The impact of Free Trade Agreements on the Pattern of Trade

PRESENTATION OF ANTONI ESTEVADEORDAL
INTEGRATION, TRADE AND HEMISPHERIC ISSUES DIVISION
INTEGRATION AND REGIONAL PROGRAMS DEPARTMENT

Meeting of the Trade and Integration Network
INTER-AMERICAN DEVELOPMENT BANK, WASHINGTON, D.C.
MAY, 29-30, 2003

THIS DOCUMENT IS BASED ON CHAPTER 3 OF THE IDB REPORT ECONOMIC AND SOCIAL PROGRESS IN LATIN AMERICA. BEYOND BORDERS: THE NEW REGIONALISM IN LATIN AMERICA

(IPES-2003)

Understanding the Complex Web of Trade Liberalization

Starting in the mid- to late-1980s, most of the developing world began moving toward substantial market-oriented economic reforms, which included, almost without exception, unilateral trade liberalization policies (IDB, 1996). This happened in the context of multilateral efforts in Geneva to liberalize trade in goods and services around the world, which culminated in the Uruguay Round Agreements of 1994 and the creation of the World Trade Organization in 1995. Moreover, a growing interest in regionalism was taking hold around the world, especially in Latin America, by way of traditional regional initiatives or newly crafted preferential trade agreements.

The depth of the unilateral trade reforms by most countries in the region is obvious when looking at the average regional tariff rates, which fell from 40 percent in the mid-1980s to 10 percent in 2000. Average maximum tariffs in the region fell from more than 80 to 40 percent, with only very few countries currently applying maximum tariffs of up to 100 percent on a small number of products. Tariff dispersion, on average, has declined from 30 percent in the mid-1980s to an average of 9 percent today. The highest average rate and the highest dispersion rate, as measured by the standard deviation, are currently under 18 and 25 percent, respectively. There are still, however, some important tariff peaks, and approximately 20 percent of tariff lines are subject to rates above 20 percent. Figure 1 shows average applied tariffs for every country in the region.

This process of opening up unilaterally was accompanied by liberalization efforts under the multilateral trade negotiations of the Uruguay Round. The agreement that entered into force in January 1995, ending almost a decade of negotiations, included the establishment of the WTO, which is responsible for administering the most sophisticated and comprehensive world trade agreement ever signed. A new round of negotiations was launched in Doha (Qatar) in November 2001, with further commitments to liberalize world trade, particularly regarding areas of importance for developing countries.

The Uruguay Round negotiations (1986-94) were primarily concerned with two basic issues regarding trade liberalization: first, ensuring greater access to markets by reducing or eliminating obstacles to trade in goods and services; and second, making the new levels of market access legally binding under more stringent WTO regulations and procedures. In the area of tariff liberalization, this latest round of GATT negotiations achieved an average tariff reduction of 38 percent in industrialized countries and, from the standpoint of the Latin American countries, implied substantial commitments to dismantle import barriers. The central obligation with respect to tariffs requires countries to limit their levels to a specified maximum or what is called a "binding" GATT tariff commitment. The latest round resulted in a significant increase in the number of bound tariff lines. In the case of developed countries, the increase went from 22 to 72 percent, and for countries in transition from 78 to 98 percent. Latin America as a whole agreed to bind practically all tariff lines. This is especially significant when compared to the existing levels of tariff bindings before the Uruguay Round began. In Latin America, only 38 percent of tariff lines for industrial products were bound, equivalent to 57 percent of imports. For agricultural products, the percentages were 36 and 74 percent, respectively. The simple average bound tariff for Latin American countries is currently around 35 percent.

These unilateral and multilateral efforts were happening just as a flurry of free trade agreements (FTAs) were being signed throughout the Americas. FTAs have a long history in the region, but the 1990s witnessed a revival of trade integration initiatives under the "new regionalism" approach. Several subregional agreements were enacted around the time of the final

act of the Uruguay Round. Of particular note were the North American Free Trade Agreement (NAFTA) and the Southern Cone Common Market (Mercosur). In addition, important institutional and policy reforms were carried out in existing agreements such as the Andean Pact (renamed Andean Community in 1997), the Caribbean Community (CARICOM) and the Central American Common Market (CACM). In December 1994 came the Miami summit that launched the FTAA, the hemispheric economic integration initiative.

Since the mid-1990s, Mexico and Chile have been in the process of consolidating their positions as strategic trade hubs in the region for some time to come. In 1994, Mexico secured three important agreements based on the NAFTA model—with Costa Rica, with Colombia and Venezuela (known as the Group of Three or G-3 Agreement), and with Bolivia. All three agreements were implemented at the beginning of 1995. Mexico then built on this momentum by concluding agreements with Nicaragua in 1997 and with the Northern Triangle (Guatemala, El Salvador and Honduras) in 2000. Finally, Mexico successfully broadened and deepened its agreement with Chile in 1998.

For its part, Chile built its status as a trade hub in gradual and consistent fashion. It signed its first and most basic agreements, in terms of the scope and nature of coverage, with Mexico in 1991, Venezuela in 1992, Colombia in 1993 and Ecuador in 1994. The level of sophistication was expanded somewhat in Chile's 1996 agreement with Mercosur and 1998 agreement with Peru. The broadest effort came in 1996 with the signing of a free trade agreement with Canada, which almost mimicked NAFTA. Chile's upgraded agreement in 1998 with Mexico was also based on the NAFTA model, as were its 1999 accords with the countries of the Central American Common Market. Most recently, Chile has been negotiating a free trade agreement with the United States based on the NAFTA model. When concluded, it will add to the ever-growing list of such North-South Agreements in the hemisphere.

This dynamism has also been present at the extra-regional level, particularly in the context of the Asia-Pacific Economic Cooperation (APEC) initiative. Mexico joined APEC as a full member in November 1993, Chile entered a year later, and Peru in 1998. During the 2nd Presidential Meeting of APEC in November 1994 in Indonesia (the same year of the launching of the FTAA), leaders agreed to achieve free trade and investment in the region by no later than 2010 for the industrialized economies and 2020 for developing countries.

This brief review of the integration efforts in the 1990s would be incomplete without reference to the European Union's involvement with Latin America. The EU signed a trade and economic cooperation agreement with Mercosur in 1995, followed by a framework cooperation agreement with Chile in June 1996. However, the most far-reaching process to date has been the Economic Partnership, Political Coordination and Cooperation Agreement between Mexico and the European Union. The broad framework agreement was finalized in 1997 and led to the signing of a comprehensive free trade agreement between the two parties in 1999. Formal launching of negotiations for association agreements between the EU and Mercosur and Chile was agreed upon in 2000, with Chile signing the agreement in May 2002.

Although all of the 30 reciprocal agreements plus some partial agreements are linked to the objectives of the "new regionalism" approach, each country has pursued its own strategic trade objectives with its own tariff reduction scheme, rules of origin, and technical, procedural and even documental systems. This has given rise to what some observers have dubbed the "spaghetti bowl" effect of trade agreements (Table 1 and Figure 2).

The "spaghetti bowl" effect notwithstanding, this overview provides some insights on how Latin America's new regionalism has interacted (and will interact in the future) with other approaches to trade liberalization. Some of the commitments undertaken by the countries in the

region under multilateral negotiations can be explained by successful unilateral trade liberalization reforms carried out at the national level. In turn, those same commitments at the multilateral level acted as lock-in mechanisms for the domestic reforms. Similarly, the Uruguay Round agreements set the stage for the pursuit of regional agreements under a common umbrella of global trade rules and a clearer set of disciplines under which preferential agreements can be negotiated. Those global rules may be further strengthened under the new Doha round of negotiations. Moreover, while the reciprocal nature of the multilateral round provides a national political underpinning to further liberalization, and the economic advantages of free trade achieved at the multilateral level are well understood, it is sometimes difficult to evaluate net gains in a negotiating forum of more than a hundred countries with very different strategic interests acting as a constraint to new commitments. Regional and bilateral agreements offer certain advantages in this respect. These agreements are based on reciprocity principles involving a smaller group of countries. This can provide a better environment to reach consensus on the complex range of issues in modern trade agendas, better evaluate the potential gains from this bargaining exercise, and gain private sector understanding and support for the liberalization process. Ethier (1998) has pointed out that regional integration can spur multilateral liberalization by facilitating coordination. In sum, the wave of new regionalism in the Americas—including the deepening of existing agreements and the ongoing FTAA negotiations—should be seen as complementing unilateral reforms and multilateral efforts.[1]

Preferential Tariff Liberalization

Market access negotiations under the "old" regionalism (Chapter 2) used to be carried out by means of a fixed preferential tariff under the most favored nation (MFN) tariffs and, in many cases, were only for a selected group of products or sectors. Unilateral and multilateral tariff reductions had the effect of progressively eroding the margins of preference initially agreed upon. In order to maintain those margins constant over time, countries had to renegotiate the agreements on a continuous basis. Alternatively, some agreements were negotiated by means of preferential tariff reductions as a percentage of current MFN applied rates, in this way keeping the margins of preference constant over time. Today, most new regionalism FTAs have followed the NAFTA model,[2] moving towards tariff elimination programs that are relatively quick, automatic and nearly universal. The tariff elimination mechanism follows pre-specified timetables ranging from immediate elimination up to generally a 10-year phase-out, with longer transitional periods for those products regarded as "sensitive." The negotiations usually start with an agreement on a base rate or base level from which phase-out schedules will be applied. These rates can also be subject to negotiations with the aim of beginning the phase-out schedules from lower rates.

Figure 3 shows the evolution of MFN tariffs vis-à-vis the preferential rates from 1985 to 1997. The figure compares the average MFN rate for 11 Latin American countries with the average preferential rate that each country applies to all partners in this group under different bilateral or regional trade agreements. It shows in a particularly striking way the simultaneous lowering of external and internal barriers as one of the key features of new regionalism minimizing the probability for trade diversion. Although tariffs will be fully dismantled under most trade agreements currently in force (the average percentage of exceptions is around 5 percent, which contrasts favorably with most of the old agreements), the internal dynamics of the

[1] See Devlin and Ffrench-Davis (1999) and Devlin and Estevadeordal (2001).
[2] The internal tariff elimination mechanism in Mercosur also followed an automatic linear program.

tariff phase-out programs vary widely across agreements. For some agreements, more than 50 percent of the products become free of tariffs during the first year of implementation of the agreement. For others, those percentages will not be reached until the fifth year or much later. For instance, in the case of NAFTA, most trade liberalization between the United States and Canada vis-à-vis Mexico took place during the first year of the agreement, while the bulk of Mexico's liberalization to the NAFTA partners was realized five years after the agreement entered into force. The current average margins of preference of selected countries in the region are shown in Figure 4. The figure compares the average MFN rate with the average preferential rate of each country to other selected partners in the region with whom there is a trade agreement. Figure 5a estimates the percentage of tariff lines that will be fully liberalized by 2005 as a result of implementing existing tariff liberalization programs, while Figures 5b and 5c provide estimates in terms of the amount of intra-regional trade covered by those agreements and the percentage that would be fully liberalized by 2005 assuming a stable trade pattern. Based on the estimate that 80 percent of total intra-hemispheric trade will be liberalized by 2005, the year that the FTAA is expected to enter into force, and the fact that compliance with multilateral rules will require that liberalization cover "substantially all trade,"[3] it can be concluded that the bulk of the difficulties in negotiating tariff liberalization in the FTAA will affect around 10 percent of current intra-regional trade flows.

Do Preferential Trade Agreements Matter for Trade?

Over the past decade, a significant amount of meaningful literature has attempted to assess the implications of preferential trading arrangements for trade patterns, global welfare, and the multilateral trading system.[4] This literature has for the most part focused on whether those agreements are good or bad for world welfare from a theoretical perspective. However, the empirical evidence is still relatively limited, and we know very little about the magnitude and significance of changes in trade barriers on a preferential basis and the resulting changes in bilateral trade volumes. Most of the recent literature has explored the effects of preferential trade agreements on trade volumes using a gravity model with the inclusion of dummy variables for trade agreements (see Box 1). In general, the effects of a free trade agreement on intra-area trade are quite large. Frankel (1997) has found that the formation of the EC raised trade among European countries by about 65 percent, and Mercosur and the Andean Pact promoted trade by a factor of about two-and-a-half among their partners. Estevadeordal and Robertson (2002) have examined the effects of preferential agreements on the volume of bilateral trade employing a gravity equation by precisely measuring preferential tariffs.[5] They analyze the role of preferential and MFN tariffs on the volume of trade, based on a specification advocated by Anderson and van Wincoop (2000) with data from several Latin American countries and its major industrialized partners, the United States, Canada, Europe and Japan.

---

[3] GATT Article XXIV (8) mandates that for customs unions and free trade areas to be considered as such under multilateral trade rules, they must provide for the elimination of duties and other restrictive measures on "substantially all trade." No universally accepted definition exists as to what constitutes "substantially all trade." Disputes among parties have arisen over whether the criteria should be the number of tariff lines liberalized, the value of trade liberalized, a combination thereof, or whether or not it must include all major categories of products, (i.e., agriculture). In this calculation we are using 90 percent of trade as the cut-off level for the definition of "substantially all trade."

[4] See Bhagwati and Panagariya (1996); Frankel (1997); and Bhagwati, De Melo and Panagariya (1993); Krishna and Panagariya (1999).

[5] Linnemann and Verbruggen (1991) have explicitly studied the impact of tariffs on bilateral trade patterns using a gravity model framework. However, Estevadeordal and Robertson (2002) is the first study that explicitly incorporates preferential tariff rates in a gravity model.

Box 1 A Primer on the Gravity Model

The gravity model provides a useful framework for assessing the impact of policy variables on the behavior of bilateral flows between countries, such as trade, foreign direct investment (FDI) or migration flows. The gravity model was first applied to the analysis of international trade flows by Tinbergen (1962), Poyhonen (1963) and Linnemann (1966). Its name is derived from its passing similarity to Newtonian physics, in that large economic entities such as countries or cities are said to exert pulling power on people (migration models) or their goods (trade models) or capital (FDI models). The simplest form of the gravity model for international trade assumes that the volume of trade between any two trading partners is an increasing function of their national incomes and populations, and a decreasing function of the distance between them. It is also common to use the so-called dummy variables to capture geographical effects (such as signaling whether the two countries share a border, or if a country has access to the sea), cultural and historical similarities (such as if two countries share a language or were linked by past colonial ties), regional integration (such as belonging to a free trade agreement or sharing a common currency), as well as other macroeconomic policy variables (such as bilateral exchange rate volatility). Although widely used because of its empirical success, the gravity model had lacked rigorous theoretical underpinnings, and was long criticized for being an ad hoc model. However, Anderson (1979), Bergstrand (1985), and Helpman and Krugman (1985) have derived gravity equations from trade models based on product differentiation and increasing returns to scale. Evenett and Keller (2002) provide a good overview of this debate.

One of the key advantages of this gravity approach is that it directly compares the contributions of "policy" frictions, such as tariffs, with "geographical" frictions due mainly to transportation costs. A consistent result of the gravity equation literature is that transportation costs, as proxied by distance to markets, have a large and significant effect on trade volumes. If distance dwarfs the effects of trade barriers, then countries that are relatively far from larger markets may not experience large benefits from integration agreements. Estevadeordal and Robertson (2002), however, find that tariff elasticities (the percent change in trade volumes induced by a 1 percent change in tariffs) are almost equivalent in magnitude to the effects of distance. This suggests that while countries cannot change their location, they can change trade policy in a way to increase the benefits of trade. For example, Chile, which suffers a geographical disadvantage in terms of distance from most industrialized markets, experienced a large increase in bilateral trade after signing a bilateral FTA with Mexico. A similar result is expected from Chile's recent agreement with Canada and one currently being negotiated with the United States. Therefore, FTAs are a speedy way to look for new trade opportunities with distance partners, as in the case of the agreements with the European Union or other Northern partners.

Rules of Origin

Rules of origin are an important but often forgotten aspect in analysis of market access in FTAs. Under an FTA, each country maintains its own external tariffs vis-à-vis the outside world. To the extent that these barriers differ, there is always the incentive to import a good through the country with the lowest barriers. Rules of origin are required to prevent such trade deflection. They specify the conditions that goods must meet in order to be deemed as "originating" and hence be eligible for preferential tariff treatment. The growth of international trade in goods that are not manufactured in a single country has made the issue of the rules for determining the "origin" of traded goods one of the most important and complex areas of preferential market access negotiations.

While the simpler rules rely on a single uniform criterion across all products, such as in ALADI-type agreements, the more complex agreements such as NAFTA[6] use a general rule plus additional specific rules negotiated at the product level, combining in different ways three methods to establish "substantial transformation." Those methods can be defined in terms of a "tariff shift" approach, a "value-added" criterion, or a "technical test."[7] Immediate precedents of the NAFTA model, with a lower degree of specificity, are the rules of origin contained in the FTA between the United States and Canada. The rules negotiated under the G-3 agreement, the Mexican bilateral agreements with Costa Rica and Bolivia, and the recent Chilean bilateral agreement with Mexico and Canada are also close to the NAFTA model. Meanwhile, rules introduced under Mercosur and its bilateral agreements with Chile and Bolivia, as well as the Central America Common Market, can be considered intermediate models between the two extreme cases.[8]

Although rules of origin are well known to trade lawyers and customs specialists (Vermulst and Bourgeois, 1994), they have only recently caught the attention of economists. While the impact of political and economic interests in shaping rules of origin is well known, there have been few attempts to estimate those effects. Economic analysis has been relatively limited both in terms of formal modeling as well as empirical testing. It has been argued that the way in which rules of origin are defined and applied within modern preferential agreements plays an important role in determining the degree of protection they confer and the level of trade distortion effects that they produce (Hoekman, 1993). One of the most convincing treatments of the potential "hidden" protectionism of rules of origin has been by Krishna and Krueger (1995), who argued that, provided that margins of preference are large and rules are restrictive, they can induce a switch in the sourcing of low-cost nonregional to high-cost regional inputs in order for producers to take advantage of the preferential rates. Thus, restrictive rules may provide additional protection to regional producers of intermediate goods, to the detriment of downstream or final goods producers. Moreover, outside producers of intermediate goods hurt by restrictive rules may have an incentive to move production facilities into the lower-cost country within the region, even though it is not the lowest cost producer worldwide.

Do Rules of Origin Matter for Trade?

As noted in a recent document of the United Nations Conference on Trade and Development, "the mere granting of tariff preferences or duty-free market access to exports originating in LDCs does not automatically ensure that the trade preferences are effectively utilized by beneficiary countries" (UNCTAD 2001, p. 8). Brenton and Manchin (2002) have estimated that in 1999, whereas the EU's Generalized System of Preference (GSP) theoretically covered 99 percent of

[6] NAFTA arguably contains the most sophisticated origin regime yet devised. These highly disaggregated and heterogeneous rules run for many pages and make liberal use of the different types of origin methodologies. Understandably, the negotiating history of NAFTA is replete with battles over the content of specific rules of origin, for the difference between a favorable and unfavorable rule can easily run in the millions of dollars annually for some firms.

[7] The "tariff shift" criterion requires that after transformation of one or several imported inputs in the exporting (originating) country, the processed product exported falls under a different heading of the tariff nomenclature than that under which the imported inputs were classified. The "value-added" criterion prescribes the minimum percentage of value that must be added in the exporting country or the maximum percentage of value accounted by imports in order to be qualified as originating. Finally, the "technical test" is based on manufacturing or processing operations that are required to confer originating status.

[8] While the method for conferring origin to a product constitutes the central element of an origin regime in a free trade agreement, there are other important provisions that are not analyzed in this chapter. These include the cumulative provisions that establish the conditions under which imports from certain sources may be counted as domestically supplied in the preference-receiving exporting country. Other provisions related to origin consideration include whether or not there are duty drawback rules.

EU imports from eligible countries, only 31 percent of exports were shipped under preferential rates by those countries. According to the authors the main reason was restrictive rules imposed by the EU, coupled with the costs of compliance with those rules. Estevadeordal and Miller (2002) have also shown that in the case of NAFTA, those "missed preferences" (UNCTAD, 2001) can be directly related to the restrictive effects and compliance costs of the rules of origin.[9] The study shows that for those sectors where the NAFTA rules of origin became more restrictive vis-à-vis the rules governing the previous FTA agreement between the United States and Canada, the "utilization rates," or the percentage of trade that uses preferential tariffs as opposed to MFN tariffs, experienced a substantial decline (Figure 6). Depending on individual sectors, this effect can be attributed to the sudden administrative burden of dealing with a new set of complicated rules to which firms may eventually adjust, or to absolutely restrictive effects of more stringent rules.

Rules of origin should be viewed as primary policy instruments in any market access negotiations, not just as having a supportive role in the application of a primary instrument such as preferential tariffs. Estevadeordal (2000) has documented the interaction between the degree of stringency of the NAFTA rules of origin and the speed of tariff liberalization, stressing the importance of considering rules of origin as key policy instruments in the design and implementation of FTAs. In the case of NAFTA, the study finds that the origin regime clearly performed its main role as an instrument against trade deflection. It finds a strong correlation between the differential of Mexican and U.S. MFN tariffs, which provides an incentive for trade deflection, and the degree of restrictiveness imposed by the rules of origin. However, as discussed earlier, those rules can have an additional intended or unintended protectionist effect. In the case of NAFTA, there is evidence that sectors with more restrictive rules of origin were also the ones with longer tariff phase-out periods; that is, rules of origin and phase-out periods could be viewed as complementary instruments of a discriminatory tariff policy. However, a more sophisticated interpretation of this result would be the existence of a substitution effect; that is, although preferential tariffs would be fully dismantled at the end of the phase-out period, the origin requirement would remain in place, providing some protective effects. Borrowing the language of the endogenous protection literature, one could conclude that the same forces that push for tariff protection also push for more stringent origin rules.[10]

Obstacles to Market Access Liberalization: Non-tariff Measures

Because governments have to a significant degree abandoned across-the-board protectionism, they are increasingly seeking other restrictive trade instruments that can be used effectively at the sectoral level. Hence the burgeoning interest in rules of origin and other non-tariff measures (NTMs). A major accomplishment of several rounds of multilateral trade negotiations in the context of the GATT agreement has been the steady reduction of tariffs across sectors and countries. Tariff reductions negotiated during the Kennedy Round (1967) and the Tokyo Round (1979) were followed by an increased use of non-tariff barriers in the form of quantitative restrictions. The Uruguay Round made important progress in reducing those types of trade barriers. Although consistent under WTO rules, countries are progressively relying on more subtle forms of protection such as anti-dumping investigations or the use of technical standards. The level of protection provided by such barriers is far more difficult to quantify than for tariffs

[9] From a methodological point of view, the study takes advantage of the fact that the preferential tariff regime negotiated in the U.S.-Canada FTA was not modified under NAFTA, while the major changes in market access conditions were due to the drastic overhaul of the origin regime.

[10] An extension of this analysis can be found in Cadot et al. (2002).

or other quantitative restrictions, making negotiations for their removal difficult. But while determining the tariff equivalent of quantitative restrictions is difficult, figuring out the costs to an importer of the paperwork for a health permit, a change in packaging requirements, or inconsistent enforcement of customs standards often proves practically impossible. The benefits of traditional trade liberalization can be greatly reduced if countries merely compensate by imposing hidden protective technical measures.

Although most regional agreements contain provisions on the application of non-tariff measures, in most cases those are applied on a most-favored nation basis (minimum price setting, automatic license arrangements, non-automatic licenses, tariff rate-quotas,[11] import prohibitions, monopolistic measures in the administration of imports, and other technical measures). During the period prior to trade liberalization reform, most countries required import licenses in order to assure that imports did not surpass pre-set quotas. These levels could be modified by authorities in response to foreign exchange crises, becoming in practice an instrument to deal with balance of payment problems. The countries of the region gradually eliminated quantitative limits on imports both unilaterally and within the framework of multilateral commitments assumed during the Uruguay Round. There remains, however, trade regulation that could potentially restrict trade, such as government purchasing arrangements, inappropriate use of anti-dumping measures, and the increasing use of certain competitive policies and technical measures for protective purposes. Figure 7 gives an overall estimate of NTM coverage as well as a measure of the incidence of quantitative and technical measures.[12] Although their importance differs greatly among countries, these measures clearly are significant, particularly in light of their potential use as protectionist measures.

[11] A tariff-rate quota (TRQ) is a two-tiered tariff. In a given period, a lower in-quota tariff is applied to a given amount of first imports and a higher over-quota tariff is applied to all subsequent imports.

[12] The empirical evidence on the administrative costs of non-tariff measures and other regulations is scant. Using firm-level data, Koskinen (1983) estimated administrative compliance costs under the FTA between the European Free Trade Association (EFTA) and the EC were between 1.4 percent and 5.7 percent of the value of export transactions, while according to Holmes and Shephard (1983), the average export transaction from EFTA to the EC required 35 documents and 360 copies.

References

Anderson, J. E. 1979. A Theoretical Foundation for the Gravity Equation. American Economic Review 69(1). March.

Anderson, J. E., and E. van Wincoop. 2000. Gravity with Gravitas: A Solution to the Border Puzzle. Mimeo.

Bhagwati, J., and A. Panagariya. 1996. The Economics of Preferential Trade Agreements. Washington, DC: The AEI Press.

Bhagwati, J., P. Krishna, and A. Panagariya (eds.). 1999. Trading Blocs: Alternative Approaches to Analyzing Preferential Trade Agreements. Cambridge, MA: MIT Press.

Bergstrand, J. H. 1985. The Gravity Equation in International Trade: Some Microeconomic Foundations and Empirical Evidence. Review of Economic and Statistics 67. August.

Brenton, P., and M. Manchin. 2002. Making EU Trade Agreements Work: The Role of Rules of Origin. Center for European Policy Studies Document 183.

Cadot, O., J. De Melo, A. Estevadeordal, and A. Suwa-Eisenmann. 2002. Assessing the Effect of NAFTA's Rules of Origin. Forthcoming.

De Melo, J., and A. Panagariya. 1993. New Dimensions in Regional Integration. London: Cambridge University Press and CEPR.

Devlin, R., and A. Estevadeordal. 2001. What's New in the New Regionalism in the Americas? In V. Bulmer-Thomas (ed.), Regional Integration in Latin America and the Caribbean: The Political Economy of Open Regionalism. London: ILAS.

Devlin, R., and R. Ffrench-Davis. 1999. Towards an Evaluation of Regional Integration in Latin America in the 1990s. The World Economy 22(2) March.

Estevadeordal, A. 2000. Negotiating Preferential Market Access: The Case of NAFTA. Journal of World Trade 34(1) February.

Estevadeordal, A., and E. Miller. 2002. Rules of Origin and the Pattern of Trade between U.S. and Canada. Integration, Trade and Hemispheric Issues Division, Inter-American Development Bank, Washington, DC.

Estevadeordal, A., and R. Robertson. 2002. From Distant Partners to Close Neighbors: The FTAA and the Pattern of Trade. Integration, Trade and Hemispheric Issues Division, Inter-American Development Bank.

Estevadeordal, A., and M. Shearer. 2002. Trade Policy and Regional Integration in Latin America: A Quantitative Assessment. INTAL-ITD Working Paper.

Estevadeordal, A., J. Harris, and M. Shearer. 2002. Towards Free Trade in the Americas. Integration, Trade and Hemispheric Issues Division. Inter-American Development Bank.

Ethier, W. 1998. The New Regionalism. The Economic Journal. July.

Evenett, S. J., and W. Keller. 2002. On Theories Explaining the Success of the Gravity Equation. Journal of Political Economy 110(2).

Frankel, J. 1997. Regional Trading Blocs in the World Trading System. Washington, DC: Institute for International Economics.

Helpman, E., and P. Krugman. 1985. Market Structure and Foreign Trade. Cambridge, MA: MIT Press.

Hemispheric Database of the Americas. 2001. Available at www.ftaa-alca.org

Hoekman, B. 1993. Rules of Origin for Goods and Services. Journal of World Trade 3.

Krishna, K., and A. O. Krueger. 1995. Implementing Free Trade Areas, Rules of Origin and Hidden Protection. In A. Deardorff, J. Levinsohn, and R. Stern (eds.), New Directions in Trade Theory Safeguard. Ann Arbor: University of Michigan Press.

Linnemann, H. 1966. An Econometric Study of International Trade Flows. Amsterdam: North-Holland.

Linnemann, H., and H. Verbruggen. 1991. GSTP Tariff Reduction and Its Effects on South-South Trade in Manufactures. World Development 19(5) May.

Poyhonen, P. 1963. A Tentative Model for the Volume of Trade Between Countries. Weltwirtschaftliches Archive, vol. 90.

Table 1

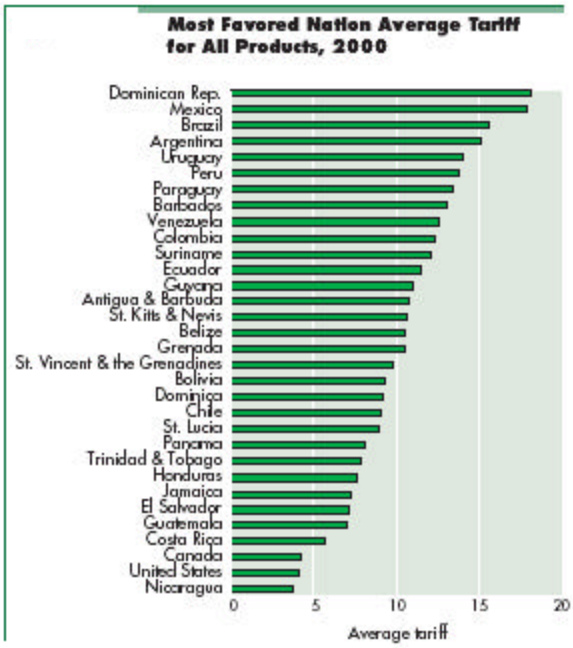
Provisions in Selected Trade Agreements in the Americas

	NAFTA	Ecuador-Chile	G-3	Chile-Mercosur	Mexico-Nicaragua	Canada-Chile	Mexico-North Triangle	Bolivia-Mercosur	CARICOM-Dominican Rep.	Chile-Central America
Tariff elimination	√	√	√	√	√	√	√	√	√	√
HS-based rules of origin	√		√		√	√	√		√	√
ALADI-based rules of origin		√		√				√		
Special rules-auto sector	√	√	√	√		√				
Agriculture-separate chap.	√		√		√		√		√	
SPS measures	√	√	√	√	√		√	√	√	√
Technical barriers to trade	√	√	√		√		√		√	√
Investment	√	√	√	√	√	√	√		√	√
Investor-state dispute settlement	√		√		√	√	√			
Services	√	BE	√	√	√	√	√	BE	√	√
Temporary entry of business persons	√		√		√	√	√		√	√
Government procurement	√	BE	√		√				BE	√
Intellectual property	√		√	√	√		√		√	
Anti-dumping/countervail	√	√		√	√	√[1]	√	√	√	√
Competition policy						√				√
Dispute settlement	√	√	√	√	√	√	√	√	√	√
Labor/Environment	SA					SA				
Special and differential treatment		√		√				√	√	

Notes: SA = side agreement; BE = best endeavor to define in the future: the parties shall explicitly seek to develop disciplines in these areas in the future; HS = harmonization system.

[1] The parties agreed to a reciprocal exemption from the application of anti-dumping.

Figure 1



Source: IDB calculations based on 2001 Hemispheric Database in the Americas, using only ad valorem tariffs.

Figure 2

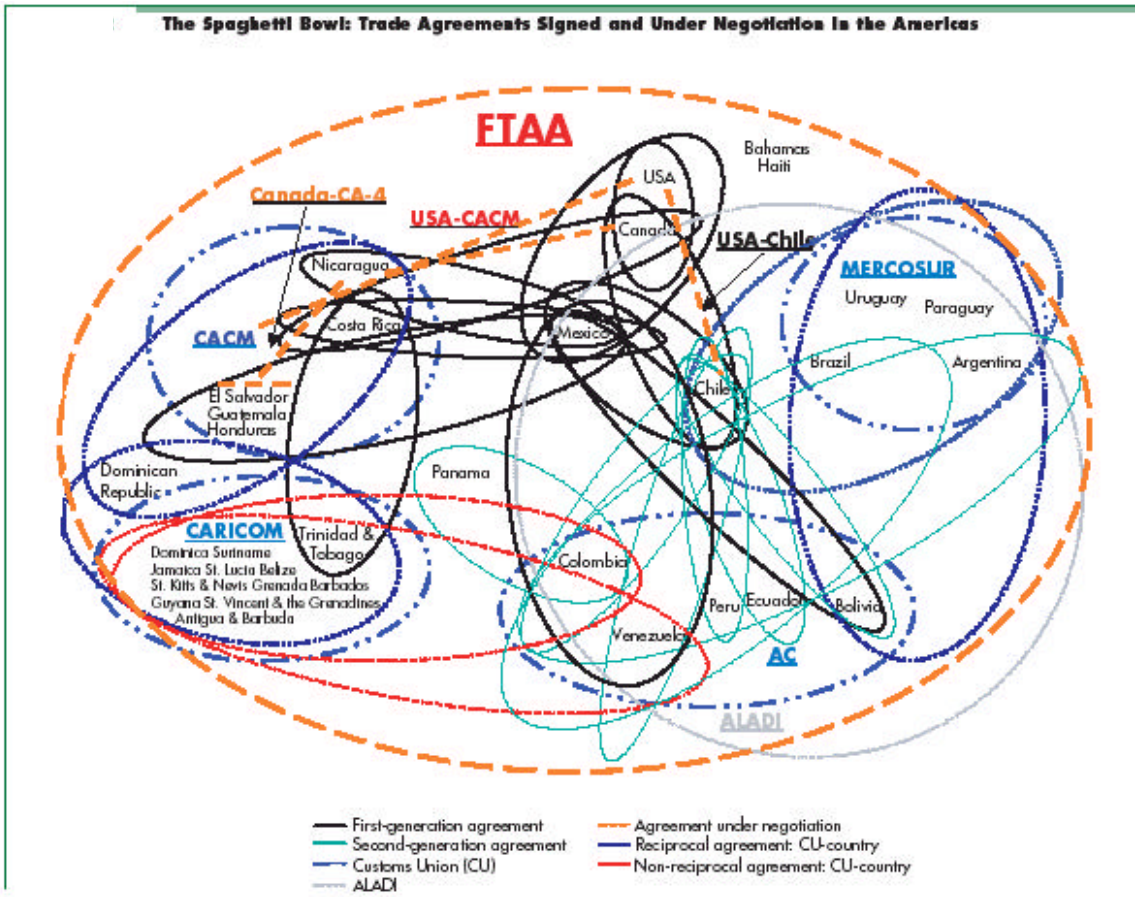
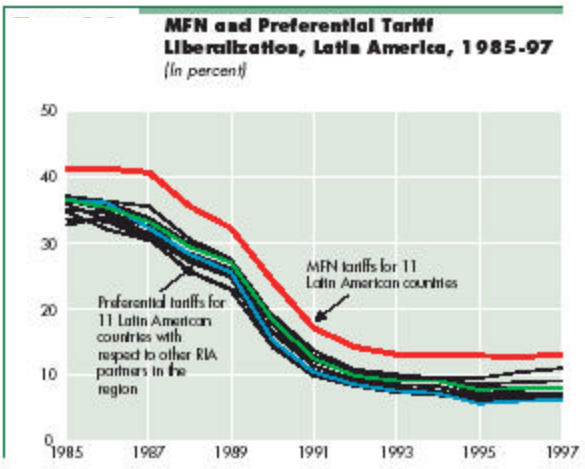
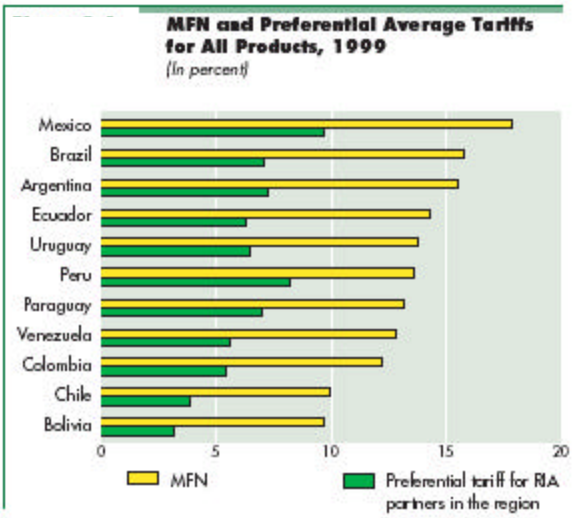

The Spaghetti Bowl: Trade Agreements Signed and Under Negotiation in the Americas
FTAA
Canada-CA-4
USA-CACM
USA-Chile
MERCOSUR
CACM
CARICOM
AC
ALADI
USA
Canada
Bahamas
Haiti
Nicaragua
Costa Rica
Mexico
El Salvador
Guatemala
Honduras
Dominican Republic
Panama
Trinidad & Tobago
Dominica Suriname
Jamaica St. Lucia Belize
St. Kitts & Nevis Grenada Barbados
Guyana St. Vincent & the Grenadines
Antigua & Barbuda
Colombia
Venezuela
Peru
Ecuador
Bolivia
Chile
Brazil
Uruguay
Paraguay
Argentina
First-generation agreement
Second-generation agreement
Customs Union (CU)
ALADI
Agreement under negotiation
Reciprocal agreement: CU-country
Non-reciprocal agreement: CU-country

Figure 3



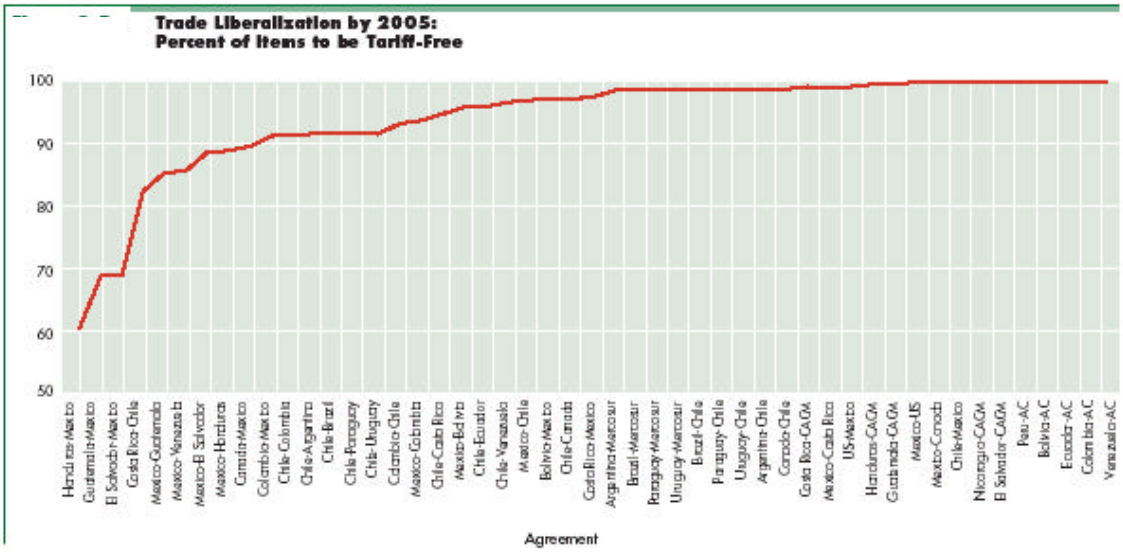
Note: The countries included are Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela. Calculations include only ad valorem tariffs.
Source: Estevadeordal and Shearer (2002).

Figure 4



Source: IDB calculations using only ad valorem tariffs.

Figure 5a



Note: The first country is the importer (liberalizing country in the bilateral relation), and the second is the exporter (beneficiary country in the bilateral relation).

Figure 5b

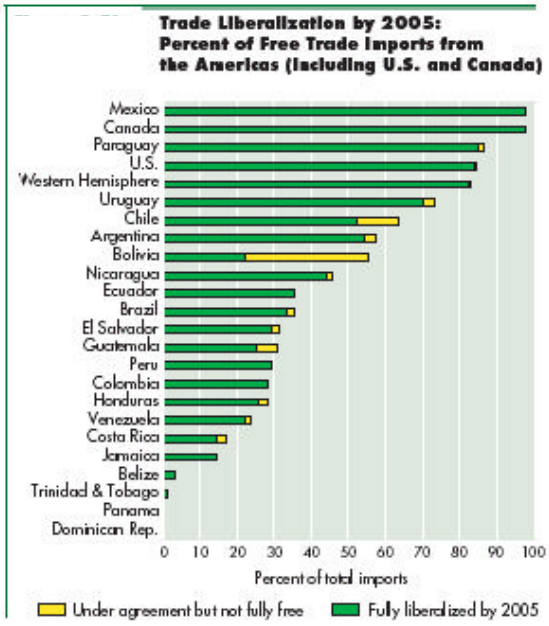
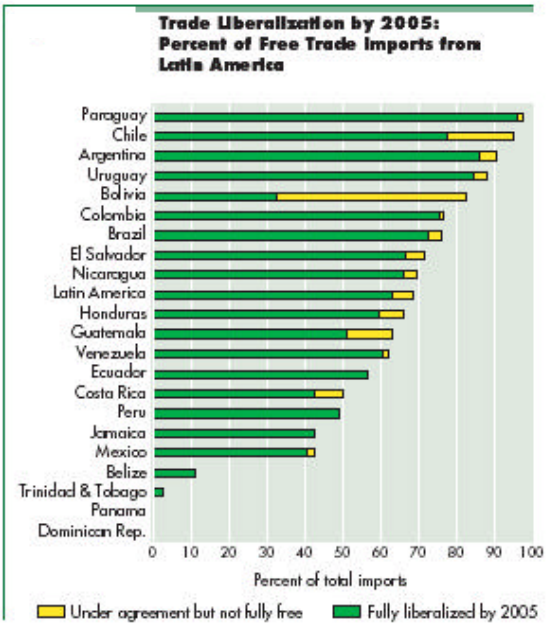
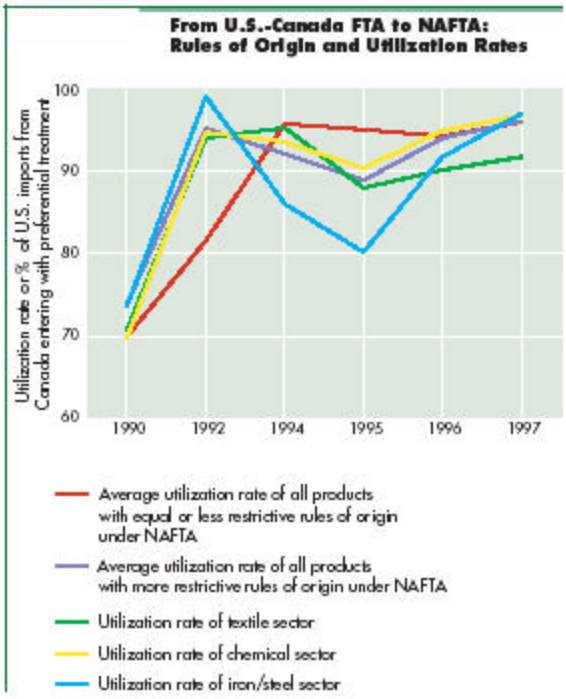


Figure 5c



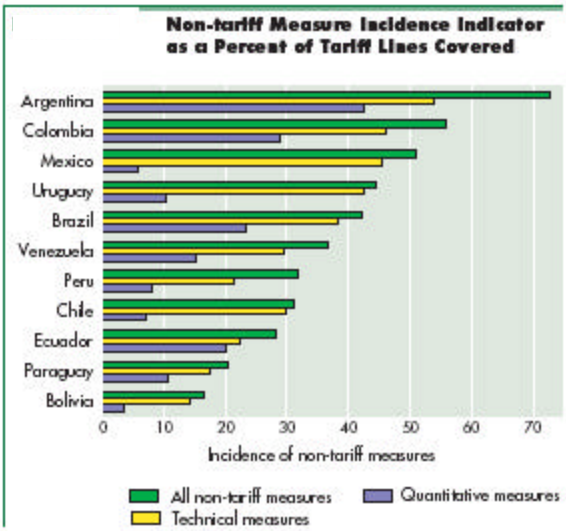
Source: Estevadeordal, Harris and Shearer (2002).

Figure 6



Source: Estevadeordal and Miller (2002).

Figure 7


Non-tariff Measure Incidence Indicator as a Percent of Tariff Lines Covered
Argentina
Colombia
Mexico
Uruguay
Brazil
Venezuela
Peru
Chile
Ecuador
Paraguay
Bolivia
0
10
20
30
40
50
60
70
Incidence of non-tariff measures
All non-tariff measures
Quantitative measures
Technical measures