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Agrifood Market Integration: Perspectives from Developing Countries

Fabio R. Chaddad, Patricia Aguilar, and Marcos S. Jank

INTRODUCTION

Beginning in the 1980s, both Mexico and Brazil adopted liberal, market-oriented policies which significantly impacted their agrifood economies. Following five decades of state involvement in agriculture, Mexico started to dismantle its direct interventionist policies in the mid-1980s. Agricultural policy liberalization included the closing or sale of state-owned enterprises, the elimination of agricultural guarantee prices and most input subsidies, and the Ejido land reform (OECD). Trade liberalization started under GATT's Uruguay Round and proceeded with the North American Free Trade Agreement (NAFTA), ten additional free trade agreements signed with more than 40 countries, and five economic complementation agreements.

The inclusion of agriculture in NAFTA has provoked a deep controversy in Mexico (Yunez-Naude and Barceinas), leading to the signing of the National Agreement for the Countryside for the Development of Rural Society and Sovereignty and Food Security (Acuerdo Nacional para el Campo por el Desarrollo de la Sociedad Rural y la Soberanía y Seguridad Alimentarias) between the government and some producer organizations in April 2003. The main call for the government was to immediately begin consultations with its NAFTA partners in order to review the provisions for white corn and dried bean imports. No evidence exists that the Mexican authorities officially approached their Canadian and US counterparts, who have clearly indicated their unwillingness to reopen the NAFTA negotiations (Zahniser, Young and Wainio).

Like Mexico, Brazil started its own economic reform program in the early 1990s, which included control of inflation, macroeconomic

Table 8.1: Economic importance of the agrifood sector, 2003.

	Mexico	Brazil	U.S.
Agribusiness	US$ 54.0 billion (11.2% of GDP)	US$ 165 billion (33% of GDP)	US$ 998 billion (9.0% of GDP)
Agriculture	US$ 28.4 billion (5.9% of GDP)	US$ 52 billion (10% of GDP)	US$ 154 billion (1.4% of GDP)

Sources: Azevedo, Chaddad, and Farina; FAO; INEGI (2005).

stability, privatization of state-owned companies, industry deregulation, dismantling of agricultural credit and price support policies, and increased international integration with the advent of Mercosur, a trade block with Argentina, Paraguay, and Uruguay. These changes have significantly impacted the competitiveness of the agrifood sector in Brazil, which has experienced substantial, export-led growth (Azevedo, Chaddad and Farina). Both Table 8.1 and Figure 8.1 show the economic importance of the agrifood sector and international trade performance of Mexico and Brazil relative to other countries. Brazil is now the third largest net agrifood exporter in the world – following the United States (US) and the European Union (EU) – after enjoying an annual growth rate in agrifood trade of 6.3 percent since 1990 (Figure 8.1).

Given the social and economic importance of the agrifood sector in both countries (Table 8.1), the objective of this chapter is to discuss their experiences with agrifood market integration focusing on three commodities: corn, cotton, and orange juice. The chapter establishes the position of these two countries with respect to farm policies in developed countries as they relate to the three pillars of trade liberalization identified by the World Trade Organization (WTO): market access, domestic subsidies, and export competition. In doing so, this chapter contributes to our understanding of the constraints to increased policy coordination in NAFTA and eventually in the Free Trade Area of the Americas (FTAA).

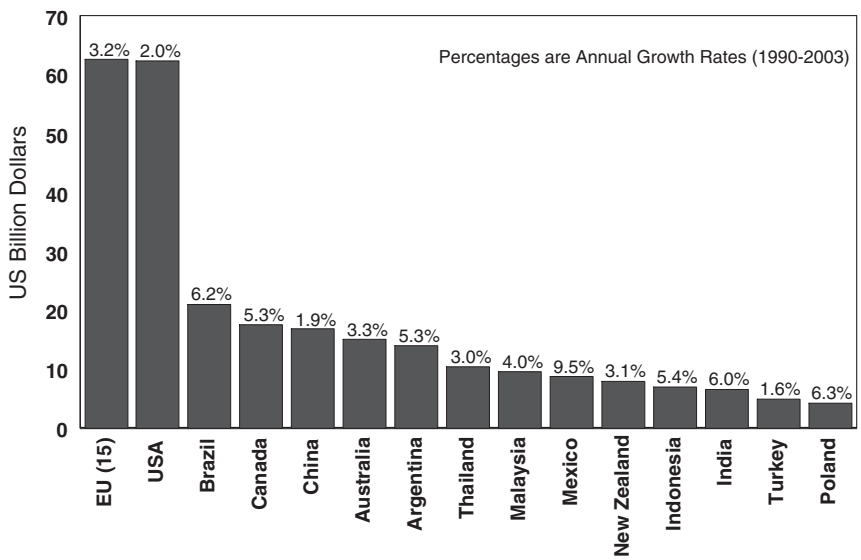
DEVELOPING COUNTRIES' PERSPECTIVES ON AGRIFOOD INTEGRATION

The process of agrifood market integration in North America – and eventually in the whole of the Americas – cannot be understood separately from multilateral trade negotiations occurring under the auspices of the WTO Doha Round. This new round of trade negotiations is also known as the "Development Round" because of its commitment to advancing developing countries' economic interests and concerns. Following the collapse of the September 2003 trade talks in Cancun,

Mexico, an ambitious agenda was set during the July 2004 negotiations in Geneva. The 147 WTO member countries agreed to substantial reforms in agricultural trade, including increases in market access, reductions in domestic support, and the elimination of export subsidies. Although this phase of the Doha Round ended with some progress, significant details – particularly the definition of modalities that will be used to reduce tariffs and subsidies – were left for resolution at the December 2005 ministerial in Hong Kong.

In addition to making progress towards freer trade in agriculture, Geneva's process consolidated a new dynamic where the traditional "Quad" (US, EU, Japan, and Canada) consensus was replaced by a negotiating format requiring continuous efforts to harmonize the positions of key developed and developing countries. Fostered by a new economic geography in the world, the G-20 emerged as block of developing countries – including Brazil, China, India and Mexico – with the common goal of fighting against agricultural protectionist policies in developed countries. Unlike traditional coalitions formed by a homogenous group of countries with similar interests, the G-20 is a heterogeneous, pragmatic, and agile coalition with adequate technical capacity to support international trade negotiations.

Figure 8.1: Agrifood trade performance of selected countries, 2003.



Sources: FAO; ICONE.

The trouble for the G-20 lies in the internal contradictions linked to the group's difficulties in coming to common ground to advance strategies beyond agricultural issues or even to open its own agricultural markets (Jank 2005b). Brazil is one of the countries with the most to gain from a broad agricultural trade liberalization, but it is reluctant to open its markets for industrial goods and services. China tries to block further opening of its agricultural and service sectors, even though it could be the main beneficiary of a global liberalization of industrial tariffs. India resists opening its markets in agricultural and nonagricultural goods, even though it has the potential to be a world class exporter of services.

Finally, Mexico, despite having little to gain due to the high number of free trade agreements already signed (Burfisher), remains a fervent defender of free trade.

In addition to the G-20, other coalitions emerged such as the coalition of 32 less developed countries (LDCs), the G-90 and the G-33. These coalitions now join other established interest groups – the US, the EU, the Cairns group, and the G-10 – in the chessboard of multilateral trade negotiations (Table 8.2). The main implication for multilateral trade negotiations at the WTO is that the old North-South paradigm is no longer valid.

Considering the three pillars of trade liberalization identified by the WTO – market access, domestic subsidies, and export competition – Jank (2005b) notes the presence of complexity, heterogeneity, and conflicts of interest among developing countries. Regarding market access, at least four different positions can be identified. The group of 32 LDCs has adopted a no commitment policy, signaling their unwillingness to open their borders to agricultural trade because it would expose their farmers to competition from developed countries' subsidies. The largest group – formed by the G-90 and the G-33 – is concerned with preference erosion of their special and differential treatment such as evidenced in the sugar case against the EU.[1] A third group is formed by populous countries with large rural populations – including China, India and Indonesia – who will play a central role in the Doha Round negotiations. This group tends to hold a defensive position in agrifood trade but has offensive interests in industrial goods (China) and services (India). Lastly, there is a group of roughly 15 free traders that are the main beneficiaries of more open borders to agrifood trade. These countries are net exporters of agrifood

[1] On 27 September 2002, Brazil filed two dispute cases against US cotton subsidies and EU sugar export subsidies at the Dispute Settlement Understanding body of the WTO. The cotton case is discussed in a subsequent section of this chapter. In April 2005, a WTO panel agreed with Brazil and other complainants that EU nations illegally export subsidized sugar, driving down prices on world markets. For details about the sugar case, see WTO (2005).

Table 8.2: An overview of WTO Doha Round interest groups, 2005.

Group	Countries	Agriculture		Industrial Goods	Services
		Subsidies	Access		
United States (US)		DP	Mixed	OP	Mixed
European Union (EU)		Mixed	DP	OP	Mixed
Free Traders (Cairns)	Australia, Chile, New Zealand, South Africa	OP	OP	OP	OP
Ag. Resistant Countries (G-10)	Japan, Korea, Taiwan, Switzerland, Norway, etc.	DP	DP	OP	Mixed
G-20 Main Players	Argentina, Brazil	OP	OP	DP	Mixed
	China	OP	DP	OP	Mixed
	India	Mixed	DP	DP	OP
Developing: SP, preference erosion	G-90 and G-33	Mixed	DP	DP	Mixed
Developing: net food importers	LDCs and others	DP	DP	DP	Mixed

Note: OP = Offensive Position; DP = Defensive Position.
Source: Jank (2005b).

products and include Argentina, Brazil, Chile, South Africa, Thailand, and some Central American countries.

Developing countries also have conflicting interests and concerns regarding domestic subsidies to agricultural production. There are at least 56 developing countries that are net food importers who do not oppose domestic subsidies in developed countries, as they tend to depress world food and agricultural commodity prices. Mexico is one exception among net food importers, as domestic support in developed countries

– particularly in the US – has negative effects on farmers' incomes (see Mexican corn section below). On the other hand, the group of net food exporters is vehemently opposed to the unfair competition from subsidies in the US, EU, and other developed countries. While the EU started to green and partially decouple its subsidies with the 2003 Fischler reform of the Common Agricultural Policy (CAP) because of internal budget constraints and the enlargement process, the US has increased its subsidies since *the 1996 FAIR Act* and subsequent supplemental legislation authorizing emergency relief programs. These "emergency" payments became permanent in the 2002 farm bill as countercyclical payments. In addition to substantially increasing the level of agricultural subsidies, the 2002 farm bill represented a strong reversal of the trend to decouple producer support from production levels. The Doha Round likely will not achieve its objectives if the US does not reduce and decouple its subsidies in the next farm bill as discussed in great detail by Thompson, which will require comparable concessions by the EU.

In addition to the WTO Doha Round, agrifood trade integration is also affected by multilateral negotiations under the Free Trade Area of the Americas. The evolution of the FTAA negotiations – from full-fledged, to light, à la carte, and now almost dead (Jank and Arashiro) – has exposed the constraints to increased trade integration in the hemisphere, particularly the opposing views of the US and Brazil. The US takes an offensive stance in the majority of the negotiating areas, but is defensive with respect to antidumping duties and agriculture. The defensive position of the US in agriculture is related to domestic subsidies (which are discussed in the cotton case section below) and (lack of) market access for a group of products that benefit from significant protection, including sugar, tobacco, peanuts, and citrus fruits (the effects of which are dealt with in the orange juice section below). Brazil, on the other hand, has adopted an offensive position in agrifood trade issues, but has been overly sensitive on issues important to US interests, including services, investment and intellectual property (Zabludovsky).

Given that the FTAA negotiation process has shown little progress, the US followed a "competitive liberalization" policy, signing bilateral free trade agreements with 12 countries in a hub-and-spoke format. In addition, 67 bilateral agreements involving countries in the hemisphere have been signed so far. The risk of this approach is the emergence of the now famous image of the spaghetti bowl suggested by Bhagwati, with diversions in trade, investment, and employment leading to a decreased level of engagement in the FTAA integration process. For those who defend the multilateral trading system, the proliferation of trade agreements raises concerns as to whether the bilateral movement is compatible with the promotion of building blocs for trade liberalization

or if it may cause more harm by diminishing the level of engagement of various actors in international trade negotiations.

AGRIFOOD INTEGRATION IN SPECIFIC COMMODITIES

Given the backdrop of the new dynamics that have emerged in multilateral negotiations in the WTO, this section of the paper further explores the perspectives of developing countries – Brazil and Mexico in particular – in specific agrifood chains, including corn, cotton, and orange juice. Note, however, that Brazil and Mexico have followed different paths in agrifood trade integration. Instead of initiating controversies against unfair trade practices, as Brazil has done, Mexico has tended to reinforce its structure of subsidies with marketing support programs which have become an integral part of its agricultural policy.

Initially, Mexico's marketing support programs were conceived as a social safety network to facilitate deregulation and economic integration by compensating farmers for some "structural inefficiencies of the economy" that reduced their competitiveness. In addition, per metric tonne marketing payments would focus on few crops, in some "disadvantaged" regions with considerable marketable production, and just during a transition period.[2] As economic inefficiencies were gradually overcome, marketing support payments would be substituted by greener, direct payments on a cropland utilization basis (this program is known by the acronym, PROCAMPO). For some crops – including corn – marketing supports have widened the gaps among different types of farmers and different regions in the country.

Recent Policies to Liberalize Corn in Mexico

Corn is the most important basic product in Mexico, not only due to its economic importance in consumption and production, but for the cultural and religious aspects that surround this crop. In other words, corn is far more than just a crop in Mexico. According to the Mexican Institute for Nutrition (CANAMI), corn tortilla consumption provides 47 percent of the total calories in the daily diet of Mexicans. For the low-income households earning up to three times the daily minimum wage rate,[3] this figure represents over 60 percent. In addition, corn is Mexico's main crop accounting for about half of total planted area. In 1998, 61 percent of ejidatarios and 67 percent of private owners cultivated corn on small plots of land averaging 3.1 and 5.8 hectares, respectively (Robles and Choncheiro).

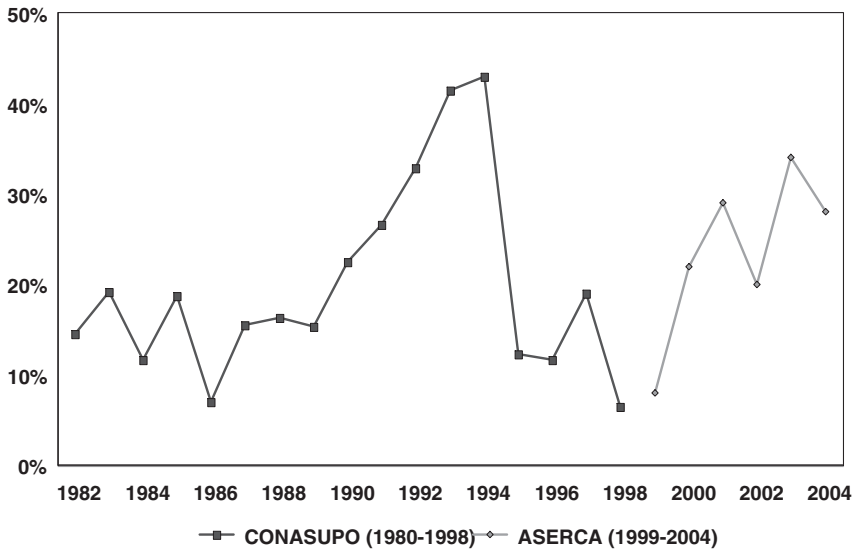
[2] Unlike in the US, price support programs in Mexico do not apply to all production, except for rice. In addition to corn, wheat for human consumption and for forage uses, triticale, sorghum, safflower, and canola are the other commodities included in this transitional scheme.

[3] In 2002, for example, this would be $12.4 per day.

Notwithstanding these caveats, Mexican decision makers did not exclude corn from NAFTA liberalization commitments – as Canada did with dairy products, poultry, eggs, and margarine and the US did with dairy products, peanuts, peanut butter, cotton, sugar, and sugar-containing products. Although corn is one of only four products that still enjoy border protection, Mexico will eliminate all agricultural tariffs on imports from the US effective 1 January 2008. The remaining border protection along with a guarantee price that was expected to last until 2008 constituted the pillars that were to support Mexican producers during the transition to a free market. However, the guarantee price for corn was immediately removed in 1995, when international prices exceeded it. CONASUPO, the state trading enterprise that used to buy Mexican crop production, remained as a buyer of last resort until 1998. Since then, ASERCA – the new agency in charge of the marketing support programs and PROCAMPO – has partially and selectively supported corn producers (Figure 8.2).

After NAFTA was enacted, Mexico replaced its import license regime with a tariff rate quota (TRQ) that is to be in effect for 14 years (1994-2007). An initial duty-free quota was set at 2.5 million tonnes for US corn and 1,000 tonnes for Canadian corn, growing at a compound three percent annual rate. Over-quota volumes in 1994 were to be assessed

Figure 8.2: Share of corn production bought by CONASUPO and supported by ASERCA in Mexico, 1980-2004.



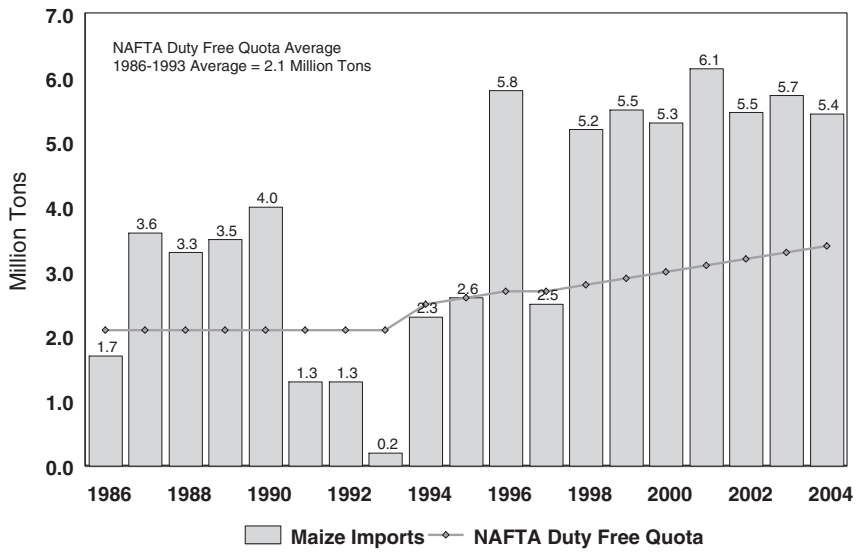
Sources: CONASUPO; SAGARPA/ASERCA (2005a).

a tariff that would decline over the 14-year transition period, initially equal to $206 per tonne but not less than 215 percent ad valorem. For 2005, the specific over-quota tariff is $52 per tonne, but not less than 54.5 percent. Although this tariff was to be applied to all over-quota shipments it has consistently not been charged.

Since NAFTA's implementation, Mexico has imported 20.2 million tonnes more than the corn quota volume. This over-quota access represents 63 percent of the quota and averaged 4.75 million tonnes per year (Figure 8.3). In addition, over two million tonnes of cracked corn have been imported by the livestock sector during the last four years. In its Agricultural Baseline Projections to 2014 the USDA (2005) suggests that annual US corn exports to Mexico will increase by 4.3 million tonnes between the 2007 and 2009 fiscal years. Much of this increase could be explained by a projected decrease in Mexican imports of US sorghum of 700,000 tonnes and the possibility that imported cracked corn from the US could also be replaced by corn. USDA projections indicate that US corn exports to Mexico will reach 11.4 million tonnes in 2009, which is equivalent to 50 percent of Mexico's current level of annual corn production, and represents an 80 percent increase over the volume imported in 2004.

In spite of domestic liberalization reforms and trade openness, corn

Figure 8.3: Corn imports by Mexico (million MT) and NAFTA duty free quota, 1986-2004.

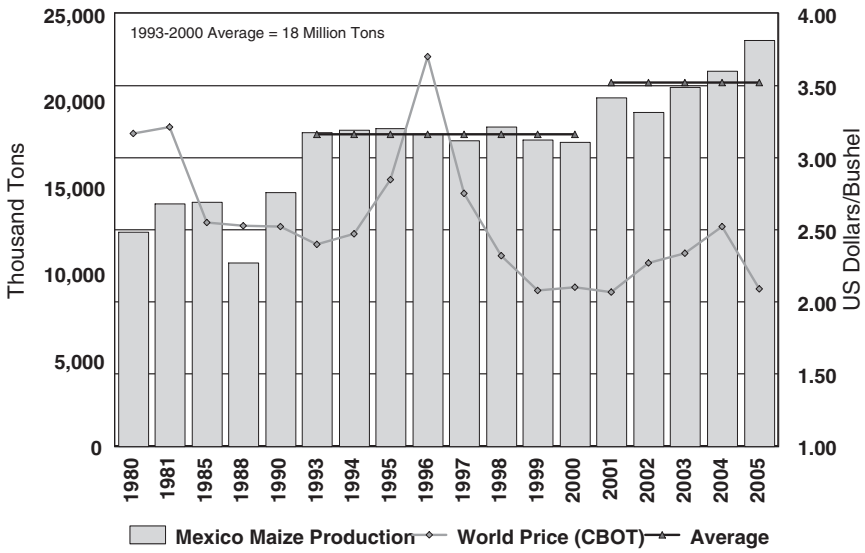


Sources: BANXICO; Secretaria de Economia.

cultivation has followed a course markedly different from some pre-NAFTA economic forecasts, such as Levy and Wijbergen. First, corn production did not experience a dramatic decrease and the crop is still cultivated by a nonhomogeneous set of producers, ranging from commercially competitive operations to small-scale subsistence farmers (Yunez-Naude and Barceinas). Second, a significant portion of irrigated area was not reallocated to higher valued exportable crops as was suggested by pre-NAFTA forecasts. Instead, it was devoted to corn (Figure 8.4). Domestic and trade policies have significantly affected farmers' production decisions mainly through a variety of supports, the allocation of the NAFTA corn import quota, and international negotiations. However, corn policies have been at times uncoordinated and incoherent.

Sinaloa, the most important Mexican state in terms of agricultural value (12 percent of total crop value) and irrigated land (19 percent), is perhaps the best example of inadequate planning to guide support programs with the goal of increasing farm incomes. In 1981, Sinaloa accounted for 75,000 tonnes of corn (roughly one percent of Mexico's total corn production), whereas its production reached around four million tonnes (more than 15 percent of domestic production) in 2004. In this particular state, it was anticipated that a small investment would offset the effects of liberalization, given the state's great potential to expand

Figure 8.4: Corn production in Mexico (thousand MT) and world price in US$/bushel, 1980-2004.

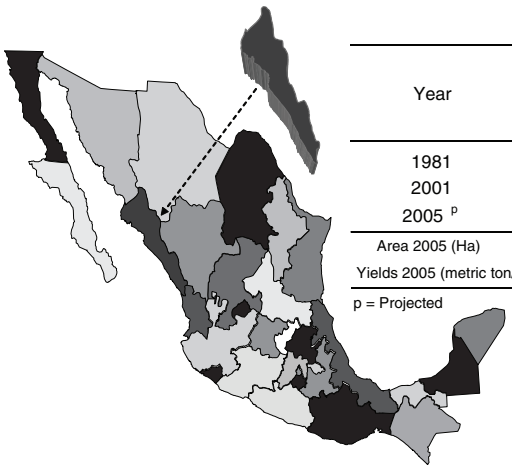


Sources: SAGARPA; AIAP (2004, 2005a); FC-Stone, LLC, with CBOT data.

irrigation at a low cost, in order to produce exportable crops. However, corn production currently takes place on 84 percent of irrigated land (Figure 8.5).

The gap between production value and irrigated land use is largely explained by the share of agricultural subsidies concentrated in Sinaloa. In 2004, Sinaloa absorbed 20 percent of the federal budget targeted to agricultural marketing support programs and 60 percent of corn marketing subsidies, which negatively affects production in other regions where corn marketing is not supported. This state is located far from consumption regions and lacks an adequate transportation infrastructure to move its agricultural output to distant markets at an economical cost, thus lowering the price that buyers are willing to pay for this crop. So, producers are provided a marketing support (a kind of countercyclical payment although excluding direct payments) equal to the difference between the target price and the effective price returned from the market. In the above mentioned year, part of the subsidized 3.9 million tonnes of corn received MX $938 per tonne – equivalent to 57 percent of the targeted price of MX $1,650 per tonne – reflecting the difficulty faced by Sinaloan farmers when selling their crop, but also giving them an advantage to compete in other regions of the country (Table 8.3).

Figure 8.5: Corn production in Sinaloa, Mexico, 1981, 2001, 2005.



Corn production in Sinaloa, Mexico
(Metric tons)

Year	Irrigated	Rainfed	Irrigated + Rainfed	Share of national production
1981	53,219	22,391	75,610	0.7%
2001	2,574,507	76,207	2,650,714	13.2%
2005 p	4,130,826	103,301	4,234,127	18.1%
Area 2005 (Ha)	468,961	75,464	544,425	
Yields 2005 (metric ton/Ha)	8.815	1.369	7.782	

p = Projected

Sources: SIAP; SAGARPA (2004, 2005).

Table 8.3: Marketing Supports to Corn in Sinaloa, Mexico, Autumn - Winter 2003 / 2004.

Concept of Support	Volume (thousand metric tons)	Total cost (million Mexican Pesos)	Cost per ton (Mexican Pesos/metric ton)	Accumulated support per metric ton (Mexican Pesos/metric ton)
Direct support to the producer	3,850	578	150	150
Increase in input costs	3,729	242	65	538
Freight	509	107	210	473
Financial costs	221	25	113	263
DICONSA	195		400	938
Total	3,850	1,030	268	

Source: SAGARPA/ASERCA (2005b).

Marketing support is received by only 196,000 producers (27,000 in Sinaloa) compared to the 2.7 million producers who received PROCAMPO support (SAGARPA). According to Levy and Wijbergen, Mexico's former agricultural policies addressed the concerns of the rural poor in terms of higher rural wage rates and increased the rents derived from rain-fed land. Now, it appears that current policies primarily serve to increase the rents of the rural rich, even though a portion of the marketing support does not go straight into the farmer's pocket. In fact, a significant part of those resources stay in the market to compensate for economic inefficiencies in areas beyond the farmer's responsibility, such as financial or transportation services; or are used as economic transfers along the production chain; or are simply captured as rents by marketing agents and buyers due to their bargaining power.

In general, it is widely believed that the same amount of resources that Mexico currently invests in marketing support programs could be better distributed among regions and types of farmers and applied to crops that are more profitable for farmers, more environmentally friendly, and more appropriate for the satisfaction of local or regional demand. Resources should also be directed to foster nonagricultural economic activities and the development of infrastructure to strengthen domestic competitiveness. This latter issue is key for Mexican producers in light of the forthcoming corn import liberalization to be implemented in January 2008.

Since 2001, producers' demands for renegotiating NAFTA have pressed the Mexican government to limit white corn imports in order to protect producers with better prices and consumers with less food dependence.

This measure has been ineffective in achieving either purpose. In world markets, white corn is typically sold at a premium over yellow corn, however, in Mexico white corn is usually sold at yellow corn prices or lower. This is driven by the following factors: 1) about 95 percent of corn production is white corn which exceeds corn demand for human consumption; 2) there are few restrictions on importing yellow and cracked corn; and 3) the livestock sector and the starch industry argue that their activities are less profitable using white corn. Nevertheless, assuming that limiting white corn imports were effective in increasing white corn prices, then tortilla prices would go up – as the corn flour industry states (CANAMI) – or white corn could be replaced by imported yellow corn, thereby reducing tortilla quality.

Brazil's WTO Cotton Case: Implications for US Farm Policy

On 27 September 2002, Brazil filed two dispute cases against US cotton subsidies and EU sugar export subsidies using the Dispute Settlement Understanding (DSU) of the WTO. Both cases constituted the first time a developing country challenged developed countries' agricultural production and export subsidies. Cotton is one of the most distorted commodities in the world due to high levels of government subsidies and barriers to trade. According to the International Cotton Advisory Committee, worldwide assistance to cotton producers ranged between $3.8 to $5.8 billion between 1997 and 2002, while the value of the global cotton market bottomed out at roughly $20 billion in 2002. In addition to domestic support, some cotton exporting countries protect their producers with tariffs or TRQs. While developing countries – including Argentina, Brazil, and India – impose tariffs on cotton imports ranging from five to 15 percent, the US adopted a TRQ system with a tariff of 4.4 cents/kilogram within quota and 31.4 cents/kilogram above the quota.

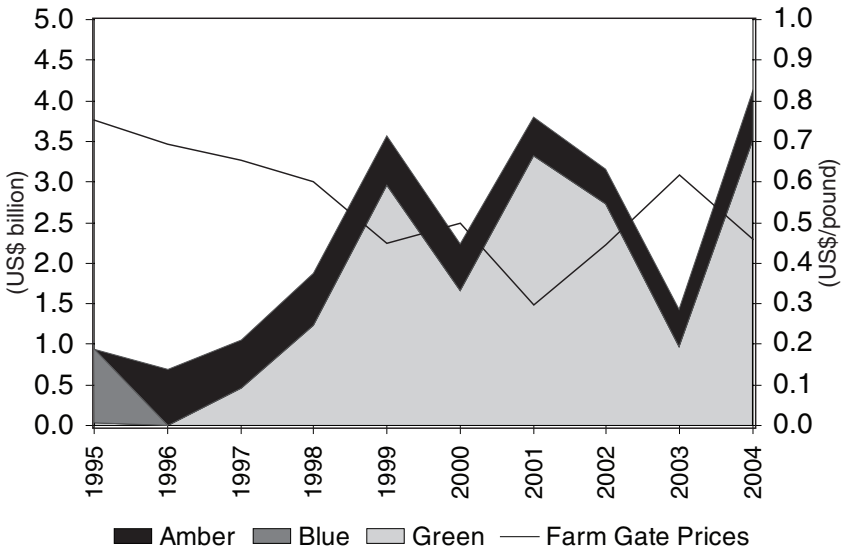
Between December 2000 and May 2002, the world price of cotton declined by 40 percent, reaching the lowest cotton price adjusted for inflation since the 1930s. This historically low cotton price triggered US price-based support programs (Figure 8.6). As a result, US cotton producers received payments ranging between $1.9 and $3.9 billion during the 1998-2002 marketing years, which exceeded the 1992 level of $1.4 billion. This constituted a violation of Article 13 of the Agreement on Agriculture – also known as the Peace Clause – the main claim of Brazil's cotton case against the US. In addition, Brazil also claimed that the export credit

program and Step 2 payments[4] were in fact export subsidies, which were prohibited under the Agreement on Agriculture.

Brazil's cotton case argued that US cotton subsidies caused "serious prejudice" to Brazilian cotton producers for two reasons. First, econometric analysis by an expert witness showed that US cotton subsidies depressed cotton prices, costing Brazilian producers $478 million in lost revenues between 1999 and 2002 (Sumner). Second, US cotton subsidies allowed US producers to gain world market share to the detriment of Brazilian producers. Despite declining world cotton prices, US cotton producers actually increased acreage by almost 15 percent. In other words, US cotton subsidies provided an additional incentive to produce. The resulting increase in production caused the US share in the world market to more than double, from less than 20 percent to roughly 40 percent, between 1998 and 2002 (USDA 2004).

[4] The Upland Cotton User Marketing Certificate or "Step 2" Program is a special marketing loan provision for upland cotton. The program has been authorized since 1990 under successive legislation, including *the FAIR Act of 1996* and *the FSRI Act of 2002*. It provides for the issuance of marketing certificates or cash payments (collectively referred to as "user marketing" or Step 2 payments) to eligible domestic users and exporters of eligible upland cotton when certain market conditions exist such that US cotton pricing benchmarks are exceeded. For further details, see WTO (2004).

Figure 8.6: U.S. cotton subsides and farm gate prices (1995-2004).



Notes: The following programs were included in the boxes: *Amber* - LDP (Loan Deficiency Payments, MLG (Marketing Loan Gains), CEG (Certified Exchange Gains), MLA (Marketing Loan Assistance), CCP (Certificate Exchange Gains), UMP (USER Marketing Payments -- Step 2), CSP (Cotton Seed Payments), Storage payments, Commodity Loan Interst Subsidy and Fees/Levies. *Green* - PFC (Production Flexibility Contracts) and DP (Direct Payments).

Sources: USDA, FSA and WTO. Elaboration: ICONE

On 18 June 2004, the WTO dispute panel issued its final ruling, agreeing with Brazil on most of its claims and recommending that the US eliminate or modify the offending programs (WTO 2004). The main findings of the WTO dispute panel can be summarized as follows: 1) US cotton subsidy levels between 1998 and 2002 exceeded the 1992 level and thus are not protected under the Peace Clause; 2) all US price-based cotton programs – including marketing loss assistance payments (counter-cyclical payments in the 2002 farm bill), the marketing loan program, and the Step 2 program – caused world price suppression and serious prejudice to Brazilian producers; 3) US support programs decoupled from prices – including direct payments (called Agricultural Market Transition Assistance or AMTA) and crop insurance payments – did not contribute to price suppression; 4) direct payments, however, did not qualify as green box because of the prohibition on fruit and vegetable planting; 5) US cotton subsidies did not contribute to an increase in US world market share; and 6) both the Step 2 program and the export credit guarantee program (GSM) were characterized as export subsidies.

Even though Brazil focused its case on US cotton subsidies, this WTO ruling may have far reaching consequences. This is so because the general programs (direct payments, countercyclical payments, marketing loans, crop insurance, and export credit guarantee programs) constitute the vast majority of US agricultural support that flows to producers. These programs are in effect for several crops – including corn and soybeans – not just for cotton. Consequently, if the cotton ruling stands, changes for all program crops may be warranted. In particular, two findings of the WTO cotton panel will force the US to reexamine its farm programs in the 2006 farm bill. First, the panel's finding that direct payments did not qualify as green box implies that the US has mistakenly notified $6 billion in annual direct payments as green box instead of amber box. Second, the panel also ruled that price-based support programs – including countercyclical payments and marketing loans – acted as a price floor and thus shielded US producers from market signals. Adjusting these price support programs would also affect other commodities.

The Effects of US Cotton Subsidies on Mexican Producers

Mexican producers have also suffered negative effects from US cotton subsidies, particularly those provided under the Step 2 program. In 1994, after 131 weeks of the systematic application of Step 2, with supports ranging between 0.56 and 14.3 cents per pound (AOASS), Mexican cotton producers convinced their government to authorize a per-hectare payment to carry out post-harvest treatment. This support was kept in force until 1996, when the 1993 Hedging Price Program was enhanced. By the end of 1999, once the Step 2 program was resumed in the US, producers appealed again to Mexican authorities and a new payment

Table 8.4: Comparative tariff structure: Mercosur-Brazil, EU-15 and U.S.

Tariff Profile (HS - 8 digits)	Agricultural Goods			Industrial Goods		
	Mercosur	EU-15	US	Mercosur-Brazil	EU-15	US
Mean	10.2%	22.8%	11.8%	10.8%	4.2%	3.4%
Median	10.0%	12.0%	3.5%	14.0%	2.9%	2.2%
Standard deviation	6.0%	54.1%	34.2%	6.8%	4.2%	4.8%
Maximum	55.0%	1381.0%	439.9%	35.0%	26.0%	48%
Number of tariff lines (A)	959	2,200	1,772	8,771	8,345	11,180
Number tariff lines > 30% (B)	0	486	137	54	0	33
% (B/A)	0.4%	22.1%	7.7%	0.6%	0.0%	0.3%

Note: All minimum tariffs are zero.
Sources: Brazilian Ministry of Industry, Development and Foreign Trade; US International Trade Commission.
Elaboration: ICONE.

per hectare was granted. Two years later, a target price was established, as part of the Program of Direct Payments to the Producer through Marketable Surpluses (Programa de Apoyos Directos al Productor para Excedentes Comercializables). Through this program, cotton producers receive the difference between the market price and the minimum price of 64 cents per pound. Due to input cost increases, the minimum price was elevated to 67.75 cents per pound in September 2004.

In other words, the Mexican cotton policy has been similar to corn policy: domestic farmers have been partially compensated in order to shield them from domestic support north of the border. In this case, however, fiscal resources have not been sufficient to halt the decline of Mexican cotton production.

Orange Juice: The Effects of (Lack of) Market Access on Trade and Investment

The US is one of the most open economies in the world. Agriculture, however, remains an exception. For sensitive agrifood products – including tobacco, sugar, ethanol, orange juice, and dairy, among others – the US applies a system of prohibitive tariffs, tariff rate quotas, special safeguards, and subsidies. Table 8.4 illustrates the persistent protectionism of developed countries in agriculture. While the tariff

structure is symmetric among Mercosur countries, with a lower standard deviation, the US and the EU tariff structures are characterized by asymmetric distributions, with tariff peaks and high tariff dispersion. Additionally, Mercosur countries mainly use ad valorem tariffs, in contrast to the US reliance on other forms of protection against imports, including specific tariffs, tariff rate quotas and nontariff barriers such as sanitary and phytosanitary (SPS) restrictions. It is worth mentioning that both countries operate with average tariff rates below the world agriculture tariff rate, which averages 62 percent (Gibson *et al.*).

Consequently, the US tends to be more open to international trade while heavily protecting selected industries against foreign competition. The US strategy of protecting sensitive products impacts directly the main export products of the Brazilian agrifood system (Jank *et al.*). Among these products is frozen concentrated orange juice (FCOJ), which receives protection against imports from several countries, but particularly from the competitive Brazilian FCOJ industry. To protect Florida citrus and orange juice production, imports from outside NAFTA have to pay a specific tariff of $0.297 per Single Strength Equivalent (SSE)[5] gallon for FCOJ and $0.175 per SSE gallon for not-from-concentrate (NFC) orange juice. As tariff rates for FCOJ are a fixed amount for a given volume, the effective protection increases when the price of the FCOJ falls and decreases when it becomes more expensive. For the average price of 2002, the specific tariff rates for FCOJ and NFC were equivalent to ad valorem tariff rates of 56.7 and 13.7 percent, respectively.

Table 8.5 presents the import tariff rate for FCOJ in the US for different countries in the last 15 years and scheduled until 2007. Two relevant conclusions may be drawn from the data. First, the protection of Florida's industry is not equitable, inasmuch as Mexico and Caribbean countries receive more favorable treatment as trading partners. Second, the tariff has been declining but there is no further prospect of lower trade barriers for Brazil in the years ahead.

Tariff rate changes of the last 15 years had an important impact on US imports of FCOJ (Table 8.6). The main effect was a significant decrease in US imports since the early 1990s. The second effect was a decrease in Brazil's share and a concomitant increase in imports from Caribbean countries, which face zero tariffs. The expected fall in tariffs on imports from Mexico after 2007 will probably have an additional negative effect on imports from Brazil.

These changes in trading rules between Brazil and the US not only affected trade flows, but created new investment opportunities, particularly towards the redesign of the citrus chain, with remarkable

[5] Single Strength Equivalent corresponds to a gallon at 11.8° Brix.

Table 8.5: Tariff rate quota schedule for FCOJ imports in the US (US$/SEE gallon).

Year	Mexico			Canada	Caribbean	Brazil
	In-Quota[a]	Over-Quota[b]	Snapback[c]			
1989	n/a	n/a	n/a	0.3143	free	0.3502
1991	n/a	n/a	n/a	0.2423	free	0.3502
1993	n/a	n/a	n/a	0.1742	free	0.3502
1995	0.1751	0.3327	0.3415	0.1022	free	0.3415
1997	0.1751	0.3152	0.3237	0.0341	free	0.3237
1999	0.1751	0.2977	0.3059	free	free	0.3059
2001	0.1751	0.2977	0.2972	free	free	0.2972
2003	0.1751	0.2977	0.2972	free	free	0.2972
2005	0.1751	0.1786	0.2972	free	free	0.2972
2007	0.0595	0.0595	0.2972	free	free	0.2972

Notes: [a] Tariff applied to first 40 million single strength equivalent (SSE) gallons of FCOJ imports from Mexico.
[b] Tariff applied to imports from Mexico exceeding 40 million SSE gallons of FCOJ up to 70 million SSE gallons from 1994 through 2002, and up to 90 million SSE gallons from 2003 through 2008.
[c] Tariff applied to imports from Mexico exceeding 70 million SSE gallons in 1994-2002 and 90 million SSE gallons in 2003-2008.
Source: US Department of Agriculture, Economic Research Service (USDA-ERS).

consequences on foreign direct investment (Azevedo, Chaddad and Farina). In the 1990s, the four leading firms in the Brazilian orange juice industry – Cutrale, Citrosuco, Cargill, and Dreyfus – started operations in Florida by acquiring existing plants formerly operated by US companies. The explicit motivation for this strategic movement was the increasing difficulties that these firms faced in accessing the US market, which is the world's largest in terms of orange juice volume. Since the late 1980s, Brazilian FCOJ exports to the US have been declining in both absolute and relative terms. In the 1990s the US became increasingly self-sufficient as orange production became less vulnerable to freezes, the result of the relocation of orange groves to southern Florida. Consequently, Brazilian FCOJ exports to the US fell from roughly one-half of total Brazilian exports in the 1980s to less than 20 percent in the late 1990s.

The acquisition of US plants by Brazil-based processors is part of their growth strategy in response to the self-sufficiency of US domestic production. However, this movement caused a rearrangement of the

Table 8.6: US Imports of FCOJ from Selected Countries (US$ 1,000).

	1989	1991	1993	1995	1997	1999	2001	2003
Brazil	463,169	220,843	202,282	103,949	124,572	218,820	109,115	196,323
Mexico	58,092	43,907	16,503	63,929	43,481	49,526	28,189	6,905
Costa Rica	0,656	1,736	2,448	6,984	18,096	16,461	33,718	35,608
Belize	8,532	4,029	6,695	8,389	16,089	13,077	19,667	11,304
Canada	0,257	0,918	2,115	2,963	2,466	4,224	4,867	5,569
Honduras	0,602	0,547	1,674	2,818	3,632	1,437	4,776	1,794
Dominican Republic	0,000	0,296	0,578	0,495	1,317	0,160	1,416	1,903
Other Countries	7,914	2,481	1,962	1,834	0,894	2,298	0,956	5,507
Total	539,222	274,757	234,257	191,361	210,547	306,003	202,704	264,913

Source: US International Trade Commission (USITC).

US orange juice production chain and was beneficial to the beverage companies that were former owners of the acquired plants.

In the early 1990s, the major US orange juice processors were large and diversified beverage companies, including Coca-Cola (Minute Maid) and PepsiCo (Tropicana). Their main business is ready-to-drink beverages that require specific capabilities in marketing and branding. Through diversification, these beverage companies are able to explore economies of scope in an extensive line of products. In the juice business, they need

a reliable source of orange juice both in terms of regularity of supply and quality, in order to keep up with their branding efforts. Until the early 1990s, transaction costs explain why Coca-Cola and Pepsi operated their own citrus processing plants, which were dedicated assets to the beverage industry. In addition to the vertically integrated beverage companies, smaller independent citrus processors sold orange juice to beverage companies or retail chains by means of supply contracts.

Until 1990, the largest beverage companies, such as Minute Maid and Tropicana, operated in the beverage industry, citrus processing and, in some cases, orange groves. At the start of the 1990s there was a transformation in the US orange juice industry. The family-owned Brazilian company Cutrale acquired Minute Maid's plants. Subsequently, Citrosuco bought the citrus processing plant of Alcoma, a citrus grower that used to be vertically integrated in processing. Then Cargill – whose citrus department was based in Brazil – also entered the Florida market, acquiring the Procter and Gamble plant. Dreyfus followed and bought the processing plant of Winter Garden (Fernandes).

The potential to leverage competencies in orange juice processing and marketing in the US market partially explains the acquisitions of Brazilian companies in Florida. In addition, this capability could not be fully explored with plants located in Brazil, as trade barriers protect Florida production. What is remarkable in the orange juice case, however, is that Brazilian companies and the US beverage industry are not in essence competitors. Instead of competing, Cutrale and Minute Maid developed a strategic alliance, which was the basis for the vertical disintegration in the US orange juice chain in the 1990s. Counting on a reliable and efficient orange juice supply, beverage companies shifted their focus to their core business in order to fully explore their competencies in marketing and the economies of scope in their beverage product line. Consequently, the acquisition of US citrus processing plants by Brazilian companies is part of the orange juice chain restructuring, which led to a more efficient form of organization.

The orange juice case provides an interesting example of the interaction between trade, FDI, and strategic alliances among US and Brazilian companies. In particular, the high and selective trade barriers for Brazil's FCOJ in the US have negative effects on Brazilian producers, who cannot benefit from their comparative advantages, but does not necessarily harm Brazilian processors. Without such trade barriers, Brazilian processors would probably reduce orange juice production in Florida and substitute for imports originating from their Brazilian operations.

SUMMARY AND CONCLUSIONS

There is a new economic geography in the world, led by developing countries that have undertaken structural reforms and corrected macroeconomic fundamentals. This new economic geography is reflected in a myriad of new trade agreements and in a new, dynamic geometry of actors and interests at the Doha Round of multilateral negotiations at the WTO, with emphasis on the G-20 group of developing countries led by Brazil and India. Unlike traditional coalitions formed by a homogenous group of countries with similar interests, the G-20 is a heterogeneous, pragmatic, and agile coalition, fighting mostly for the reduction of agricultural protectionism practiced by developed countries. In addition to the G-20, other coalitions have emerged such as the G-90 and the G-33. These coalitions now join other established interest groups – the US, the EU, the Cairns group and the G-10 – in the chessboard of multilateral trade negotiations. The main implication for multilateral trade negotiations at the WTO is that the old North-South paradigm is no longer valid.

Brazil's Perspectives

As far as Brazil is concerned, the creation of the G-20 can be considered the most positive achievement of President Lula's trade policy since the successful sugar and cotton disputes brought by Brazil to the WTO by the previous administration. While the cotton case has significant implications for domestic support, and especially US farm policy, the sugar case (WTO 2005) reinforces the trend towards the elimination of all forms of export subsidies.

The experience of the G-20 shows that with focus and coordination it is possible to obtain positive results, though it is still too early to celebrate. That being said, the success of the Doha Round rests on three factors. First, the US must implement the WTO dispute settlement body's decision on the cotton case and further cut its agricultural subsidies much beyond cotton. The position of Brazil and other agrifood free traders is that the Doha Round cannot produce results that are inferior to what has been achieved in the cotton decision.

Second, the negotiations depend on the capacity of countries with offensive positions in market access – the US and Brazil included – to convince the EU, Switzerland, Norway, Japan, Korea, as well as key G-20 members (especially China and India) to open their agricultural markets, of course respecting some special and differential treatment for less developed countries. The truth is that everyone is somehow responsible for market access failures, and if the G-20 becomes an obstructionist force, all the liberalizing ambitions of Doha can go to

waste. It is up to Brazil, for example, to accept a comprehensive opening of its own domestic markets, as long as there is compatible reciprocity from all major players. It is important to remember that the large food markets of the future are in Asia, and therefore, Brazil cannot be complacent with respect to the protectionist positions of its G-20 partners in agricultural market access.

Third, Brazil must advance the internal debate regarding industrial goods and services access. This is an area where Brazil lacks the necessary diligence to identify its offensive and defensive interests for the long term. Reciprocal market opening agreements in these two areas have a tendency to bring positive net results to society, as well as leading to correct public policies, and building stronger institutions. Less efficient sectors may be losers in the process, but the WTO is the best forum to seek flexibility in the modalities, timing, and degree of opening.

Finally, it is worth noting the negotiating efforts for sector agreements aimed at accelerated tariff reduction in nonagricultural goods. In principle, sector agreements are as undesirable as preferential trade agreements. While the latter discriminate against the most efficient suppliers that are left out, sector agreements discriminate against the most sensitive products, as the opening of these sectors ends up being delayed. Yet, reality is always far from ideal and there are good chances for sector initiatives to come to fruition for industrial goods. If that happens, Brazil should demand parallel initiatives for the agricultural sector. The US took the lead and proposed agreements for beef, oilseeds, and fruits and vegetables, which represent about 60 percent of Brazil's agricultural exports. Brazil should study the issue in depth, even if this is a third best solution with little chance of success, but which could bring investment and trade in areas which are of great interest.

In sum, the US and Brazil have common interests in agriculture. Both countries are big winners from agrifood trade liberalization, both at the WTO and the FTAA, and thus hold offensive positions in market access. In addition, both countries have been victims of increasing sanitary restrictions from China, Russia, and other important import markets. Unlike the EU, however, the US does not recognize the regionalization principle which allows for the consideration of parts of a country as disease-free zones. For countries with a territorial extension, such as Brazil and Argentina, the requirement of disease eradication in the whole territory makes fresh bovine meat exports to the US infeasible. The non-recognition of the regionalization principle affects not only Mercosur countries but the US itself. For example, the crisis caused by a case of mad cow disease in Washington State negatively affected US beef exports as a whole.

Despite these common interests, important divergences remain. Chief among these is domestic support of agricultural production in the US, as evidenced in the cotton case. In the case of agricultural export subsidies, the US is more open to negotiation, given that the country's utilization of this mechanism is quite rare. In addition, US protection of sensitive products harms important agrifood sectors in Brazil, as shown in the orange juice case. If offers for highly sensitive products appear to be impossible, then broad access for comparable products could be granted (e.g., ethanol instead of sugar or different meats instead of orange juice).

Mexico's Perspectives

Mexico is an extreme case among Latin American countries due to its geographical proximity to the US, a 2,000 kilometer shared border, the specific conditions under which NAFTA was signed, and the intricate web of bilateral trade agreements involving Mexico. This situation, however, does not make the Mexican case less illustrative, because it suggests some of the potential effects that an accelerated process of economic integration would have on other Latin American countries. The manner and timing in which integration takes place at the hemispheric level will no doubt be fundamental in achieving the results that all parties desire.

Over 20 years ago, Mexico questioned whether it should participate in the process then known as internationalization. As time went by, it became clear that protectionism was no longer an option in the context of the economic crisis that plagued the country in the mid-1980s. As a result of this crisis, Mexican authorities embraced trade liberalization as a mechanism to dampen inflationary pressure and to expose highly protected and often inefficient industries to international competition. In the early 1990s, under a relatively stable economic situation, globalization was considered an alternative for economic development. There was a clear purpose to foster economic growth based mostly on an increase of Mexican exports to the US and Canada, as well as on increased capital flows from these countries. Between 1995 and 2000, Mexican exports expanded at an average annual rate of 16 percent, compared to three percent in Brazil. Export trends reversed during the period 2000-2003 with growth rates of -0.4 percent in Mexico and ten percent in Brazil (WTO Secretariat). Mexico, however, remains the largest trader among Latin American countries, tripling Brazil's trade. As the destination for 90 percent of Mexico's total exports, the NAFTA partners have played a key role in Mexico's export performance. In addition to exports, foreign direct investment has been an important source of foreign currency for Mexico over the last ten years – $142.3

billion between 1994 and 2004, although annual inflows have been declining since 2001.

The International Monetary Fund (IMF) recently suggested that the export-oriented strategy of development focused on NAFTA might be exhausted, recommending that structural reforms and development of infrastructure are needed to maintain the benefits of such a strategy (Singh *et al.*). Between 1990 and 2000, public infrastructure spending in Mexico actually diminished by 2.1 percentage points of GDP, to the detriment of competitiveness, longer-term growth, and popular support for reforms. Deficiencies in transportation systems and financial services seriously affect the competitiveness of domestic farmers in such a way that domestic crops are usually more expensive than imports. This provides the rationale for many of Mexico's marketing support programs.

Perhaps not surprisingly, economic integration is perceived adversely by most Mexican farmers, a view that is fostered by worrisome economic indicators such as the increasing agricultural trade deficit, which reached an all-time record of $3.8 billion in 2004. The NAFTA partners, which absorb 87 percent of Mexico's total exports and provide 79 percent of its imports, account for about 56 percent of that deficit. Additionally, only 0.22 percent of total FDI was allocated to agriculture between 1994 and 2004, while the food, beverage, and tobacco industries attracted 8.9 percent. Almost 60 percent of that amount was invested in retail businesses and supermarket chains, whereas 35 percent was captured by the food and beverage industries.

Family remittances, although welcomed by recipients and the Mexican government, help foster perceptions of a negative performance of the agricultural sector. Remittances from migrants, which constitute Mexico's second largest source of foreign currency, reached $15 billion in 2004. Remittances are a common phenomenon across Latin America, where rural populations continue to grow and the importance of agriculture as an income source is expected to decrease.

The setting-up of possible scenarios for the year 2008 will surely be a recurrent subject during the next two years in Mexico. Several elements will be present at the discussion table: the social mobilization that originated prior to the application of the abatement phase of NAFTA in January 2003, the upcoming completion of PROCAMPO's operational authority in 2008, the review of the strategy aimed at stabilizing farm income, the restrictions on corn imports, and surely the precedents established by Brazil with its WTO trade dispute successes. Although no consensus exists on the ideal policy set, it is clear that political stability constitutes a premise for rural development. In doing so, the Mexican

government would have to respond to the needs of those excluded from the economic benefits of the integration process, including the indigenous population and low-income farmers.

It is worth mentioning that NAFTA was signed in November 1993, some months before the conclusion of the Uruguay Round negotiations. In addition to missing the opportunity to include the agreements reached in the WTO, Mexico accepted more liberal conditions, which now have priority over WTO statements (NAFTA, Art. 103). In particular, NAFTA does not prevent the parties from using domestic support measures, including "those that may be subject to reduction commitments, at the Party's discretion, subject to its rights and obligations under the GATT." NAFTA only recommends that its member-countries apply measures that "have minimal or no trade distorting or production effects; or are exempt from any applicable domestic support reduction commitments that may be negotiated under the GATT" (NAFTA, Art. 704). However, it is expected that the successes achieved by Brazil at the WTO offer Mexico some room to fill in several blanks in the NAFTA normative framework regarding domestic support and market access issues.

In addition to benefiting from the WTO cotton ruling, Mexico's main issue is to fight against US domestic support policy for corn production. In doing so, Mexico has to face not only US concerns, but also internal resistance from consumers who would have to pay higher prices for basic foods, and from farmers and agents who benefit from subsidies. Beyond finding a point of equilibrium among divergent positions, it should be understood that solving the sugar market access struggle with the US is a sine qua non condition to achieve a real solution to the corn case, due to the interrelation between both commodities arising from high fructose corn syrup, which is a substitute for sugar on the one hand and stimulates corn demand on the other.

In this negotiation process, Mexico would be better off within the G-20 framework. With the support of Mexico, as one of the top importers of US commodities, Brazil would benefit from a joint effort to force the US and major developed countries to modify their agricultural policies. It is too early to know how respondent countries will comply with the WTO rulings on the sugar and cotton cases. It is also true that Mexico will face US pressure if it insists in raising controversial cases in the WTO arena. However, the Mexican government is under strong internal pressure that will increase over time until it takes action to build a comprehensive policy.

In conclusion, the type of integration process pursued in Mexico and in the Americas will depend on the vision and will of the countries involved in this process towards defining objectives and goals, approving legal

and normative frameworks, selecting operational instruments, and building the necessary institutions to guarantee the functional operation of any secured agreement. In this openness process, obligations should rely on development goals instead of relying on preset time schedules. According to Harvey, institutions must ensure that trade and economic integration are oriented to reduce disparities between countries, regions, sectors, and groups, leading to or associated with more social inclusion and opportunities for self-expression and determination, and hence, social (as well as political) progression. As long as regional integration is not conceived from this perspective, commercial liberalization among countries with profound differences – such as those in Latin America – will be another factor contributing to polarization within the region. In this way, the processes threatening social welfare and the environment are accelerated, leading to both migration and uprooting of the rural population (Barkin).

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