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A New Approach to Trade Development in Latin America

Martín Redrado
Hernán Lacunza

Special Initiative on Trade and Integration

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Special Initiative on Trade and Integration

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PREFACE

The present work is motivated by the desire to share with those in the political and academic arenas in Latin America my experience with a distinguished team of professionals. This included two years creating and implementing trade policy in Argentina, as well as several years devoted to research concerning the region's relations with the rest of the world and the creation of an export model that could serve as a source of growth for developing countries. This paper is an abridged version of my book, *"Exportar para crecer"* (Editorial Planeta, 2003).

The management model created at the Argentine Ministry of Foreign Relations draws on both public and private intellectual contributions. Together, they led to an aggressive trade policy designed to open markets for Argentine products through trade negotiations. The policy attempted to transcend false antagonisms concerning the geographic destinations of our exports, focusing, moreover, on an indispensable complementary element: developing markets as a means of ensuring the effective use of opportunities created.

This paper attempts to adduce concrete experience to show that unproductive antagonisms can be transcended, and that horizontal consensus can be created, to serve as a platform from which our products can be launched internationally. The paper gives an account of how consensus was created between government, business, academics and civil society as a basis for trade policy.

Though it is, no doubt, premature to evaluate the results of this effort, which will have to be assessed in the longer term, there are already some concrete indications regarding the functioning of this trade policy as a pillar of Argentina's new economic program, which seeks not only to move beyond the grave crisis that the country experienced at the beginning of the present decade, but also to move firmly back onto the path of sustained development.

Martín Redrado

A NEW APPROACH TO TRADE DEVELOPMENT IN LATIN AMERICA

Martín Redrado^{*}
Hernán Lacunza^{**}

I. THE CHALLENGE OF SUSTAINABLE GROWTH FOR THE REGION

Latin America has not yet found its *place in the world* of the twenty-first century. Despite structural reforms that created greater macroeconomic stability, microeconomic efficiency and openness in trade, the resulting international integration that the region has experienced is unbalanced, with a greater presence in the financial sphere than in trade.

The features of this integration model, implicit in the process, have made our countries overly dependent on foreign savings to finance development. The volatility of financial flows carried over to our economies, and in the late 1990s the old stop-and-go growth model was reproduced in these economies. Growth in foreign trade was weak and magnified the crisis, rather than helping to absorb financial shocks.

Erratic growth and debt accumulation are not the path to sustainable development, which requires real financing and must have a development pattern based on international efficiency. Undeniably, exports must lead the growth process in countries such as those of Latin America, which are overwhelmed by high debt and serious social deficits.

While the East Asian countries had an average annual growth of 7.4% over the last thirty years, reducing their income gap with the developed world by 45% in the process, Latin America proved scarcely able to reach 3.5% growth (which increased its gap with developed countries by 22%). An Asian miracle? No, simply a consistent and durable trade policy. In 2002, the Asian countries had 9.7% of the world's trade, though their share in 1970 had been a mere 2.1%. During the same period, Latin America's share of the world's trade fell from 5.6% to 5.4%.

The challenge of developing an export model is not a minor one, but it is clearly attainable. The experience of countries such as Chile and Mexico, whose idiosyncrasies and positions in the world are similar to ours, demonstrates this. The recipe is simple: implement sensible, consistent economic policies. Following a precipitous decline in 1982-1983, Chile doubled its sales between 1985 and 1989, launching two decades of sustained growth. Mexico's turn came between 1995 and 2000. Scarcely five years after the apparently fatal "Tequila" crisis, the country entered the select ranks of "investment-grade" countries.

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The authors are indebted to Jorge Carrera, Martín Cicowiez and Marcelo Saavedra, economists at the *Centro de Economía Internacional*, for contributions and comments provided during the preparation of this paper.

Obviously, these results require that the international integration strategy become a national goal. The policy must be based on a broad social consensus, so that it can establish itself as a permanent reference for the private sector. Moreover, it must operate simultaneously along two strategic lines. First, it must include "intelligent" liberalization, focusing on all target markets that offer opportunities for Latin American products. Second, the productive sectors must develop and occupy markets.

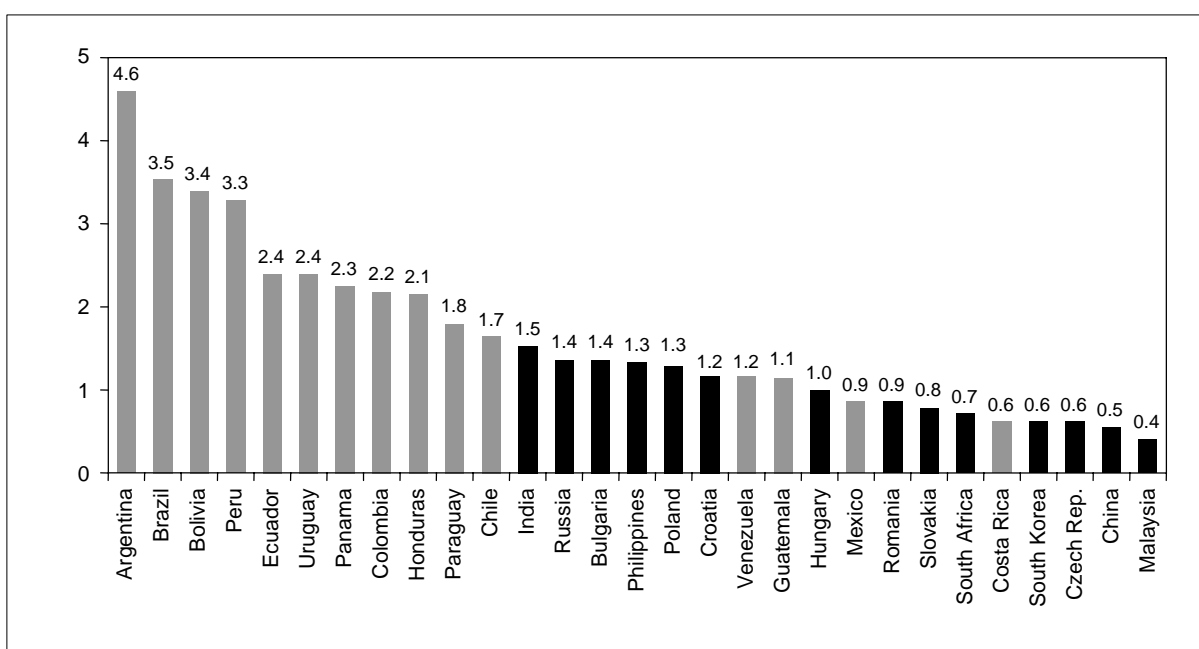
Thus, finding the road to sustainable growth is both necessary and possible for the countries of Latin America. Two tools are vital to achieving superior development standards: a strategy of trade negotiations based on a pragmatic "country by country, product by product" approach, and an approach to managing markets focusing on competitive sectors and attractive markets. These tools must be used within the framework of a comprehensive trade policy that is consistent with the rest of economic policy and is supported by the private sector, the academic community, political forces and civil society. Only under these conditions will trade policy have the stability necessary to become a permanent policy that effectively serves the objectives of sustained development, since no investor places capital in a country whose strategy of international integration is a moving target.

This paper examines such strategy and its possible results for Latin American economies. The second section presents the export model as a valid alternative for Latin America, with lessons drawn from international experience. The third section provides a complete analytical method, designed to serve as a theoretical basis for trade strategy, as well as for measuring results. The fourth section emphasizes the importance of consensus in the national policy process, along with other requirements for, and objectives of, trade policy. Section five outlines the central features of the strategy proposed for Latin America, which involves searching out, as well as developing, markets. The final section offers conclusions and policy recommendations for more effective trade approach by our countries.

II. EXPORTS AS A KEY FOR DEVELOPMENT

Latin America's economies have a dual problem in relation to the outside world, inasmuch as a combination of low exports and high debt. Though Mexico and Chile are exceptions, countries such as Argentina, Bolivia, Brazil, Colombia, Peru and Uruguay need the equivalent of more than two years of exports to cover their foreign debt. If we consider, as a measuring rod, the fact that in the emerging economies classified as "investment grade" (e.g., Hungary, Malaysia) the foreign debt is equivalent to no more than a few months of exports, we can appreciate the distance that separates our countries in terms of this indicator.

FIGURE 1
DEBT REPAYMENT CAPACITY
Average 1999-2001. Years of exports needed to cover total foreign debt



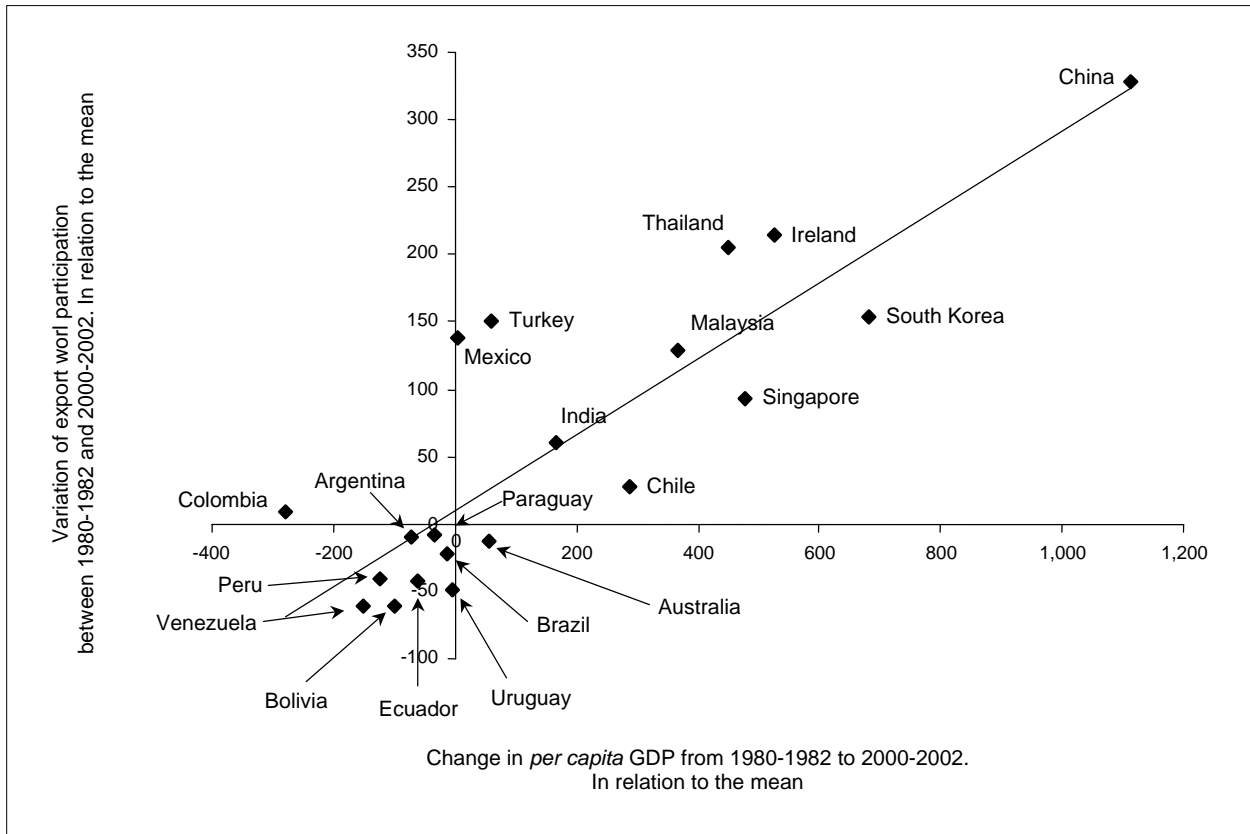
Source: CEI, based on *World Development Indicators*, 2003.

The chronic stagnation of these economies -in contrast to countries as diverse as Australia, Ireland and Korea, which had similar or lower levels of development only a few decades ago- is partially due to unbalanced international integration, i.e., expansive in the financial area (always in the "debtor" position), but limited in the trade area (where their role is that of "creditor").

The crises of the last few years resulted not from financial liberalization, which made it possible for foreign capital to compensate for scant domestic savings, but rather from a very limited ability to repay debt, due to a low level of production that made an equivalent flow in exportable goods impossible. When growth in net external sales (and its effect on the current account) is less than the growth in the external debt, foreign capital quickly takes note of the discrepancy and stops financing those countries.

Of course, reversing financial liberalization or generating import barriers is not the solution. The following figure shows a positive correlation between countries' economic growth and their share of international trade. Latin American countries occupy the lower part of the figure, where the change in share of trade was small or negative and the increase of per capita GDP relatively low.

FIGURE 2
ECONOMIC GROWTH AND SHARE OF WORLD TRADE
 (Percentages)

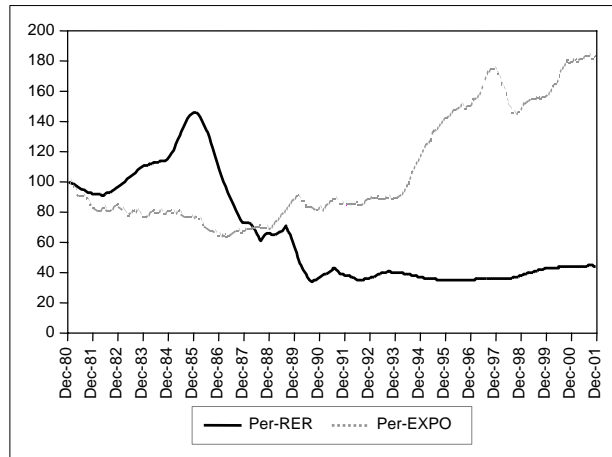
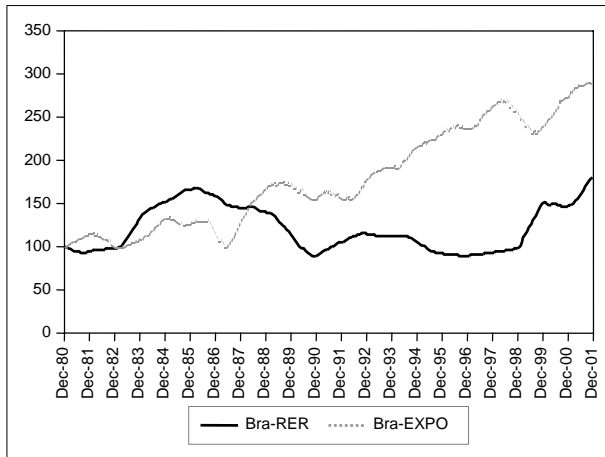
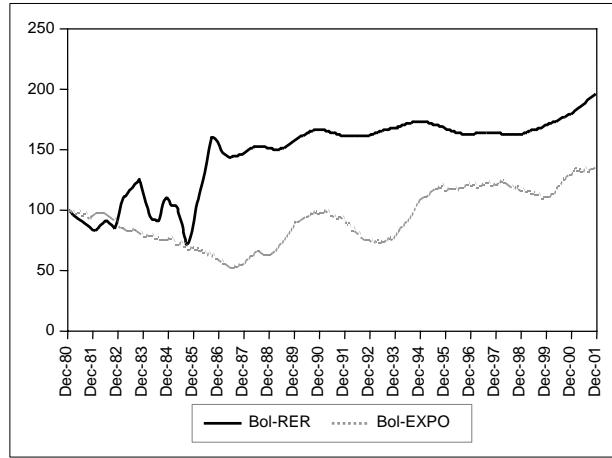
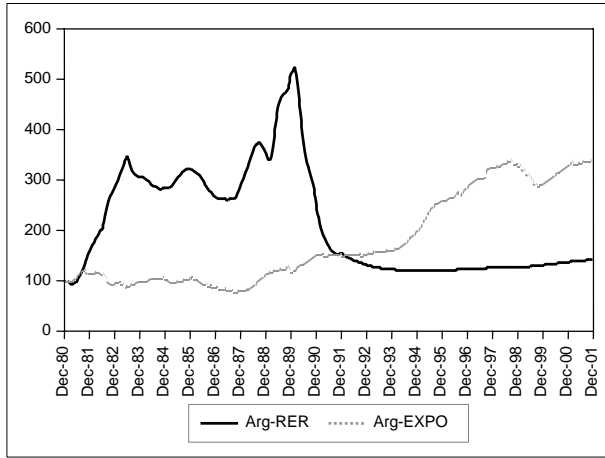


Source: Author, based on IMF data.

This situation is the result of weak public policies that created economies with little systemic competitiveness, making it difficult to incorporate them in real international flows. Hence, small or medium-sized Latin American economies that are financially open but have an artificially limited demand for exports (as in the case of agricultural subsidies) and, in general, have financing problems, will only be able to find a path of the sustainable development by adopting a growth model in which exports play a leading role.

In order to resume this pattern of growth, the economy must be embedded in a competitive framework. This requires a stable exchange rate (see Figure 3) and consistent fiscal and monetary instruments, in addition to an aggressive trade policy that can substantially increase the quantity and quality of exports.

FIGURE 3
EXPORTS AND THE REAL EXCHANGE RATE

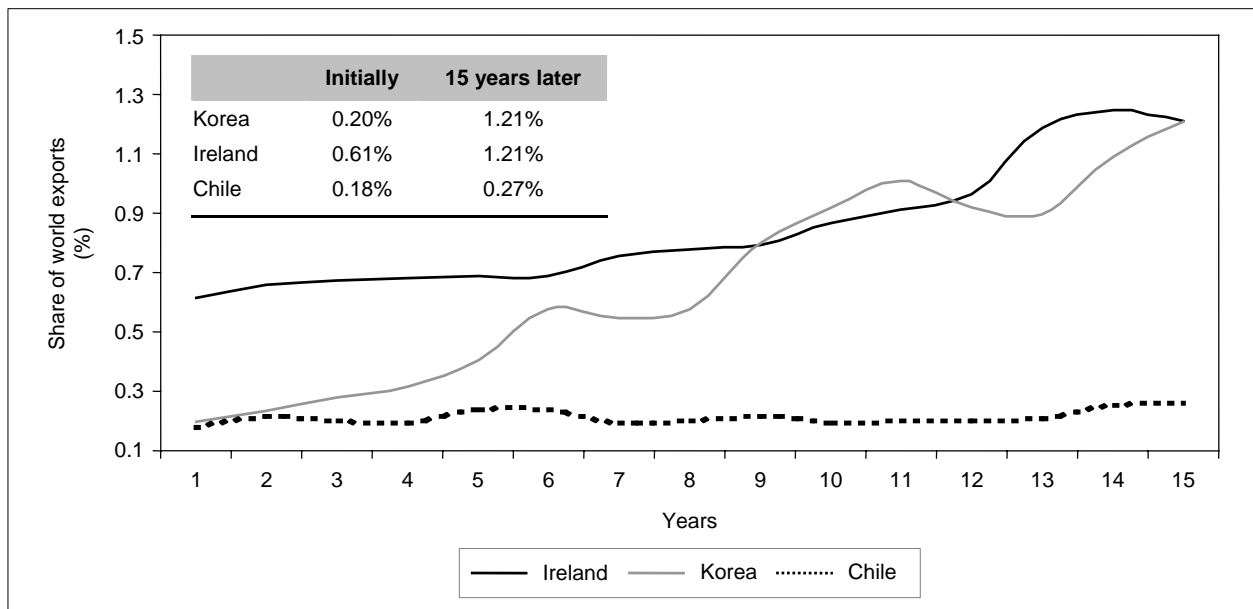


Source: CEI.

III. LESSONS DRAWN FROM INTERNATIONAL EXPERIENCE

For many countries that achieved a competitive export-led economy (including those that started from distinctly low levels of development, little potential in natural resources, industrial structure or skilled labor), the prospect of recreating an export model is shown as a real possibility. The trade experiences of Chile, Ireland and South Korea are relevant to Latin America, given the size and productive structure of these countries. All three have outstanding records in international trade over the second half of the last century, though the three began their advances at different times: Korea in the 1960s, Chile in the mid-1980s and Ireland in the 1990s.

FIGURE 4
SHARE OF EXPORTS FOR THE FIRST 15 YEARS OF THE MODEL



Source: CEI based on International Financial Statistics.

The geographic environment and trade regulations that served as the background for the export expansion of these three countries vary in the specifics. Ireland benefited from the European Union’s financing for less developed countries. At the time of its expansion, South Korea benefited from certain trade development tools -e.g., benefits tied to export targets- that today are restricted by the World Trade Organization.

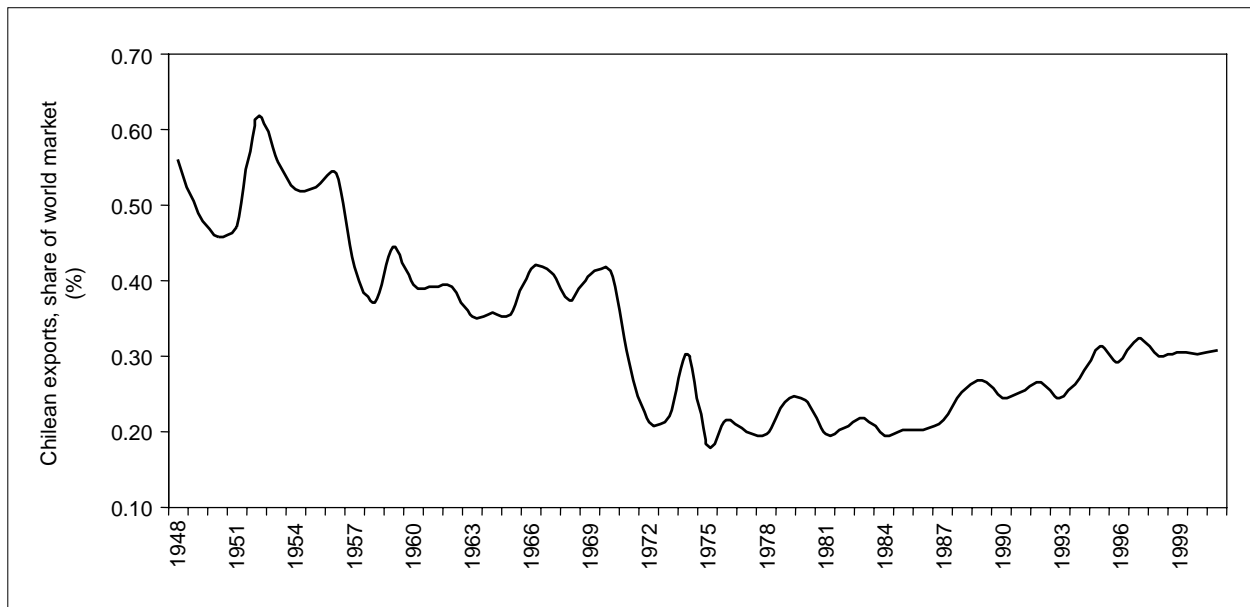
Making allowances for geographic and cultural differences, however, the experience of the three countries contains some important lessons for the development of an export strategy.

The Chilean Experience

Chile is, perhaps, the best point of reference for the region, because it shares the greatest similarities, culturally and geographically. Chile’s exports declined from 1948 to 1975, when its

share of world exports reached an historic low of 0.18%. From that point, they rose to 0.31% toward the end of the century.

FIGURE 5
PERFORMANCE OF CHILEAN EXPORTS



Source: Author, based on International Trade Statistics.

As a result of the change shown in the above figure, exports represented 34% of GDP by the end of the 1990s, as compared with 12% at the beginning of the 1970s, though the bulk of the growth was concentrated in the periods 1974-1980 and 1986-2000 (when sales increased 11.5% annually).

Meanwhile, the degree of concentration of exports by product has dropped sharply, considering that copper's share total exports has fallen from 75% in the 1970s to 35% today. The declining concentration has also manifested itself geographically. The number of markets rose very significantly, and the central importance of the European Union (61% in 1970) diminished sharply (to 29% by 1998), with the diversification in Chile's target markets.

This impressive growth in exports had its origin in the mid-1970s, when a strategy of unilateral liberalization was applied to the economy in the areas of trade and finance. In the former, both the level and dispersion of tariffs were reduced sharply, while non-tariff barriers such as quantitative limits, were dismantled. From 1974 to 1979, there was a fixed 10% tariff, clearly a very reduced level, with little dispersion, reflecting the central features of the process of unilateral liberalization.

In the macroeconomic area, the local currency was devalued in 1974 and 1975, in order to compensate for the loss of protection in the domestic market, and to provide an incentive for exports. By the end of the 1980s, fixed parity was established. This represented an appreciation of the currency, and affected the competitiveness of the Chilean economy.

These domestic realities, along with the debt crisis of 1982, made for a non-linear path of liberalization in Chile. In the early part of the 80s, there was a temporary reversal of this trend reforms, increasing trade tariffs to 35%.

The second phase of trade reform occupied the latter half of the 80s. It was moderate, in comparison with the 1970s. The center stage was now occupied by trade promotion and other structural reforms, such as privatization and investment incentives, all designed to increase export performance.

Chile took advantage of the experience of the capital crisis of the 1980s, instituting regulations for short-term capital flows. This gave the economy greater immunity to the various financial crises that exacted a toll on the world's emerging economies toward the end of the century.

In the 1990s, with a prevailing trend toward the formation of regional blocs, the country reoriented its strategy of international integration, altering the unilateral character of its liberalization process. The change was essentially a response to the need to open up markets more quickly than could be achieved by unilateral liberalization and multilateral negotiation. This demonstrates the difficulty of achieving significant export expansion, even when trade policy, on the tariff side, is clearly pro-export. Chile's approach to this new strategy of liberalization was to sign various bilateral agreements, with countries and with regional blocs.

The objectives of the new strategy were: (a) to achieve greater market volume for goods, services and factors of production; and (b) to increase, diversify and facilitate trade.

The new approach towards global integration was also accompanied by further liberalization measures. The flat tariff was reduced from 15% to 11% in 1991, and a gradual reduction of 1% per year began in 1998, reaching 6% in 2003.

The rest of Chile's economic policy did its part in executing this liberalizing export trade approach. The macroeconomy played a central role in the growth of exports, primarily by virtue of consistent exchange and monetary policies. The fact that it behaved independently allowed it to compensate for external shocks and prevent the "domino effect" of financial volatility on the productive sectors.

In addition to the pro-competitive environment created by exchange rate policy, institutional performance and administrative reform, the promotion of exports played a central role in the growth of Chile's export sector. Incentives were designed in the areas of taxation, finance, customs and institutional support, in order to increase and diversify the export base. The central methodology of this policy was to orient export supply to the most dynamic markets, in particular with a matching import profile.

Chile implemented a variety of export promotion policies, including policies to finance exports, instruments to stimulate production and exportation, tax benefits, drawbacks and deferred payments.

In terms of the difficulties of the export model, Chile's problems arose primarily in the area of infrastructure, where bottlenecks impeded the flow of shipments.

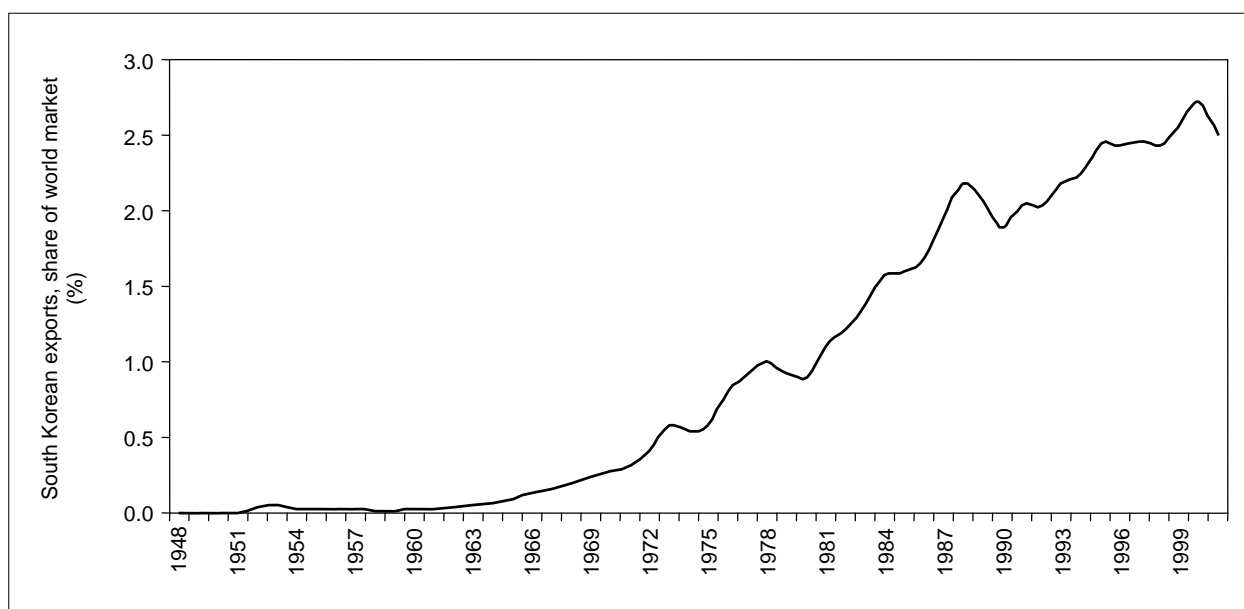
In conclusion, Chile's export growth was the result of a range of actions taken by the government, none of which, however, were clearly targeted to selecting "winning" sectors. Moreover, although unilateral liberalization was the centerpiece of Chile's strategy, it also involved searching out

markets, on both a multilateral and bilateral basis, in order to gain access and increase export growth. Thus, the major lesson to be drawn from the Chilean case is that the success of any trade policy depends on its consolidation and its stability over time, as it becomes national policy.

The Korean Experience

Korea's exports increased by an average of 29% annually between 1961 and 1970, and 21% annually from 1971 to 1980. Thus, the country's foreign sales represented 35% of GDP by 1980, as compared with 4% in 1960. Though at a reduced pace, the export boom continued during the succeeding decades, and exports represented 50% of GDP by the end of the century.

FIGURE 6
PERFORMANCE OF SOUTH KOREAN EXPORTS



Source: Author, based on International Trade Statistics.

The extraordinary performance of Korea's exports is reflected in their share of world trade, which grew from being technically nil at the beginning of the 1960s to roughly 2.5% by the end of the century.

The great leap in exporting for South Korea (as well as Taiwan, Malaysia and Thailand) was preceded by the implementation of an import substitution model. However, when the first symptoms of fatigue appeared in this Asian subregion, the model was replaced by a process of gradual trade liberalization and export promotion.

The development of South Korea's exports was based on the growing importance of industry within the country's economic structure. This led to a pattern of growth that was not based on the

exploitation of natural resources or on exogenous factors such as an influx of labor or venture capital. Rather, the guiding concept was to import raw materials that would be processed and subsequently sold with value added.

There is no doubt that the international situation helped to establish the export model, since the United States, in a sense, supported the process, both because it provided concrete support that made it possible to finance the current account deficit, and because its markets were open to Korean products. The GATT negotiations were another beneficial factor, making direct export subsidies possible.

The gradual liberalization process began with the most competitive sectors, while plans were made to cover less competitive sectors later on. This liberalization mechanism tended to direct production and exports toward sectors with greater value added. Thus, public policy played a strong role in investment.

The commitment regarding the choice of policy was a crucial element. The response of these economies to foreign debt problems was not to erect import barriers, but to maintain the chosen trade policy, so as not to slow down the economy's development of productive and technological capacity.

The guiding concept of the export promotion process was to even the playing field, balancing access to foreign markets with domestic sales, i.e., eliminating the negative influence of trade barriers through fiscal, trade and credit policy.

The principal instruments used were financial incentives. Banks -in essence, the public-sector banking institutions- gave priority to loans for export-related industrial activity. Energy prices were also subsidized, road and rail infrastructure built, and tax exemptions provided, while other types of measures to stimulate export were adopted, including trade incentives (tariff exemptions, free sale of currency certificates on the market, monopoly rights), exchange rate incentives (preferential rates for exporters), fiscal incentives (reduction of tax rates for exports, exemption from indirect taxes on inputs and on sales of export firms), financial incentives (funds for export promotion, loans at preferential rates and with deferred payment to finance importation of capital goods, financing for export spending, funds for the transformation of small and medium companies into export firms, development of credits and insurance for selected export activities) and administrative incentives (preference for exporters in granting manufacturing licenses, preferential rates for public services, simplification of official procedures).

The other Asian cases share a common thread with that of South Korea. Promotion of exports, through financing, was also a major factor for Taiwan, where, as in Korea, the State played a very strong role in determining what sectors would be winners. In Thailand and Malaysia, the State also played a central role, but there the basic tool was the creation of "free zones" for the processing of exports.

The government was active in all of these cases, by determining which sectors would enjoy preferences for investment, seeking higher value added, promoting advanced technology, and seeking trickle-down effects throughout the rest of the productive structure.

Another major factor to be taken into account in assessing the export process in Asia is the role of human resource training. As a result of government policy, South Korea is the world leader in terms of the number of people in technical training programs, as a percentage of the total population. This situation holds in Asia as a whole, where the percentage of people in technical training is double that in the industrialized countries, and five times the percentage in Latin America.

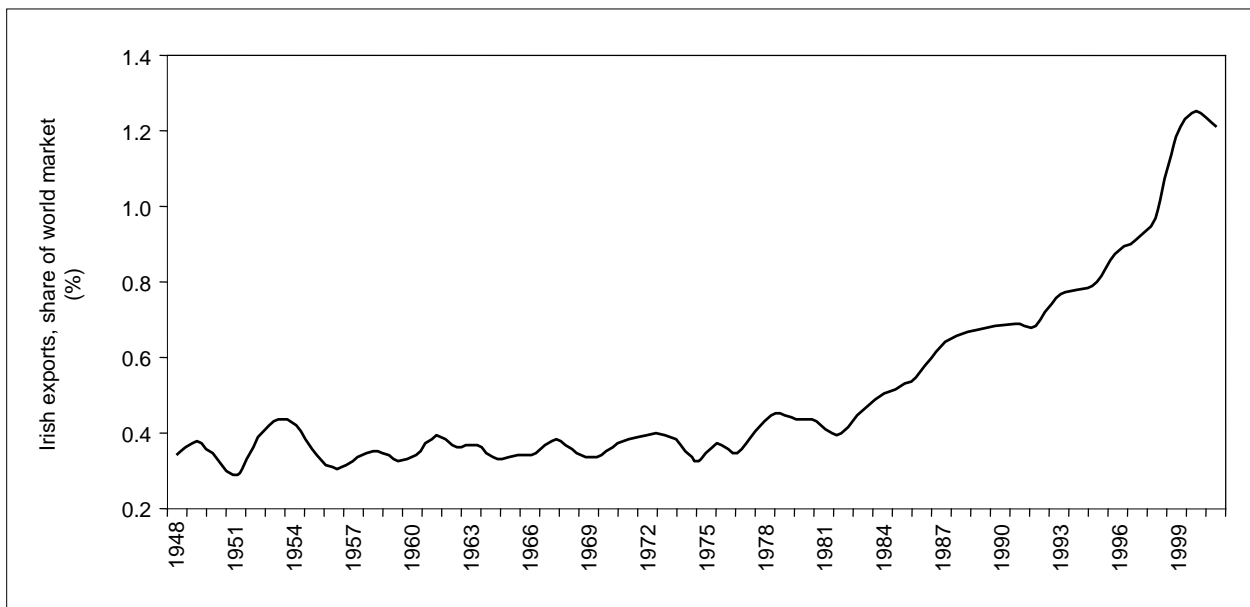
In terms of technological activity, also, Southeast Asia (led by South Korea, which, after Japan, has the highest amount of research and development in relation to GDP) is the most dynamic part of the developing world. Research and development in Asia, as a percentage of GDP, is ten times what it is in Latin America and the recently industrialized countries.

In short, the export success of the Asian countries was not the result of chance or a natural consequence of liberalization. It resulted from government policy that looked beyond trade and supported exports. To be sure, the international environment of the 1950s and 1960s helped the model to take root and continue being fruitful. Trade policy was national policy in a broad sense. It not only included trade measures, but also fiscal and monetary consistency, so as to ensure that no anti-export bias in the latter areas would undermine efforts in the former. Government policy was decisive in the entire process, both in the form of extremely active use of incentives and through efforts to recreate the conditions for a systemically competitive economy.

The Irish Experience

Ireland's foreign sales reached a turning point in the mid-1970s, when, after almost 30 years of stability, they began an upward trajectory that, in the end, tripled the country's share of world exports.

FIGURE 7
IRELAND'S SHARE OF WORLD EXPORTS



Source: Author, based on International Trade Statistics.

Ireland's exports, as a percentage of GDP, rose from roughly 30% in the 1960s to 80% by the late 1990s.

The geographic diversification is a distract factor in its export pattern. At the beginning of the 1960s, 75% of the country's exports went to the United Kingdom. By the late 1990s, this percentage had dropped to 25%. Though Ireland joined the European Union during the intervening period, the percentage of exports destined for the EU fell from 82% in the 1960s to 68% by the end of the century, reflecting a successful global insertion, beyond the major trade preferences that were obtained.

Sectoral diversification and the incorporation of value in exports were also highly significant factors. While 69% of exports were farm products or raw materials in the 1960s, only 18% were in this category by the end of the 1990s. Meanwhile, more technologically developed products with greater value added gained as a share of all sales. Exports of chemical products, pharmaceuticals, software and equipment constituted 60% of exports in the 1990s, as compared with 16% in the 1960s.

The spillover to the rest of the economy was important. Exports are directly or indirectly responsible (25% and 50%, respectively) for jobs, which makes them the major engine of the nation's economy.

Though the benefits of this process became palpable in the 1990s, the pro-export policy was instituted some years earlier. In 1973, Ireland became a member of the European Common Market, perhaps the most important landmark in the development of its export model.

Along with these developments, Ireland undertook an ambitious educational reform. Though it entailed a long period of maturation, it was fruitful in the long run. With a young and highly skilled population, and preferential access to the European market, Ireland became a pole of attraction for major, clearly export-oriented high technology investment. Today, it is the second largest exporter of software in the world (second only to the United States).

From a macro perspective the key was the resolution of the public debt problem. It was equivalent to 112% of GDP in 1987. An austere fiscal policy reduced this to 36% of GDP by 2000.

Meanwhile, the solution to the problem of unemployment laid in a social agreement between workers, businesses and the government, with a view to keeping wage increases under the European median. Meanwhile, productivity rose more than the median for the continent, producing a major competitive shock.

In terms of exchange rate policy, continued low levels of inflation and the fluctuations allowed by the European Monetary System's exchange rate mechanism led to a stable real exchange rate that contributed to competitiveness, as a factor to attract investment in the tradable goods sector. The real exchange rate has remained above the levels it had between the 1980s and the 1993 devaluation, stimulating investment in the export sector.

The role of aid from the European Union in the process of Ireland's development (particularly in the form of funds earmarked for backward countries) cannot be ignored. It not only helped to

compensate for a relatively low level of development, but allowed Ireland to remain relatively insulated from the volatility that affected emerging countries over the last 15 years.

Since the bulk of Irish exports (70%) comes from foreign-owned firms, the government implemented active policies to support domestically-owned firms. These were trade intelligence policies, providing on-site support in destination countries through trade offices or via Ireland's embassies abroad. They helped small and medium-sized firms to overcome the information and finance gap and penetrate new markets.

The primary intention was to achieve geographic and sectoral deconcentration in the marketing of exports of Irish origin, since the bulk of SME exports went to the United Kingdom and were agricultural. These policies were primarily funded by monies from the European Regional Development Fund. Though the State played a role as a risk insurer, it was not an extensive role.

In short, Ireland's increased competitiveness was produced by a series of notable factors: (a) social consensus on wage levels; (b) macroeconomic stability; (c) major flows of foreign direct investment; (d) low business taxes; (e) rapid expansion of an increasingly trained and educated labor force; (f) major transfers from the European Union; and (g) government support in the form of trade promotion policies.

Thus, it can be seen that, despite the advantages of belonging to a large economic bloc such as the EU, Ireland took approximately 20 years to consolidate its position as an exporter. This points up the importance of long-range national policy.

Lessons for Latin America

It is clear that our region is not part of a stable, neighborhood such as the one enjoyed by Ireland, where, in addition to a large market available on a preferential basis, development financing was provided. Moreover, our region lacks certain trade promotion tools that were available to South Korea in another historical context (viz., export targets, which are now prohibited by the WTO). Nevertheless, making allowance for historical, geographic and cultural differences, the experiences cited above contain some important lessons for the development of a regional export plan.

- *The Government plays a **central role** in developing an export model.* This role cannot be translated into a single recipe. As is apparent from the three cases cited above, its role may vary widely. For example, unlike the Asian governments in question, it did not adopt an interventionist posture, though it did act as an integrator of the various economic policies. Ireland, on the other hand, is a paradigmatic case of how a government can generate the conditions needed to increase systemic competitiveness. Thus, though the level of intervention may be different, the development of an export model always requires a leading role of the public sector, so that the private sector receives unmistakable signals about the advantages of investing in the export activity.
- *Trade policy must be a **permanent** policy.* Erratic and unsystematic efforts are useless. No one makes decisions to invest in a country whose trade policy is subject to periodic changes.

- *Consensus is a central element in the success of a trade model in which exports play the leading role.* Though the cases of Chile and South Korea involved non-democratic processes, the Irish experience shows that consensus may also be achieved within a democratic framework, through a fluid **public-private partnership**.
- Though successful export processes -for reasons of efficiency- are based on the natural advantages of the economies where they are based, *these natural advantages must be supported by investing **training human capital** and in **technological development**.* The capacities of the factors of production are static, while successful exports require *dynamism*, i.e., capacities that allow for the ongoing creation of new competitive advantages. This, in essence, means technical training, technological innovation, market engineering and investment.
- *The trade policy effort must be accompanied by a **stable macroeconomic environment** as well as fiscal and monetary policies that minimize any anti-export bias.*
- *Access to the largest markets is crucial.* Increased competitiveness may be inconsistent when, for instance, there are quantitative restrictions (not price restrictions) on placing the products that one wishes to export.
- *A **market development policy** is required if products are to reach world markets.* It is useless to open markets through negotiations if products are not then placed in those markets. This is not a matter of an instrument that distorts the market, but rather of one that is of special utility for small and medium-sized enterprises, inasmuch as it does not necessarily involve implementing discretionary policies, such as that of picking winners.
- *Export development requires an **adequate infrastructure**.* This is critical to avoid the bottlenecks that can prevent successful implementation of the final phase of the export trade model.
- *Exchange rate policy must **combine stability and flexibility**.* The former is needed to clearly define investment incentives, the second to maintain a proper level of price competitiveness.

In summary, since many of the required actions involve "public goods", the State must take an active role, in order to ensure increasing productivity. To this end, the region's countries "must encourage an offensive trade policy", gaining markets through negotiation and the removal of barriers, while implementing monetary and fiscal policies consistent with an export model and instituting permanent structural reforms to encourage long-term competitiveness. All of this is needed to create a quantitative and qualitative leap in exports and to support a process of sustained growth that permanently moves the region beyond the secular stagnation of the last 30 years.

IV. AN ANALYTICAL MODEL

Given the number and complexity of the negotiating scenarios generated by policy makers from our countries, along with the limited technical and human resources available and the enormous interests involved, efforts must be made in advance to assess the economic impact of mutual concessions involved in the negotiating processes undertaken by our countries.

The assessment must include a comprehensive strategic vision that shapes the policymaker's roadmap, as well as specific analysis that helps to identify threats and opportunities associated with each negotiation.

The former element makes it possible to assess impact on aggregate well-being. Where the allocation of resources is at stake, an analysis of production, exports, jobs and compensation, among other factors, suggests what areas of negotiation will be assigned a high priority and which will have secondary importance.

The second element just helps to select potential "winner" and "loser" activities associated with each agreement, in order to take advantage of winning opportunities, and anticipate countervailing policies or resource reallocation for the losing side of the equation.¹

By using these instruments, the net effect of negotiations can be covered from opposite angles, coordinating the costs and benefits of the mutual concessions involved in a potential trade agreement, taking into account the new markets to be obtained and the loss of tariff preferences to be sustained in the domestic market or in an expanded pre-existing market.

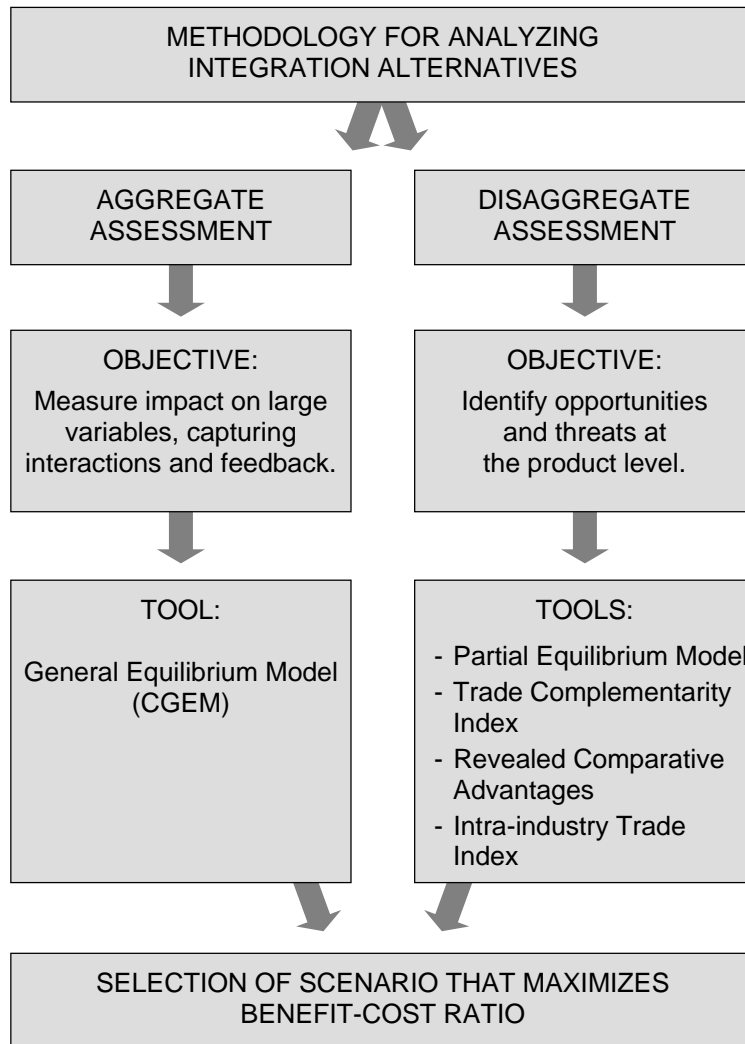
Figure 8 shows a methodological approach for analyzing integration alternatives. General equilibrium models (CGEMs) are the most appropriate instruments for an aggregate analysis, since they capture all interactions occurring in a country's economy in relation to the rest of the world (e.g., changes in production due to reallocation of factors of production, which are not captured by partial equilibrium models). This ensures that the user is not "missing" anything in the analysis, when considering the advisability of adopting the proposed policy.

A disaggregated assessment, which is designed to identify opportunities and threats at the sectoral level, is based on partial equilibrium models. Though these do not have the advantage of the "generalist" approach of general equilibrium models, they are more accurate in terms of the performance of a given productive sector. A number of indicators is also used to detect opportunities arising from the export specialization of country A and the import specialization of country B (*trade complementarity index*), along with proxy measures of the industry's sectoral competitiveness (*revealed comparative advantage index*) and gauging of the intensity of intra-industry trade (*intra-*

¹ It would be absurd to ignore specific costs -industries affected by the increased competition- in any economic integration agreement, since specialization and economies of scale are natural results and give rise to the main benefits of integration. Nevertheless, specific policies must address the potential "losers", since the reallocation of resources (both physical and human) is not always instantaneous -indeed, the reallocation may even reverse the aggregate net result of a trade agreement as it affects a country's welfare.

industrial trade index). These indicators are applied by decision making analysis to classify tariff lines or items according to their positive potential or the degree of threat they represent.

**FIGURE 8
DESCRIPTION OF ANALYTICAL METHODOLOGY**



Aggregate Impact Analysis: General Equilibrium Models

General equilibrium models (CGEMs) make it possible to analyze quantitative changes in policy governing the optimal allocation of resources, efficiency and welfare.

Applied to the field of trade policy, CGEMs allows to measure the changes, both direct and indirect, that occur in different aggregate variables (GDP, jobs, exports, imports and terms of trade, among

others), based on the reduction or elimination of tariff barriers in a particular market.² It is possible to simulate with great versatility, including even the consideration of political-economic constraints, the impact of different scenarios that make up Latin America's economic and trade integration agenda.³

Though the structure of a CGEM is complex, the underlying concept is simple. It attempts to represent the economy by a group of equations that are then solved by a computer. In the model, the economy is composed of different elements called "economic agents" -consumers, businesses and the public sector- which interact among themselves and with the rest of the world.

A CGEM allows to carry out counterfactual experiments. The computation based on the model indicates what would have occurred in the baseline year if the trade policy under examination had been implemented, assuming that the rest of domestic policy and external conditions remained unchanged. Hence, this type of analysis emphasizes the effects of a given trade policy in isolation from other factors. The features we have mentioned should be taken into account in interpreting the results of a CGE model. It does not predict, but simulates (since the assumption "all else remains constant" is not realistic). The method functions as a "controlled experiment" in which only some of the exogenous variables are modified (in our case, the tariff rates of the countries being studied).

Based on the model of the *Global Trade Analysis Project* (GTAP) (Hertel and Tsigas [1997]), a model may be constructed as a starting point for analyzing trade policy. The model is a multisectoral model of the world economy, and it is constructed as follows: it is neoclassical, static, has yields that are constant to scale, perfectly competitive markets, fixed quantities of the factors of production and differentiation of products according to country of origin (Armington [1969]). A model such as this only captures the effects of improved resource allocation and increased possibilities of consumption created by trade liberalization. Extensions or modifications may be made to the assumptions or values associated with the model's parameters, enriching the analysis. For example, one may include the positive externalities of trade as they affect growth (capturing, for instance, effects such as *learning by doing*), imperfect competition, economies of scale (typically in the manufacturing sector) and capital accumulation (to give the model a dynamic element). The assumption of a fixed supply of factors of production may also be dropped, to make simulations in which there are changes in the countries' employment levels.

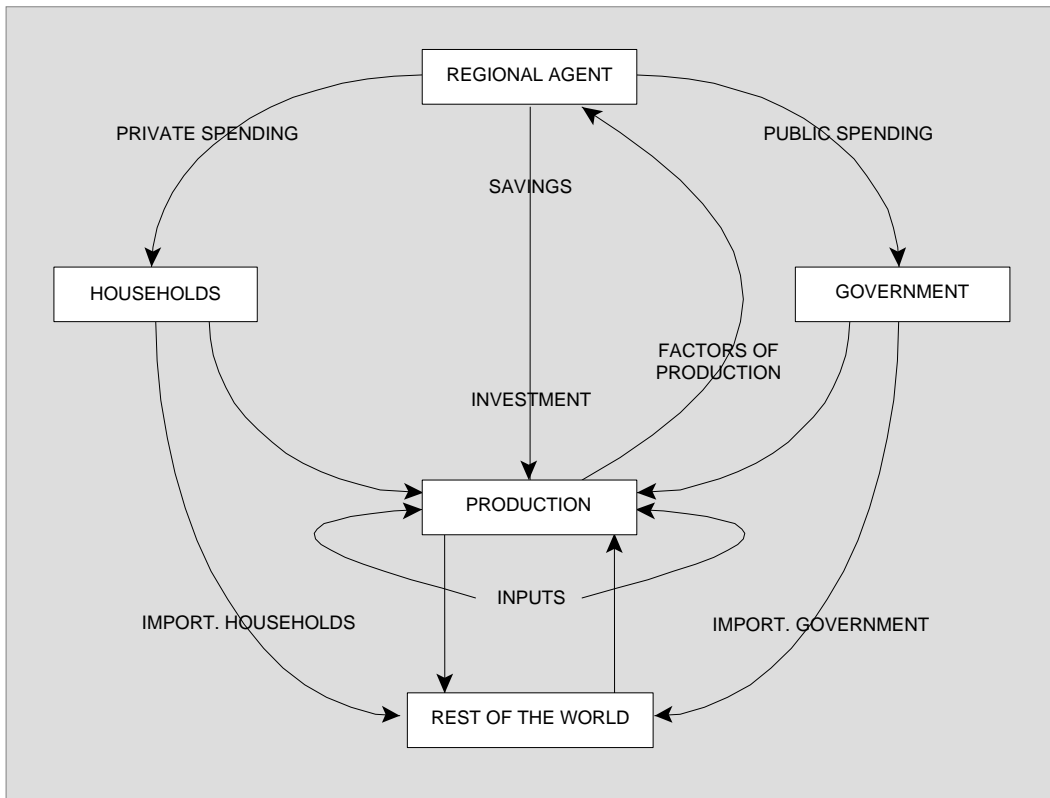
Structure of the Model

This section provides a general description of the model. The equations are presented in Annex A. The figure explains the overall functioning of the CGEM.

² The *Centro de Economía Internacional* (CEI), the think tank associated with Argentina's Ministry of Foreign Affairs, has developed a general equilibrium model to measure the possible costs and benefits of the various integration alternatives facing Argentina. The model can feasibly be extended to other countries of the region. See CEI [2002].

³ They are in wide use today for the quantitative analysis of the impact of different trade integration agreements. For application to an assessment of the NAFTA, consult Francois and Shiells [1994]. For application to the Uruguay round of the GATT, consult Francois *et al.* [1996]. Among applications of CGEMs to FTAA countries, note Harrison *et al.* [2001]; Monteagudo and Masakazu [2001]; Roland-Holst and van der Mensbrugge [2001]; Diao and Somwaru [2000] and Harrison *et al.* [2002], among others.

**FIGURE 9
STRUCTURE OF THE MODEL**



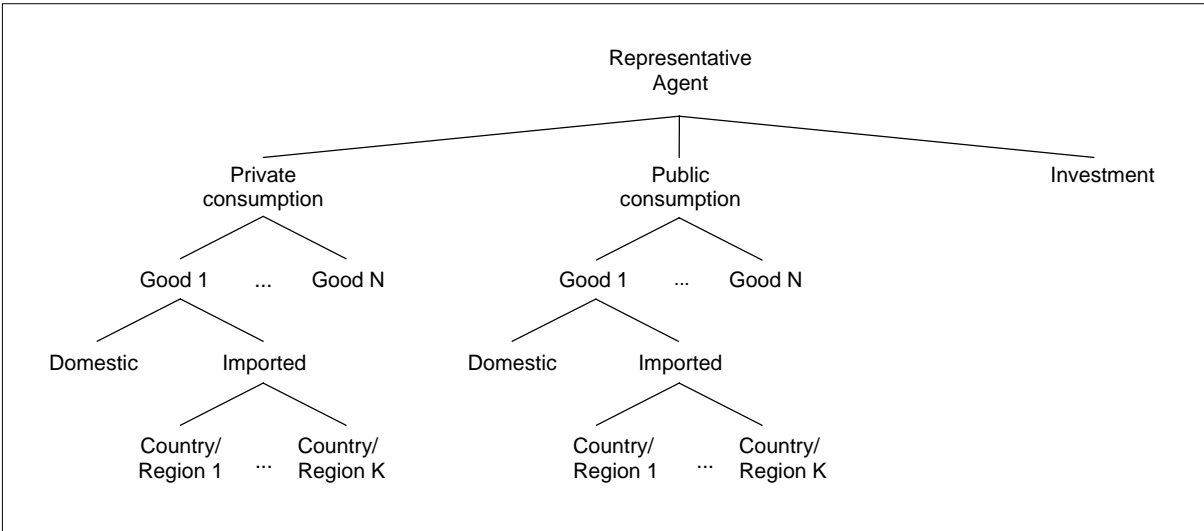
Source: Brockmeier [2001].

The diagram of the model summarizes how the behavior of the economic system in each country under consideration is treated. The sectors use factors of production -land, skilled and unskilled labor, capital and other natural resources- as well as intermediate inputs, and they may choose between selling their products domestically or exporting them to the rest of the world. On the demand side, the goods are not only distinguished as domestic or imported, but also according to the country from which they come, if they are of foreign origin.⁴ To simplify, one considers a representative agent in each country that has the entire fixed supply of factors of production, and with the authority to collect tax revenues, while at the same time demanding goods for private consumption and public spending, and saving a portion of the revenues for investment. The factors are mobile between sectors, but not internationally.

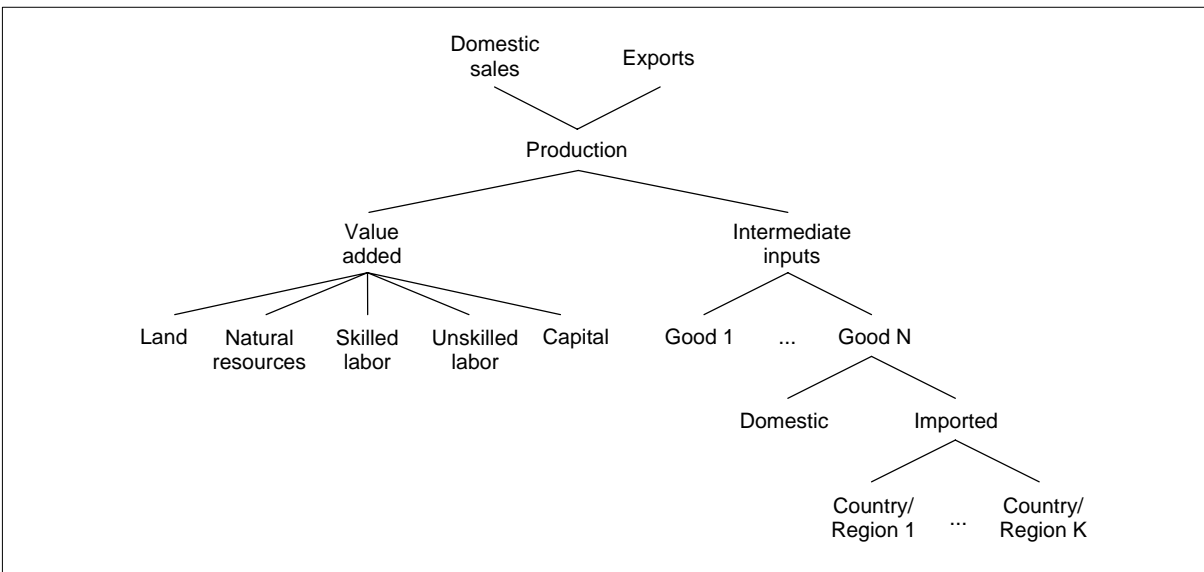
On both the production and the consumption side, the behavior of the economic agents is determined in accordance with the principles of neoclassical microeconomic theory. The following figure describes the structure of the CGEM in greater detail. Panel *a* shows the consumption side of a country, and panel *b* the production side, with *N* goods and *K* countries/regions.

⁴ Armington's assumption regarding differentiation of products according to country of origin makes it possible to model bi-directional trade in a single good. The good is exported and imported simultaneously. This intra-sectoral trade phenomenon may be observed in trade statistics, even at disaggregated levels.

**FIGURE 10A
CONSUMPTION IN THE CGEM**



**FIGURE 10B
PRODUCTION IN THE CGEM**



Panel *a* shows the consumption decisions made by the representative agent of each of the countries/regions in the model. The model aggregates individual decisions on private consumption, public consumption and investment. The consumption decision is broken down into three stages. Firstly, the agent chooses how much of each good to consume, in the second, how much of each to buy in the domestic market and how much to import from the rest of the world, and finally, how much of each good to import from each of the other countries/regions in the model.

As is normally the case, the representative agent faces budget constraints under which its revenue must equal its spending: the revenue from factors of production, tax collections, and a net transfer from the rest of the world (which is assumed to be equal to the trade balance in the initial situation) should equal the sum of private consumption, public consumption and investment.

Panel *b* shows that each of the K countries/regions produces N goods included in the model, using intermediate inputs and value added in fixed proportions. It is assumed that sales to the domestic market are an imperfect substitute for exports to the rest of the world.⁵ The productive sectors, like each representative agent, choose how much of each intermediate input to buy in the domestic market, and how much to import from each of the other countries/regions in the model.

The model also includes the following equilibrium conditions: (i) in all of the markets, supply equals demand; (ii) profits to producers are zero, which means that the cost of production for each sector is equal to the value of its product; (iii) the representative agent of each country/region meets its budgetary constraints, and its spending is thus equal to its income; and (iv) each country's/region's external sector is also in balance.⁶

Sectoral Impact Analysis: Partial Equilibrium Models and Trade Indicators

Given that the CGEM is designed for a global analysis that can only descend to the level of large sectors, the analysis requires developing a complementary mechanism to identify threats and opportunities at the product level. This mechanism detects trade complementarity between the parties, and to assess the state of comparative advantages, as well as the state of intra-industry trade, in order to identify possible "winners" and "losers" in the dismantling of barriers to trade with each particular region.

Partial Equilibrium Models (PEMs)

By definition, PEMs do not take account of many of the factors emphasized by general equilibrium theory. This limitation is also the principal advantage of PEMs, since it allows for an analysis of the performance of a particular sector.

From a practical point of view, PEMs are simple to implement, since they require relatively little information to function. This is why they permit more disaggregation. In general terms, the information needed to construct a computerized PEM includes: trade flows, tariff rates, tariff equivalents of non-tariff measures, etc. For this type of model, it is also necessary to review the economic literature in order to assign values to some of the performance parameters (elasticities)

⁵ A CET (constant elasticity transformation) transformation function is used to model the decision regarding how much is sold to each of the target markets.

⁶ To make the model operational (calibrate it), the principal tool used is the GTAP database (Dimaranan and McDougall [2002]), which organizes production and trade data for 66 countries/regions and 57 productive sectors as a set of social accounting matrices, related to each other via trade flows. This is supplemented by information on preferential tariff rates obtained from various sources.

that the model(s) may have. The alternative, if the information is at hand, is to make an econometric estimate of the value of the parameters (elasticities).

The results that can be obtained using a partial equilibrium model include export growth, changes in terms of trade, changes in welfare as measured by the consumer surplus, etc.

Annex B includes the equations for a partial equilibrium model.

Trade Complementarity Index (TCI)

The TCI is derived from the index of comparative advantages (RCAs) suggested by Balassa [1965], and shows the degree of association between products exported by country A and those imported by country B.

The case presented below shows how the sectoral TCI operates. It may be interpreted as follows: The ratio on the left is Balassa's suggested RCA indicator -in this case, for country A- which expresses the extent to which this country specializes in the exportation of good a . This occurs when the good represents a greater share of A's exports than it does of world trade. The RCA indicator is complemented by the ratio at the right, which shows the extent to which country B (the target market for the exports) specializes in importing good a , i.e., how much of that good it imports in relation to the world trade in the good.

In more formal terms, the sectoral TCI may be expressed as follows:

$$TCI^a = \frac{\frac{X_A^a}{X_A} \cdot \frac{M_B^a}{M_B}}{\frac{M_{Mun}^a}{M_{Mun}} \cdot \frac{M_{Mun}^a}{M_{Mun}}}$$

where: X_A^a : Country A's exports of good a ,

X_A : Country A's total exports,

M_B^a : Country B's imports of good a ,

M_B : Country B's total imports,

M_{Mun}^a : World exports of good a (excluding country A's imports), and

M_{Mun} : Total world imports.

If the expression at the left is greater than 1, it may be inferred that country A specializes in the export of good a , since, in relative terms, it exports more than what is traded globally.

If the expression at the right is greater than 1, then country B specializes in importing good a , since, in relative terms, it imports more than what is traded globally.

If both expressions are greater than 1, then the TCI is greater than 1. In this case, one may conclude that countries A and B have a significant degree of trade complementarity in good a .

Nevertheless, it may occur that one of the factors of the product is less than 1, and that, in any case, the TCI is greater than 1. For instance, if the expression on the left is equal to 0.6 and the expression on the right equal to 2, then the TCI is 1.2. In this case, the second factor more than compensates for the preceding one.

One variant of the sectoral TCI is the bilateral TCI. If we aggregate the sectoral TCI, we can obtain the bilateral TCI between two countries, which shows the degree of association in world trade. To obtain this index, one simply weights the sectoral index according to the relative share that each of the goods represents in world trade.

The bilateral TCI is obtained by applying the following formula:

$$TCI_{AB} = \sum_a \left(TCI_{AB}^a \cdot \frac{M_{Mun}^a}{M_{Mun}} \right)$$

where TCI_{AB}^a is the trade complementarity index of country A with country B in good a .

Revealed Comparative Advantage Index (RCAI)

This index is used as a proxy measurement for a sector's competitiveness. Also called the "index of contribution to balance", it has been taken from Miotti, Quenan and Winograd [1998].

The expression of the RCA is:

$$RCAI = \frac{100}{(X + M)/2} \left[(X_i - M_i) - (X - M) \frac{(X_i + M_i)}{(X + M)} \right]$$

where: X : total amount of the country's exports,
 X_i : sector i 's total exports,
 M : the country's total imports, and
 M_i : sector i 's total imports.

One way of reading this index is to separate the first and second term in the brackets. The first reflects the trade balance for sector i , while the second represents the expected or theoretical trade balance as a function of the sector's share of total trade. If the first term is greater than the second, the index is positive, and the sector has a comparative advantage. If the index is negative, the sector has disadvantages.

The weighting factor makes it possible to express how much greater the observed balance is than the expected, or theoretical, one, as a percentage of half of the trade, and to make the interannual comparison, since the index is weighted by the volume of trade in the year under consideration.

Intra-industry Trade Index (ITI)

The ITI has been used in a range of work. It is a modification by Fuchs and Kosacoff [1992] of the index created by Grubel and Lloyd ([1971] pp. 494-517). Its main advantage is that, by eliminating the original's absolute value bars, it makes it possible to identify import and export trade.

The ITI is expressed as follows:

$$ITI_j = 1 - \frac{X_j - M_j}{X_j + M_j}$$

where: X_j : sector j 's total exports, and

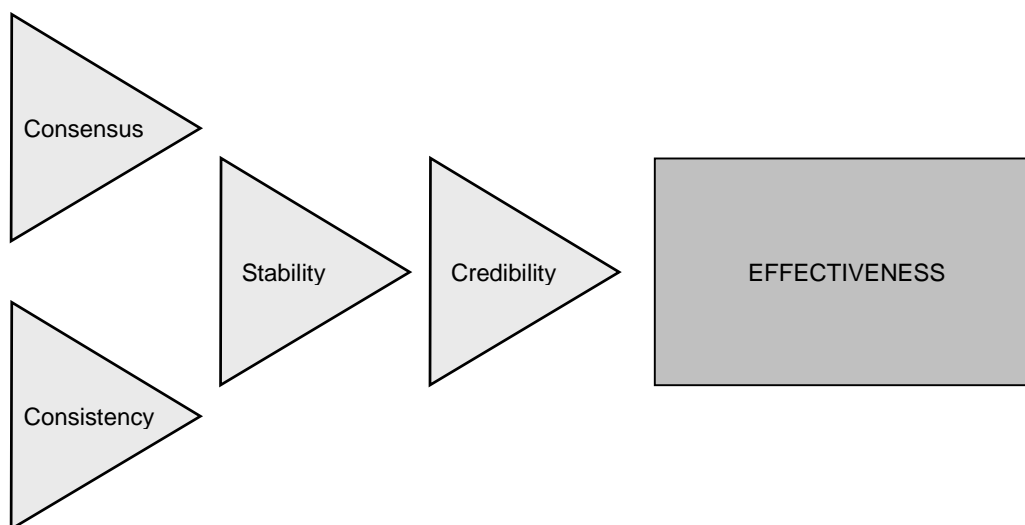
M_j : sector j 's total imports.

Given the way it is constructed, the index may assume values between 0 and 2. The value is 0 when the trade involved is totally inter-industry and export-oriented, since the balance is equal to the volume of trade. When the value is 2, we say that there is import-oriented inter-industry trade, since the balance is equal to the volume of trade, but with the opposite sign. Finally, when the index equals 1, we speak of full intra-industry trade, since the balance is 0, and trade is present.

V. THE SEARCH FOR CONSENSUS

For trade policy to be effective, it must be *credible*. This means that it must be stable, since, otherwise, it will not be taken into account in decisions regarding production, consumption and investment (Calvo and Vegh [1993]).⁷ Stability depends on two factors, which are definitive determinants of trade policy effectiveness: consensus and consistency -determined by the theoretical strength behind the policy, and consistency with the rest of the economic policy.

FIGURE 11
TRADE POLICY REQUIREMENTS



Consensus has a significant value. A trade policy which does not generate a critical mass of political and social support is always subject to the *danger of reversal* every time there is a change in the relation of forces that originally created it. In this sense, it is easy to understand that *corner solutions* -both abrupt liberalization and extreme protectionism- will have less probability of lasting.

Creating consensus is intimately linked to the trade negotiation process. Every agreement creates winners and losers, but it is generally the latter who are most motivated to manifest their opposition to integration (although, generally, few sectors lose in a major way), while the former do not publicly reveal their preferences (with many gaining, on a small scale).⁸ Thus, one of the

⁷ A trade policy that is perceived as reversible, far from generating desired behavior in terms of investment and export projects, tends to generate opportunistic behavior. For example, the temporary drop in the price of imported goods that provoked the abrupt liberalization of the Argentine economy between 1977 and 1978 created increased demand for imports by consumers (the wealth effect) and a drop in domestic production (substitution effect). The effects were permanent, though the phenomenon itself was transitory.

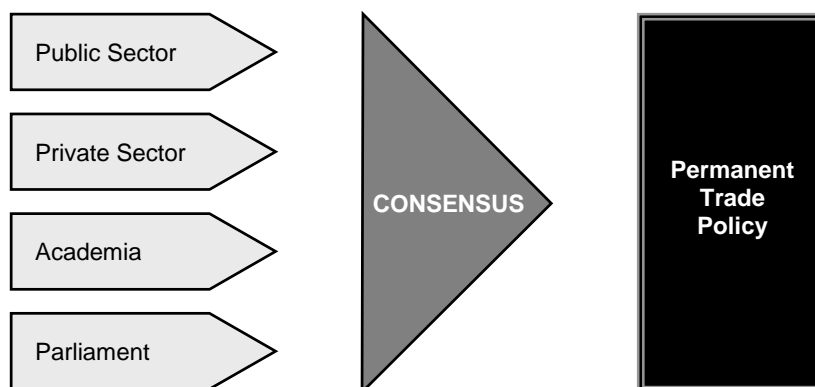
⁸ In "The logic of Collective Action", Mancur Olson described the "problem of collective action". The chapter on agricultural subsidies in the European Union offers a living example. Almost 20 million Europeans (the agricultural population) have seen their incomes grow by 36%, thanks to subsidies and protectionism, while 376 million European consumers pay more for food as a result of protectionism. They do not protest against the subsidies, however, because food represents only 15% of family budgets (there are many families, but the loss for each is small), while farmers (there are few in number, but for each, one third of income is at stake) have great incentive to organize and lobby the government strongly to maintain the common agricultural policy.

central tasks of trade policy makers is to precise information about what is really at stake in each negotiating table, so that economic rationality (costs and benefits) will not be omitted from the public debate. In other words, the lack of transparency can make the most beneficial trade agreement fail, as the result of a lack of consensus in civil society.⁹

Moreover, recent international trade negotiation experience shows the importance and the complexity of issues to be debated in coming years within the various scenarios involving the countries of Latin America. This requires a formal scheme of interaction that brings together the public, private and academic arenas in formulating and implementing trade policy to achieve consensus.

Creating this permanent trade policy, therefore, requires promoting, to the various relevant sectors, a managerial model that is more open, transparent and solid, based on participation and interaction between the private sector, including consumers, workers, producers and other members of civil society, the public sector, and the academic community. This model takes advantage of synergies, while ensuring that there will be a lasting trade policy and that consensus will emerge from the process of exchange.

FIGURE 12
SYNERGY BETWEEN SECTORS



Creating an export philosophy among all actors in the economy means that participation, must be based on consensus achieved through authentic contracts in which all perceive that they can gain by joining the mission of improving market access to the global marketplace.

⁹ The FTAA negotiators should take this problem into account, given the poor public "image" that the hemispheric integration initiative has today in Latin American countries.

Box V.1
THE COUNCIL ON INTERNATIONAL TRADE

In Argentina, public-private partnership was institutionalized in 2002 through the Council on International Trade, which brings together all of the important actors in the State's trade policy: public officials and negotiators, business organizations, scientific and academic institutions (universities, consulting firms), national legislators and nongovernmental organizations representing civil society.

Experience paved the way for a fluid, cooperative approach, as a means of formulating Argentina's position on different negotiations. For example, the country arrived at the WTO summit in Cancún (September 2003) with positions that enjoyed total consensus among the productive forces. This made it possible to show unprecedented strength at the multilateral negotiating table.

It also facilitated direct private sector participation in the negotiations. The "next door policy",^a which began in mid-2002, made it possible for Argentine officials and industry representatives to consult in a virtually "online" manner when the Argentina-Mexico automobile agreement was signed.

^a The "adjoining room" mechanism was used successfully by Mexican officials during the NAFTA negotiations.

By the same token, an inconsistent trade policy will not be a stable -let alone a credible- one, since all economic actors will be awaiting (or perhaps acting in anticipation of) its reversal. The different parts of the program that affect export development -exchange, fiscal and trade policy- must seek to have compatible objectives, in order to support and magnify each other's effects. Trade policy must have immunity from macroeconomic shocks and major changes associated with economic cycles -which affect trade balances, inflation, consumption and investment- as well as legal and institutional stability.

In addition, trade policy must be internally consistent. It must have a strong theoretical basis, as well as a battery of analytical tools from the vanguard of knowledge, helping policymakers in designing the best negotiating strategy for the country involved, so as to increase the benefits and reduce the implicit costs of any integration agreement.

VI. MULTIPOLAR STRATEGY

Trade policy must bring together its two basic areas of action:

- the *search for markets*, through trade negotiation; and
- the *development of markets -or trade intelligence-* to detect existing opportunities in the international market for domestic products.

While the two forms of action are intrinsically related, each has its own specific instruments. Analyzing the central axes of trade policy, as a matrix for bringing together its different components and showing the relationship between them, should provide greater clarity. Figure 13 details the actions, instruments and scope of application.

Clearly, trade policy will be effective if, and only if, both branches are linked. Thus, each market opened by negotiation should be effectively occupied by domestic products. The net gain in aggregate welfare comes from each country specializing in the products for which it is most efficiently positioned. This means that the value of what is being given up in the domestic market is less than what is to be obtained in the foreign market.

**FIGURE 13
ANALYTICAL FRAMEWORK**

Trade Policy		Market Search	Market Development
Poles	<i>Geographic</i>	↑ ↓	← →
	<i>Sectoral</i>	← →	↑ ↓

The negotiating approach assumes that there will be reciprocal concessions; thus, if the private sector does not take advantage of open markets, the net result of the negotiation will be a negative one -i.e., the domestic market will be granting concessions while receiving nothing in exchange. It is therefore essential to establish a fluid, two-way channel of negotiation, one that is organic and systemic, between public officials, the private sector, and the academic community. This will provide negotiators information about the real sensitivities, along with state of the art theoretical framework when formulating trade policy, while informing the private sector about the opportunities opened up by the negotiation process.

Regionalism and Multilateralism

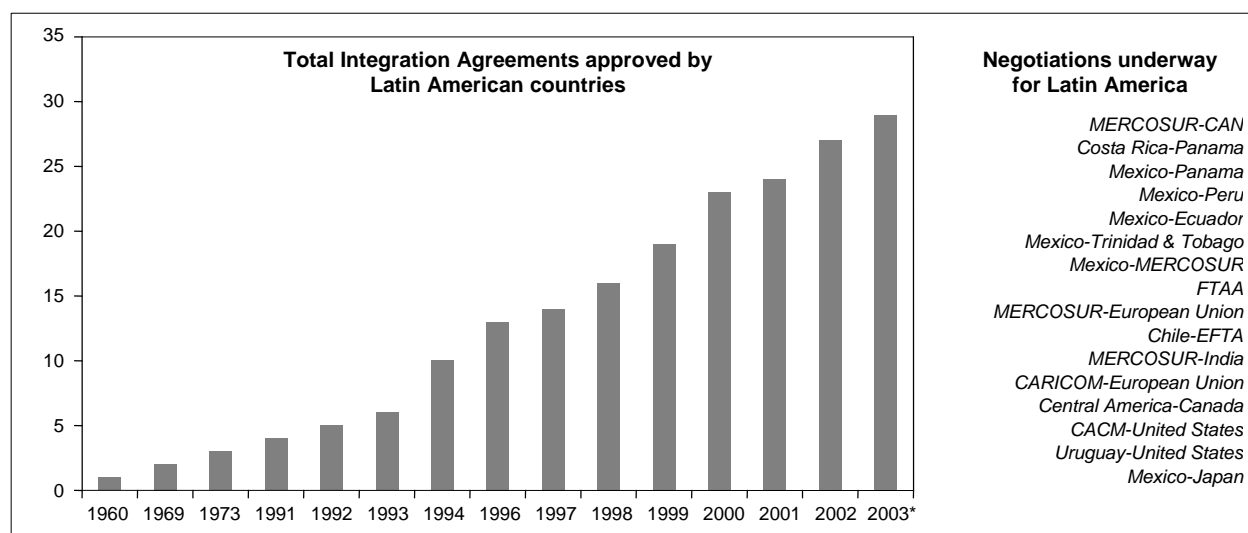
An offensive trade strategy involves opening markets in all possible venues, at the bilateral, regional and multilateral levels.

In this respect, the strategy adopted by countries such as Mexico and Chile serves as a regional paradigm: there are no exclusionary options, only complementary ones. MERCOSUR or the Free Trade of the Americas (FTAA)? The European Union or the United States? These are false dilemmas. In few areas of economic policy do the concepts of "synergy" and "feedback" acquire such significance as in trade negotiations aimed at reaching parallel integration agreements, since advancing on one front promotes progress on others, thus enhancing the final result. For example, progress in the FTAA negotiations could conceivably be taken into account by the European Union to give greater impetus to its own agreements with countries or blocs in the hemisphere, and vice versa.

Equally, existing subregional agreements -MERCOSUR, the Andean Community, the Central American Common Market- do not necessarily run the risk of being diluted by the new efforts at regionalism, since this dynamic could serve as platforms for improved negotiation. Thus, building new intra-regional trade alliances -such as the MERCOSUR-Andean Community and MERCOSUR-Mexico agreements- will make it possible to increase the negotiating power of our countries and take advantage of trade opportunities in Europe, the United States, China and Southeast Asia.

Latin America has participated actively in the "regionalist" wave of recent years. These countries have already approved nearly 30 trade integration agreements, and that trend shows evidence of accelerating -with 18 other agreements currently underway- given the difficulties of progress on the multilateral front.

FIGURE 14
INTEGRATION PROCESSES IN LATIN AMERICA



Note: * Prior to June 2003.

Source: IDB, updated by the author.

By the same token, combining participation in multilateral rounds and regional negotiations, far from being incompatible, are eminently possible and necessary. As long as the world does not promote full free trade, regional agreements will continue to be in the forefront of liberalization processes.

Despite the recent difficulties for achieving progress in the multilateral arena, it should not be underestimated. It represents the natural venue for counteracting the absence of fairness in current trade rules, which today are discriminatory against the developing countries. After the Uruguay Round experience, which consolidated those differences, the countries of Latin America need to assume an active and leading role in the new Doha Round.

However, while it must occupy a central place in the process, it would be mistaken to limit our role in this venue to discussing the agricultural issue. First, our countries need to gain markets in all sectors -in agriculture, industry and services. Second, the major players on the global scene must be capable of discussing all issues with the aim at leveling the playing field in global trade.

Unlike the development in the financial sector, Latin American countries occupy the role of international creditors in the global trade system, given the medium-to-low tariff levels prevalent, with extremely high tariff peaks, intensive use of nontariff barriers, and distorting subsidies applied by developed countries.

In this framework, Latin America needs to adopt an initial strategy for achieving a symmetrical agreement, and must coordinate its strategies with the other countries with which it shares common interests.¹⁰

A multipolar trade policy refers to geographic factors as well as to sectoral factors: diversification of exports in terms of products is at least as important as deconcentration of destinations, and has its roots in the theory of risk diversification. The less concentrated foreign sales are in a given market and in a given product, the greater stability of the export performance.

Negotiation by sector therefore becomes as significant as geographic categorization. Hence, the advisability of employing the sectoral analysis methodology described in the preceding section -or some alternative- in order to have a vision of sectoral competitiveness that avoids arriving at the negotiating table unprepared. Given that the resources and concessions that could emerge are usually limited, it is wise to prepare a sectoral map -as broken down as possible- of the advantages of each of the poles, as well as the disadvantages associated with the potential partner.

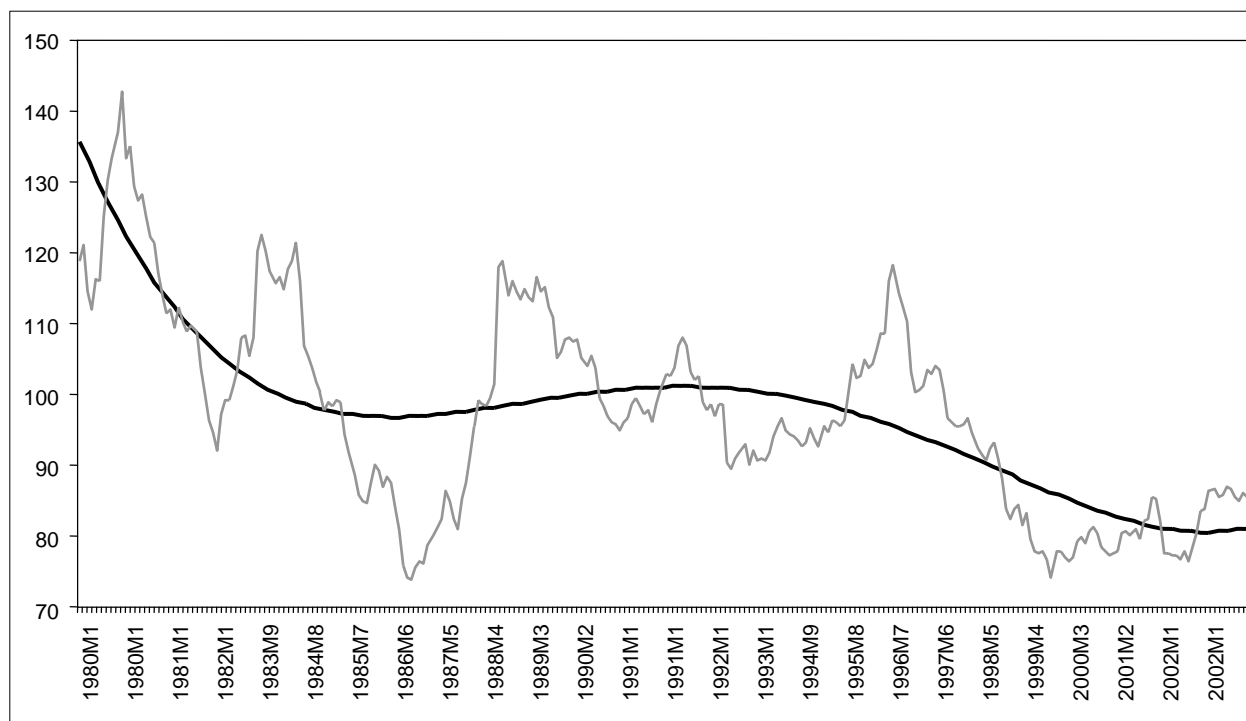
It is clear that negotiation should not be considered in mono-sectoral terms. In addition to the agricultural issue, our countries also need greater access to services and industrial goods. Differentiation of supply in exports by product helps to ensure that fluctuations in international prices will not produce severe changes in the terms of exchange, thus reducing the impact of external shocks on local economies.

¹⁰ In this respect, the recent formation of the G-20, which includes leading countries such as China, India, South Africa, Brazil and Argentina, with active involvement in the Cancún Summit, represents a valid example of how our negotiating capacity can be enhanced when we are able to identify international partners with whom we share interests in multilateral negotiation.

Currently, Latin American sales are composed of a high proportion of goods with a low value added or differentiation and standard international price, a circumstance that keeps export revenues subject to fluctuations in international markets. As is known, the prices of goods of this type -as well as demand for them- are highly volatile, due primarily to random factors, such as climate, or external factors, such as the level of global demand. In addition, however, existing distortions in the international commodities market create a situation in which their volatility has a more severe effect on efficient producers in the emerging countries than on their counterparts in developed countries, who are protected by aid mechanisms, or price supports.

FIGURE 15
EVOLUTION OF COMMODITIES PRICES

International prices of cereals, vegetable oils, meat, seafood products, sugar, bananas and oranges



Source: CEI based on IMF data.

Consequently, sectoral diversification toward exports with higher value added not only increases sales, but also constitutes a basic tool for reducing the volatility of export revenues, because prices of manufactured goods are less volatile than those of commodities.

Market Development

The development of markets acts to "reinsure" the success of trade policy: it ensures that domestic products "effectively occupy" the markets opened through negotiation. The experience of countries that have launched successful export strategies indicates a close connection between negotiations and the development of markets, with the private sector gaining from the preferences obtained.

Along with seeking markets, *trade intelligence* activities involve lines of action in two differentiated spheres: geographic and sectoral. In the former, trade promotion should be directed to countries that qualify as "priority destinations" for the local products, selected through the simulation models and trade indicators described in the preceding section. Likewise, promotion should be focused on activities that demonstrate the greatest potential. This does not mean picking winners or replacing the market in its task of "discovering" competitive sectors, but rather involves trade intelligence tools offered horizontally to the entire productive spectrum based on objective indicators, such as comparative advantages and trade complementarity.

It is clear that the sectors with the greatest value added, technological intensity and horizontal and vertical links with other activities occupy a central place when designing trade development strategy. Likewise, expanding the number of export enterprises is an objective, in itself, so that external sales do not end up being concentrated in few hands and to facilitate the spillover of benefits from exporting to all of society.

- A single agency for the development of markets -

The first step toward achieving a market development policy structured as a flexible, open and dynamic system, consists of designing and adopting a new management model that brings together the functions in a single area dedicated to promoting exports and developing markets, from which all actions can be coordinated. The scattering of efforts can only produce inefficiency and waste of financial and human resources.

The basic role of this agency is to "link" the country's export supply with world demand, detecting global trade opportunities for local products, linking domestic exporters with foreign importers.

The only way of successfully achieving these objectives is to maintain direct and fluid communication with enterprises, systematically measuring the results of the policies adopted, and using a goal oriented managerial approach.

The central task of the agency is to "*democratize*" international market information and disseminate it to local suppliers, providing enterprises with qualified trade information targeted to selected markets. This includes potential and real demand, adapting current or future supply to those requirements, conditions of market entry, access to trade opportunities, cultural factors in the terminal market (language, contractual customs, preferences for negotiating in local currency), regulatory or legal framework, financial engineering (including everything from payment conditions to clearance costs), transportation, distribution, among others.

This task, of course, does not mean ignoring its basic responsibility for assisting enterprises in achieving global access and targeting its action toward the most appropriate venues such as fairs, exhibitions and international events. The key point, given the scarce resources, is to know beforehand where it is important to be, under what conditions, and who should participate; and make a prior analysis of the market impact of each event, giving the enterprises the relevant information, organizing their presence under the national "umbrella" and assisting in the presentation, through marketing efforts that positions the export supply. This also includes drawing up business agendas

for companies or consortiums, as well as business missions organized to bring foreign importers to our countries to learn about local supply.

Box VI.1

THE FOREIGN TRADE DEVELOPMENT PROGRAM

In order to facilitate interaction with enterprises, the Foreign Trade Development Program was instituted in Argentina. This involves a work programme inspired in the British foreign service and in the French *Partenariat*, with the goal of taking advantage of the synergies between the public and private sectors, by ensuring coordination in the actions of the Ministry of Foreign Affairs and principal exporters.

The cooperation mechanism consists -among other things- of involving public officials in the export departments of enterprises. Thus, members of the Foreign Service act as business "links" with the export firm, intensifying the direct dialogue between the public and private sectors. Likewise, the program supports the export activities of enterprises with regard to small and medium enterprises (SME) clients and providers, facilitating these its marketing channels, know-how, information and economies of scale -and, in some cases, financing as well- for accessing foreign markets. This involves a cooperative game, employing a win-win management model: SMEs expand their markets, and large enterprises have more stable providers and clients.

VII. CONCLUSIONS

An active trade policy could help the region find its place in the world of the twenty-first century. If our countries manage to achieve the four basic objectives of the trade strategy -substantially increasing the volume of exports, diversifying the destinations of shipments, deconcentrating sales toward products with higher value added, and spreading the export business across the entire productive spectrum, in addition, of course, to adopting consistent macroeconomic policies in the monetary and fiscal area- the stop-and-go model, with its cyclical crises, could be relegated to economic history manuals within a few years.

The recent regional crises merely demonstrated an obvious fact: there is a limit to the capacity for indebtedness. Countries must obtain real resources based on the sale of our products. The experience of many developing countries -particularly Chile and Mexico, true benchmarks for the region in regard to trade, shows that the challenge can be met.

Consensus and consistency. These must be the pillars for constructing a trade strategy. The concurrent efforts of public negotiators, productive forces, the academic community, the political sphere and civil society are essential in transforming that strategy into a State policy.

A *multipolar* policy, both geographic and sectoral, that articulates the two branches of action -the search for and development of markets- is needed. Negotiations should give priority to opening markets, accompanied by a development plan to effectively "occupy" those markets, under a management model based on achieving consensus and meeting objectives.

Multipolarity refers, in this case, to a concept of inclusion, which supercedes that of selection: taking advantage of the synergies of simultaneity, participating actively in the multilateral negotiation of the World Trade Organization (WTO) and in regional negotiations for the Free Trade Area of the Americas (FTAA), or with the European Union, as well as in all other bilateral and biregional negotiations undertaken with countries within and outside the continent.

Under the *multipolar strategy*, Latin American integration occupies a central place. The progress of the MERCOSUR-Andean Community, MERCOSUR-Mexico, and other agreements will not only provide the classic advantages of efficiency associated with integration, but will also establish a monolithic and homogeneous bloc in an often inhospitable international negotiating environment (in relation to both trade and financing).

Clearly, this participation does not involve a dogmatic exercise that accepts any negotiating modality. The results of each agreement depend, in a vital way, on our interests being represented fully at the negotiating table. This, in turn, means analyzing beforehand the potential costs and benefits of each integration process, in order to minimize the threats, which inevitably exist, and enhance the opportunities that new trade channels provide for our countries.

A policy that lacks articulation between negotiation and market development could become the worst of worlds for our countries, since "negotiating" always involves ceding something in exchange, and no cost will be exacted if we are not in a position to effectively "occupy" the new markets with products.

Thus, determining sectors with undiscovered export potential is at the centerpiece of this action. This will help meet the objective of increasing our exports, while at the same time providing diversification toward goods with greater value added. This will expand the number of exporters and maximize the spillover effects.

This approach was adopted in designing Argentina's current trade policy. It is based on a professional analysis of our dynamic competitive advantages, making it possible to develop a strategy governed by four guiding principles. The concept of reciprocity is used in all negotiations: the process is meaningless unless an equivalent value is provided in exchange. Argentina presents itself as a nation that works in the areas of agriculture, industry, services, investment and government procurement. Thus, the new trade policy is one that covers multiple issues, and our stance, before the world, is one of a country with multiple interests. Moreover, the trade policy is consistent: for the first time, Argentine negotiators have solid professional and technical support, based on theoretical studies to measure each negotiation's impact on the productive sectors. Lastly, there is the importance of transparency: through a broad system of dissemination, all tariff proposals are known by the private sector before being presented to our international interlocutors.

In short, an offensive, ongoing, multipolar trade policy can contribute to the new sustainable development paradigm required for Latin America.

ANNEX A

COMPUTABLE GENERAL EQUILIBRIUM MODEL EQUATIONS

A CGEM has two types of equations: performance equations, which derive from microeconomic optimization, and balance equations, which represent equilibrium conditions. For each of the countries, final demand is modeled through a representative agent, which receives all income generated in each country (composed of remuneration to primary factors of production -land, skilled and unskilled labor, capital, natural resources- and tax receipts) and determines spending on each of the goods in such a way as to maximize aggregate welfare. Levels of public spending and investment -though not their make-up- are assumed to be fixed. Intermediate inputs and primary factors of production are used in production. In order to solve the model, it is necessary to specify functional equations for production and profit. The following section presents computable general equilibrium equations for the simplest model used to analyze changes in trade policy.

Production

Each productive sector produces two different forms of the same good: one for the domestic market and the other for export. This circumstance is modeled using a CET (Constant Elasticity Transformation) function. Mathematically,

$$Y_{ir} = \left[\alpha_{ir}^Y D_{ir}^{\frac{\eta+1}{\eta}} + \beta_{ir}^Y X_{ir}^{\frac{\eta+1}{\eta}} \right]^{\frac{\eta}{\eta+1}}$$

where Y_{ir} is the product of sector i in country r , D_{ir} is the quantity sold in the domestic market and X_{ir} is the quantity exported to the rest of the world. Producers operate in perfectly competitive markets.

Intermediate Consumption

Inputs used by productive sectors include primary factors of production and intermediate inputs. The demand for each of the intermediate inputs is a fixed proportion of the output of each sector. Total demand for the intermediate input i in country r is,

$$ID_{ir} = \sum_j Y_{jr} a_{ijr}$$

where ID_{ir} is the demand for intermediate input i in country r and a_{ijr} is the quantity of input i used to produce a unit of j in country r . The coefficients a_{ijr} are assumed to be constant.

Making use of the Armington assumption (1969) for differentiation of products according to the country of origin, the demand for each intermediate input i is represented by a composite good made up of the domestic and imported forms of good i . Thus, it is assumed that the domestic and

imported forms of a given good i are imperfect substitutes. The composite good is modeled using a CES (Constant Elasticity Substitution) function, as follows:

$$ID_{ir} = \left(\alpha_{ir}^I DI_{ir}^{\frac{\sigma-1}{\sigma}} + \beta_{ir}^I MI_{ir}^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

where DI_{ir} is the intermediate demand for the domestic good i and MI_{ir} is the intermediate demand for the imported good i .

Value Added

In order to "produce" value added based on primary factors of production, a CES production function is used. Producers minimize the unit cost of production taking the prices of factors as a given. In order to obtain the demand for productive factors, each productive sector resolves the following optimization problem:

$$\min \sum_f p_{ir}^f (1 + t_{fir}^f) FD_{fir}$$

$$\text{s.a. } VA_{ir} = \sum_f \left(\alpha_{fir}^F FD_{fir}^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

where VA_{ir} is the value added in sector i in country r , FD_{fir} is the demand for factor f for the production of good i in country r . The subindex f is land, skilled and unskilled labor, capital and natural resources.

Public Spending

The public sector demands goods which, together, make up public spending, using a Cobb-Douglas function. Mathematically this can be written as:

$$G_r = \Gamma_r \prod_i (GD_{ir})^{\theta_{ir}^G}$$

where G_r is total public sector spending in country r , GD_{ir} is the demand by the government for the good i .

As in the case of intermediate demand, the demand for goods by the government is modeled using an aggregate of domestic and imported goods:

$$GD_{ir} = \left(\alpha_{ir}^G DG_{ir}^{\frac{\sigma-1}{\sigma}} + \beta_{ir}^G MG_{ir}^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

where DG_{ir} is the government demand of country r for domestic goods and MG_{ir} is the government demand of country r for imported goods.

It is assumed that public spending is exogenous. Thus, in the simulations it remains constant at the initial equilibrium level. It should be pointed out, however, that the composition of public spending depends on changes in relative prices.

Private Consumption

Public spending and investment are exogenous, while private demand is determined by maximization of a CES profit function that can be written as:

$$U_r = \sum_i \left(\alpha_{ir}^C CD_{ir}^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

where U_r is the profit that the representative agent derives from country r from the private consumption of goods and CD_{ir} is the private consumption of good i in country r. This representative consumer maximizes its profit, taking as a given the prices of the goods. The following are its sources of income:

$$\begin{aligned}
M_r &= \sum_f p_{fr}^F F_{fr} && \text{factorial income} \\
&+ \sum_i t_{ir}^Y (p_{ir}^D D_{ir} + p_{ir}^X X_{ir}) && \text{indirect taxes} \\
&+ \sum_i t_{ijr}^{ID} p_{ir}^{ID} Y_{jr} a_{ijr} && \text{taxes on intermediate inputs} \\
&+ \sum_{fi} t_{fir}^F p_{fr}^F F_{fir} && \text{taxes on primary factors} \\
&+ \sum_i t_{ir}^G p_{ir}^{GD} GD_{ir} && \text{taxes on public consumption} \\
&+ \sum_i t_{ir}^C p_{ir}^{CD} CD_{ir} && \text{taxes on private consumption} \\
&+ \sum_{is} t_{ir}^X p_{ir}^X M_{irs} && \text{taxes on exports} \\
&+ \sum_{is} t_{isr}^M (p_{is}^X M_{isr} (1 + t_{isr}^X) + p^T T_{isr}) && \text{import tariffs} \\
&- \sum_i p_{ir}^D I_{ir} && \text{investment} \\
&- \sum_i p_{ir}^G (1 + t_{ir}^G) GD_{ir} && \text{public sector demand} \\
&- p_n^C B_r && \text{current account results}
\end{aligned}$$

where M_r is income available for private consumption, B_r is net transfer from the rest of the countries, assumed to be constant in terms of initial equilibrium value, t_{ir}^Y is the indirect tax rate, t_{ijr}^D is the tax rate on intermediate inputs, t_{ir}^F is the tax rate on primary factors, t_{ir}^G is the tax rate on public consumption, t_{ir}^C is the tax rate on private consumption, t_{ir}^X is the tax rate on exports, t_{ir}^M is the import tariff rate and I_{ir} is investment in country r.

Private consumption of good i is also modeled as a composite good, based on combining domestic and imported forms of a composite good, using a CES function:

$$CD_{ir} = \left(\alpha_{ir}^C DC_{ir}^{\frac{\sigma-1}{\sigma}} + \beta_{ir}^C MC_{ir}^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

where DC_{ir} is the private consumption of the domestic good i and MC_{ir} is the private consumption of the imported good i.

Bilateral Trade

There are three uses for the total imports made by a country: intermediate consumption (MI_{ir}), public spending (MG_{ir}) and private consumption (MC_{ir}). It is assumed that the share of total consumption occupied by imports may vary among these three types of demand, but that these imports have the same regional composition. The regional composition of total imports is determined by a CES function used to combine imports from different countries as follows:

$$MI_{ir} + MG_{ir} + MC_{ir} = \left(\sum_s \alpha_{isr}^M M_{isr}^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

where M_{isr} are imports by country r of good i from country s.

Two taxes, and transportation costs, are applicable to bilateral trade. Transportation costs are proportional to the volume of trade:

$$T_{irs} = \tau_{irs} M_{irs}$$

where T_{irs} is the total cost of transporting good i from region r to region s and τ_{irs} is the unit transportation cost.

The transportation sector is an international productive sector that uses as inputs the transportation services produced in different countries. The production function for this sector is a Cobb-Douglas function:

$$\sum_{irs} T_{irs} = \psi_T \prod_{ir} TD_{ir}^{\theta_{ir}^T}$$

where the left side of the equation is the sector's total output.

Bilateral trade flows are determined by minimizing costs, taking as a given the FOB price of the exports from country r , p_{ir}^X , the export tax rate, t_{ir}^X , and the import tariff rate, t_{ir}^M .

Equilibrium Conditions

Following is a presentation of the model's equilibrium conditions in the different markets of the model, along with price and zero profit equations.

Domestic Market

Production for the domestic market is equal to the sum of intermediate, public and private demand for domestic goods and investment:

$$D_{ir} = DI_{ir} + DG_{ir} + DC_{ir}$$

where, as above, DI_{ir} is intermediate consumption, DG_{ir} is public consumption and DC_{ir} is private consumption.

Imports

Total imports of a country are an Armington aggregate of the imports of that country from other countries. Total demand for imports is the sum of imports for intermediate, public and private use:

$$M_{ir} = MI_{ir} + MG_{ir} + MC_{ir}$$

where, as above, MI_{ir} is intermediate consumption, MG_{ir} is public consumption and MC_{ir} is private consumption.

Exports

Global supply of exports is equal to world demand for imports:

$$X_{ir} = \sum_s M_{irs} + TD_{ir}$$

Armington Composite Goods

The model includes conditions of equilibrium between supply and demand for the aggregate of domestic and imported goods used for intermediate, public and private consumption. These conditions have been detailed above in the equations defined by ID_{ir} , GD_{ir} y CD_{ir} .

Primary Factors

The (fixed) endowment of each primary factor (skilled and unskilled work, capital, land and natural resources) is equal to the demand for that primary factor:

$$F_{fr} = \sum_{fi} FD_{fir}$$

where F_{fr} is the supply of factor f in country r .

Zero Profit in Production

Producers operate in perfectly competitive markets and use constant profit to scale technologies, thus in the equilibrium, the profits are zero. Total income from each productive sector is equal to the sum of the value of sales in the domestic market, and exports. The costs of production include payments for the use of primary factors (which pay a tax at rate t_{fir}^F) and intermediate inputs (which pay a tax at rate t_{jir}^{ID}). Mathematically, the zero profit condition can be written as:

$$(p_{ir}^D a_{ir}^D + p_{ir}^X a_{ir}^X)(1 - t_{ir}^Y) = \sum_f a_{fir}^F p_{fr}^F (1 + t_{fir}^F) + \sum_j a_{jir} p_{jr}^{ID} (1 + t_{jir}^{ID})$$

Price of Imports

The zero profit condition also applies to trade activities. In equilibrium, the domestic CIF price of imports is equal to the FOB price of the imports, the gross export tax, the transportation margin and the tariff:

$$p_{ir}^M = \sum_s a_{irs}^M [p_{is}^X (1 + t_{isr}^X) + \tau_{irs} p^T] (1 + t_{isr}^M)$$

Price of Armington Aggregates

Prices of the aggregates of domestic and imported goods can be expressed with the following equilibrium conditions:

$$p_{ir}^I = c(p_{ir}^D, p_{ir}^M, \alpha_{ir}^I, \beta_{ir}^I)$$

$$p_{ir}^G = c(p_{ir}^D, p_{ir}^M, \alpha_{ir}^G, \beta_{ir}^G)$$

$$p_{ir}^C = c(p_{ir}^D, p_{ir}^M, \alpha_{ir}^C, \beta_{ir}^C)$$

where,

$$c(p_{ir}^D, p_{ir}^M, \alpha, \beta) \equiv \min p^D D + p^M M \text{ s. a. } (\alpha D^\rho + \beta M^\rho)^{\frac{1}{\rho}} = 1$$

is the unit cost function defined by the aggregate of domestic and imported goods with constant elasticity substitution.

ANNEX B

PARTIAL EQUILIBRIUM MODEL EQUATIONS

Following is a description of a partial equilibrium model with an Armington preference structure,¹¹ constructed to analyze the market for a given good from the perspective of an importing country.¹² The consumers in this country believe that the imports from each of the other countries included in the model are imperfect substitutes for the domestically produced good.¹³ The supply of each of the countries is modeled using functions with constant elasticity of supply. It is assumed that there is equilibrium both in the market for the domestic good and in the markets for imports.

Following are equations of a partial equilibrium model that closely follow the formulation of Francois and Reinert [1997]. The first equation shows the Armington aggregate of the domestic form and imported forms of the same good. From the first-order conditions of the consumer problem are obtained the demand for domestic goods (1) and demand for imported goods (2). Equation (3) is the supply function for the domestic good. Equation (4) is the supply function for the good imported from country *i*. Equation (5) is the demand function for the Armington composite good. Equations (6) and (7) are the equilibrium conditions in the market for the domestic good and for the imports from country *i*, respectively. Equation (8) is the zero profit condition in the "production" of the Armington composite good.

$$Q = \left(\alpha_D D^{\frac{\sigma-1}{\sigma}} + \sum_i \alpha_{M_i} M_i^{\frac{\sigma-1}{\sigma}} \right)^{\frac{\sigma}{\sigma-1}}$$

$$D^d = \frac{\alpha_D^\sigma Q}{P_D^\sigma \left(\alpha_D^\sigma P_D^{1-\sigma} + \sum_i \alpha_{M_i}^\sigma P_{M_i}^{1-\sigma} \right)^{\frac{\sigma}{\sigma-1}}} \quad (1)$$

$$M_i^d = \frac{\alpha_{M_i}^\sigma Q}{P_{M_i}^\sigma \left(\alpha_{M_i}^\sigma P_{M_i}^{1-\sigma} + \sum_i \alpha_{M_i}^\sigma P_{M_i}^{1-\sigma} \right)^{\frac{\sigma}{\sigma-1}}} \quad (2)$$

$$D^s = K_D P_D^{\varepsilon_D} \quad (3)$$

$$M_i^s = K_{M_i} \left(\frac{P_{M_i}}{1 + \tau_{M_i}} \right)^{\varepsilon_{M_i}} \quad (4)$$

$$Q = K_Q P_Q^{-\eta} \quad (5)$$

¹¹ Models similar to what is described here have been employed by Hufbauer and Elliot [1994].

¹² By way of example, this could involve a subheading of the Harmonized System.

¹³ The preferences of the importing country are modeled using a CES function.

$$D^s = D^d \quad (6)$$

$$M_i^s = M_i^d \quad (7)$$

$$P_Q Q = P_D D^d + \sum_i P_{Mi} M_i^d \quad (8)$$

The model's eight endogenous variables are: (1) Q ; (2) D^d ; (3) M_i^d ; (4) D^s ; (5) M_i^s ; (6) P_D ; (7) P_{Mi} ; (8) P_Q . The international price of the good imported from country i is defined as $P_i^* = 1/(1 + \tau_{Mi})$. The domestic price of all goods is assumed to be equal to the unit in the initial equilibrium used to calibrate the model.

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