

INTER-AMERICAN DEVELOPMENT BANK

REGIONAL POLICY DIALOGUE

TRADE AND INTEGRATION NETWORK

FIFTH MEETING

**The Impact of Western Hemisphere Free Trade Agreements on the
Foreign Sector and Debt Sustainability**

WORKING DOCUMENT

José Luis Machinea
Inter-American Development Bank

Washington, D.C., August 14-15, 2003

Note: This document is part of a series of papers commissioned by the Inter-American Development Bank for the Regional Policy Dialogue. This document is under review, therefore it should not be cited as reference. The opinions expressed herein are solely those of the authors and do not necessarily reflect the position of the Bank.

(Original document in Spanish)

Preliminary version
Do not quote

The Impact of Western Hemisphere Free Trade Agreements on the Foreign Sector and Debt Sustainability

José Luis Machinea*

*Department of Integration and Regional Programs
Inter-American Development Bank*

2003

August 6, 2003

* Senior Expert on Trade and Integration, Trade and Integration Initiative

1. Introduction^{1 2}

Since the beginning of the nineties, there has been a considerable increase in the number of regional integration agreements.³ This proliferation of agreements has been in part the result of the difficulties associated with ensuring that the multilateral trade system generates trade liberalization that is viewed as equitable by all concerned parties. In contrast, parties involved in trade agreements believe they can reach –and many times do – arrangements that prove to be mutually beneficial. At the same time however, during this period of time trade agreements have not conflicted with the broader liberalization of trade. In fact, they have generally gone hand in hand with greater openness of trade and producing the so-called “new regionalism” or “open regionalism.”⁴

Many studies have attempted to show the advantages and costs that these regional agreements offer countries that participate in them. The static benefits are associated with improvements in resource allocation, while the dynamic gains depend on externalities related to the creation of new commercial flows, the existence of more open markets, greater competition and an increase in foreign investment. General equilibrium models attempt to capture these dynamic advantages by including economies of scale and externalities that are in one way or another associated to trade.⁵ However, since the pioneering work of Viner (1955), literature on the subject has also pointed to the potential costs associated with preferential trade liberalization. These costs are usually associated with trade diversion, which may offset the benefits resulting from trade creation. Among other things, the net impact will depend on the degree of openness of the regional agreement compared to that of the rest of the world.⁶

Likewise, the macroeconomic context in which these agreements are implemented affects their results in the same manner in which trade agreements have an impact on the macroeconomy of the countries involved.

The importance of the macroeconomy in trade agreements is derived mainly from the fact that high macroeconomic instability may jeopardize the trade agreement. Real exchange

¹ I would like to thank Luis Castro for his assistance in producing this document and Johanna Rubli for its edits.

² This document is based on a paper that is being elaborated : “El impacto del ALCA sobre los precios relativos” (Machinea, Monteagudo and Watanuki)

³ In the past decade, free trade agreements presented to the World Trade Organization (WTO) increased over 40 percent, according to data from the same organization.

⁴ See Devlin and Estevadeordal (2001) for an analysis of this tendency with particular focus on Latin America and the Caribbean.

⁵ For an example, see Burfisher (2003) and Monteagudo and Watanuki (2002).

⁶ For a _____ review of literature on costs and benefits of preferential trade liberalization see Panagariya (1999).

Preliminary version

Do not quote

rate volatility between partners may be of particular importance, although the behavior of other variables also matters, as is discussed in greater detail in section 2.

In section 3 the possible effect of trade agreements over certain macroeconomic variables is analyzed, in particular, on the external sector and public debt.

Given the negotiations already underway, the paper basically discusses the macroeconomic impacts of trade agreements between Latin American countries and the United States, whether they be bilateral or a result of the creation of a Free Trade Agreement of the Americas (FTAA). Taking into account that the greater impact of a trade agreement in the Western Hemisphere is linked to the participation of the United States, it is especially useful to analyze the experience of agreements which include countries that contrast strongly with regards to their relative development. Included in this category are “North-South” agreements or “North-North” agreements that include countries that are very different in regards to their relative development. Nafta and the expansion of the European Union to include Eastern countries belong to the first category and the impact of the European Union on countries like Spain, Portugal, Greece and Ireland belong in the second.

Finally, in section 4 the possibility of coordinating the macroeconomic policies between countries in the region is discussed.

2. The Macroeconomic Conditions for Successful Trade Agreements

As stated in the introduction, the success of a preferential trade agreement is strongly linked to a series of macroeconomic conditions and in particular, to the preservation of stability of the main economic variables.

Current Stability. To ensure the success of trade openness, whether it is in the context of a unilateral tariff reduction or a preferential trade agreement, it is necessary to reallocate the factors of production _____ between different sectors in a relatively short time frame. To do so, it is important that relative prices give the appropriate signals. This is especially difficult in the context of elevated volatility of the main economic variables, primarily inflation, exchange rate and the product (GDP). Therefore, the first requirement for a successful agreement is that a certain degree of stability exists regarding the principal macroeconomic variables. Without stability, the relative prices will not give the appropriate signals or the signals will not be credible. Within this framework, a process of trade liberalization will only cause an increase in exports, but it will seldom translate into increased investment in the export sectors or, at least, the reallocation of resources will be much slower.⁷ Consequences are evident in terms of growth, employment and the current account deficit (or exchange rate devaluation).

⁷ In order to procure additional investment in the exporting sectors there are certain conditions that have to be met, such as the competitiveness of the economy, an institutional context that clearly states the rules of the game and most importantly, property rights.

Future Stability. Investment decisions are not only based on the behavior of current macroeconomic variables, but primarily on the expectations of their future performance. This is why the manner in which certain indicators evolve, such as monetary variables, fiscal deficit and the levels of public debt, is of particular relevance. Structural reforms that contribute to increase their predictability in the short and long term are also important. Examples of these reforms are the independence of the Central Bank or commitments with respect to public spending or the imbalance of public accounts.

What is the situation in Latin America and the Caribbean concerning the behavior of these variables? Graphic 1 illustrates the progress of the inflation rate and the region's fiscal deficit. As shown, the inflation rate has remained at low levels for the past few years, especially if the history of Latin America is considered. The inflation increase in 2002 is clearly linked to the real devaluation in several countries, but data for the first semester of 2003 show that inflation rates have gone back to the level of international rates similar to those of past years. With respect to the deficit in public accounts, although it is possible to see an important reduction in the elevated levels seen in the early nineties, after 1997 the indicator begins to deteriorate rapidly, causing the region's fiscal deficit to go from 1.3% to more than 3% of the GDP. Taking into account the reduction of the growth rate, or the fall in the level of activity in a few countries, the growth of the fiscal deficit does not seem alarming. However, as long as the starting is a high level of public debt, the persistence of these imbalances may negatively affect the expectations of investors regarding the macroeconomic prospects of the region and thereby notably disturbing capital flows. This seems to be the case in several countries of the region when the development of the public debt in recent years is analyzed (Graph 2). On average, the current level of debt is incompatible with midterm stability. In fact, in the last several years three countries in the region have had to restructure their debt: Ecuador in 1999, Uruguay in 2003 and Argentina (in progress).⁸

Greater stability of the inflation rate does not mean that the region has performed well in terms of the rate of growth. Graph 3 shows a decrease in the growth rate for the last few years and the growing disparity between countries, measured as the standard deviation with respect to the region's average/mean. A considerable volatility of the growth rate not only generates unwanted results in terms of the productive system and poverty but also fosters uncertainty that causes a reduction in investment.

Political Economy. The macroeconomic context not only affects the economic results of a free trade agreement, but also the political economy of the agreement. A trade agreement implies certain costs in terms of reallocation of factors of production and the interests of sectors that have enjoyed high levels of protection are affected. If during the process of implementing a trade agreement the country must adopt adjustment measures to improve the macroeconomic situation, it will be difficult to distinguish between the effects of these policies and those associated with economic openness. Therefore, it is probable that the

⁸ The restructuring followed a halting of payments in Ecuador and Argentina. In contrast, the restructuring of Uruguay was much less traumatic because it did not include a previous payment halt.

forces opposed to the agreement are more powerful than in a situation where the macro-economy does not create additional costs.

Exchange Rate. Among the most relevant relative prices in any integration process, the type of real exchange rate within a region has an important role. A high level of volatility can affect not only the volume of intra-regional trade, but also the political economy of the process. The European "obsession" of reducing exchange rate volatility between the signatory countries is an evident signal of the importance that Europe assigned to that variable in the deepening of the integration process. In fact, the devaluations that took place in some member countries at the beginning of the nineties were one of the factors that contributed to the decision of converging to a single currency with the objective of avoiding such volatility in the future.⁹ Likewise, the high variability of the real exchange rates also negatively affected the needed deepening of Mercosur at the end of the nineties.

Exchange Rate Regimes. The question to be considered is what can countries in the region do to reduce the volatility of their real exchange rates to favor trade integration, while avoiding a succession of competitive devaluations.

The existence of different exchange rate regimes tends to increase the volatility of real exchange rate among the countries in the region. The previous statement is especially true in cases where "polar" exchange rate regimes coexist -as is the case with fixed exchange rate systems ("*hard pegs*") and flexible exchange rates- and the region is exposed to strong and similar external shocks.¹⁰

Therefore, it is convenient that member countries have similar exchange rate regimes.¹¹ The relevance of this recommendation crucially depends on the magnitude of trade with its partners. Graph 4 shows trade between each Latin American country and member countries of the sub-regional agreement, the remaining Latin American countries, and the United States and Canada. As shown, for 18 out of the 32 countries in Latin America and the Caribbean, trade with countries in the region is equal to or higher than 29% of total trade. For South America, trade with Latin America and the Caribbean exceeds this percentage in 8 out of 10 countries. This means that for a large portion of the countries in the region, the existence of exchange rate volatility with other countries in Latin America and the Caribbean could negatively affect trade and the political economy of the integration process.

Since the majority of countries in the region have adopted a flexible exchange rate system, it would be convenient that countries adopt a flexible exchange rate system in order to reduce exchange rate volatility within the region resulting from external shocks.¹² If a hard

⁹ See Eichengreen, B. (1993).

¹⁰ The effects of different exchange rate regimes on the variability of the real exchange rate between partners of an agreement, is illustrated by the Mercosur experience of 1998-2001. See Machinea, J.L. (2003).

¹¹ Eichengreen and Taylor (2002) show that exchange rate volatility is lower between countries with a flexible exchange rate regime and where the main objective of the monetary authorities is inflation targeting.

¹² This comment refers to the benefits from the point of view of the integration process. The choice of an exchange rate regime for a particular country acknowledges the existence of other factors, such as history and individual preferences of its citizens.

peg system is adopted or the extreme solution of substituting the domestic currency by a foreign one is adopted (dollarization), it is imperative that reforms that allow greater flexibility of the nominal variables, and thus the real exchange rate, are deepened.

Alternatively, if trade takes place primarily with the United States, the importance of a flexible exchange rate will diminish.¹³ However, Nafta's experience shows that the two U.S. partners (Canada and Mexico) have decided to maintain a flexible exchange rate, even though the share of the U.S. trade is higher than that of any other country in the region.¹⁴ On the other hand, as Graph 5 clearly shows, the relatively high variability of the exchange rates of both countries with respect to the United States shows that this flexibility is not only theoretical but it has been useful, among other things, in facing non-synchronic external shocks. The non-synchronic nature of real shocks in the Nafta region can be seen in Graph 6. It shows that the terms of trade between signatory countries have been negatively correlated. This behavior is sustained throughout the nineties, even after the agreement entered into force. Excluding CACM, other regional agreements show a positive but very low correlation in their terms of trade. In contrast, the European Union, which has a similar structure of production and, in particular, whose exports are concentrated in industrial products- shows a high correlation of its terms of trade (Graph 6).

Fixed Exchange Rates. If countries for which trade with the United States represents approximately 80% of their total trade have successfully decided to maintain an independent monetary policy, it is rather difficult to accept dollarization in countries that have a less significant trade relationship with that country. However, the choice of a particular exchange rate regime responds in many cases to certain domestic preferences that maybe explained by history or certain peculiarities of these economies. Some possible explanations to the adoption of a fixed exchange rate system may be the belief that a country is incapable of independently managing its own monetary policy or the belief that the adoption of a fixed exchange rate system may help discipline public spending. In this respect, the experience of Argentina shows that even a very rigid regime such as convertibility was incapable of bringing discipline to public expenditure, resulting in an unsustainable dynamic of the public debt. Another consideration for adopting a hard peg or the substitution of the local currency, is the degree of the economy's dollarization. In vastly dollarized economies it is almost impossible to manage monetary policy and, in addition, exchange rate changes may have an extremely negative effect the balance sheets of companies and the government. Graph 7 shows the high degree of dollarization of several economies in the region, measured as the ratio of deposits in foreign currency and total deposits, which on average reach more than 43% for Latin America and the Caribbean.¹⁵ In some cases, a floating exchange rate does not translate into true real exchange rate

¹³ For 20 countries in Latin America and the Caribbean, trade with the U.S. exceeds trade with other countries of the region. In the case of South America, only three countries trade more with the U.S. than with the rest of the region.

¹⁴ See Rojas Suarez (2002) and Eichengreen (2002).

¹⁵ Late 2001 data was considered. At that point, Argentina stopped being a country with a high degree of dollarization of the financial system as a direct consequence of the compulsive conversion of credits and deposits into pesos. Calvo and Reinhart (2002).

flexibility for fear of its impact on the balance sheets of companies and the government.¹⁶ In such cases, uncertainty about the behavior of the real exchange rate prevails and the benefits associated with a more flexible exchange rate regime are foregone..

Regarding the paragraph above, the region's recent experience shows that the higher the degree of an economy's dollarization, the higher its vulnerability to external shocks and domestic misalignments. Even though dollarization can have short-term benefits by allowing a greater degree of financial deepening and lower interest rates, its costs are apparent in the medium term. These costs will be higher when i) trade with the United States is lower; ii) external shocks are greater; iii) the degree of openness is lower; and iv) the possibility of achieving a given level of reputation in the medium term through monetary policy management is higher.

“Readiness”. Jeffery Schott (2001) created an index that tries to show how well prepared countries in the region were to take full advantage of a regional trade agreement. The index, which is presented in Box 1, is the result of a combination of economic indicators related to a “suitable business environment.” Keep in mind that in such a volatile region, history, even recent history, is not necessarily a good indicator of current and future behavior of the macroeconomy of these countries. In fact, countries that until recently had a satisfactory record of behavior according to Jeffrey Schott’s indicators, faced a considerable economic downturn in 2002 (Argentina and Uruguay).

Finally, the possibility of reaching a successful macroeconomic agreement not only depends on the macroeconomic conditions, but on the performance of institutions, especially those directly associated with establishing an attractive investment environment. To illustrate this, Graph 8 shows a ranking of countries in the region according to an index that attempts to portray in summarized format the performance of institutions in each country in 2002.¹⁷ The indicators represent compliance with the law, control of corruption, political stability, quality of regulation, government effectiveness and societal control.

In summary, to take full advantage of all the possibilities that the FTAA has to offer, countries in the region must work to maintain the stability and predictability of their main macroeconomic variables, reduce the rates of dollarization of their economies, and to the extent possible, adopt floating exchange rate regimes or improve the flexibility of nominal variables when adopting a fixed exchange rate. They should also maintain a "friendly" outlook towards private sector investment. In the absence of these conditions, it is difficult to believe that free trade agreements will bring benefits to member countries, especially taking into consideration that economic liberalization increases competition between countries that are looking to attract investment.

¹⁶ Calvo and Reinhart (2002).

¹⁷ The index has been created using data by Kaufmann, Kraay and Mastruzzi (2003). The information is the result of a series of interviews to a large number of companies, citizens and experts from developed and developing countries by various organizations in 2002 and using different methods. The heterogeneous nature of the sources and the methodologies followed affect, as the authors themselves recognize, the relative position of countries ranked to be susceptible to significant margins of error. Consequently, the relative positions in the ranking do not reflect in any way the opinion of the IDB or its Advisory Board over the institutional condition of any country.

3. The Impact of Trade Agreements on the Macro Economy

As stated in the introduction, free trade agreements affect the macroeconomy differently.. Three areas are of particular important:

- 1) The institutional framework
- 2) The foreign sector
- 3) The public accounts and debt

In what follows, an initial evaluation is presented on the possible macroeconomic implications of a free trade hemispheric agreement, such as the FTAA, on Latin American and the Caribbean countries. Before doing so, the following must be taken into account. Countries in Latin America and the Caribbean have certain common peculiarities but at the same time, a considerable amount of diversity exists. Table 2 shows the total gross domestic product and the GDP per inhabitant for all the countries in the region. The coefficient of variation and the distance between extreme values are examples of the vast differences between countries. Therefore, any consideration about the macroeconomic impact of trade agreements on countries in the region must be pondered by the diversity mentioned above, and consequently all comments made in this section must be taken solely as illustrations of these impacts.

3.1 The Institutional Framework

There has been an increasing amount of literature about the positive impact that institutions have on the growth rate. Furthermore, Rodrick, Subramanian and Trebbi (2002) present evidence that the institutional framework is the most important variable in explaining growth. The most relevant institutions are those that have to do with property rights and law compliance.

From the point of view of integration agreements, it is relevant to analyze the way in which these agreements impact institutions and hence, growth. From the point of view of this paper, it is important to evaluate the degree in which trade agreements improve the macro economic situation of member countries, among other things, through the improvement of the institutional framework.

The impact of trade agreements on macro economic variables recognizes two channels: the indirect, through institutional improvement, and the direct. An example of the improvement of the macro economic context through the institutional channel is the independence of the central bank and the impact of property rights on the availability of internal and external credit. An example of the latter would be the impact of the Maastricht Treaty over the fiscal deficit and the interest rate of some member countries of the European Union.

a) The effect integration has on institutions.

In analyzing the impact of trade openness on institutions, Wei (2000) finds a positive relationship between the degree of “natural openness” and the decline of corruption. However, the relationship is not maintained when “residual openness” is the dependent variable. Given that “natural openness” only includes geographical and size factors and the trade policy is part of “residual openness” this means that trade agreements cannot improve institutions.¹⁸ Rodrich, Subramanian and Trebbi (2002) do not find that trade openness has a positive effect on the growth rate,¹⁹ but they do show a positive relation between trade openness and institutional development.

The relevant question at hand is why greater openness, and especially trade agreements, can improve institutions. An argument outlined by Wei (2000) is that a greater degree of openness increases competition and with it the competition for the allocation of investments. In other words, within the context of greater openness there are fewer incentives to produce in markets where products are sold. Therefore, there is greater flexibility in investment allocation.²⁰ In this context, institutions become more relevant. The greater importance of institutions in deciding the allocation of investments will depend on three factors: the characteristics of the partner, the number of partners and the depth of the agreement.

- i) **Characteristics of the Partner.** Competition through institutional improvement will be more relevant the higher the institutional quality of the members of the agreement. In general, this implies that North-South agreements should be more efficient in improving the institutional framework than South-South agreements.
- ii) **The Number of Partners.** The higher the number of partners the greater the competition to attract investment.
- iii) **The Depth of the Agreement.** If an agreement eliminates the possibility of utilizing the exchange rate or other incentives to investment, attraction of investment will be associated to a larger extent with other disciplines, which the institutional framework will be particularly relevant.

The other reason for believing that a trade agreement can improve the institutional framework is through the **obligations imposed by the same agreement**. It is obvious that this is the case with regards to issues specifically related to trade, as is the impossibility of unilaterally changing the rules of the game in this field. However, as the agreement begins to incorporate other disciplines, such as trade and competition in the services sector, transparency in government procurement and the treatment of foreign investment, it is expected that institutional improvement will be broader than that solely related to the trade

¹⁸ It is difficult to explain the reason behind the diverse impact different levels of openness have on corruption. What the author does not explain is if total openness (natural and residual) is a good explicative variable of the levels of corruption.

¹⁹ See Rodriguez and Rodrik (2001) for an analysis of literature on openness and growth. Jones (2001) offers empirical evidence on this debate.

²⁰ The impact will be higher in larger countries, since the advantage of a large domestic market is lost in a free trade area.

in goods.²¹ Nonetheless, the role of the agreement in this area crucially depends on the behavior of the country in these areas in the previous period, i.e. on the extent to which the country made progress on these disciplines before signing the agreement.

It is clear that institutional improvements positively affect the rate of growth. It is also clear that institutional improvements related to property rights should improve the behavior of certain macro variables, for example credit supply and consequently the interest rate. What is not so obvious is associated with the fact that institutional improvements related to trade agreements should improve the performance of the macro economy. It is not evident why institutional reforms associated with the agreement should also affect other institutions more closely linked to the macro economy. Nonetheless, there is a similar reason to believe that trade openness should improve the institutional context in general: greater competition in the allocation of investment. This greater competition obviously includes institutions related to macro economic behavior. Under similar conditions, investors will be more willing to invest in a more predictable country from a macro economic standpoint.

b) The Direct Impact on Certain Macro Economic Variables

In principal, there are no reasons to believe that a trade agreement could improve the macro economic context through factors other than competition for investments associated to the agreement. If at least one of the partners has a “good” reputation, the only case in which this outcome would occur is if certain macro economic coordination mechanisms existed, and in an extreme case, a common currency is adopted. This would be the mechanism by which reputation could have a positive impact on the less credible partner. In other words, the existence of rules that imply a greater commitment to a rational management in the macro economic area can generate positive externalities for countries with a lower reputation. The effect of the Maastricht Treaty on the macro economy of some member countries of the European Monetary Union is a clear example.

3.2 The Foreign Sector

This section discusses the impact on the foreign sector, in particular the exchange rate, of a free trade agreement in the Western Hemisphere. To this effect, the trade component, foreign investments, and other capital flows are considered. Finally, productivity is also discussed.

a) Trade Component. Even though a trade agreement always increases the degree of openness of an economy,²² its impact on exports, imports, and the exchange rate depends on two factors: the level of tariff reduction and other restrictions to trade, as well as the size of the economies involved. Both factors are discussed below.

²¹ See Blanco and Zabludosky (2003).

²² The higher openness will be a function of the size of the countries involved in the agreement, their level of their initial bilateral tariff protection and their trade policies with respect to third countries.

i) Initial Level of Protection. The impact of tariff reduction on the trade balance depends on the initial level of protection. Tariffs in Latin American and the Caribbean countries, except for member countries of the CACM, are between three to five times greater than those of the United States (Table 3). The difference is greater when one considers that some countries have already obtained important tariff reductions to access the American market. This is the case of the CACM and the majority of countries in the AC.²³ Also, with the creation of the FTAA these countries would gain preferential access to other countries in the region. However, they would lose the relative advantage they currently enjoy of access to the American market, which stems from their preferential agreements with the United States.

It must also be taken into consideration that as opposed to transitory agreements, a free trade agreement ensures access to the North American market. The importance of this factor is very difficult to evaluate even though it may be significant in terms of FDI.

Therefore, excluding the size of the countries involved, for some countries the FTAA is similar to a unilateral reduction of tariffs, and should therefore result in imports of Latin America countries growing more than their exports. By the same token, it should result in a tendency to depreciate the real exchange rate. It is also probable that in the short-term, imports will react faster than exports, given that the later require investments which will take time to materialize and provoke an increase in production. Therefore, the trade imbalance and/or the depreciation should be larger in the short-term than in the mid to long-term, i.e. once the factors of production have “repositioned” themselves.

However, this conclusion may vary for some countries, depending on whether or not the negotiations include quantitative restrictions and specific tariffs that are currently applied in the U.S. market.²⁴

ii) Size. A reduction in import prices makes the demand for these products increase more in large country than in a small country. . The importance of this effect has been analyzed while discussing the impact of a tariff reduction on the terms of trade for different country sizes. The larger the size of an economy, the higher the possibility that a tariff reduction results in an increase in the international market price when domestic demand for imports increases. Therefore, if the tariff reduction was the same in the large (the United States, for example) and the small country, the prices of exports in the small country should be greater than that of imports. This is equivalent to an appreciation of the equilibrium exchange rate in the latter country.

iii) In summary, if the tariff reduction is smaller in the relatively larger country, there are two opposing effects: the smaller tariff reduction -compared to other countries- tends to improve the trade balance, while the larger size tends to deteriorate the terms of trade and, thereby, negatively affect the trade balance. Therefore, from a conceptual standpoint, a

²³ As regards to AC export to the American market, under the hospice of the Preferential Trade Andean Pact, the average tariff fell more than 50 percent since 1999 to the present. Under the initiative of the Cuenca del Caribe, and other preferential programs, at present 74 percent of the imports from Central America and the Caribbean enter free of tariff to the United States. USTR(2003).

²⁴ For an assessment of the importance of the specific rights and quantitative restriction in the U.S market, see Markos Jank (2002).

U.S. agreement with other countries in the hemisphere has an ambiguous effect on the balance of trade or the equilibrium exchange rate. Whether the impact is on the resulting trade balance or the real exchange rate, will depend on whether the trade imbalance is offset by capital flows - a topic to be discussed further on. Should the initial trade balance remain, the adjustment must take place through variations in the exchange rate.

Computable General Equilibrium models usually assume that the trade balance remains at the level prevailing before the agreement entered into force. The simulations under these models suggest that the creation of a free trade hemispheric zone would result in a depreciation of the equilibrium exchange rate in Latin American countries. This depreciation will be greater if the United States does not further its initial FTAA proposal, which only includes the reduction of MFN tariffs.²⁵

b) Foreign Investment

i) Investment in Goods Traded Internationally. It is usually stated that a free trade agreement increases direct foreign investments in the countries that take part in the agreement. The main reason behind this is the expansion of the market as a direct consequence of the trade agreement, which allows exporting from a particular country to the rest of the region, and ultimately to the world.²⁶ This is due to the fact that market growth is greater for the relatively smaller economies that participate in the agreement, which should be the ones that benefit the most.²⁷ However, this can also negatively affect direct foreign investments. The negative impacts reach horizontal types of investments, whose purpose is to “skip” the tariff barriers in the recipient country (“tariff jumping”); a typical investment in the process of import substitution. This investment loses the incentive associated to the tariff, at least within the region, and should therefore be reduced.²⁸ Given that the horizontal type of FDI is especially important in countries of greater relative size, they are the ones that should suffer the negative impacts the most.

ii) General Foreign Investments. To the extent that the free trade agreement includes other disciplines, like the treatment of foreign direct investment, or the opening of the services sector to competition and private investment, it is probable that the foreign direct investment that primarily targets the domestic market will increase. In this case, foreign investment will be larger in relatively bigger countries; a process similar to the previously mentioned horizontal investment, which is fueled by import tariffs. This effect will be of least importance for countries of the region that have advanced the most in the privatization of public utility firms, countries that have modified in the last couple of years their legislation on foreign investments in order to make it more attractive to investors, and

²⁵ See Monteagudo and Watanuki (2002)

²⁶ Whether for exports of final goods or to integrate production chains. For a detailed analysis on the relation between foreign direct investment and regional integration see IPES(2002), Chapter 10.

²⁷ We are assuming that all the variables that affect investments do not depend on the size of the country. Taking under consideration that market growth is considerable in any of the countries involved, given the importance of the American market, what can at least be confirmed is that the smaller size is not a factor that affects foreign direct investments negatively, like in the case of the tariff jumping effect that will be explained later.

²⁸ FDI from outside the region can increase as a result of the incentive associated to the broadening of the market.

for those that already have bilateral investment protection agreements in place (Table 4).²⁹ Likewise, it is possible to suggest that the agreement can affect the institutional context and the macroeconomic context in general, with a positive impact on investments (see the discussion in section 3.1).

iii) Number Countries that Conform the Agreement and the Structure of Relative Prices. Although it is evident that explaining international trade depends on other variables besides the relative prices of the factors of production, it cannot be denied that the inclusion in the agreement of other countries with different factor endowment should explain the increase in trade and therefore, the investment associated with it. Most likely, this is one of the reasons for the increase of foreign direct investment in Mexico and for the increase in its trade to and from other NAFTA Members. The key question here is what happens when a new country having a factor endowment similar to that of “older members” joins the agreement.³⁰ In this case it is not evident that the response to foreign investment in “newcomers” will be similar to that in countries that originally joined the agreement. The reason is that trade, which basically depends on factor endowment, would have already generated investment in the country with a similar factor endowment and that already belongs to the agreement. However, the “newcomers” will at least eliminate the negative discrimination that they previously experienced for not forming part of the agreement. This statement applies for example to various countries in Latin America, especially to Central America and the Caribbean, in relation to Mexico in the context of an agreement with the United States.³¹

With the objective of analyzing differences in factors intensity among the countries that would join the FTAA and the European Union, we have constructed various indicators considering the variables for which we have homogenous information: average salary, income per-capita, ratio GDP-Capital and the proportion of a qualified labor force.

To the extent that the factor endowment of the countries that will join the agreement in the future is similar to that of one or more of the member countries, the effect of the relative factor endowment will be less important. To this end, Table 5.a shows the coefficient of variation of the different indicators for the countries in the sample, as well as the difference in factor endowment (in its diverse forms) between extreme cases.³² For all the variables considered, Table 5.b shows the ratio of standard deviation between the United States (or the European Union) and the countries in Latin America and the Caribbean (or Eastern Europe), with respect to the difference between the United States (or the European Union) and Mexico (or Spain).³³ The closer the indicator is to one, the closer new members will be

²⁹ As it can be seen in Figure 2, twenty-two countries of the region, excluding the United States and Canada, have signed at least one bilateral investment agreement (the regional average is eight agreements per country). The activity has been intense within the region, with more than 60 agreements signed among Latin American countries. It has also been intense outside of the region, as almost one hundred agreements have been signed between these countries and some members of the European Union. The number of agreements signed with the United States is lower, only nine, reaching 17 if the ones negotiated with Canada are included.

³⁰ The most obvious case is the incorporation of other countries of the region to an agreement with the United States or the creation of the FTAA.

³¹ See Monge Naranjo (2002) for an analysis of this effect.

³² The difference is measured as the indicator for the country with the highest average salary, per-capita income, capital per labor force and higher qualified labor, and the average of the three countries with lower values for these indicators.

³³ Spain's inclusion as a country with the least relative development in the EU is justified by the lack of data for other countries with low income per-capita.

to the existing member. As the indicator increases (over one), the new members will have a factor endowment that is more distant from that of the more developed country than what is the case between this country and the less developed country of the agreement. Consequently, this will be a sign that the new members are “different” (from the standpoint of factor endowment) from the less developed partner.

The following conclusions arise from the examination of both tables:

For the variables considered, the coefficient of variation -which measures the dispersion between countries- for the future members of the FTAA is a little more than twice the one for Latin American countries (Table 5.a).³⁴ This is a clear indicator of the low dispersion of factor endowments in the region. A similar result is obtained when the coefficients of variation between countries of the EU enlarged and Eastern European countries are compared. However, in this case the difference is slightly less than two, which is basically a result of the greater difference in factor endowments between the United States and Latin America than the one that exists between countries belonging to the European Union and Eastern European countries.

The “distance” indicator between countries that are more capital intensive and the three countries with less capital intensity (including within this definition qualified labor force) is, for the countries that would conform the FTAA (including the U.S.), approximately three times higher than the one that results from estimating the same indicator only for the countries of the region. The difference is two when the same indicator is calculated for the EU (Table 5.a).

Table 5.b shows that the difference in factor endowment between the new partners and Mexico is very small, particularly with regard to hourly wages and the importance of qualified labor, when compared to the difference between the United States and Mexico (Column 1.) When only the countries with factor endowment less capital intensive than Mexico are included (considering the average wages and the income per-capita within this category), the indicator does not change significantly (Column 2). When the indicator for Eastern European countries is calculated, a notable difference with the Latin American case is observed. In this case, the difference in factor endowment between the new members and the members of the European Union is twice the one existing between the European Union and its least developed partner. Obviously, in this case there is a clear difference in the intensity of the labor force and particularly in the salaries of the new members with respect to current members.

In summary, the similarity between the different indicators of relative capital endowment / labor between countries of Latin America and the Caribbean and Mexico, shows that relative factor endowment hardly explains an increase in FDI in the countries of the region similar to that experienced by Mexico. In other words, although the countries of the region differ greatly, they are relatively similar when compared to the United States.

³⁴ Caribbean countries are not included due to a lack of data.

However, there is a topic that deserves special consideration, which is the one related to the qualification of the labor force and the salary level. Although, when compared to the United States, the qualification of the labor force among countries of the region is not too large, this difference may be sufficient to motivate certain types of investment that have not yet been allocated to Mexico. For example, the existence of qualified labor force coupled with a relatively low salary seems to explain the presence of Intel in Costa Rica, Monge-Naranjo (2002). It is therefore necessary to note that Costa Rica is one of the sample countries that show the most qualified labor force in relative terms. Also, when the salary level weighs this indicator, this country appears, along with Venezuela, as the country with the relatively lowest salaries given the qualifications of its labor force.³⁵

Finally, it is worth remembering that the relative factor endowment is only one of the elements that explain trade and therefore the FDI associated to it. Natural resources, institutions, and the macroeconomic context are some of the other variables to consider.

iv) Some Integration Experiences: European Union and NAFTA

- **European Union.** The role of Spain, Portugal, Greece, and Ireland in relation to other members of the European Community could be considered similar to the impact of North-South agreements on developing countries.³⁶ Just as Tables 9.a and 9.b show that the participation of foreign investment, measured as the share of worldwide foreign investment, in Spain and Portugal grew considerably in the five years prior to their accession to the EU in 1986. The increment was around 52% in Spain, and more than 200% in Portugal. The higher levels of investment remained in both cases during the next five years and later decreased, reaching levels in Spain that were below the levels seen prior to the agreement. This behavior would be showing a type of “stock adjustment” to the new situation. In the case of Ireland, there was also a strong initial increase investment after its accession to the European Union in 1973. The increment was almost 300% and it later fell back to previous levels, and even below them (Table 9.c). The most important increase in the levels of investment took place twenty years after its admittance to the EU and was greatly in response to the reform policies launched by the country. Foreign direct investment in Greece as a percentage of global foreign investment fell abruptly since the start of the agreement (Table 9.d). Greece’s experience, who joined the Community at the same time as Spain and Portugal, reveals the significance of domestic policies: entry into the European Community did not generate the same response of foreign investment in all the countries. The reason can surely be found in the different policies that were launched in each one of them. As an approximate indicator of macroeconomic stability, Graph 10 shows the evolution of the consumer price index 15 year after these countries joined the Community. As can be seen, Greece shows a relatively high inflation rate.³⁷

³⁵ The measure is not too precise because the salaries of the qualified labor force are not available and only the average salary of the economy is available.

³⁶ The limits in this analogy, are given by the fact that the GDP per capita of these countries was between 40 to 50 of the other members of the agreement. In Latin America the income per-capita is an average of 10 percent than that of the United States.

³⁷ The inflation rate is used in some econometric studies to show the macroeconomic context. (See Levy Yeyati, Stein Daude, 2002)

- **European Union and Countries of Eastern Europe.** Foreign direct investment in Eastern European countries, “candidates” to join the European Union,³⁸ has risen as a percentage of global investment almost a 558% since the beginning of the “accession” process in 1991, even when taking into consideration the great differences between countries.³⁹ As Graph 11.a shows, FDI has concentrated in the countries of higher relative development and size, like Poland, Hungary, or the Czech Republic. However, just as it appears in Graph 11.b, FDI also reaches important levels in “small” countries or of a smaller size if measured as a percentage of the GDP. As explained in the next section, it is estimated that full membership of these countries to the European Union can signify an important increment in their inflows of direct investment.

- **NAFTA.** Although foreign investment has significantly increased in Mexico as a result of NAFTA, it has not shown, with the exception of the period 1994-95, an increase with respect to the total FDI that Latin America received as a whole during that period (Graph 12). Considering that the rest of the continent privatized more than Mexico, we have included in the same graph FDI excluding capital flows due to privatizations.⁴⁰ Although Mexico’s share of total FDI inflows to the region increases significantly, the tendency of a reduction in Mexico’s share of regional FDI remains during the period following the creation of NAFTA. Possibly the tendency would be different if it were possible to disaggregate foreign investment by the sector to which it has been directed, and analyze the behavior of investment in production activities of internationally tradable goods. As a consequence of its enhanced process of liberalization, it is to be expected that investment in Mexico sensibly increased in the production of tradable goods, while in other countries of the region, for example Argentina and Brazil, the investment seems to have mostly concentrated in the services producing sectors. As an approximation, not too precise in relation to that indicator, Graph 13 shows FDI disaggregated between mergers and acquisitions, and capital stock increasing investment (*greenfield investment*). As shown, during the period under analysis FDI in Mexico was considerably higher than in Latin America when mergers and acquisitions are excluded.

v) Econometric Work

The analysis of a few special cases allows us to discuss in greater detail certain experiences that mostly resemble the ones that would result in free trade agreements with the United States. In turn, the problem with case study is that it is very difficult to distinguish the impact on foreign direct investment from other variables. Therefore, econometric studies that include various control variables seem necessary complements. In relation to this, two

³⁸ Bulgaria, Romania, Latvia, Lithuania, Estonia, Slovakia, Poland, Hungary, Czech Republic, and Slovenia.

³⁹ The FDI increment not only reflects the expectations of joining the European Union, but also the process of construction of capitalism in these economies, including in many of them the privatization of public enterprises.

⁴⁰ The calculation subtracts from foreign direct investment flows – UNCTAD (2002) data- revenue from privatizations, which were estimated as “earnings in foreign exchange from privatization.” This data was obtained from the database on privatizations of the World Bank (2002). For a few years and some countries (3), in which there were discrepancies between both sources of data, it was assumed that the privatizations were 100 percent equal to their revenue flows. For Argentina, the discrepancies in 1990-1993 were adjusted by subtracting from earnings from privatizations profits based on data from the Ministry of Economy (2001).

recent studies analyze the impact on FDI of different integration agreements.⁴¹ The studies show that free trade agreements importantly increase foreign investment. This increment depends on a set of factors, among which the expansion of the resulting market due to the agreement is the most relevant. Other important variables are privatizations, the institutional and macroeconomic context and the degree of openness.

Utilizing the coefficients estimated in the work of Levy and Yeyati et.al. (2002), the stock of foreign direct investment in Latin American countries increases as a result of the formation of the FTAA from around 20% in the countries of greater relative size to more than a 100% in the smaller countries. Assuming that the increase of the stock of capital from foreign investment takes place in a ten-year period, the increase in the annual flow of foreign investment would be equivalent to 0.5% of GDP in the least open countries of the region (for example, Argentina and Brazil), 1.2% in the countries of Andean Community, 3.5% in Central American countries, 4% in Chile, and between 5% to 10% in the Caribbean nations.

Utilizing a different model, Buch and Piazzolo (2000) calculate that foreign direct investments inflows in Eastern European countries could duplicate after they become full members of the European Union. The current levels of FDI are higher than those suggested by the model for countries of larger relative size. This would appear to indicate that the size of the recipient country is an additional explanatory factor.

A paper by the Central Bank of Mexico,⁴² which includes various control variables, estimates that NAFTA explains around 40% to 70% of the investment in Mexico. However, in line with the “stock adjustment” of the desired FDI observed in other cases, the model underestimates the investment in the first years and overestimates it in the second half of the nineties.

In summary, the empirical evidence supports the idea that direct investment increases with a free trade agreement. Its importance is greater when the agreement allows access to larger markets, in other words, when we speak of agreements that include developed countries.⁴³ It is also to be assumed that its relevance will be greater when other disciplines are included besides the trade of goods. An example of this is the inclusion of services and the treatment of foreign investments, even though the econometric estimations have not included these characteristics of the agreements as explanatory variables. The impact will obviously be greater when the agreement shows a strong divergence with the current situation.

Case studies seem to show that one of the characteristics of foreign investment is that it increases considerably during a limited period of time, and then it returns to levels that are similar to or lower than the ones that prevailed before the agreement was signed. This

⁴¹ Levy Yeyati, Stein and Daude (2002 and 2003)

⁴² Cuevas, Messmacher and Werner (2002)

⁴³ This effect can also occur in agreements that only include developing countries, when the difference in size between the members is considerable. An obvious example is the importance that Uruguay and Paraguay assign to their access to the Brazilian market, and to a lesser degree to Argentinean market.

behavior seems to be showing an increase in the desired stock of foreign investment and a quite fast adjustment to the new equilibrium condition.

Ultimately, case studies and the econometric analyses show that an integration agreement is not sufficient to increase investment. Without sound institutions and a reasonable macroeconomic context, it is not realistic to expect an increase in foreign direct investment. As Levy Yeyati et.al. (2003) point out, "...the earnings in terms of FDI are probably distributed in an uneven manner. Our results indicate that beyond the role of market opening and factor endowment, there is a group of factors that determine the appeal of a country and these factors will have an important role in determining whether or not a country will benefit from the process of integration."

Real Exchange Rate. FDI inflows will cause an appreciation of the local currency in the short term, however their medium term effect is not evident. Among other factors, it will depend on whether or not the investment is directed to the sector of internationally tradable goods. If so, it is possible that the improvement of the trade balance associated with the investment offsets the long term effect of funds outflows resulting from an increase in the item of the current account "payments of foreigners" earnings."

It may be argued that although the long term competitiveness of tradable goods increases independently from the sector in which the investment takes place (tradable or non-tradable goods), the effects can vary greatly in the short and medium term. The competitiveness of tradable goods increases when a huge investment is done in non-tradable goods as prices of the latter decrease, which is equivalent to an increase in the real exchange rate. However, the reduction in prices of non-tradable goods may not be evident in the short term, perhaps because the productive sectors may be less competitive (due to lack of foreign competition).⁴⁴ In other words, the higher investment in non-tradable goods can take a long time to translate into price reductions and therefore the effect on the competitiveness of the sectors that produce tradable goods can take a considerable time.

Given a level of investment, the magnitude of the impact on the short-term exchange rate will depend on the level of openness. The more closed the economy is, the bigger the impact from a particular investment (in terms of GDP) on the real exchange rate. Simulations under a General Equilibrium model show that capital inflows equivalent to a 1% of GDP cause a short term appreciation of the exchange rate at levels of 4-5% in very closed economies like Argentina and Brazil, 2.5% in Chile and the countries of the Andean Community, and 1% in more open economies like Central America.⁴⁵ Considering that according to the previous discussion the rise in FDI foreseen in the model of Levy Yeyati et.al. (2002) is greater in smaller and more open economies, both effects tend to balance on their impact on the appreciation of the exchange rate.⁴⁶

⁴⁴ If a monopolist sets the price below the price that maximizes profits (marginal revenue equal to marginal cost), the increase in productivity will not allow any reduction in prices as long as the equilibrium price exceeds the he controlled price. This situation is relatively normal in the case of the price of privatized public services, where a tariff is set by the government.

⁴⁵ Machinea, et.al. (2003)

⁴⁶ With the parameters used, the appreciation associated to the increase in FDI would be in the range 2.5 to 4 percent. The exception being Chile, whose appreciation for this concept would be around ten percent.

c) Capital Inflows (excluding Foreign Direct Investment)

In principle, there is no reason to believe that a free trade agreement will increase portfolio investment in member countries. However, as long as the agreement helps improve the expectations about less credible members, including about their growth rates, it may be possible that investment inflows associated to such improved expectations will increase. The reasons behind this behavior are not evident and depend greatly on who are the partners of the agreement, as well as its depth. In this sense, a South-South agreement does not seem to have an important positive effect on these expectations. In contrast, it is more probable that a North-South agreement has that impact (EU and NAFTA), although the depth of the agreement also seems to be crucial. It is not the same to participate in an agreement with Europe, where besides structural aid funds a decision has been made to move forward with a single currency, with a predictable impact on the interest rates; than in NAFTA, or eventually the FTAA, where none of these compromises exist.

Graph 14 shows the behavior of net private capital flows of foreign direct investment in some countries in years prior to their accession to a free trade agreement. A first observation is the high volatility of these flows. It is also apparent that net capital inflows increased in the countries with the least relative development in Europe (Ireland, Spain, Greece, and Portugal) prior to joining the European Union. On average, capital inflows in these countries increased from a 0.5% of GDP in the three years prior to the agreement, to 1.4% in the six years after the agreement, and to 2.9% in the six subsequent years. In the case of Mexico, capital inflows, excluding FDI, do not seem to have increased as a result of NAFTA.

Capital inflows in countries that joined the EU in 1986 (Spain, Greece, and Portugal) was particularly high during the nineties, i.e. after the implementation of the Maastricht Treaty, which established convergence criteria and introduced a common currency. From this point on, capital inflows increased in response to the reduction in exchange rate uncertainty and to take advantage of interest rate differentials.

d) Productivity. The increase in productivity associated to foreign investment in trade integration processes has been documented in different papers.⁴⁷ Although this effect is especially relevant in the mid to long term, it is hardly relevant in explaining the variations of exchange rate in the short term.

In summary, we have discussed the impact that a free trade agreement that includes the United States and Latin American and Caribbean countries would have on the foreign sector and, in particular, on the real exchange rate. From the standpoint of the impact on trade, the exchange rate should depreciate in Latin American and Caribbean countries. The effect is possibly higher in the short term given that the increase in exports would be a result of investment in tradable goods, which may take a certain period of time to have any effect. The improvement in competition -via the exchange rate- needed to tackle the process of trade liberalization could be compensated by an increase in competition resulting from structural reforms.

⁴⁷ For Mexico and Brazil see the work of Lopez – Cordoba and Moreira – Mesquita (2003)

On the other hand, foreign investment inflows tend to appreciate the exchange rate, at least in the short term. Its mid term effect is not clear since this will depend, among other things, on the destination of the investment, in particular if it is directed towards increasing production of internationally tradable or non-tradable goods.

The net short-term effect is difficult to determine and will depend on individual countries. In particular, it must be taken into consideration that the trade effect associated with greater opening will always be present, while foreign investment depends on a set of factors that are difficult to determine beforehand.

Depending on its magnitude, an appreciation of the exchange rate associated to foreign investment may be sustained in time by the positive effect on productivity and trade flows. However, this is not necessarily true with other capital flows that tend to appreciate the exchange rate with dubious effects on productivity. Therefore, the coexistence of liberalization processes coupled with an increase in capital inflows destined to investments in financial assets tends to have a negative effect the allocation of resources. The experience of Latin America is illustrative in this regard and countries of the region must be aware that an appreciation at the beginning of the process of liberalization associated to short term capital inflows should be avoided through different economic policy instruments.⁴⁸

A Final Comment on the Exchange Rate. Beyond what was previously discussed regarding the impact of tariff liberalization and other factors on the exchange rate, it is possible to state that exchange rate variations in Latin America and the Caribbean over the past few years have been strongly linked to the flow of capital, be it in the form of FDI or portfolio investment. During the nineties, a period characterized by strong capital inflows, the exchange rate throughout the region has shown a sustained tendency towards its appreciation, as Graph 15.a shows. Since 1998 in South America and 2001 in CACM and CARICOM, this tendency begins to change as a result of the “sudden stop” in capital flows.

As long as movements in the real exchange rate of countries of the region are determined by common exogenous factors, there must be a common tendency for these exchange rates to move in similar fashion. The co-movement of real exchange rates can be captured through the analysis of principal components, a statistical method that estimates a “principal component” that explains the common variations of a set of time series and establishes a summary indicator of their degree of correlation.⁴⁹ Using this methodology for monthly series during the nineties, it has been established that the first component explains 60% of the variation in the real exchange rate with respect to the dollar in countries of CACM and CARICOM, and 58% in the case of South America (excluding

⁴⁸ These instruments range from the application of certain restrictions on short term capital inflows (*a la* Chile and Colombia), to countercyclical fiscal policy.

⁴⁹ For a technical explanation of the method of principal components and its applications see Jolleffe (2002).

Preliminary version

Do not quote

Venezuela).⁵⁰ This is proof of the importance of external factors in the determination of the real exchange rate in the region. It also proves that variations of the real exchange rate depends on other factors.

The fact that variations in the region's exchange rates are correlated implies that, in order for the effective real exchange rate (currency basket) to change in a given country, the changes in the exchange rate with respect to the dollar must be higher.⁵¹ In other words, taking into consideration the importance of intra-regional trade, devaluations in the different countries tend to partially offset each other. The result is a variation of the real exchange rate with respect to a currency basket - that evidently includes the currencies of the trade partners-, which is below the exchange rate with the dollar. This can be seen in Graph 15.b for South American countries. It shows that the depreciation of the real exchange rate with the dollar has been much more pronounced than with respect to a currency basket. Consequently, there is a greater correlation of the exchange rate with respect to the dollar than of the effective real exchange rate.⁵² For South America, the higher correlation can be observed by dividing the decade of the nineties into sub-periods. Except for the period 1996-98, Graph 15.c shows that there is a higher correlation between the exchange rate with respect to the dollar than with respect to a currency basket. The difference is particularly important during the period when capital inflows heavily decreased in the region (1999-2002).

In summary, the analysis of section 3.2 discusses the impact of a regional integration agreement on the exchange rate. However, it must be noted that the movements of the exchange rate throughout the region are in many cases explained by factors over which the countries have no control.

3.3 f.

a) Tax Collection and the Fiscal Deficit

A free trade agreement initially has a negative impact on tax collection as a consequence of tariff reductions. The reduction will be greater the larger the share of tariffs in total tax collection and the greater the amount of imports from the region with which the agreement is signed. Table 6 shows the importance of tariff collection as a percentage of total tax collection and as a percentage of tax collection by the central government for countries of Latin America and the Caribbean. Although their importance has declined since 1990, tariffs continue to represent on average around 12% of the total tax collection of central governments of countries in the region and accounts for almost two points of their GDP.

From the standpoint of the effort that must be made to compensate this drop in tax collection, it is appropriate to consider the central government and not the income of the

⁵⁰ The correlation diminishes to 52 percent after Venezuela is included, where the behavior of the exchange rate has been highly associated to the oil price and to particular domestic problems.

⁵¹ The effective real exchange rate is calculated as the real exchange rate (nominal exchange rate divided by domestic prices and multiplied by the prices of the other countries) with respect to the main trade partners, weighted by the share of trade with each country.

⁵² In fact, the first component for this indicator explains alone the co-movement of the effective real exchange rate for countries of Latin America (58 percent in the ratio with respect to the dollar).

public sector. In other words, revenues from social security and from local governments should be excluded. The reasons are: a) the loss in tax collection pertains to the central government, b) transfers to local governments are usually unrelated to tariff revenue and c) social security expenditure is unrelated to the collection of tariffs from foreign trade. As seen in Table 6, the difference between total tax collection and that by the central government is significant in many countries of the region.

Table 7 shows the loss in tax collection as a percentage of tax collection by central government and as a percentage of GDP by sub-regions, resulting from implementing the FTAA. Two comments about these figures. First, the estimation assumes that there is no import diversion, meaning that imports from the region are not substituted by imports from extra-zone countries as a result of the agreement. Therefore, it is reasonable to conclude that the values in Table 7 reflect a minimum loss of tariff collection. Secondly, in a more dynamic analysis, it could also be assumed that the loss in tariff collection is offset at least partially by the positive impact of the trade agreement in the growth rate of the economy.

However, this belief seems to be too optimistic. Graph 16 shows the number of years needed to compensate the fall in tariff collection, assuming that as a consequence of the agreement the GDP grows an additional 0.5% per year, an increment far superior to the projections from any General Equilibrium model. In order to conduct this estimation we have assumed that the elasticity of tariff collection with respect to GDP is one. As shown, the countries where tax collection by the central government is lowest with respect to GDP, take the longest time to recover the loss of revenue. The explanation is obvious: the lower the initial tax collection with respect to GDP, the lower the growth of collection due to a given increase in revenue. In most cases, the countries with lower collection rates in terms of GDP are those in which import tariffs represent a greater percentage of the fiscal revenue. In other words, countries where the impact on the tariff collection arising from trade liberalization is greater.

The loss in revenue will require that some countries put in place a comprehensive tax reform, while others countries that have a more complex tax system may consider increasing the rate of certain taxes instead of a comprehensive tax reform. Either way, each country deserves special consideration. For example, in cases where the collection losses are significant but there is no competitive national production of the goods they import, the problems that result from the decrease in revenues would be relatively insignificant. This is because they could be offset, without generating changes in relative prices, through the establishment of a domestic sales tax on a specific good equivalent to the tariff that previously affected this good.

b) Public Debt

Debt sustainability is probably one of the main variables needed to evaluate a country's stability in the short and medium term.⁵³ As mentioned earlier, news for the region on this

⁵³ See Rojas Suarez (2002).

regard are not very encouraging (Graph 2). Debt growth with respect to GDP in the past few years is associated with a slowdown in the growth rate and the subsequent increase in the fiscal deficit, as well as with an increase in the real exchange rate.⁵⁴ Even if Nicaragua or Argentina is excluded, the growth in the level of public debt has been considerable. The result of this increase in the levels of indebtedness is that two countries in the region decided in the past few months to refinance their debt: orderly in the case of Uruguay and disorderly in the case of Argentina.

Another characteristic of the evolution of the public debt in the past few years is that the share of debt allocated to residents has increased as a percentage of total debt. While in 1995 domestic debt represented only 18%, in 2002 it represented almost 36% of the total public debt (Graph 17). This could be a good signal to the extent that it results from a deepening of domestic financial markets and an increase in deposits in domestic currency. However, this does not seem to be necessarily the case. On the contrary, the increase of the internal debt is actually a result of the difficulties associated to placing debt in international markets over the last few years rather than the deepening of domestic financial markets. In addition, an important component of internal debt has been converted to a foreign currency. Therefore, the increase of deposits in the domestic market is not necessarily good news. The most obvious case is Argentina, where the higher holdings of government bonds by banks and pension funds during 2001 resulted from the inability to obtain foreign financing. The impact of the debt restructuring on bond holders was significant.⁵⁵

Given this scenario, one could ask what would be the impact of a free trade agreement over the sustainability of the public debt. To answer this question, let's look at the following equations in order to understand which variables determine the evolution of the debt.

The total stock of debt in a given time period t , may be expressed through the following equation:

$$D_t = B_t + E_t B_t^* + M_t \quad (1)$$

Where,

B_t = local currency denominated debt

B_t^* = foreign currency denominated debt and expressed in dollars

E_t = nominal exchange rate with the dollar

M_t = Monetary base = Commercial bank deposits held by the central bank + money in public hands

⁵⁴ By simplifying the analysis one could conclude that the strong decline in capital inflows to the region provoked the changes in both variables: the depreciation of the real exchange rate and the slowdown of the growth rate of the region.

⁵⁵ In mid 2003, the total net worth of the Argentinean financial system continued to be negative if the government bonds held by banks are valued at market prices.

Preliminary version

Do not quote

The evolution of the debt may be expressed as follows:

$$D_t - D_{t-1} = iB_{t-1} + i^*E_tB_{t-1}^* + (E_t - E_{t-1})B_{t-1}^* + (G_t - R_t) \quad (2)$$

where,

i = interest rate

i^* = interest rate in dollars

G_t = consolidated public expenditure

R_t = total public revenue

Using equations (1) and (2) and making a few transformations, the value of the debt can be expressed in terms of the GDP.

$$d_t = \frac{(1+i)}{(1+\pi)(1+\gamma)} b_{t-1} + \frac{1+i^*(E_t/E_{t-1})}{(1+\pi)(1+\gamma)} b_{t-1}^* + \frac{\mathfrak{S}}{(1+\pi)(1+\gamma)} b_{t-1}^* + \frac{m_{t-1}}{(1+\pi)(1+\gamma)} + (g_t - r_t) \quad (3)$$

where,

$$d_t = \frac{D_t}{Y_t}$$

$$b_{t-1}^* = \frac{E_{t-1}B_{t-1}^*}{Y_{t-1}}$$

π = inflation rate

γ = growth rate of GDP in real terms

$$\mathfrak{S} = (E_t - E_{t-1})$$

Simplifying:

$$d_t = \frac{(1+i)}{(1+\pi)(1+\gamma)} b_{t-1} + \frac{(1+i^*)(E_t/E_{t-1})}{(1+\pi)(1+\gamma)} b_{t-1}^* + \frac{m_{t-1}}{(1+\pi)(1+\gamma)} + (g_t - r_t) \quad (4)$$

The debt GDP ratio is remains unchanged when $d_t = d_{t-1}$. Therefore, the value of the primary superavit required to maintain the value of the debt constant is obtained by subtracting d (t-1) from (4), make the resulting equation equal to zero and finally solve for $(g_t - r_t)$. After some transformations the result is:

$$(r_t - g_t) = \frac{i - \pi - \gamma - \pi\gamma}{(1+\pi)(1+\gamma)} b_{t-1} + \left[\frac{E_t/E_{t-1}(1+i^*)}{(1+\pi)(1+\gamma)} - 1 \right] b_{t-1}^* - \frac{\pi + \gamma + \pi\gamma}{(1+\pi)(1+\gamma)} m_{t-1} \quad (5)$$

The last term in expression (4) is the value of the seignorage relative to GDP.

Preliminary version

Do not quote

From (5), the primary superavit that balances the value of debt depends on the domestic and foreign real interest rates, the growth rate of GDP and the variation of the real exchange rate.

The foreign currency denominated domestic debt must be considered a part of b^* ⁵⁶.

As regards foreign debt, it is important to consider that in many cases, an important share of countries foreign debt is owed to international organizations. The interest rate on these loans may be very different from that of debt with the private sector, in particular in crisis situations. Hence, in order to estimate debt sustainability it is necessary to distinguish foreign debt owed to international organizations and debt owed to the private sector and apply the appropriate interest rate to each debt type.⁵⁷

We have estimated the primary fiscal superavit in all countries contained in the selected sample maintaining the debt constant in terms of 2002 gross domestic product.⁵⁸ The following assumptions were made: a) the real domestic interest rate is equal to the real international interest rate; b) the real foreign interest rate was estimated as the return of a ten-year United States Treasury bond plus the country risk of each nation divided by the inflation rate of the United States for the past 12 months;⁵⁹ c) the interest rate of international organizations equals 5% for the bigger countries of the region and 4% for countries with preferential rates; d) the estimated growth rate equals the growth rate of the GDP of each country for the period 1991-2000.

Should the country risk of the first trimester of 2003 remain unchanged, the average primary superavit necessary to balance the debt coefficient would increase to a 1.6% of GDP, but it would amount to only a 1.1% of GDP when the country risk for the period May-July is considered.⁶⁰ This shows that the extent to which the variability of the region's debt is exposed to external shocks, such as those of recent years -which modify the interest rate significantly- is considerable.⁶¹

⁵⁶ Although the real exchange rate of foreign currency denominated debt placed in domestic and foreign markets may differ, in this exercise we will assume that the rates are the same.

⁵⁷ It has been assumed that the interest rate of the bilateral debt is similar to that of international lending organizations.

⁵⁸ The countries considered are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay and Venezuela.

⁵⁹ The exceptions being Argentina and Uruguay. In the first case, we have considered an average rate for the domestic restructured debt of 4% and 9% for the private sector debt (to be restructured). In the case of Uruguay, the interest for the restructured debt was assumed to be 7.5%.

⁶⁰ The countries for which the country risk figure, measured by the EMBI+, was obtained are: Argentina, Brazil, Chile, Colombia, Dominican Republic, Ecuador, El Salvador, Mexico, Panama, Peru, Uruguay and Venezuela. As regards countries for which it was not possible to obtain the "country risk," this was estimated through the interpolation of the risk rating in a regression that relates the ratings of risk rating agencies (Standards and Poors) and the figure of country risk of countries for which the figure was available.

⁶¹ The exercise assumes that the current country risk applies to the debt in whole (excluding debt with international credit organizations). This is not the case, as an important portion of the debt is subject to fixed interest rates, which vary only at maturity when the debt needs to be renewed.

The relatively low primary superavit required to maintain the debt constant is explained by two motives: the current very low interest rate of international credit organizations and the assumption that the growth rate of the previous decade remains unchanged. As shown below, the sustainability of the debt is particularly sensitive to the growth rate of the economy. Likewise, it is difficult that the current international interest rates remain unchanged during a long period of period of time, which means that the primary superavit required to maintain the ratio debt/GDP constant should increase in the future.

On the other hand, the high levels of debt in various Latin American countries are excessively dangerous given the variability to which the region is exposed. For this reason, we have conducted an exercise to analyze the primary superavit required to reduce the ration debt/GDP to 40% in a specified period of time.⁶² As shown in Graph 18.a, the magnitude of the primary superavit required is sufficiently large to think that this could be possible in less than twenty years.

With the purpose of analyzing the sensitivity of the results to changes in certain critical variables, we have estimated the primary fiscal superavit required to maintain the debt/GDP ratio constant in the event of changes in country risk, the interest rate of the United States, the growth rate and the real exchange rate. Graph 18.b shows the impact of a 1% change in these variables, except for the exchange rate which considers a 10% change.

As seen in the Graph, a one percent decrease in the growth rate is the variable that has the highest impact in the primary superavit required to maintain debt constant. The exercise only takes into account the direct effect of a lower growth over the primary superavit required to maintain debt constant. The total impact would be higher if one considers that a one percent reduction in the growth rate also affects tax collection.

A one percent increase of the United States interest rate has a greater impact on the deficit than a similar increase in country risk. The reason for this is that it is assumed that the increase in the international interest rate affects the cost of financing of international credit organizations, which does not occur when the country risk increases. Moreover, it was assumed that variations in the international interest rate affect the cost of domestic financing in developing countries.

In respect to this topic, Frankel, Schmukler and Serven (2000) show that on average a one percent increase in the international interest rate affects the domestic interest rate in developing countries by about one percent. The impact is somewhat larger in countries with fixed exchange rates.⁶³ Given that currently in Latin America the majority of economies have floating exchange rates, this exercise assumed a “one-to-one” relation between the variation in international interest rates and domestic interest rates. In other

⁶² The exercise includes only countries that have a ratio debt/PGB greater than 40%.

⁶³ For example, in their estimations for Argentina between 1991 and 1999, they show that a 1% increase in the United States interest rate implied an increase of 1.28% in the domestic rate.

words, a one percent increase in the international rate would affect the international and domestic cost of financing of Latin American countries in one percent.⁶⁴

What impact does a trade integration agreement have over these variables?

Real Exchange Rate. The impact on the real exchange rate was discussed in the previous section and the conclusion reached is that the results are ambiguous. On the one hand, trade integration should produce a depreciation of the exchange rate, but surely the larger foreign investment should show a tendency to increase the value of the exchange rate to some degree. In any case, it does seem as if the variations in the real exchange as a result of the agreement rate are significant. However, the impact will differ for countries depending on, among other things, the amount of foreign investment and the economy's degree of openness. In any case, what should be taken into consideration is that a 5% appreciation of the real exchange rate reduces the debt/GDP ratio of countries in the region in 3% of GDP.

Growth Rate. General Equilibrium models predict greater growth as a result of the agreement, however the additional growth very rarely exceeds 2% or 3% of GDP in different estimations. In such case the impact over the ratio debt-GDP would not exceed 2% of GDP.⁶⁵

Foreign and Domestic Interest Rate. It is difficult to believe that a trade agreement such as the FTAA can affect the international interest rate. However, one can speculate about its impact on country risk and in turn, on the interest rate of foreign financing and the domestic interest rate.

If the trade integration agreement improves the credibility of a country, this has a tendency to diminish foreign and domestic interest rates. At the same time, credibility can improve via two mechanisms: a) an improvement of the macro economic and institutional context and b) the idea that a country with greater relative development can help in critical crises situations. The first topic was discussed in section 2 and it was concluded that even though openness tends to improve the institutional framework, it is not evident to what degree it translates into an improvement of the macro economic situation, except for the "disciplinary" influence of openness due to greater competition with the new partners. The Eastern European countries are a different case because of the belief that the "disciplinary" influence imposed on them by the European Union to form an integral part of the agreement is linked to obligations in several sectors, including on the macro economy. In other words, in this case it is not the trade agreement but the obligations imposed in other areas to achieve deeper integration.

Regarding the assistance that the relatively more developed country can provide its less developed partner in a crisis situation, the most astonishing of these cases is the support the United States offered to Mexico during its crisis in 1994-95, only a year after they signed a

⁶⁴ Likewise, it was assumed that an increase in the international interest rate does not affect the country risk.

⁶⁵ See Montegudo y Watanuki (2002).

free trade agreement. It is not clear whether the United States support to Mexico was directly related to the creation of NAFTA, since the assistance could be explained by the geographic proximity, the problem of immigration and the desire of the United States to avoid a crisis similar to the one Latin America suffered after Mexico's moratorium in 1982. Even if it is difficult to determine what factors were responsible for the support provided by United States, it could seem as if having a reputable and wealthy partner improves the chances of procuring aid in a disastrous situation. In any case, markets can predict this will be the case and in turn, lower the interest rates for the less developed partner. However, the possibility of aid decreases as the number of countries that compose the trade integration increases because only if an institutional agreement exists, in a crisis situation it will be difficult to provide assistance to all countries with whom a trade agreement has been signed.

What does data show? Mexico's interest rate reduction after the "tequila effect" and the signing of NAFTA is not much different from the real interest rate reduction in the rest of Latin America (Graph 19). However, it could also be construed as prudent monetary and fiscal management in the second half of the nineties. Regarding the European experience, real interest rates only declined once concrete steps towards macro economic coordination were taken and in particular, after the signing of Maastricht Treaty. This means that real interest rates did not decline until the second half of the nineties, i.e. several years after countries joined the European Community. By proposing a single currency after a tough process of convergence, the Maastricht Treaty generated a considerable reduction in real interest rates among the relatively less developed countries.

Given this experience, it is difficult to foresee an interest rate reduction as a consequence of signing the FTAA or associating with the United States. The only effect would be indirect and a result of the afore mentioned greater macro economic discipline, motivated by an ambiance of greater competition for the allocation of investments. This brings us to the conclusion that beyond the incentives associated to the creation of a free trade area, interest rate reductions will be basically a consequence of the internal/domestic effort made by each country.

To conclude, there is no reason to believe that a hemispheric trade agreement will have an important impact on the debt of countries with lower relative development. The only positive effect could come accompanied by a greater rate of growth and from the discipline an agreement brings due to greater competition.

On the other hand, if agreements generate greater confidence and with it, increased capital inflows coupled with a subsequent reduction in interest rates, a strong exchange appreciation should be avoided, and above all, the greater income should not be used to finance large fiscal imbalances. The reduction of interest rates in Eastern European countries, as a result of expectations related to their incorporation to the EU, have facilitated the financing of large fiscal deficits that have weakened discipline and dangerously increased the debt of these countries (see *Financial Times*, July 23, 2003). In any case, it would not seem to indicate that this experience could be repeated in the region since as it was previously mentioned, agreements such as the FTAA do not impose macro economic disciplines which seem to explain the increase in income in these economies.

4. What are the Possibilities for Regional Macro Economic Cooperation?

As was clearly stated throughout this paper, the positive effect of a regional integration agreement over the main macro economic variables depends on the characteristics of the partner, the number of partners, and basically, the introduction of discipline in the macro economic arena. From the perspective of the first two criteria, a trade integration agreement between several Latin American and Caribbean countries and the United States should improve the macro economic situation by motivating competition for the allocation of investment in the region. Nonetheless, even if these are important factors, they do not automatically generate the necessary incentives to substantially improve macro economic conditions.

What the European experience has demonstrated is that it is possible to generate incentives associated with the integration process that help improve the macro economy of the region. This was especially evident after the treaty of Maastricht, which established macro economic guidelines that countries had to follow in order to join the Monetary Union. Establishing a macro economic coordination mechanism does not make much sense in the context of a trade agreement like the FTAA. At the same time, it is evident that the stability of the countries in the region clearly has externalities that will affect the rest of the hemisphere. Therefore, it is important to consider what can be done regionally to generate incentives that will improve the macro economy of the region.

Before discussing alternatives, it is important to recall the extreme volatility of the external shocks to which the region is exposed.⁶⁶ The magnitude of the changes in the international context complicates any stabilization process and many times force countries to adopt so many internal security measures that weaken the growth process. An example of this is the creation of regulations in the financial system that limit its vulnerability but that in an extreme case, can reduce the ability to intermediate funds with a given degree of efficiency.

Taking this reality into consideration, it would be desirable that countries in the region could have access to a financial facility in the case of external shocks. This facility would be provided in case of an abrupt decrease in capital flows or a strong deterioration of the terms of trade.⁶⁷ Access to this fund would be subject to compliance with certain macro economic objectives and the implementation of certain structural reforms.⁶⁸ It is important to clarify that this facility would act as a complement and not as a substitute of the International Monetary Fund.

⁶⁶ See IDB (2002), Chapter 7.

⁶⁷ See Agosin (2001) for a review of the formation of a regional fund. Taking into consideration that the low correlations of the terms of trade within the region (Graph 5), this facility could work especially well in the case of a strong deterioration of the terms of trade in certain countries of the region. The higher correlation of the capital flows would require the formation of a fund with substantially increased resources.

⁶⁸ Examples of these reforms would be the independence of the Central Bank, price and salary flexibility and agreement between national and local governments that create incentives for fiscal sustainability.

Preliminary version

Do not quote

To increase transparency and “pressure from the peers”, a committee comprised of a group of experts would determine if a country is complying with the established objectives and would give recommendations on macro economic issues. Adherence to an agreement of this sort would be completely voluntary and under no circumstances would it impose trade penalties within the context of the FTAA. The only penalty would be the inability to access this regional fund.

In this manner, certain regional incentives would exist to move forward with macro economic cooperation. This alternative has a serious political inconvenience: it is very difficult to imagine that this facility could count on support from the United States, who would at the same time be the main contributor. Therefore, it is critical to consider other alternatives. Another possibility is to maintain the FTAA as a purely commercial agreement and analyze the possibility of some type of coordination at the sub-regional level.

In this sense, it is important to consider that sub-regional agreements are recognized as key blocks of the regional integration process. Additionally, in most cases, the objective of these agreements is to create a common market. Undoubtedly, in order to move forward with the process it is required that political will and the building of institutions be present. It is also necessary to increase the incentives so that countries are willing to coordinate. It is noteworthy to consider that the strong incentives European countries had to comply with the Treaty of Maastricht do not exist in Latin America and the Caribbean.⁶⁹

Some of these incentives could be: a) the creation of a committee of experts that evaluate the coordination process and offer their opinions and advice; b) technical assistance financed by the FTAA and by the IDB and c) some type of economic incentive if the countries that are part of the agreement comply with the established objectives.⁷⁰

In this manner, a coordination mechanism – in terms of the convergence of certain variables and structural reforms- could help improve the behavior of the region’s macro economy. Without the placement of some of these incentives, there is a risk that these – sub-regional coordination attempts do not go beyond good intentions.

⁶⁹ For some of the countries, joining the agreement meant gaining a positive reputation since being left out would have been a very negative signal to markets and would have surely made later convergence of interest rates difficult to attain.

⁷⁰ For example, one could consider loans by multilateral credit organizations that would be disbursed if the countries followed certain reforms within the context of the coordination process.

Preliminary version

Do not quote

REFERENCES

Agosin, M., 2001. *Fortalecimiento de la cooperación financiera regional*. ECLAC Magazine, April.

World Bank, Database of the Gender Unit for Latin America and the Caribbean, <http://wbln0018.worldbank.org/external/lac/lac.nsf/6d4b30e53303849d852567d6006c117d/1c04e5f4ea2734f1852568bd005592f3?OpenDocument>.

World Bank, Database on Privatizations (1990-1999), <http://www.ipanet.net/documents/WorldBank/databases/plink/soceco/allprive8898.xls>

Blanco, Herminio and Jaime Zabludovsky, 2002. *Hacia un tratado de libre comercio entre Uruguay y Estados Unidos: contenido e impacto*. CERES, Seminars and Conferences, November.

Buch, Claudia and Daniel Piazolo, 2000. *Capital and Trade Flows in Europe and the Impact of Enlargement*, Financial & Economic Research International.

Burfisher, Mary, Sherman Robinson and Karen Thierfelder, 2003. *Regionalism: Old and New Theory and Practice*. Paper prepared for The International Agricultural Trade Research Consortium (IATRC) Conference, Italy.

Calvo, Guillermo, and Carmen Reinhart, 2000. *Fear of floating*, National Bureau of Economic Research, working paper 7993.

Cuevas, Alfredo, Miguel Messmacher and Alejandro Werner, 2002. *Changes in the Patterns of External Financing in Mexico since the approval of NAFTA*, Banco de Mexico

ECLAC, 2003. *Anuario Estadístico de América Latina y el Caribe 2002*. Santiago de Chile.

Devlin, Robert and Antoni Estevadeordal, 2001. *What's new in the new regionalism in the Americas?* INTAL –ITD–STA, Working Paper 6

Eichengreen, Barry, 1993. *European Monetary Unification*, Journal of Economic Literature.

Eichengreen, Barry and Alan Taylor, 2002. *The monetary consequences of a free trade area of the Americas*, IADB/ Harvard University.

Eichengreen, Barry, 2002. *What Macroeconomic Measures are needed for Free Trade to Flourish in the Western Hemisphere?* Prepared for the Conference “Integrating the Americas,” organized by the OAS, Washington, November.

Preliminary version

Do not quote

ICSID (International Center for Settlement of Investment Disputes), Bilateral Investment Treaties, <http://www.worldbank.org/icsid/treaties/treaties.htm>

International Monetary Fund, 2003. International Financial Statistics CD-ROM.

Gual, Jordi, 2000. *Trade and foreign direct investment with Central and Eastern Europe: Its impact on Spain*" (with C. Martín) in Faini, R. and R. Portes (eds.) European Union Trade with Eastern Europe: Adjustments and Possibilities, CEPR, London.

Informe Progreso Económico y Social en América Latina, (IPES), 2002. Chapters 7 and 10, IADB.

Kaufmann, D, Kraay and Mastruzzi, 2003. *Governance Matters III: Governance Indicators for 1996–2002*, World Bank.

Kraay, A., Loayza, N., Servén, L. and Ventura, Country Portfolios, 2000. Working Paper 7795, NBER, Cambridge.

Jolliffe, I.T, 2002. *Principal component analysis*, New York: Springer -Verlag,

Jones, Charles, 2001. "Comment on Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence, by Rodriguez and Roderick." In Ben S. Bernanke and Kenneth Rogoff, eds., NBER Macroeconomics Annual 2000, 330-38. Cambridge, Mass.: MIT Press.

Levy, Yeyati, Eduardo, Ernesto Stein and Christian Daude, 2002. *The FTAA and the Location of FDI*, IADB.

Levy, Yeyati, Eduardo, Ernesto Stein and Christian Daude, 2003. *Regional Integration and the location of FDI*, IADB.

Lopez – Cordoba, José Ernesto, and Mauricio Moreira Mesquita, 2003. *Regional Integration and Productivity: The Experiences of Brazil and Mexico*, INTAL- ITD- STA, working paper 14

Machinea, José Luis, Josefina Monteagudo and Masakazu Watanuki, 2003. *El impacto del ALCA sobre los precios relativos*, IADB. (In progress)

Machinea, José Luis, 2003. *La inestabilidad cambiaria en el Mercosur: Causas, problemas y posibles soluciones*, IADB.

Ministerio de Economía y Producción, Republic of Argentina. Dirección de Nacional de Coordinación de Políticas Macroeconómicas, 2001. *Informe Económico Trimestral*. <http://www.mecon.gov.ar/peconomica/informe/indice.ht>

Preliminary version

Do not quote

Monge –Naranjo, Alexander, 2002. *The Impact of NAFTA on foreign direct Investment flows in Mexico and the excluded countries*, World Bank.

Monteagudo, Josefina, and Masakazu Watanuki, 2002. *Regional trade Agreements for Mercosur: a comparison between the FTAA and the FTA with European Union*, IADB.

Panagariya, A., 1999. *Preferential Trade Liberalization: The Traditional Theory and New Developments*, University of Maryland, unpublished manuscript.

Rodrik, Dani, Arvind Subramanian, Francesco Trebbi, 2002. *Institutions rule: the primacy of institutions over geography and integration in economic development*, NBER working paper 9305.

Rodríguez, Francisco and Dani Rodrik, 2001. *Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence*, 2000. Published in *Macroeconomics Annual 2000*, eds. Ben Bernanke and Kenneth S. Rogoff, MIT Press for NBER, Cambridge, MA.

Rojas- Suarez, Liliana, 2002. *Toward a Sustainable FTAA: Does Latin America meet the necessary financial preconditions?* Preparado para la conferencia “Integrating the Americas” organizado por la OEA, Washington, noviembre.

Sawaya Jank, Marcos, Ian Fuchsloch and Geraldine Kutas. 2002. Agricultural Liberalization in Multilateral and Regional Trade Negotiations. Paper prepared for the International Seminar “Agricultural Liberalization and Integration: What to expect from the FFTAA and the WTO?” IADB

Schott, P.K, Ed. Leamer, H. Maul and S. Rodriguez, 1998, *Does Resource Abundance cause Latin American Income Inequality?*, Journal of Development Economics 59 (1): 3-42

SICE, OAS Trade Unit’s Foreign Trade Information System,
http://www.sice.oas.org/investment/invagr_e.asp

USB Warburg, Latam (revised) 2003 – 2004 Macro Forecast, Stamford, January 10, 2003

UNCTAD, Handbook on
Statistics <http://stats.unctad.org/fdi/eng/ReportFolders/Rfview/explorerp.asp>

USTR, United States trade Representative website, 2003.
www.ustr.gov/regions/whemisphere/index.shtml.

U.S. Department of Labor, Bureau of Labor Statistics, <http://www.bls.gov/data/home.htm>

Vienna Institute for International Economic Studies, Handbook of Statistics: Countries in Transition, <http://www.wiiw.ac.at/e/statistics.htm.l>

Preliminary version
Do not quote

Viner, Jacob, 1950. *The Customs Union Issue*. New York: Carnegie Endowment for International Peace.

Wei, Shang- Jin, 2000. *Natural openness and good government*, NBER Working paper, 7765

WEO (World Economic Outlook), International Monetary Fund, April 2003, <http://www.imf.org/external/pubs/ft/weo/2003/01/data/index.htm>

World Development Indicators, CD-ROM, 2002. WinStar*Version 4.2

Annex 1.a
Factor Endowment in the FTAA and the EU “Enlarged”:
Sources of Data and Description

<i>Indicator</i>	<i>Source</i>		<i>Description</i>	
	FTAA	EU “Enlarged”	FTAA	EU “Enlarged”
Average Hourly Salaries	World Bank, Database of the Gender Unit for Latin America and the Caribbean(2002)l, based on the national home survey for the United States, U.S. Department of Labor	Viena Institute for International Economic Studies (2000) on “acceding” countries and average EU 10. For Spain, Jordi Gual (2000)	Average salary in current dollars, last figure available.	Monthly salary in euros and PPP. Year 2000. For Spain Jordi Gual (2000)
Capital	Kray, Loayza, Serven and Ventura (2000)	n.a.	Domestic Stock of Capital (in million of dollars)	n.a
Labor	World Development Indicators (2002)	n.a.	Labor force in millions of persons	n.a
GSP per capita	World Development Indicators (2002)	Ídem	GDP divided by total population. Measured in constant dollars of 1995	Ídem
Qualified labor as percentage of total labor	Schott et.al. (1999)	Ídem	Workers with tertiary and higher education as percentage of total labor force	n.a

Annex 1b

Methodology

In order to measure the degree of similarity/dissimilarity in the factor endowments of “new” members and “old” less developed members of a trade agreement, relative to the degree of likeness/unlikeness already existing in the agreement, the following “distance” or relative dispersion indicator was used in this paper:

$$D = \frac{\sum_{i=1} |X_g - x_i|}{\frac{n-1}{|X_g - x_v|}}$$

where,

x_i represents “new” countries members of the agreement or the average of a sub-group of those countries; x_v , “old” relatively less developed countries, i.e. those that are already members of the agreement; and X_G , the more relatively developed country or group of countries.

The numerator of the above expression measures the “distance” between the more developed country and “new” partners; the denominator measures the difference between the relatively more developed country and “old” relatively less developed members of the agreement.

Values close to one would indicate great similarity between “new” countries and “old” relatively less developed countries. A value greater than one, indicates that relative factor endowment in “new” countries differs more from “old” relatively less developed countries more than what is the case among current partners.