 1         | -3     | 49      | 47       |
| 3- Free trade area in the rest of FTAA     |           |        |         |          |
| (without MERCOSUR)                         | -240      | -647   | -22     | -909     |
| <i>Sub-total:</i>                          |           |        |         |          |
| <i>FTAA without completion of MERCOSUR</i> | -23       | 1.327  | -2      | 1.302    |
| 4- Completion of MERCOSUR                  | 743       | -57    | -4      | 682      |
| Total FTAA (*)                             | 720       | 1.269  | -6      | 1.984    |

Source: Estimates based on GTAP

*Completion of the MERCOSUR.* Finally, as the liberalization within MERCOSUR had not been completed by 1997 (benchmark year), the FTAA simulation captures the effect of the phasing out of tariffs within MERCOSUR. Since that year, MERCOSUR has made considerable progress in the elimination of exceptions to free trade within the bloc, and it does not seem appropriate to impute the result of this process to the FTAA negotiations. Even though some defensive instruments (like antidumping measures) are still used, their effects are not considered in the tariff data for MERCOSUR. Table 6 shows that the net welfare effect of the FTAA on MERCOSUR is positive, and amounts to \$1,302 million, if this fourth effect is not considered.

*Integration options for the MERCOSUR: simulations and results*

The creation of the FTAA is one of the most important options on the menu of integration strategies that the Mercosur countries might pursue. However, there are other options that are under consideration in one way or other. The possibility of creating a South American Free Trade Area (SAFTA), or reaching a free trade agreement just with the CAN, or the alternative of negotiating an agreement only with the USA, have been frequent issues in public debate. Both in Argentina and Uruguay there have been influential opinions in favor of a bilateral agreement with the USA. Brazil, in turn, has shown a strong preference to negotiate a SAFTA before getting into the crucial negotiations of the FTAA. Therefore, it seemed interesting to evaluate these options and to compare the results with those of the FTAA alternative. Moreover, to simulate these other options is equivalent to breaking down the FTAA agreement into its main sub regional agreements, which is quite useful for understanding the results.

### *The welfare effects of different options*

Table 7 shows the results obtained when the welfare effects of the FTAA are broken down by RTAs. The first thing to notice is that none of the agreements that involve exclusively South American countries have any effect on the world as a whole. Only the agreements where the USA is one of the participants have some global impact (of a negligible magnitude).

At first glance, the FTAA seems to be the most suitable option for MERCOSUR, even though its impact is not very high. The columns in bold type show that in the case of the FTAA the welfare gain for MERCOSUR is 0.26% of total consumption, while it is only 0.18% in the case of the SAFTA and 0.19% for the sum of all the other possible RTAs that the bloc can reach in the hemisphere. More generally, MERCOSUR benefits from all the possible RTAs in which it might be involved, but the wider the agreement, the greater the gains. On the other hand, the NAFTA and other agreements that exclude the MERCOSUR countries have negative effects on the bloc.

The other countries participating in SAFTA obtain mixed results in comparison with the effects of the FTAA. Chile would be better off with SAFTA, since its welfare loss would be smaller than in the FTAA. This is because the SAFTA would only erode the Chilean preferences in the South American markets, while the preferences Chile has in the NAFTA countries would remain untouched. The opposite is true in the FTAA where all the preferences obtained through bilateral agreements by Chile would be eroded.

In the case of the CAN, the welfare gains obtainable through the FTAA would be cut to one fifth in the case of SAFTA, although they remain positive. This can be explained by the preferential treatment principle in LAIA (see table 4). The CAN has greater preferential access to the Mercosur countries and Chile than these countries have in the CAN markets. Therefore, the SAFTA agreement would considerably improve market access for Chile and the MERCOSUR countries, while the benefits from market access would be minimal for the CAN. In this case, it is likely that the erosion of existing preferences will not be offset by the market access effect.

Table 7  
Welfare gains as percentage of consumption

|                | <i>FTAA</i>  | Prev.<br>RTAs in<br>S. Amer.<br>* | Merco-<br>Andean<br>Comm. | <i>SAFTA</i> | Merco-<br>USA | Merco-<br>Rest of<br>NAFTA | Merco-<br>Rest of<br>America | <i>Sum of<br/>other<br/>Merco<br/>RTAs</i> | NAFTA | Chile-<br>NAFTA | Chile-<br>Rest of<br>America | Andean<br>Comm. -<br>NAFTA | Andean<br>Comm-<br>Rest of<br>America | NAFTA-<br>Rest of<br>America | RTAs in<br>Rest of<br>America | <i>Sum of<br/>RTAs<br/>excl.<br/>Merco</i> |
|----------------|--------------|-----------------------------------|---------------------------|--------------|---------------|----------------------------|------------------------------|--|-------|-----------------|------------------------------|----------------------------|---------------------------------------|------------------------------|-------------------------------|--|
| ARG            | <b>0.28</b>  | 0.32                              | 0.05                      | <b>0.37</b>  | -0.04         | 0.00                       | 0.04                         | <b>0.00</b>                                | -0.01 | -0.01           | 0.00                         | -0.03                      | 0.00                                  | -0.03                        | 0.00                          | <b>-0.09</b>                               |
| BRA            | <b>0.25</b>  | 0.01                              | 0.09                      | <b>0.09</b>  | 0.16          | 0.04                       | 0.09                         | <b>0.28</b>                                | -0.02 | -0.01           | 0.00                         | -0.04                      | 0.00                                  | -0.04                        | -0.01                         | <b>-0.13</b>                               |
| URY            | <b>-0.04</b> | -0.02                             | 0.05                      | <b>0.03</b>  | 0.00          | -0.02                      | 0.10                         | <b>0.08</b>                                | -0.07 | 0.00            | 0.00                         | -0.03                      | 0.00                                  | -0.03                        | -0.01                         | <b>-0.15</b>                               |
| CHL            | <b>-0.12</b> | -0.03                             | -0.03                     | <b>-0.06</b> | -0.06         | -0.01                      | -0.01                        | <b>-0.08</b>                               | -0.06 | 0.17            | 0.05                         | -0.10                      | 0.00                                  | -0.03                        | -0.01                         | <b>0.02</b>                                |
| CAN            | <b>0.23</b>  | 0.03                              | 0.01                      | <b>0.04</b>  | -0.02         | 0.00                       | -0.01                        | <b>-0.03</b>                               | -0.03 | -0.01           | 0.00                         | 0.20                       | 0.12                                  | -0.06                        | 0.00                          | <b>0.22</b>                                |
| USA            | <b>0.10</b>  | 0.00                              | 0.00                      | <b>-0.01</b> | 0.04          | 0.00                       | 0.00                         | <b>0.04</b>                                | 0.01  | 0.01            | 0.00                         | 0.02                       | 0.00                                  | 0.03                         | 0.00                          | <b>0.07</b>                                |
| RNAFTA         | <b>0.20</b>  | 0.00                              | 0.00                      | <b>0.00</b>  | -0.05         | 0.05                       | 0.00                         | <b>0.00</b>                                | 0.18  | 0.00            | 0.00                         | 0.02                       | 0.00                                  | 0.00                         | 0.00                          | <b>0.20</b>                                |
| RAM            | <b>1.10</b>  | -0.02                             | -0.02                     | <b>-0.04</b> | -0.08         | 0.00                       | -0.01                        | <b>-0.08</b>                               | -0.13 | -0.01           | 0.02                         | -0.08                      | 0.15                                  | 0.38                         | 0.88                          | <b>1.22</b>                                |
| EU             | <b>-0.05</b> | 0.00                              | 0.00                      | <b>-0.01</b> | -0.02         | 0.00                       | 0.00                         | <b>-0.02</b>                               | 0.00  | 0.00            | 0.00                         | -0.01                      | 0.00                                  | -0.01                        | 0.00                          | <b>-0.02</b>                               |
| ROW            | <b>-0.04</b> | -0.01                             | 0.00                      | <b>-0.01</b> | -0.01         | 0.00                       | 0.00                         | <b>-0.01</b>                               | 0.00  | 0.00            | 0.00                         | 0.00                       | 0.00                                  | -0.01                        | 0.00                          | <b>-0.02</b>                               |
| <i>MERCOSU</i> | <b>0.26</b>  | <i>0.11</i>                       | <i>0.07</i>               | <b>0.18</b>  | <i>0.09</i>   | <i>0.03</i>                | <i>0.07</i>                  | <b>0.19</b>                                | -0.02 | <i>-0.01</i>    | <i>0.00</i>                  | <i>-0.04</i>               | <i>0.00</i>                           | <i>-0.04</i>                 | <i>-0.01</i>                  | <b>-0.11</b>                               |
| <i>R</i>       |              |                                   |                           |              |               |                            |                              |  |       |                 |                              |                            |                                       |                              |                               |  |
| <i>Total</i>   | <b>0.03</b>  | <i>0.00</i>                       | <i>0.00</i>               | <b>0.00</b>  | <i>0.01</i>   | <i>0.00</i>                | <i>0.00</i>                  | <b>0.01</b>                                | 0.01  | <i>0.00</i>     | <i>0.00</i>                  | <i>0.00</i>                | <i>0.00</i>                           | <i>0.00</i>                  | <i>0.00</i>                   | <b>0.02</b>                                |

\* MERCOSUR, Andean Community, Chile-MERCOSUR, Chile-Andean Community

Source: Estimates based on GTAP



As might be expected, the SAFTA yields negative results for the USA and for the Rest of America, as they do not participate in the agreement, but their welfare loss is negligible. The impact is null for the other countries in NAFTA.

The other options for MERCOSUR should also be considered. An agreement with the USA yields positive results for the bloc, but the welfare gain is one half of what could be obtained through SAFTA. However, the benefits for each individual country are completely different. Brazil is the country that would have the greatest gains from an agreement with the USA, and these gains would be significantly greater than those obtained through SAFTA. The opposite is true for Argentina, which would suffer a negative impact from an agreement with the USA. Uruguay would be mostly unaffected.

Finally, it should be noted that an agreement with the other countries in NAFTA would be less suitable for MERCOSUR than an agreement with the CACM and the CARICOM (gathered in the Rest of America). The welfare gains for the bloc are about twice as high, and they are much higher in the case of Uruguay.

#### *The effects of previous sub regional agreements*

The analysis above does not take into account the fact that, as was shown in section III, there are several free trade agreements already in force among the countries involved in the FTAA. In fact, the welfare gains from FTAA and from SAFTA include the effects of several agreements that have almost completely liberalized trade among certain countries. In particular, they include the effects of full trade liberalization within MERCOSUR and within the CAN, which is at present virtually complete. They also include the effects of the completion of all the bilateral agreements signed by Chile (with the Andean countries, with MERCOSUR and with the NAFTA countries) which, in most cases, will come fully into force before the FTAA takes shape. Therefore, the impact of all these previous sub regional agreements should be deducted from the welfare gains of the FTAA in order to evaluate the real *additional* effect of the hemispheric agreement.

In Table 7 the effects of FTAA and of SAFTA have been further broken down in order to assess what is the real impact of the liberalization that has not yet been negotiated.

The first thing to notice is that the completion of SAFTA is generally equivalent to the negotiation of a free trade agreement between MERCOSUR and the CAN. Chile, the only South American country that does not belong to either bloc, has signed bilateral agreements with each of the Andean countries and with MERCOSUR (see section 3 ), so the only liberalization agreement that remains to be made is that between the two blocs.

Table 7 shows that the welfare effects of the existing trade agreements on MERCOSUR are greater than those stemming from the agreement between MERCOSUR and the CAN. This is mainly because of the large gains that Argentina obtains through the completion of previous agreements. Instead, Brazil and Uruguay would receive larger gains from an agreement with the CAN. These different results are explained by the composition of each country's trade with the CAN and their degree of complementarity.

The CAN would not benefit so much from an agreement with MERCOSUR. The welfare gains would be one third of those derived from the completion of the full enforcement of previous agreements. Apparently, the completion of the free trade area within the CAN and the bilateral agreements with Chile would improve welfare in the Andean countries more than a free trade agreement with the MERCOSUR.

According to these results it is doubtful whether the CAN will be interested in the SAFTA option. Besides the low welfare gain that they would obtain from the remaining negotiations, it is clearly a second-best option compared to an agreement with the USA, which would generate much greater welfare gains.

It is interesting to note that the welfare effects on Chile are always negative, except in the case of an agreement with the NAFTA countries. Such an agreement is virtually sealed, as Chile has signed bilateral agreements with Canada and Mexico, and it has recently finished its negotiations with the USA. Therefore, Chile's negotiating strategy seems to be consistent with the welfare impact expected. As long as this country has bilateral agreements with most other countries in the hemisphere, it would be harmed by any new agreement involving the other countries. Chile would lose the preferences previously obtained, and that is why the FTAA would reduce its welfare, as would any other agreement.

These results to a certain extent contradict the position that each of the MERCOSUR countries has frequently maintained. In fact, Brazil has been the most enthusiastic advocate of the SAFTA while it has been quite reluctant to negotiate with the USA. In contrast, Argentina and Uruguay have paid little attention to the SAFTA option and have frequently expressed their willingness to reach an agreement with the USA. The numbers suggest that these positions have been mainly determined by political motives rather than reasons based on economic grounds. However, the present analysis is merely static, and significant dynamic effects cannot be discarded, therefore, a deeper analysis of that issue would be needed for a full understanding of the impact and a more comprehensive comparison of the options available.

#### *The option of a FTAA that excludes the agricultural sector*

The protection granted to the agricultural sector is one of the most difficult issues in trade negotiations. It is an unresolved subject in the WTO negotiations, and it threatens to be the Achilles' heel of the FTAA. The MERCOSUR countries have strongly supported the elimination of all protective measures in the agricultural sector, as the developed countries' policies hinder the growth of their exports. This issue has led MERCOSUR into confrontation with the USA, which refuses to deal with it in the FTAA negotiations and prefers to discuss it at the WTO. Given the extreme difficulty to reach agreement on this subject, it seemed reasonable to simulate the FTAA on the assumption that the agricultural sector might be excluded from liberalization.

Table 8 compares the welfare effects of the full agreement with the results that would be obtained if the agricultural sector were excluded. Three options are compared with and without the liberalization of the agricultural sector: the FTAA, the MERCOSUR-CAN agreement, and the MERCOSUR-USA agreement.

Table 8  
Welfare gains as percentage of consumption

|                 | FTAA        |              | MERCOSUR – CAN |              | MERCOSUR - USA |              | ARG-USA      | BRA-USA     | URY-USA     |
|-----------------|-------------|--------------|----------------|--------------|----------------|--------------|--------------|-------------|-------------|
|                 | All goods   | Manuf. goods | All goods      | Manuf. Goods | All goods      | Manuf. goods | Manuf. goods |             |             |
| ARG             | 0.28        | 0.25         | 0.05           | 0.02         | -0.04          | -0.06        | 0.02         | -0.08       | 0.00        |
| BRA             | 0.25        | 0.18         | 0.09           | 0.09         | 0.16           | 0.09         | -0.04        | 0.13        | 0.00        |
| URY             | -0.04       | -0.02        | 0.05           | 0.02         | 0.00           | 0.00         | -0.03        | -0.05       | 0.08        |
| CHL             | -0.12       | -0.23        | -0.03          | -0.02        | -0.06          | -0.04        | -0.02        | -0.02       | 0.00        |
| CAN             | 0.23        | 0.08         | 0.01           | 0.02         | -0.02          | -0.01        | 0.00         | -0.01       | 0.00        |
| USA             | 0.10        | 0.08         | 0.00           | 0.00         | 0.04           | 0.04         | 0.01         | 0.03        | 0.00        |
| RNAFTA          | 0.20        | 0.03         | 0.00           | 0.00         | -0.05          | -0.04        | -0.01        | -0.03       | 0.00        |
| RAM             | 1.10        | 0.65         | -0.02          | -0.01        | -0.08          | -0.03        | 0.00         | -0.02       | 0.00        |
| EU              | -0.05       | -0.04        | 0.00           | 0.00         | -0.02          | -0.01        | 0.00         | -0.01       | 0.00        |
| ROW             | -0.04       | -0.04        | 0.00           | 0.00         | -0.01          | -0.01        | 0.00         | -0.01       | 0.00        |
| <b>MERCOSUR</b> | <b>0.26</b> | <b>0.20</b>  | <b>0.07</b>    | <b>0.06</b>  | <b>0.09</b>    | <b>0.04</b>  | <b>-0.02</b> | <b>0.06</b> | <b>0.00</b> |
| <b>Total</b>    | <b>0.03</b> | <b>0.01</b>  | <b>0.00</b>    | <b>0.00</b>  | <b>0.01</b>    | <b>0.01</b>  | <b>0.00</b>  | <b>0.00</b> | <b>0.00</b> |

Source: Estimates based on GTAP

As was said before, if a full agreement is assumed, the three options are positive for MERCOSUR. The same sign is found when the agricultural sector is excluded, but the gains are much less, particularly in the case of a MERCOSUR-USA agreement, when gains are cut by more than one half.

Both Argentina and Brazil reduce their gains (or increase their losses) no matter which negotiation option is considered. In the FTAA simulation, their welfare gain (as a percentage of total consumption) goes down from 0.28% to 0.25% of consumption in the case of Argentina, and from 0.25% to 0.18% in the case of Brazil. The latter is not harmed by the exclusion of the agricultural sector when the MERCOSUR-CAN option is considered. This is because the agricultural production mix in Brazil and the CAN are similar, and so there is only a small amount of trade in agricultural products between them.

Surprisingly, in the case of Uruguay, when the agricultural sector is excluded from the FTAA negotiations the welfare loss gets smaller, so Uruguay would be better off if the agricultural sector was excluded. This astonishing result is due to the erosion of its preferences in the Brazilian market, which is one of the main destinations of Uruguayan exports of beef, rice and other agricultural products. The improvement in market access to other countries is not enough to compensate for the loss of preferences in Brazil.

The last columns in table 8 show how each MERCOSUR country is affected by a potential bilateral agreement between each of the other partners and the USA. Argentina gains 0.02% of consumption by reaching a bilateral agreement with the USA, but loses 0.08% if Brazil does so. Similarly, by signing an agreement with the USA, Uruguay would gain just as much as it would lose when the other MERCOSUR countries do so. Only Brazil gains more with its own agreement than what it would lose with the other partners' agreements. These separated effects explain the results obtained in a MERCOSUR-USA trade agreement.

## **6. Conclusions**

From the results of the simulations presented in this study, the following conclusions about the effects of the elimination of tariffs within the FTAA can be drawn:

The welfare effects of the FTAA are rather small. This is partly due to the fact that, as a fraction of GNP, most countries do not trade very much.

Whatever the integration option simulated may be, all the results are significantly different if previous preferential agreements are taken into account. If they are not considered, the effects of the FTAA are clearly overestimated, except in the case of the NAFTA countries. This is particularly important in designing compensatory policies within the FTAA because if previous preferences were considered, the welfare gains would be greater for the NAFTA countries and smaller for the rest.

As of 1997, there were a number of agreements in force which included a phasing out of tariffs not completed at that time. Even though the tariffs used were adjusted to capture the existing preferences at that time, none of the liberalization commitments that stem from previous agreements among the FTAA countries were considered at the benchmark. Therefore, despite the inclusion of preferences in existence in 1997, the results of the simulations are still overestimates, as the completion of those agreements cannot be attributed to the FTAA negotiations.

Conversely, the static effects of the FTAA could be higher if the existence of non-tariff barriers were taken into account. In fact, this type of obstacle to free trade can be quite important, but it is very difficult to measure, and requires a more detailed study.

Leaving aside the liberalization previously negotiated, the most important negotiations for MERCOSUR in the FTAA are those with the USA and with the CAN.

The net effect of trade creation and trade diversion for the importing country can be positive or negative, but is generally low. The market access effect is positive and much more important. The erosion of Argentine and Uruguayan preferences in the Brazilian market has a clearly negative effect, as their privileged access to that country is very valuable. In some alternatives, this negative effect is partly or fully offset by the increase in demand due to an income effect, as Brazil raises its expenditure and demand from all origins. In all the simulations, when the net effect of trade creation and trade diversion is isolated, it is almost nil for Argentina and Uruguay and very small for Brazil.

If the FTAA is created without the participation of MERCOSUR, the welfare effect of this bloc is clearly negative but rather low. Furthermore, agreements among other FTAA countries (excluding MERCOSUR) lower the potential gains of the hemispheric agreement for this bloc.

The results obtained from the simulations carried out in this study contradict the stance that each MERCOSUR country has taken in the FTAA negotiations. Argentina and Uruguay would have greater welfare gains through an agreement with the CAN than through one with the USA, but in spite of this they frequently express willingness to reach an agreement with the USA. Even though these countries can improve their welfare by reaching an agreement with the USA, their gain is partly or fully offset when the other partners also reach such an agreement. Therefore, the positive effects of an individual strategy of this kind are quite unstable as they depend on the other partners failing to make progress in a similar strategy. The opposite is true for Brazil, which has repeatedly insisted on the suitability of creating a free trade area in South America, and is less enthusiastic about the FTAA.

The exclusion of the agricultural sector from FTAA negotiations reduces the gains of the hemispheric agreement. This is also true for Argentina and Brazil when considered separately. However, the exclusion of the agricultural sector does not worsen Uruguay's situation because in that case there would be no erosion of its preferences in the Brazilian market, which absorbs a large share of Uruguayan agricultural exports.

Despite the limitations of the methodological approach, the findings summarized in this section give a number of clues as to which issues are more important at the time of conducting the negotiations. In particular, the need to take existing preferences into account should be emphasized, and this suggests the need to obtain more complete and reliable data on that subject.

The assessment of the impact of the FTAA on the MERCOSUR countries needs to be tackled from different perspectives. The approach that has been adopted in this study is suitable for identifying the static effects of such an agreement, but does not allow any inferences to be drawn about the dynamic effects or those derived from the exploitation of economies of scale. The empirical evidence shows that both of these could be very high. By the same token, the effects of increased competition in small markets where noncompetitive structures prevail are not considered, and they can be quite important.

All these effects, which are not analyzed in this study, could offset some of the negative impact found through the static approach. Consequently, the FTAA should be analyzed further, with other tools and from other perspectives, in order to have a full understanding and evaluation of its suitability for the MERCOSUR countries.

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## APPENDIX

### Preferential tariffs

#### *Tariff preferences granted by the USA to other FTAA countries*

In the case of tariffs actually applied by the USA to imports from other FTAA countries, three special regimes are relevant: the Generalized System of Preferences (GSP), the Caribbean Basin Initiative (CBI), and the Andean Trade Preference Act (ATPA). In fact, imports from FTAA countries that enter the USA with these preferential tariffs accounted for more than 10% of total USA imports from those countries. This figure might not be considered very high but it is significant for a number of sectors in which preferences are concentrated.

Tariff data for the year 1997 was obtained from the USA International Trade Commission (USITC). The USITC Tariff Database provides information about the *ad valorem* and the specific MFN tariff rates for all items at the 8-digit level of the Harmonized Tariff Schedule (HTS), and also information about preferential regimes. In particular, it indicates the items eligible for the GSP, for the CBI preferences and for the ATPA, as well as the countries excluded from those preferences in some particular items. For the CBI and the ATPA, the database also gives information about both *ad valorem* and specific tariff rates. In order to obtain the average tariff for each of the sectors considered in this study, the estimated *ad valorem* equivalents to full MFN rates were used. For the CBI and the ATPA, only *ad valorem* tariffs were considered, and a zero tariff was assigned to the GSP.

The same aggregation method used in the GTAP database was followed to obtain the average tariff by sector and country of origin. Starting from the tariffs at the 8-digit level, simple averages were taken to obtain tariff rates at the 6-digit HTS level. Then, USA average imports for the period 1998-2000 (from the ITC dataweb) by partner and tariff treatment were obtained at the 6-digit HTS level. Finally, these import flows were used as weights to obtain the average tariff by sector.

#### *Tariff preferences granted through bilateral or regional agreements in LAIA*

In the case of reciprocal preferences granted by LAIA members, all the agreements in this framework were considered. The most important of these agreements is the MERCOSUR, which established a free trade area (except in the sugar and automotive sectors) between Argentina, Brazil, Paraguay and Uruguay. The CAN agreement is also very important, as it created a free trade area between Bolivia, Colombia, Ecuador, Peru and Venezuela. Additionally, all bilateral agreements between any LAIA members were also considered: Bolivia and Chile with MERCOSUR, Chile with all other LAIA members, Mexico with most of them, some of the MERCOSUR countries with some countries belonging to the CAN, etc.

The residual tariffs applied by each LAIA country to imports coming from all the other members, averaged at the 6-digit HTS level for 1997, were obtained from LAIA.

Trade flows at that same level were obtained from Hemispheric Trade and Tariff Data Base for Market Access. It was assumed that the residual tariff on any particular item was applied to all imports of that item. Then, for each country or group of countries considered in this study, average tariffs by sector and country of origin were obtained, using import flows as weights.