

# Will regionalism survive multilateralism?

## The EU-MERCOSUR example.\*

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### Abstract

Twelve years agreeing on the framework of negotiations and eight after the beginning of the market access talks, the European Union (EU) and MERCOSUR have not achieved significant progress in the bilateral negotiations. The first of several explanations is that progress in bilateral negotiations is held at the conclusion of the Doha Round. Second, agricultural trade liberalization is a key issue of this Free Trade Agreement (FTA) as agricultural sectors are the core of MERCOSUR's comparative advantages and their protection is still a major element of EU trade policy, mostly achieved by tariff-rate quotas (TRQs) and very high specific tariffs. Finally, the addition of Venezuela as a full MERCOSUR member may also change the conditions under which the bilateral negotiations are developing.

To provide a very detailed analysis of the negotiations, we use the CEPII's MIRAGE CGE dynamic model. The policy relevance of this paper is threefold: first, the fact that Venezuela has joined MERCOSUR is explicitly taken into account in the dynamic baseline. Second, simulations are run by considering plausible outcomes of the Doha Round, including its failure. Indeed, due to the “one pocket”

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approach of the EU Commission, major concessions on agriculture in the Doha Development Agenda (DDA) will have negative effects on what will be offered in the bilateral talks, and vice versa. Last but not least, between 2001 (GTAP 6) and 2004, trade patterns between MERCOSUR and the EU have undergone important changes. In order to retain a realistic reference situation for the negotiations, we update the trade flows that will be used in our simulations. Liberalization scenarios (multilateral and regional) are defined at the finest level available using MAcMapHS6-v2. As a result, we handle with care the issue of sensitive products and exceptions. Simulation scenarios lead to the examination of trade flows and welfare effects of EU-MERCOSUR FTA with and without a successful multilateral trade agreement.

**Keywords:** Tariff-rate quota, TRQ, Tariff-rate quotas administration, MERCOSUR, European Union, Preferential Trade Agreement, Welfare effects.

# INTRODUCTION<sup>1</sup>

Twelve years after the agreement on the framework of negotiations and eight after the beginning of market access talks, the European Union (EU) and MERCOSUR negotiations have not managed to achieved significant progress for several reasons:

First, progress in the bilateral negotiations is subjected to the evolution of the Doha Round. Indeed, interest in reaching a bilateral agreement in the future would decrease depending on if the multilateral negotiations succeeded and led to the opening of markets. At the same time, concluding an agreement right now would make no sense; most of the preferences granted could be changed and even revoked by multilateral talks. Moreover, a conflict between the EU and G20 leaders, such as Brazil and Argentina, on the WTO stage would make any bilateral agreement more difficult. Nevertheless, a failure in the Doha Round will increase the motivation to reach a Preferential Trade Agreement (PTA).

Second, agricultural trade liberalization is one of the most conflict-laden issues in both bilateral and multilateral negotiations. For the EU, trade liberalization under the Doha Round and/or under the MERCOSUR-EU PTA would be a severe blow to the EU farm sector. The “single pocket” approach, (the fact that the EU could bear a total given amount of adjustment and political costs related to the liberalization in agriculture), links both kinds of liberalization: if more tariff reduction is given in the Doha Development Agenda (DDA) talks, less will be given in the MERCOSUR-EU PTA, and vice versa. Moreover, bargaining on Tariff-Rate Quotas (TRQ), the most favoured tool of policy-makers for warranting market access while retaining control of the volume of imports, is difficult. Not only the size of the quotas but also the way TRQs are administrated are both controversial issues in negotiations. The quota rent allocation (importers, exporters or government) depends heavily on these methods (License on Demand, Historical trade, Auctions, etc.).

Finally, Venezuela has recently signed a protocol to become a full MERCOSUR member. An exhaustive schedule has been set in order to take into account trade sensitivity aspects of each member. Argentina and Brazil will eliminate their tariffs by 2010, and Uruguay and Paraguay will do the same by 2013. Venezuela will start its tariff elimination by 2012, except for sensitive products, such as chemical and petrochemical products, paper products, automobiles, etc., whose tariffs will be eliminated by 2014 with the full completion of the agreement. This new MERCOSUR member could change the conditions of these bilateral negotiations with the European Union.

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To provide a detailed analysis of the negotiations, we use the MIRAGE model, the CEPII's CGE model aimed at studying the impact of trade liberalization. MIRAGE is a dynamic multi-sector multi-country model, based on the latest release of the GTAP (version 6.2) database. The new improvement is: it was re-calibrated using trade variation from the BACI database between 2001 and 2004 to capture major changes in trade pattern during the last few years.

The policy relevance of this paper is threefold: first, Venezuela's joining MERCOSUR is explicitly taken into account in the baseline. Because it is the first net food importer country in the custom union, it is crucial to assess the consequences of its integration. It is noteworthy that nowadays, no such assessment has been done in a CGE framework. Second, simulations are run by considering plausible outcomes of the Doha Round, including its failure. Both elements provide us a very realistic framework for analysis. Finally, the update of the trade-flows database allows for meaningful insights to negotiators.

Even if our main focus is on to the agricultural part of the agreement, we also give attention to liberalization in manufacturing sectors. Liberalization scenarios (multilateral and preferential) are defined at the finest level available (HS6 for goods using the MAcMap database), and the issue of sensitive products and exceptions is handled with care<sup>2</sup>. We assume an average EU-MERCOSUR PTA scenario between the EU's and MERCOSUR's proposals. This scenario will be examined under different baselines, according to the different possibilities resulting from Venezuela's integration into MERCOSUR and the success or failure of the Doha Round. Because TRQ's are a key issue in the negotiations, we conduct sensitivity analysis of the results on their rent allocation according to alternative choices of TRQs' administration methods.

To compare the consequences of these different scenarios, we closely examine the trade flows and welfare effects of each.

The paper is organized as follows: Section 1 describes the bilateral trade relation and protection between both blocks. Section 2 describes the specifications of the MIRAGE model and scenarios. Finally, in Section 3.2 we discuss the results and put forth our conclusions about this regional trade agreement.

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<sup>2</sup>Particularly for products excluded from the MERCOSUR's common external tariff.

# 1 EU-MERCOSUR bilateral relations

## 1.1 Historical and Prospective relations

Bilateral trade negotiations between the EU and MERCOSUR countries (i.e. Argentina, Brazil, Paraguay, Uruguay) began at the end of 1999 when negotiators set the structure, the methodology and the calendar for negotiations. The first phase concluded with political and cooperation dialogue, and in 2001, the two blocs exchanged the first texts on goods, services and government procurement in order to improve market access between the regions. In the Presidential Summit in Madrid in 2002 the countries reiterated their political commitments in order to reach the largest bi-regional trade agreement in history (Giordano 2003). Several rounds of negotiations followed the previous commitments. In the 9th round, the first list of most sensitive products under negotiation was exchanged and it has constrained progress in recent negotiations because MERCOSUR countries insist on a much larger access to the EU market. In the most recent proposals (October 2004), the EU offered concessions under several TRQ's for these sensitive products. MERCOSUR countries considered the European proposal too limited on market access issues. At the same time, the EU also rejected the MERCOSUR concessions in services and government procurement as too limited. Moreover, the EU fears that a more generous European proposal on agriculture would allow MERCOSUR countries to capture an extremely large market share in the EU (Bureau et al. 2006). After this disagreement on proposals, dialogue was interrupted until the Ministerial Meeting in Brussels on September 2005 when it was formally restarted (Ramos et al. 2006). Despite the strong majority vote in the European Parliament in favour of a EU-MERCOSUR FTA and recent discussions between representatives from both regions (November 2006 and April 2007), no agreement seems forthcoming if concessions are not improved.

The EU-MERCOSUR negotiations have shown long slow progress and even some backward steps, because of their protectionist attitudes. EU-MERCOSUR Bilateral negotiations reject the classical thesis that postulate that PTA's are much easier to attain than multilateral trade agreements because of the restriction of the WTO non-discrimination clause on a side and on the other side, because of the predictability on trade impact (Johnson 1965). The conditions for a EU-MERCOSUR PTA are that trade would be partly liberalized in a gradual and reciprocal way, substantially covering most bilateral trade flows without excluding any sector according to the WTO rules. This insures that a regional integration process achieves a sufficient degree of compatibility with the multilateral trading system (Giordano 2003). Moreover, the demands and concessions of

each region under bilateral negotiations are subject to the evolution and outcomes of WTO negotiations. Consequently, we consider that the EU-MERCOSUR FTA is not based on the domino theory of regionalism, in which countries look toward integration because of fear of exclusion (Baldwin and Venables 1995), or only for the proximity reason (Krugman 1993). However, the new regionalism theory may be considered a better theoretical framework to explain the EU-MERCOSUR regional trade agreement because of its compatibility with multilateralism (Ethier 1998a, Ethier 1998b). Both multilateral and bilateral negotiations are very closed and the success or failure in multilateral negotiations could open new perspectives at the bilateral negotiations or impose the same restrictions as at the multilateral talks.

Many empirical works using CGE models (GTAP, MIRAGE and AMIDA) have analysed the impacts of the EU-MERCOSUR FTA. Their simulations display similar results, with some slight differences according to each model's hypotheses (static vs. dynamics, perfect vs. imperfect competition on industrial sectors, number of factors, FDI, externalities and labor market rigidities). A PTA between the EU and MERCOSUR countries would generate economic gains (welfare, GDP, trade and employment) for both regions. Monteagudo and Watanuki (2001) simulate a EU-MERCOSUR FTA scenario and find a substantial GDP increase for MERCOSUR (2.94%), while the EU's GDP only increases 0.06%. Trade follows the same tendency as GDP. MERCOSUR exports and imports increase 7.9% and 6.4% respectively; those of the EU only vary 0.4 for both exports and imports. According to Monteagudo and Watanuki (2001) most of GDP and trade variations for MERCOSUR are explained by export externality gains (between 10 and 13% of MERCOSUR's exports increase) and the scale effect of a larger economy has only a minor influence (6% of MERCOSUR's exports increase). MERCOSUR's agricultural sector is the greatest winner from this scenario because of the level of the EU protection on these sectors and the competitiveness of MERCOSUR's agriculture. Flores (2006)'s results show the same tendency as Monteagudo and Watanuki (2001)'s; however, trade percentage variations differ slightly from the previous paper. MERCOSUR's total exports and imports increase 19.4% and 18.57% respectively. The gains due to the EU-MERCOSUR bilateral trade take place at the expense of trade diversion effects for the rest of the world. One non-negligible reason to explain the discrepancy between these results are those of the previous paper is that Flores (2006) explicitly models transaction costs (transportation, bureaucracy, distribution margins, etc.) using COMTRADE data. Trade facilitation is also simulated when an FTA is signed, thus the gains of trade liberalization may vary from gains displays by others papers. Bouët et al. (2003) display

a smaller trade creation effect between the EU and MERCOSUR as a consequence of a FTA. MERCOSUR's exports and imports increase 5.8% and 6.4% respectively; trade only slightly increases for the EU (exports 0.8% and imports 0.4%). These results are close to those of Monteagudo and Watanuki (2001)'s. Both papers use static CGE models considering imperfect competition in the manufacturing sectors. In this paper, standard modelling is compared with a model including Rules of Origin effect. The Rules of Origin appears as a strong restrictive impact on trade flows, so trade gains are smaller than under the standard model. Bchir et al. (2003) show that dynamic gains are important when compared to the previous static models. A full liberalization scenario between the EU and the MERCOSUR displays higher trade gains for both regions than in the previous static models. MERCOSUR's exports and imports increase 22.6% and 19% respectively, while those of the EU gain 2.4% and 2.3%. Once more, the primary source of the gains for MERCOSUR comes from agricultural liberalization, and trade diversion effects are always non-negligible as a consequence of this FTA. The imperfect competition hypothesis in industrialised sectors leads to greater welfare gains than under other standard models with perfect competition in these sectors. Other papers, such as (Laens and Terra 2006), which use a basic GTAP model (static, perfect competition in all sectors, no externality effects, etc.) display smaller welfare (0.07% for MERCOSUR and 0.05% for EU27) and trade (11.2% and 9.58% for MERCOSUR's exports and imports respectively; 1.08% and 1.1% for EU's exports and imports respectively) gains for both regions than the previous papers. Non of these works have considered Venezuela as a full MERCOSUR member.

Venezuela as a new MERCOSUR member and the ongoing integration in South America condition the future for the EU-MERCOSUR negotiations. Inside Latin America, MERCOSUR countries have signed different agreements with their neighbours. The trade agreements with Chile and Bolivia (format "4+1") have created two separate FTA's, leading that the two partners becoming MERCOSUR Associated Members. Such was the beginning of the MERCOSUR "expansion" in Latin America. Trade negotiations between MERCOSUR and the Andean Community would have been the first "block-to-block" trade agreement in the region, but it failed many times due to the discrepancy between members' interests. Finally, on July 1th 2004, a FTA was implemented between MERCOSUR and the Andean Community according to the Economic Agreement (ACE 59) at the ALADI. One year later, MERCOSUR countries became Associated Members of the Andean Community and in April 2006 Venezuela left its Andean partners to become a full member of MERCOSUR. This step in MERCOSUR expansion will likely lead to future Latin America integration. The recent work of Coelho et al. (2007) compared different

scenarios for Venezuela's accession to MERCOSUR, different hypotheses about the application of the Common External Tariff (CET) and free trade between partners. Trade results for Venezuela show that imports would increase more quickly than exports, and Brazilian exports would benefit the most from this process of integration due to bilateral trade composition.

The enlargement of MERCOSUR and the possibility to become a power region in trade negotiation may have a considerable impact on the EU-MERCOSUR bi-regional trade negotiations.

## 1.2 Bilateral trade relation

The period from 1998-2004 reveals important changes in the MERCOSUR economies (currencies devaluation, social and macroeconomic crises and recent economic growth) which have affected their trade relations with the rest of the world, and especially, with the European Union.

MERCOSUR exports to the rest of the world (ROW) have fluctuated since 1997 following the crises in the region. Agricultural exports have obviously suffered more than the manufacturing sector (agricultural exports fell 21% while manufactured exports rose 5% between 1997 and 1998. In 2001 the situation was similar: agricultural exports fell 13% while manufactured exports rose 1%. The variation in agricultural exports to the EU is not only related to the local macroeconomic situation but also linked to sanitary crises, especially ground exports of beef (foot and mouth disease) and poultry (avian influenza). Between 2003 and 2004, MERCOSUR countries have improved their international competitiveness through currency devaluation as a consequence of the financial crises in the region, but animal diseases limited animal product exports to the European Union especially because of extra sanitary controls (while 2003 saw a 34% increase, 2004 saw a -12% decrease in agricultural and food exports).

[INSERT Figure 1]

European Union (agricultural and industrial) exports to the ROW have grown steadily during this period. However, their exports to MERCOSUR countries have been strongly linked to the macroeconomic situation in Latin America. European exports to MERCOSUR have been falling since 1998, a phenomenon that can be explained by the recession period in South America and the first Real (Brazil's currency) devaluation. Industrial exports remained steady at the beginning of 1997, but after the Real devaluation they suffered from a strong negative variation (-8%). European exports recovered in the two



following years (1999 and 2000) until the next crisis in 2001 (-6% of industrial exports). In 2001, the economic crisis in MERCOSUR and thus the devaluations of MERCOSUR countries currencies in 2002, resulted in a collapse of European exports to the region. Since then, and until 2004, a more “healthy” MERCOSUR economy led to a steady increase in European exports (between 30% and 40% per year even for agricultural and food products).

[INSERT Figure 2]

Even if MERCOSUR is a minor EU world partner, it is the EU’s most important partner in Latin America, because MERCOSUR is the destination of close to 50% of the EU exports to the Latin region. At the same time, the EU is an important partner of MERCOSUR countries especially in the domain of agricultural and food exports (more than 30% of total non-MERCOSUR exports).

Figure 3 gives an idea of the patterns of trade of these two regions and also of the dynamic bilateral balance of trade. MERCOSUR countries are net exporters of agricultural and food products (not only to the EU but also to the ROW) and being the complement of their patterns of trade, the EU exports in return mostly manufactured products and services. Bilateral balance of trade displayed a deficit for the MERCOSUR region until 2001, and it currently shows a decrease in the deficit due to the shrinking of MERCOSUR absorption capacity in manufacture goods. Since 2002, because of the boom in their agricultural exports, MERCOSUR countries have reversed the negative balance of trade with the European Union.

[INSERT Figure 3]

European imports from MERCOSUR never stopped rising even during the crises. Since 2002 European agricultural imports from MERCOSUR have shown a rapid increase with a peak in 2003. Until depreciation of MERCOSUR currencies have reinforced the competitiveness of MERCOSUR exports and the appreciation of the Euro with respect to the US dollar then contributed to the widening of the trade surplus between MERCOSUR and the EU.

Bilateral trade between the European Union and MERCOSUR seems to be complementary according to the previous pattern of trade. MERCOSUR exports to the European Union are concentrated in a few chapters, of which most are agricultural: animal products (high-quality beef, poultry, swine and fish), cereals and seeds (wheat, rice and corn), fruits and vegetables, and some foods and beverages. It may seem that we may

think they also compete on chapter 48 (papers and the articles of paper) and 87 (vehicles other than railway or tramway), but the composition of trade at the HS6 level is different and favours the final products (i.e. MERCOSUR countries export raw materials from the paper sector but the EU exports the final products from this sector).

European Union exports to MERCOSUR mainly concern manufactured products (chemicals, pharmaceuticals, plastic, paper, iron and steel products and machinery, such as nuclear reactor, domestic electrical and electronic devices and vehicles) as we can see in the composition by chapter in figure 5.

[INSERT Figure 4]

[INSERT Figure 5]

Bilateral trade between Venezuela and the rest of MERCOSUR is concentrated on Venezuela's exports of primary (petrol and derivatives) and its imports of primarily agricultural and food products from all MERCOSUR countries (meat, fats, dairy products, food) and manufactures products specially from Brazil (chemical, vehicles, machinery, metal and textile products). Within bilateral trade between the EU and MERCOSUR, Venezuela increases the primary and fruit exports from the region.

The complementarity between the patterns of trade of each economic block, leads us to predict important gains of this regional agreement. Moreover, adjustments costs of this agreement would be negligible compared to the gains due to of the high initial tariff level, especially on the European side (De Melo and Panagariya 1993, DeRosa 1998).

Bilateral trade is only a part of bilateral business relations between the two regions. The Foreign Direct Investment (FDI) completes them. During the 1990's, the MERCOSUR region has received more than 50% of the FDI in Latin America and most of the capital came from European transnational groups (telecommunication, energy services and agribusiness). With a EU-MERCOSUR agreement, the European Union is looking to consolidate its presence in the MERCOSUR market through FDI. To insure the FDI, European companies demand an stable regulatory framework of direct investment and intellectual property rights in order to reduce risks and avoid future problems in the future (Giordano 2003).

In short, MERCOSUR and the EU have complementary trade patterns, but we will see in the next subsection that trade flows are concentrated in the sectors with highest level of protection. The latter and the insecure regulatory framework for FDI, both make this regional trade agreement difficult to conclude.

## 1.3 Reciprocal level of protection

### 1.3.1 Structure of protection in the European Union

Since MERCOSUR countries are developing countries, they are eligible for the EU Generalized System of Preferences (GSP) and some of them, such as Venezuela benefit previously from the GSP Drug before 2007, and now with the GSP+ with a duty exemption close to over 85% of its exports. However, MERCOSUR countries benefit from a limited preferential market access, because the coverage of the EU GSP is very partial for agricultural products. For the least-developed countries, the EU GSP covers all products, but for MERCOSUR countries it only covers some agricultural products (fats, seafood and fruits) and only grants limited tariff reductions (no 0% tariffs). EU GSP product coverage, tariff reduction and graduation provisions for some MERCOSUR countries in some agricultural products limit the preferences of the GSP for MERCOSUR's exports. Brazil is strongly affected by graduation, suppressing GSP preferences for a large number of products (Coffee, Soya, Cocoa and Tobacco products but also vegetables and meats for a total of 136 HS6 products over 317 eligible). However, MERCOSUR continues to export despite the MFN tariffs. On the other side, Chile has already signed a bilateral trade agreement with the EU which implementation has started in 2003.

If the general pattern of EU protection, an average protection in agriculture ten times superior to the one in other goods, appears clearly in the bilateral protection rates with the latin american countries, strong differences exist in the average level of obstacles meet on the EU market. For non agricultural goods, Brazil faces only an average rate of 1.6% versus 2.6% for the rest of MERCOSUR countries. On the other side, due to high protection on meat, but especially on sugar for Brazil, and dairies for Uruguay, Argentina is the less harmed by EU protection: just 14%, half of the rate faced by Brazil, and one fifth of the one encountered by Uruguay and Paraguay.

[INSERT Figure EUprotection]

[Note: Base year 2004, Reference Group weighted average, MacMapV2.03, Author's calculations]

Moreover, the current EU protection (MFN or GSP) is designed to increase the effective rate of protection: level of protection follow the value-added chain. This is particularly true for meat, cocoa, semi-processed products of the wood sector, flours, tobacco and leather and apparel goods. A FTA with EU, will allow MERCOSUR countries to improve the degree of processing of their exports.

[INSERT Figure TE1]

[Note: Base year 2004, Reference Group weighted average, MacMapV2.03, Author's calculations]

[INSERT Figure TE2]

[Note: Base year 2004, Reference Group weighted average, MacMapV2.03, Author's calculations]

Tariff-rate quotas defined under the Uruguay Round Agriculture Agreement (URAA) allow MERCOSUR countries to benefit from preferential tariffs for some of their agricultural exports. These are either current access TRQ's, opened so as to ensure persistence of historical preferential trade flows, or minimum access TRQ, given in order to open 5% of the EU consumption market to international competition (all WTO members).

The EU has opened more than 80 TRQ's on agricultural products, some are granted for the current access and others introduced under the Uruguay Round minimum access. MERCOSUR countries and Chile benefit both from a preferential market access through TRQ's for cereals (maize), wheat, meats (beef, swine and poultry), fruits and vegetables, rice, dairy products and other food products. Argentina and Brazil face large quotas for food (Argentina), meat (Brazil and Argentina), and fruits and vegetables (Brazil), while Uruguay and Paraguay only have smaller (bovine) meat quotas (Uruguay and Paraguay) and a tiny quota for dairy products (Uruguay). Venezuela only benefits from a very large quota for fruits and vegetables.

[INSERT Figure 6]

[INSERT Figure 7]

Under the EU's current access TRQ's, Argentina and Uruguay profit from preferential access with a limit of 23,000 tons and 5,800 tons for sheep and goat respectively, and under minimum access these countries also benefit from TRQs for beef or for nutritional remainders (Argentina). Venezuela benefits from a large TRQ on fruits and vegetables. Argentina also benefits from a quota for garlic, which was submitted to the WTO, but it is not fulfilled as it is the case with the beef TRQ's (Bureau et al. 2006).

MERCOSUR countries also benefit from a 59,100-ton TRQ of "Hilton" (fresh) meat (a 28,000-ton quota for Argentina, 6,300 tons for Uruguay, 5,000 tons for Brazil and 1,000 tons for Paraguay). The only country which does not fulfill its quota is Paraguay due to sanitary problems. There is also a 66,000-ton frozen beef WTO TRQ (for the meat industry) of which Brazil is the main beneficiary (as the quota is not allocated to any specific country). The Hilton in-quota tariff is 20% and the out-of-quota tariff is

a composite tariff (ad-valorem tariff of 12.8% plus specific tariff between 140 and 300 €/per 100kg). In spite of the high out-of-quota tariff, MERCOSUR countries manage to fulfill their quotas and even to export small volumes out-of-quota. For instance, Brazil exported some 80,000 tons of frozen meat and 41,000 tons of Hilton meat out-of-quota in 2003. In this last case, outside exports represent eight times its quota of 5,000 tons. Brazil also benefits from the TRQ's opened under minimum-access for poultry and not allocated to a particular country. Brazil fills half of the 15,500-ton poultry TRQ. Despite EU tariffs, Brazil manages to ship large quantities of poultry to the EU outside quotas (Bureau et al. 2006, Ramos et al. 2006).

Since Spain and Portugal have become EU members, MERCOSUR countries have also benefited from the corn TRQ (2,500,000 tons). This quota does not exist anymore because for seams the tariff is 0% and Non-tariff barriers (OGM restrictions) protect the EU market from MERCOSUR's corn. Since 2006, the EU has opened a 244,000-ton WTO TRQ for flint maize leading to Argentina and Brazil benefit from it. Since Finland entered in the European Union, Brazil also benefits from a 82,000 tons of sugar under a TRQ because of the quota that Finland gave to before it enters in the EU.

Even if the WTO is concerned with the effects of quota administration methods on volume and distribution of trade, the distribution of rights to imports at the in-quota tariff has an impact on the distribution of rents. At the same time, the distribution of rents has influenced the distribution of trade and motivates the politics of TRQ administration (Skully 1999).

The WTO identifies seven methods of TRQ administrations: Applied-tariff, License-on-demand, First-come-First-serve, Historical, Auction, State-trader/Producer-group and a combination of the previous six other methods (Abbott 2002).

Most TRQ's from the European Union are administrated according to License-on-demand, Historical trade and First-come/First-serve methods and thus determine not only the volume of trade but also the rent allocation between importers and exporters. TRQ's concerning live animal products are administrated under the Historical-trade administration method, most meat TRQ's (fresh, chilled, frozen and processed) according to Licence on Demand method, and fruits (fresh and juices) and vegetables according to First-come/First-serve one (de Gorter and Kliauga 2006). Nevertheless, in some TRQ's, such as the "Hilton" beef TRQ, MERCOSUR countries manage their own licenses and capture most quota rent. This aspect explains the interests from some MERCOSUR producers to keep TRQ's and not to negotiate MFN tariff reductions.

The previous TRQ administration methods are one of the factors which influence the

allocation of the quota rent between importers and exporters. However, the capture of the rent is explained sometimes by the presence of importer (or exporter)'s market power (Olarreaga and Ozden 2005). Others explanations for the rent allocation between countries under the same preferential agreement are the difference in the quality composition of exports, the changes in world prices (or import prices) after the agreement or the differentiation of imports across origins.

### 1.3.2 Structure of Protection of MERCOSUR countries

Since 1995, all MERCOSUR members have been applying a Common External Tariff (CET) to all imports coming from outside MERCOSUR. At the beginning, the CET covered about 85% of imports but since 2001 Argentina and Brazil have strongly increased the percentage of coverage, and Paraguay and Uruguay have more recently done the same (2006). Nevertheless, there exist some exemptions, such as for capital goods, telecommunication and electronics devices, sugar, automobiles and the list of exemptions defined by each particular country.

The CET varies between 0 and 23%, in which the highest level of protection is concentrated in manufactured products such as textiles, wood, machinery and equipment, food and other manufactured goods and the lowest level of protection is applied to animals, seeds, some chemical products, etc. The general criterion is that tariffs increase with the share of the added value of goods; however, other criteria have been also considered, such as the protection of production coming from a particular region or country. Indeed, MERCOSUR applies the highest tariffs on consumption goods and the lowest on agricultural raw materials. However, the protection structure is much more homogeneous than the EU one. Due to trade pattern, average protection is between 14% to 10% in agriculture and industry, and falls to 2% for primary products. In average, the small countries of MERCOSUR have a lower average protection rate vis-a-vis the EU.

[INSERT Figure MEprotection]

[Note: Protection applied on EU products, Base year 2004, Reference Group weighted average, MacMapV2.03, Author's calculations]

[INSERT Figure VEprotection]

[Note: Base year 2004, Reference Group weighted average, MacMapV2.03, Author's calculations]

Venezuela and MERCOSUR countries have signed the protocol to let Venezuela become a full member of this custom union in July 2006. This protocol details the schedule

in which the agreement will become effective. Free trade in the region will be guaranteed gradually, in a flexible way, in order to take into account the asymmetries between countries. Argentina and Brazil will eliminate their tariffs on Venezuela's imports by 2010, except for some sensitive products according to their own lists. Venezuela will permit free market access for MERCOSUR countries by 2012, giving preferential treatment to the smallest MERCOSUR members, Uruguay and Paraguay (immediate tariff elimination except for beef, fish, dairy products, wool, some plastics and chemical products). Finally, Uruguay and Paraguay will implement free trade with Venezuela by 2013, except for their sensitive products. The deadline to liberalize sensitive products is January 2014 at the conclusion of the agreement.

Before the signature of this agreement, Venezuela has left the Andean Community due to different political discrepancies. In spite of that, having Venezuela in MERCOSUR could help the integration between the two Latin custom unions. MERCOSUR countries have only been Associated Members of the Andean Community since July 2005 but bi-regional trade is not even completely liberalized. The Venezuela enters the MERCOSUR with initial tariffs higher in agriculture (by 4%) and on primary goods.

The EU has no preferential access to the MERCOSUR market. European countries face the CET from MERCOSUR in all products which is higher for consumption and non-agricultural products than it is for other products. Some MERCOSUR countries, such as Brazil and Venezuela, have opened WTO TRQs on agricultural products. Brazil has opened two TRQ's, one on pears and apples and the other on wheat. The former is not effective because the CET is lower than the in-quota tariff, but the latter is always effective, used and has been opened to all WTO members. Venezuela is the other MERCOSUR country which has open TRQ's (more than 60) on many different agricultural products. These TRQs are not MERCOSUR TRQs, they were individually opened by Brazil and Venezuela. The rest of MERCOSUR does not profit from them because of a 0% tariff for intra-MERCOSUR trade, except for some exports, such as vehicles and vehicle parts exports, which are sensitive products for MERCOSUR.

## 2 Modelling the EU-MERCOSUR bilateral agreement

### 2.1 The MIRAGE model

The model we use is the CEPII’s computable general equilibrium (CGE) model, nicknamed MIRAGE. It is a dynamic model fitted with imperfect competition in the manufacture and service sectors (in order to give a more realistic representation of the world economy) . MIRAGE describes imperfect competition in an oligopolistic framework “à la Cournot”.

The demand side is modelled in each region through the Representative Agent Assumption. Domestic products are assumed to benefit from a specific status for consumers, making them less substitutable for foreign products than foreign products between each other. Secondly, products originating in developing countries and in developed countries are assumed to belong to different quality ranges. This assumption is motivated by the fact that several empirical works have shown that unit value differences are able to reveal quality differences even at the most detailed level of product classification. This hypothesis about quality differentiation is likely to have direct consequences on the transmission of liberalization shocks since the elasticity of substitution is lower across different qualities than across products within a given quality. Hence, the competition between products of different qualities is less substantial than between products of a similar quality. In the absence of systematic information suitable for the incorporation of vertical differentiation in a worldwide modelling exercise, such as the one undertaken here, differentiation is modelled in an *ad hoc* fashion: developed countries and developing countries are assumed to produce goods belonging to two different quality ranges; substitutability is assumed to be weaker across these two quality ranges than between products belonging to the same quality range.

Regarding the supply side of the model, producers use five factors: capital, labour (skilled and unskilled), land and natural resources. The structure of added value is intended to take into account the well-documented relative skill-capital complementarity. These two factors are thus bundled separately, with a lower elasticity of substitution, while a higher substitutability is assumed between this bundle and other factors.

The production function assumes perfect complementarity between added value and intermediate consumption. The sectoral composition of the intermediate consumption aggregate stems from a CES function. For each sector of origin, the nesting is the same as for final consumption, meaning that the sector bundle has the same structure for final



and intermediate consumption.

Constant returns to scale and perfect competition are assumed to prevail in agricultural sectors. In contrast, firms are assumed to face increasing returns to scale in industry and services (through a constant marginal cost and a fixed cost, expressed in output units). In those sectors, competition is imperfect. This modelling allows the pro-competitive effect of trade liberalization to be captured.

Capital goods have the same composition regardless of the sector; they cannot change their sector affectation once it has been installed, thus introducing a rigidity in the economy suggested by empirical evidence. Capital is accumulated every year as the results of investments in the most profitable sectors. Natural resources are considered to be perfectly immobile and may not be accumulated. Both types of labor are assumed to be perfectly mobile across sectors, whereas imperfect land mobility is modelled with a constant elasticity of transformation function. Production factors are assumed to be fully employed; accordingly, negative shocks are absorbed by changes in prices (factor rewards) rather than in quantities. All production factors are internationally immobile. With respect to macroeconomic closure, the current balance is assumed to be exogenous (and equal to its initial value in real terms), while real exchange rates are endogenous.

The calculation of the dynamic baseline has been recently improved in order to have an endogenous total factor productivity (TFP). This improvement is based on a more elaborate demographic and macroeconomic forecast in which the labor and GDP growth rates until 2015 are taken from the World Bank database. At the baseline, the TFP is calculated endogenously but under the simulation scenarios it becomes fixed and the GDP is calculated endogenously.

The model uses the GTAP database 6.1. However, instead of relying on modelling tariff cuts at the sector level, we use a detailed database (MAcMap) at the HS6 level (5,113 products); this permits a better handling of the tariff dispersion (which matters as far as the gains of tariff removal will depend on such dispersion) as well as introducing sensitive products. TRQ data (in, at and out-of-quota tariffs, quota levels and imports under TRQs) is also provided at HS6 level, leading to state realistic scenarios about very sensitive products. This also allows analysis to be based on actual applied tariffs, including preferential provisions (e.g. GSP, FTAs, etc.). Regarding border protection, the database used to construct the scenarios of trade liberalization at the product level is MAcMapHS6v2, base year 2004, and MAcMapHS6v1, base year 2001 (Bouët et al. 2004).

Some particular changes have been made for this paper. First, we have defined a specific aggregation between regions (13) and sectors (30) in which all agricultural products

are kept at GTAP original sector definitions (see Table 1). Second, particular treatment to recalibrate the trade matrix has been done to mimic the recent changes in the trade relation between 2001 and 2004. Trade data is based on BACI database (Gaulier and Zignago 2004).

[INSERT Table 1]

## 2.2 Calibration

Crisis and currency devaluations in MERCOSUR economies have led to important changes in their trade patterns. MERCOSUR bilateral trade with the EU has strongly increased for cereals, meat and other traditional agricultural exports. Moreover, the “mad cow” crisis has strongly weakened the meat sector in Europe and has allowed new export possibilities to the European market. In contrast, EU exports to MERCOSUR have decreased in the domain of traditional exports (chemicals, machines, vehicles, etc.) due to the different crises and currency devaluations in the region.

Comparing GTAP and BACI trade databases, we found that since 2001, the bilateral trade between these two regions has been varying quite a lot. Simulating FTA scenarios on the basis of 2001 trade data, will result in a very distorted picture of the reality and weaken any utility that this exercise could have for the policy makers.

[INSERT Table 3]

[INSERT Table 4]

Starting from GTAP bilateral trade between these two regions (also including Chile), we update them to reproduce the growth rate of trade flows, drawn from BACI database, between 2001 and 2004. Indeed, for some sectors and some small countries, such as Rest of MERCOSUR and Other manufactures products, COMTRADE and so, BACI display extreme variations of trade (in volume) and in many cases they are inconsistent with the base year data in GTAP. Taking into account relative changes instead of absolute changes allows us to avoid modifying the initial Social Accounting Matrices (SAMs).

## 2.3 Pre-experiment and reference baseline

Before the simulation of any scenario, several elements are included in the reference situation in order to have a realistic baseline: the end of the Multi-Fibers Agreement, the United States’ 2002 Farm Bill and the end of the implementation period of China commitments as a new WTO member. All the tariff simulations are applied at the

HS6 level taking into account all relevant information (Bound tariffs, MFN applied tariffs and preferential applied tariffs), then aggregated to the model nomenclature using the reference group weighting scheme. Starting from the 2001 data on protection provided in MAcMApHS6v1 and used in GTAP6, we move to the 2004 level of protection (MAcMApHS6v2), and then we apply realistic trade policy changes. Starting from this common ground, different baselines, used later as counterfactual, are built:

- (R1): the “business as usual” situation, with a Mercosur without Venezuela.
- (R2): (R1) + a successful DDA
- (R3): (R1) + the Venezuela accession
- (R4): the Venezuela accession plus a successful DDA (R1) + (R2) + (R3)

The accession of Venezuela to MERCOSUR has two main aspects: Venezuela adopting the MERCOSUR Common External Tariff (CET), and Venezuela’s partners applying the MERCOSUR regime to its exports. However, we keep the current preferences between Venezuela and the Andean Community constant. This regional integration is implemented during the seven years between 2007 and 2014. Argentina and Brazil will eliminate their tariffs by 2010, and Uruguay and Paraguay will do the same by 2013. Venezuela will start its tariff elimination by 2012 (tariff cut for non sensitive products) and will finish it by 2014 eliminating tariff for sensitive products (chemical and petrochemical products, paper products, automobile, etc.) at the full completion of the agreement.

The Doha scenario considered here is similar to Lamy’s 20-20-20 proposal. This expected compromise can be described as following: a Swiss formula with a coefficient 10 for developed countries and 20 for developing ones in Non Agricultural Market Access (NAMA). The G20 proposal in agriculture (a tiered formula for tariffs,<sup>3</sup> a new ceiling for domestic support in the North, and the phasing out of export subsidies at the 2013 horizon); A Special and Differential Treatment making LDCs exempted from any tariff cuts and asking them to just continue the binding process Fontagné et al. (2007). Other exclusions and flexibilities are introduced: a series of developing countries will not liberalize their manufacturing sectors due to a low initial binding rate (the so-called “Paragraph 6” countries of the NAMA framework); small and vulnerable economies (including Paraguay

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<sup>3</sup>A tiered formula with inflexion points at 20, 50 and 75 percent, using average tariff cuts of 45, 55, 65 and 75 percent. For developing countries, the inflexion points are placed at 30, 80 and 130 percent and the average cuts at 25, 30, 35 and 40 percent. Final tariffs are capped at 100% for developed countries and 150% for developing countries.

and Bolivia) are conceded zero liberalization. A final exception is that South Korea is treated as a developing country for agriculture and as a developed country for the NAMA.

Next, we address the issue of special and sensitive products, in order to examine the “variations” around the central scenario. “Sensitive products” and “special products” have to be defined for each country.

For both the agricultural and manufacturing sectors, “sensitive” products are defined following a political criteria in line with that the one proposed by Jean et al. (2006). We make the assumption that tariffs are currently higher where political sensitivity is the highest, and that governments take into account the effective impact on the formula of the applied tariffs and the price impact for domestic producers and consumers. In agriculture, sensitive products are available for all countries and know a weaker liberalization than normal products. In NAMA, sensitive products are totally excluded from liberalization but this option is restricted to developing countries. In agriculture, developing countries are entitled to have some “special” products related to food-safety issues that will also be excluded from liberalization. More precisely, to define these products we compare situations in which normal rules apply and in which specific treatments are applied. As special products are concerned, we exclude 10 % of the HS6 positions from liberalization, giving priority to a list of positions selected on the basis of their caloric contributions. Thus, sensitive products are defined as 4% of the HS headings with the highest sensitivity index. For these products, we apply half of the formula effect on bound rates. When HS6 positions entail TRQs, we apply 2/3 of the formula (mimicking an increase in the quota). For NAMA, the sensitive products of developing countries can cover 10% of their HS6 positions and up to 10% of their trade. For sensitive and special products, no capping at the HS6 level is considered.

The DDA commitments are fully implemented after four years for developed countries (2008-2012) and seven years for developing countries (2008-2014).

## 2.4 Scenario

The accomplishment of the EU-MERCOSUR trade agreement is subordinate to the multilateral negotiations at the WTO for two reasons: the single ‘pocket’ constraint for the EU, and the value of preferences on both markets. Indeed, if an ambitious Doha Round succeeds, what will be the worth of having a preferential access in a market that is already largely open to other competitors?. Because of this unknown, our pre-experiment scenarios assume both possibilities, success and failure of the multilateral trade agreement before the signature of the bilateral EU-MERCOSUR agreement. The fact that

we consider a WTO trade agreement before the EU-MERCOSUR agreement also affects our choice of sensitive products for the bilateral negotiation, and thus the second reason why our scenario and pre-experiments are justified. Moreover, Venezuela as a new MERCOSUR member also may change the future of the EU-MERCOSUR FTA.

The current horizon of the EU-MERCOSUR agreement is seven years. Both scenarios start in 2008.

Because in October 2004 there were no new proposals exchanged, we simulate an average agreement between EU and MERCOSUR proposals (October 2004), also including some new TRQs open by the EU for some particular products.

Trade liberalization for this bilateral trade agreement is total and reciprocal for all products except for sensitive and very sensitive products. Sensitive products will be liberalized in five years. Sensitive products represent 5% of HS6 lines for the EU as well as 5% for MERCOSUR. EU sensitive products are almost equally shared between agricultural and manufactured chapters; however sensitive products for MERCOSUR are essentially located in industry.

[INSERT Figure sensi\_nb]

[Note: Number of products, no venezuela accession, no DDA case.]

[INSERT Figure sensi\_vol]

[Note: Number of products, no venezuela accession, no DDA case.]

Very sensitive products represent 5% of tariff lines for MERCOSUR. Sensitive products and very sensitive products in the case of MERCOSUR have been selected using the same approach as for the DDA framework. Such as for MERCOSUR sensitive product, very sensitive product are almost all from manufactured chapters. Very sensitive products for EU are products under WTO TRQ's such as meats, cereals and some dairy products and other products for which the EU has the intention to open new bilateral TRQ's for the MERCOSUR countries (ethanol, sugar, cacao and tobacco). In terms of trade, sensitive products represent 21% of EU imports and very sensitive products 18%, on the other side, with just 5% of lines on both categories, the MERCOSUR may classify 14% of its imports as sensitive and 44% as very sensitive. This last share of unliberalized products is extremely high and a stronger discipline on the number of lines should be considered.

Since the sensitive product list is endogeneous to the initial tariffs and trade flows, the lists of sensitive products are baseline dependant. For the EU, without the Venezuela in the MERCOSUR, the sensitive product list related to the agreement is not affected

by the conclusion of the DDA. Indeed, most of the sensitive products in agriculture in the EU-MERCOSUR relation are also sensitive for the WTO talks and the DDA will not change the pattern of protection, i.e. the ranking of sensitivity, on goods exported by MERCOSUR countries. However, Venezuela's accession has a more significant impact. Nearly 20% of the list will be modified: agricultural products, as well as clothings and footwears will be replaced by chemicals (organic and inorganic), aluminium, metals, plastics and glass products. In this case, the DDA will bring a marginal change in the list (10 products) adding aluminium, fisheries and organic chemicals. Indeed, without flexibility in the DDA for EU and with the application of a swiss formula, the structure of tariff in non agricultural goods will be more affected by the round. For the MERCOSUR sensitive and very sensitive product lists is impacted by the positive outcome of the DDA. 10% of the products, among them chemical products, tanning or dyeing extracts, textiles and vehicles, are replaced by machinery, organic chemicals, photography and optics. The Venezuela accession has similar effects in magnitude but in this case, the number of sensitive products in agriculture, vehicles, wearing and apparel increased.

[INSERT Figure ME\_sensi\_tariff]

[Note: Protection applied by MERCOSUR on EU imports, Base year 2004, Reference Group weighted average, MacMapV2.03, Author's calculations]

[INSERT Figure EU\_sensi\_tariff]

[Note: Base year 2004, Protection applied by EU on MERCOSUR imports Reference Group weighted average, MacMapV2.03, Author's calculations]

Looking at the average rate of initial protection by degree of sensitivity, we check that there is a positive relation. This is a direct consequence of the criteria chosen. In the case of the MERCOSUR, a clear step differentiates the very sensitive products in industry (14.3% to 17%). For the EU, the same pattern is checked: very sensitive products concentrated the tariff peaks.

Considering the very sensitive products, we made two assumptions for the scenario concerning agricultural products. For products under WTO TRQs we simulate a quota enlargement without any change in tariffs (inside and outside). The quota enlargement for these products is based on the comparison of the present utilization of the WTO TRQs of MERCOSUR countries and the new quota volume (average between EU and MERCOSUR proposals, See Table 2). Since in MIRAGE there is not an explicit modelling of TRQs, the quota enlargement does not affect the TRQ regimes (in, at or out-of-quota). The quota enlargement simulated in MACMaps database only leads to a larger quota rent. For MERCOSUR very sensitive products, no liberalization takes place.

[INSERT Table 2]

For the new bilateral TRQs opened to MERCOSUR countries we consider some special tariff lines at 8 and 4 digits level. The new quota for Ethanol would concern only 4 product lines (22071000, 22072000, 22089091, 22089099), for Sugar only 7 products (17025050, ex17499099 -17499080-, 18061090, ex18062080 -18069080-, ex18062095 -18069080-, ex18069090 -18061980-, ex18069090 -18069980-), for Cacao and Tobacco all products under the following HS4 codes: 1803, 1804, 1805 for Cacao and 2402, 2403 for Tobacco. The new TRQs will concern 1.5 of traditional bilateral trade between regions and this is the assumption for our scenario. Moreover, the quota rents' evolution is extracted from the scenarios and used in the modelling.

[INSERT Figure PTA\_TAR\_MAN\_EUM]

[Note: End of the implementation period, Difference computed from the relevant baseline tariffs, Bilateral protection with EU, Reference Group weighted average, MacMapV2.03, Author's calculations]

[INSERT Figure PTA\_TAR\_AGR\_EUM]

[Note: End of the implementation period, Difference computed from the relevant baseline tariffs, Bilateral protection with EU, Reference Group weighted average, MacMapV2.03, Author's calculations]

[INSERT Figure PTA\_TAR\_MAN\_EUX]

[Note: End of the implementation period, Difference computed from the relevant baseline tariffs, Bilateral protection with EU, Reference Group weighted average, MacMapV2.03, Author's calculations]

[INSERT Figure PTA\_TAR\_AGR\_EUX]

[Note: End of the implementation period, Difference computed from the relevant baseline tariffs, Bilateral protection with EU, Reference Group weighted average, MacMapV2.03, Author's calculations]

Due to the very sensitive products, the PTA assessed here is far from being a total liberalization scenario. Consequently, the non-agricultural protection of the MERCOSUR regarding the EU exports is cut by 50% (Argentina) to 60% (Brazil), on the other side, agriculture protection is reduced by more than 80%. For the EU, even if during the implementation period, sensitive products avoid liberalization, the tariffs related will be eliminated at the end. Finally, non agricultural goods from MERCOSUR countries gain a free access to the EU and the EU agricultural protection will be reduced by 65% (for Argentina) to 95% (Rest of Mercosur). Now, the different baselines bring some significative

changes. The accession of Venezuela to MERCOSUR will bring more agricultural products as sensitive for the enlarged trade block. The market access gains for the EU will be slightly reduced (to nine tenth of the basic cut). As expected, the main changes are driven by the DDA. The DDA will already achieve one fifth of the opening of MERCOSUR non agricultural markets to EU exporters and half of the job regarding MERCOSUR agricultural exports to the EU. It seems that the gains of the EU-MERCOSUR agreement could be significantly impacted by a successful DDA: the direct gains will be reduced and the value of the granted preferences will be reduced by increased competition coming from third countries. To check the consequences of this limited agreement, we also assess a 100% liberalization (FTA).

This EU-MERCOSUR Agreement will be simulated, under all different baselines detailed in the previous section.

## 3 Simulations' Results

### 3.1 Trade impacts

[Il faut rajouter les trade balance bilatérales en niveaux. Cela permettra aussi de faire apparaître clairement les détournements de trafic]

[il faut ne faire du ranking entre baseline qu'en niveau pas en %]

Looking at the trade consequences of the EU-MERCOSUR agreement, Table 7 shows that this scenario increases total exports for all parts of the agreement. MERCOSUR benefits the most from this tariff reduction, especially considering the situation without Doha and without Venezuela in the MERCOSUR. Brazil exports increase between 9.13% (R1) and 7.4%(R4), Argentina's increase between 3.25%(R1) and 2.5%(R4) and the rest of MERCOSUR (Uruguay and Paraguay) exports increase between 6.79%(R1) and 5.2%(R4).

In the case of Argentina, bilateral trade increases especially with the EU27, where the better scenario is the present situation (without DDA and Venezuela). Argentina's trade also increases with it MERCOSUR (present and future) partners an associated members, such as Chile. This last situation is especially true under baselines including the Doha agreement. If we consider the baseline only with Venezuela as a full MERCOSUR member, bilateral trade with this country reduces (-0.92%). The sectors whose exports increase the most are Agro-Food and Industry (between 3.9% for R1 and 2.9% for R4). The increase in Agro-Food exports is especially explained by the traditional exports



increase, such as Dairy exports which increase between 47%(R1) and 27%(R4) and Meat and Cattle exports which vary between 27%(R1) and 10%(R4). Exports constraint by TRQ also increases, and their variations are very close to the export increases under an FTA between MERCOSUR and the EU27. This last results lead us to prove that an average quota increase (our scenario hypothesis) does not change TRQ regimes, because quotas remain all binding and the out-of-quota tariff is the effective protection. In the case of European sensitive products whose tariff does not disappears (Other meat) exports increases only if we consider an FTA between these two blocs. Manufactured exports also increase under this PTA, especially for Motor Vehicles sector (between 8% and 6% for R1 and R4 respectively) and Textile sector (between 4% and 3% for R1 and R4). Argentina imports increases for all sectors (Agro-food, Industry, Primary and even Services due to general equilibrium effects). Agro-food imports are basically Dairy (between 27% for R1 and 5% for R4), Meat and Cattle and Sugar (around 30%). Forestry imported product also increases (between 30% for R1 and 25% for R4) such as for Textile.

For Brazil bilateral trade, it only increases with the EU27. It varies between 62% (R1) and 48% (R4) always knowing that the baseline without Doha and Venezuela as a MERCOSUR member is the most beneficial scenario. Venezuela as a full MERCOSUR member intensifies the decrease in bilateral trade between Brazil and this new member. The increase in Brazil export is essentially from Agro-Food sectors (between 25% and 19% for R1 and R4 respectively), such as Dairy, Meat and Cattle, Sugar and Rice. Industry is the most affected sector from Brazil, its exports decrease between 6.3% and 5.2% under scenarios R1 and R4 respectively. Once more, all agricultural sectors subjected to TRQ's display an exports variation very close to the free trade situation, leading us to infer that no change in TRQ regimes is possible under an lower quota increase than MERCOSUR demands. Brazil total imports are basically shared between Agro-food (Beverages, Dairy products, Fats, Meat and Cattle, Sugar and Rice) and Industry's (Chemicals, Paper, Motor Vehicles and Other manufactures) products.

As the same as for Brazil, small MERCOSUR countries display bilateral trade increase only with the EU27, for which the better scenario for their export is also the present situation without Doha neither Venezuela into MERCOSUR. The increase in their exports is essentially from Agro-Food sectors, such as Cereals, Wheat, Dairy, Meat and Cattle, Rice and Sugar. Under the EU-MERCOSUR scenario, all these sectors benefit from a quota enlargement, leading to a trade creation. Uruguay and Paraguay imports increases for all large sectors, but greater import variation are basically Agro-food products (Rice, Milk and Dairy products, Meat and Cattle, Fats). Forestry and Paper sectors (which

is deteriorating political relationship between Uruguay and Argentina) also display a larger increase in imports (around 20% and 8% respectively), knowing that their exports strongly decrease (around -8% and -5% respectively).

Trade consequences for Venezuela are very interesting, because they dramatically change from one scenario to another. This country really benefits not only from the EU-MERCOSUR scenario but different baselines allow a extra variation on its exports. The most beneficial scenario for this country concerns the baseline with the Venezuela as a MERCOSUR member, leading to an increase in bilateral trade with all regions in the world (except with the rest of South America) and especially the EU27 and MERCOSUR. Adding the Doha agreement to the previous baseline, Venezuela bilateral trade deteriorates with all regions except with Brazil and the EU. In short, Venezuela is the only country for which its conversion to a MERCOSUR members leads to an increase in trade and is the only that Doha scenario reduces most if its bilateral trade relations with most part of the world. Under R2, the sector whose exports increase the most are essentially Primary and Agro-Food (Vegetables and Fruits) but the previous trade gains reduce if we also introduce the DDA agreement in the baseline. Venezuela imports reduce under all scenarios except under the R3 baseline (Venezuela into MERCOSUR) where all imports increase, especially from Agro-food sectors (Dairy, Meat and Cattle and Rice).

European Union bilateral trade increases with all MERCOSUR countries including Venezuela, but under the baseline with the Doha agreement and without Venezuela into MERCOSUR, bilateral trade between the EU and Venezuela deteriorates. Venezuela as a MERCOSUR member is relevant for EU trade with this country when the EU-MERCOSUR agreement is achieved. The trade creation between the EU and MERCOSUR (with Venezuela) is at expenses of trade diversion with the rest of the world. Most affected EU trade relations are with the rest of developing countries (rest of South America, rest of developing Cairns countries and South Saharian Africa). European exports increases essentially for manufactured sectors (between 1.25% and 0.95%), such as Chemicals, Machinery and Metal. However, Agro-Food exports also increases for most of the sectors, except for Sugar (-9.48%) under the present situation scenario (under all other scenarios EU sugar exports increases). EU imports are all from Agro-food sectors (Cereals, Meat and Cattle, Other meat, Sugar and Rice).

[INSERT Table 7] [INSERT Table 8]

## 3.2 Macroeconomic impacts

The EU-MERCOSUR agreement does not seem to be a welfare improvement option for all MERCOSUR countries. Large MERCOSUR countries, Argentina and Brazil, lose in terms of welfare under all scenarios especially due to allocation efficiency and TRQ losses. However, Terms of Trade improves for Brazil and not for Argentina, which only perceives small land supply gains.

Small MERCOSUR countries, Uruguay and Paraguay, improves welfare under this EU-MERCOSUR agreement, and the best scenario is without Doha and Venezuela in the baseline (0.53%) but we know that if in the long run both hypotheses are true (Venezuela as a MERCOSUR full member and DDA agreement) these countries only will improve 0.39% from their welfare.

In the case of Venezuela, the EU-MERCOSUR agreement is only welfare improvement if DDA agreement is achieved (R2 and R4 scenarios); however, the sources of welfare gain are different: under R2 Venezuela only perceives capital accumulation gains and under R4 the improvement in the Terms of Trade is the main welfare-gain source.

Nevertheless, the EU-MERCOSUR agreement is a welfare-improvement scenario for the EU27 under all different baseline. Baselines R1 and R3 displays greater welfare gains for the EU (0.18% and 0.19%), that means if the Doha agreement is assumed in the reference situation welfare gains are smaller than considering only the MERCOSUR+Venezuela one. Looking at welfare decomposition, the EU especially gains in terms of allocation efficiency and capital accumulation.

[INSERT Table 5]

GDP displays the similar results to welfare, only th EU and the small MERCOSUR countries increase their GDP but large MERCOSUR countries reduce it. These consequences on GDP lead to the same consequences on agricultural employment and skilled and unskilled wages.

[INSERT Table 6]

## CONCLUSION

The asymmetrical agreement between the EU-MERCOSUR simulated in this paper leads to asymmetric welfare and trade results for the two blocs. Even if MERCOSUR region increases their traditional trade (agricultural and food products) each country displays

different consequences for their sectors. The European Union not only improves its non-agricultural trade with the MERCOSUR but also increases its total agricultural and food trade, even for some controversial sector (i.e. Sugar) under certain scenarios. This is due to very sensitive products under TRQs, which according with our model, remain the EU protection. This is not a negligible results since until now the European Union (or some European countries) argue that for them it is impossible to liberalize agricultural sector.

Moreover, welfare both regions display different consequences. Looking at each MERCOSUR welfare in details, the only smallest countries gain from this agreement as well as the EU27, which is the winner of this scenario of bilateral agreement. These results are greater than others presented by the CEPII such as under Doha WTO agreement, where the welfare gain for the EU was 0.12% and under PTA EU-Asean it was only 0.03%.

Venezuela as a full MERCOSUR member only improve bilateral trade between this country and its future and potential partners (MERCOSUR and the EU27). This baseline is crucial for trade improvement with the EU27 under an FTA with MERCOSUR. For MERCOSUR countries, Venezuela into MERCOSUR will also lead to a negative trade relation with this block.

According to the simulation results of this bi-regional trade agreement between the EU and MERCOSUR, the answer to the question “Will regionalism survive multilateralism?” is positive in this particular case. Most welfare and trade gains for EU and MERCOSUR countries come from the bilateral agreement and not from the WTO agreement. There is still more progress and gains to get to regionalism, even if PTAs only concern goods liberalization such as in the example of the EU-MERCOSUR trade agreement.

The EU-Merosur agreement seems to be a very interesting opportunity for the EU27 to increase its share in MERCOSUR markets. The only constraint to this agreement would come from some MERCOSUR countries (Argentina and Brazil), which will ask for interesting proposals for the most sensitive products. The end of the bilateral negotiation and the signature of this agreement would depend only on the EU proposal for these products, because only the quota enlargements for the very sensitive products are not enough to convince the largest MERCOSUR countries.

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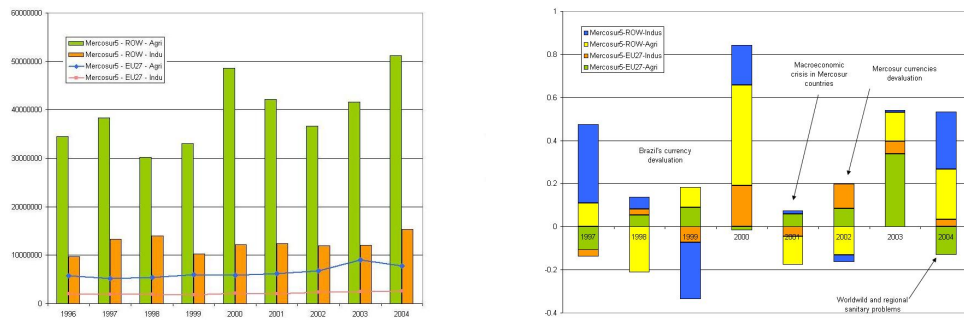
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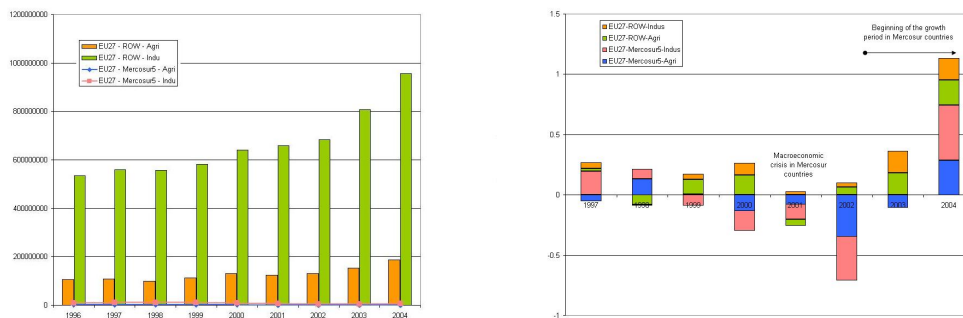
## Tables and Figures

Figure 1: MERCOSUR (5) total exports (in thousand dollars and variation)



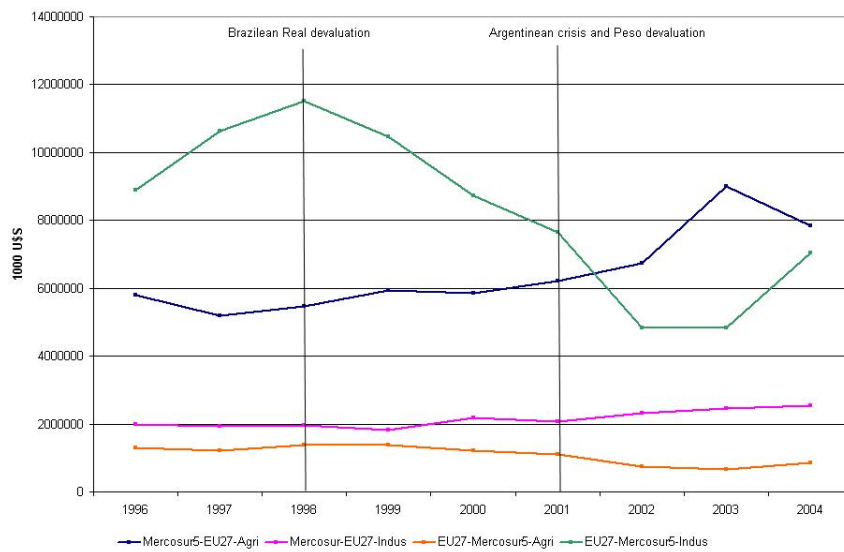
source: BACI - CEPII

Figure 2: European Union (27) total exports (in thousand dollars and variation)



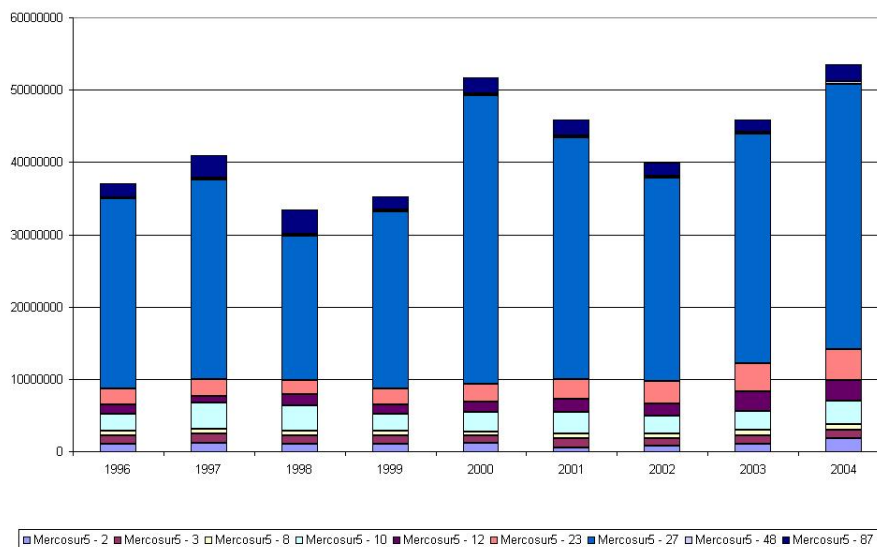
source: BACI - CEPII

Figure 3: European Union - MERCOSUR bilateral trade (exports in thousand U\$)



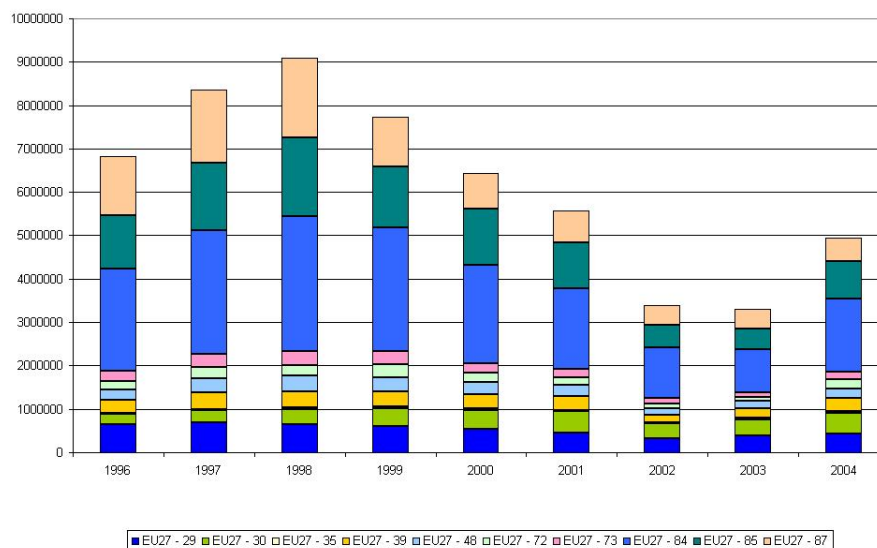
source: BACI - CEPII

Figure 4: MERCOSUR exports to the European Union by HS2 level (thousand of dollars)



source: BACI - CEPII

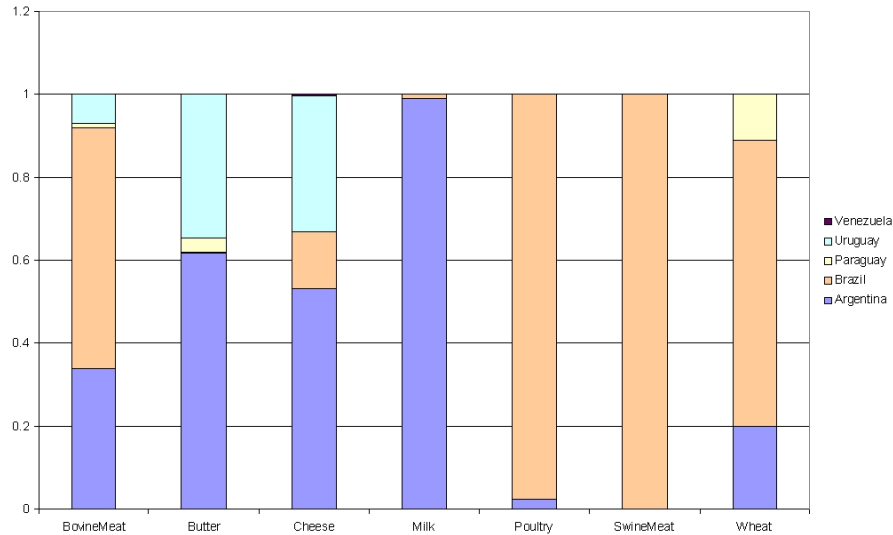
Figure 5: European Union exports to MERCOSUR by HS2 level (thousand of U\$S)



source: BACI - CEPII

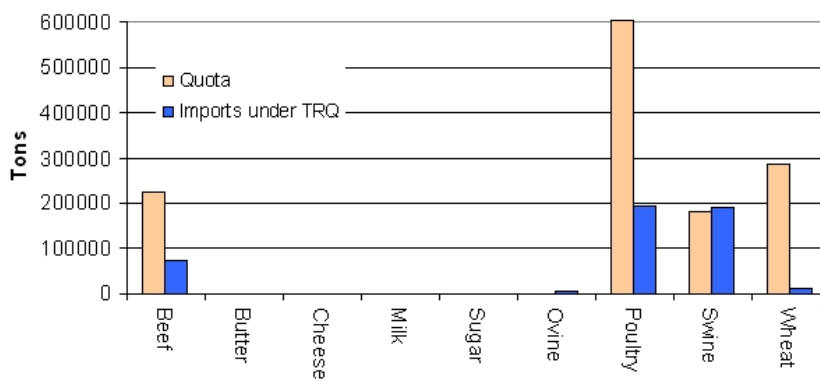


Figure 6: EU TRQs distribution between MERCOSUR countries



source: MAcMaps TRQ database - CEPII

Figure 7: Relation between EU TRQs and In-quota imports for MERCOSUR countries



source: MAcMaps TRQ database - CEPII

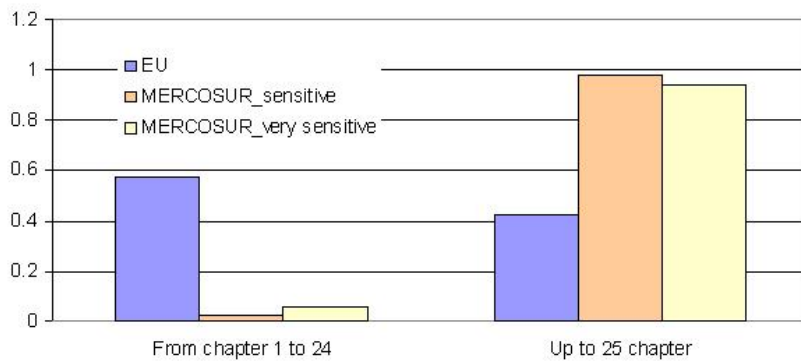
Table 1: Geographical and sectoral aggregation

Sector	Regions
Rice	CairnsDvped
Wheat	RestDvping
Cereals	RestDvpd
VegFruits	CairnsDvg
OilSeeds	NAFTA
Sugar	SthAm
Crops	Venezuela
MeatCattle	Argentina
MeatOther	Brazil
Milk	Chile
Wool	RoMercosur
Forestry	EU27
Fishing	Meditera
EnergyPdts	SSA
Primary	
Fats	
Dairy	
Food	
Beverages	
Textile	
Paper	
Chemicals	
Metal	
MotorVeh	
TrspEqNec	
Electronic	
Machinery	
OtherManuf	
OthSer	
TrT	
BusServ	

Table 2: TRQ enlargement scenario for the EU-MERCOSUR agreement

Products	EU proposal (TN)	MERCOSUR proposal (TN)	Average Scenario (TN)
Bovine meat	160000	315000	237500
Poultry meat	27500	250000	138750
Swine meat	15000	40000	27500
Wheat	200000	1000000	600000
Corn	200000	4000000	2100000
Cheese	20000	60000	40000
Milk	13000	34000	23500
Butter	4000	10000	7000

Figure 8: Composition of sensitive and very sensitive products lists for MERCOSUR and the EU27



source: MAcMaps database - CEPII

Table 3: Total trade variation (%) between GTAP-2001 and BACI-2004

	Venezuela	Argentina	Brazil	Chile	RoMercosur	EU27
Rice		7%	22%	36%	5%	
Wheat	5%	15%	60%	5898%	16%	5%
Cereals		10%	8%	70%	5%	
VegFruits	15%	1%	6%	11%	4%	
OilSeeds	39%	11%	4%	14%		
Sugar	49%	11%		305%		
Crops	68%	10%	8%	81%	5%	13%
MeatCattle	368%	78%	44%	30%	14%	24%
MeatOther	28%			7%		4%
Wool		64%	418%	45%	76%	24%
Forestry	50%	14%	12%	17%	45%	5%
Fishing			23%		1%	
Primary	62%	18%	14%	6%	2%	6%
Dairy	14%	3%	28%	3%		
Food	5%	139%	69%		117%	
Beverages	8%			8%		
Textile	18%	2%		7%		
Paper		6%	6%			2%
Chemicals		2%			9%	
Metal				3%		
TrspEqNec	4%			4%	2%	
Electronic	5%		2%		21%	
Machinery	20%	49%	11%	32%	9%	4%
OtherManuf	122%	102%	150%	42%	660%	67%
OthSer	250%		174%		46%	1931%

Table 4: Bilateral trade variation (%) between GTAP-2001 and BACI-2004

		Venezuela	Argentina	Brazil	Chile	RoMercosur	EU27
Rice	Argentina					16%	
	Brazil		86%			12%	91%
	Chile			289%			
Wheat	Brazil					32%	
	Chile		117%				
	RoMercosur		14%				
	EU27		47%				
Cereals	Venezuela				219%		856%
	Argentina			468%	103%		
	Brazil					22%	351%
	RoMercosur		83%	249%			65%
	EU27		38%	89%	51%		
VegFruits	Argentina					120%	
	Brazil	467%				142%	
	Chile		89%	52%			
	RoMercosur			10%			
	EU27	103%	13%	88%	43%	19%	
OilSeeds	Argentina			2086%	6%	1892%	18%
	Brazil						84%
	Chile		92%	14%		301%	801%
	RoMercosur		113%	141%			96%
	EU27			55%	339%	160%	
Sugar	Venezuela			1394%			
	Argentina			401%			
	Chile		62%	6241%			
	RoMercosur			19%			
	EU27			3%		128%	
Crops	Venezuela					9%	
	Argentina	29%		70%		35%	
	Brazil					53%	
	Chile			27%			5%
	EU27		15%	32%	2%		
MeatCattle	Venezuela		23253%	2014%			
	Argentina				27%		
	Brazil		21%			23%	
	Chile		224%	100%			
	RoMercosur		22%	33%	262%		
	EU27		151%	33%	64%	18%	
MeatOther	Venezuela			1478%		169%	
	Argentina					161%	
	Brazil	11%			142%	192%	
	Chile		106%	189%			17%
	RoMercosur		37		291%		119%
	EU27		337%	119%	106%	200%	
Wool	Argentina				132%		1018%
	Brazil		24457579%				366%
	Chile						522%

Table 5: Welfare results (% variation)

Region	R1		R2		R3		R4	
	PTA	FTA	PTA	FTA	PTA	FTA	PTA	FTA
Argentina	-0.10	-0.11	-0.11	-0.15	-0.10	-0.15	-0.12	-0.16
Brazil	-0.06	-0.18	-0.12	-0.21	-0.06	-0.23	-0.12	-0.25
Chile	0.01	-0.11	-0.03	-0.08	-0.01	-0.05	-0.00	-0.05
Developed countries Cairns Group	-0.07	-0.08	-0.07	-0.07	-0.08	-0.08	-0.07	-0.07
Developing countries Cairns Group	0.10	0.02	0.05	0.04	0.04	0.03	0.05	0.03
EU27	0.18	0.21	0.15	0.16	0.19	0.21	0.15	0.16
Mediterranean countries	-0.03	-0.02	-0.02	-0.03	-0.01	-0.02	-0.02	-0.03
NAFTA	-0.00	-0.01	0.00	-0.00	-0.00	-0.01	-0.00	-0.00
Rest of developed countries	-0.01	-0.03	-0.02	-0.02	-0.02	-0.03	-0.02	-0.02
Rest of Developing countries	-0.01	-0.05	-0.04	-0.05	-0.02	-0.03	-0.04	-0.05
Rest of Mercosur	0.53	0.42	0.42	0.23	0.53	0.32	0.39	0.18
Rest of South America	-0.73	-0.81	-0.78	-0.80	-0.75	-0.76	-0.79	-0.81
South Saharian Africa	-0.28	-0.32	-0.29	-0.32	-0.29	-0.33	-0.29	-0.32
Venezuela	-0.08	-0.43	0.02	-0.30	-0.07	-0.23	0.04	-0.20

Table 6: GDP results (% variation)

Region	R1		R2		R3		R4	
	PTA	FTA	PTA	FTA	PTA	FTA	PTA	FTA
Argentina	-0.07	-0.04	-0.08	-0.08	-0.08	-0.07	-0.09	-0.09
Brazil	-0.13	-0.18	-0.16	-0.20	-0.14	-0.21	-0.16	-0.22
Chile	0.03	-0.07	-0.01	-0.05	0.01	-0.02	0.00	-0.03
Developed countries Cairns Group	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06
Developing countries Cairns Group	0.08	0.02	0.05	0.04	0.04	0.03	0.04	0.03
EU27	0.18	0.19	0.13	0.14	0.19	0.19	0.14	0.14
Mediterranean countries	-0.03	-0.02	-0.02	-0.02	-0.01	-0.01	-0.02	-0.02
NAFTA	-0.00	-0.01	0.00	-0.00	-0.00	-0.01	0.00	-0.00
Rest of developed countries	-0.01	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Rest of Developing countries	-0.01	-0.04	-0.03	-0.04	-0.02	-0.02	-0.04	-0.04
Rest of Mercosur	0.36	0.30	0.29	0.17	0.36	0.21	0.27	0.13
Rest of South America	-0.70	-0.77	-0.75	-0.76	-0.72	-0.73	-0.75	-0.77
South Saharian Africa	-0.27	-0.30	-0.28	-0.30	-0.28	-0.31	-0.28	-0.30
Venezuela	-0.07	-0.22	0.02	-0.14	-0.02	-0.12	0.01	-0.14

Table 7: Total Exports results (% variation)

Region	R1		R2		R3		R4	
	PTA	FTA	PTA	FTA	PTA	FTA	PTA	FTA
Argentina	3.25	5.69	2.58	4.29	3.20	5.56	2.50	4.17
Brazil	9.13	13.93	7.58	11.25	8.95	13.44	7.40	10.78
Chile	-0.13	-0.32	-0.14	-0.26	-0.15	-0.26	-0.07	-0.18
Developed countries Cairns Group	0.05	0.01	0.03	0.00	0.03	0.00	0.03	-0.00
Developing countries Cairns Group	0.01	-0.04	-0.00	-0.02	-0.00	-0.02	-0.01	-0.03
EU27	0.27	0.51	0.21	0.39	0.29	0.52	0.21	0.39
Mediterranean countries	-0.06	-0.10	-0.04	-0.09	-0.04	-0.10	-0.05	-0.09
NAFTA	-0.05	-0.13	-0.05	-0.13	-0.06	-0.14	-0.06	-0.13
Rest of Developed countries	-0.02	-0.07	-0.01	-0.05	-0.02	-0.07	-0.01	-0.05
Rest of Developing countries	0.02	-0.02	-0.00	-0.02	0.01	-0.01	-0.00	-0.02
Rest of Mercosur	6.79	8.52	5.24	6.49	6.71	8.23	5.02	6.24
Rest of South America	0.52	0.32	0.39	0.25	0.49	0.38	0.37	0.25
Sub Saharian Africa	-0.12	-0.36	-0.22	-0.38	-0.14	-0.36	-0.22	-0.38
Venezuela	-0.10	5.02	-0.10	4.00	2.10	3.43	-0.13	2.26

Table 8: Total Imports results (% variation)

Region	R1		R2		R3		R4	
	PTA	FTA	PTA	FTA	PTA	FTA	PTA	FTA
Argentina	3.26	6.10	2.49	4.46	3.20	5.94	2.39	4.31
Brazil	7.77	12.24	6.34	9.77	7.60	11.78	6.18	9.33
Chile	-0.12	-0.30	-0.14	-0.25	-0.13	-0.24	-0.06	-0.16
Developed countries Cairns Group	-0.11	-0.15	-0.13	-0.15	-0.13	-0.15	-0.13	-0.16
Developing countries Cairns Group	0.05	-0.01	0.04	0.02	0.04	0.02	0.03	0.01
EU27	0.43	0.66	0.36	0.55	0.44	0.67	0.37	0.55
Mediterranean countries	-0.07	-0.10	-0.06	-0.10	-0.05	-0.10	-0.06	-0.10
NAFTA	-0.04	-0.10	-0.05	-0.10	-0.05	-0.10	-0.05	-0.10
Rest of Developed countries	-0.04	-0.09	-0.04	-0.08	-0.05	-0.09	-0.04	-0.07
Rest of Developing countries	-0.04	-0.08	-0.06	-0.09	-0.05	-0.07	-0.07	-0.09
Rest of Mercosur	5.37	6.83	4.09	5.15	5.31	6.59	3.90	4.94
Rest of South America	-0.88	-1.04	-1.00	-1.11	-0.90	-0.99	-1.02	-1.10
Sub Saharian Africa	-0.42	-0.62	-0.51	-0.65	-0.43	-0.63	-0.52	-0.65
Venezuela	-0.15	6.05	-0.13	4.80	2.51	4.12	-0.17	2.71