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DEVELOPMENT STRATEGY AND GOVERNANCE DIVISION
MARKETS, TRADE AND INSTITUTIONS DIVISION

May 2006

DSGD Discussion Paper No. 33
MTID Discussion Paper No. 95

Trade Liberalization under CAFTA: An Analysis of the Agreement with Special Reference to Agriculture and Smallholders in Central America

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ABSTRACT

This paper is a description and an analysis of trade liberalization under CAFTA. It shows that in the short run the impact of the agreement is likely to be small. That is partly because the pre-CAFTA tariff levels were already low and also for sensitive products in agriculture, tariff reductions either quite gradual or non-existent. CAFTA also granted tariff-free access for certain amounts of several important products. However these quotas are either less than the current level of imports or small relative to domestic supply which means that they are unlikely to have much impact on domestic prices or producers.

Since the U.S. already grants tariff-free access under the CBI, trade liberalization in the CAFTA treaty appears to be asymmetric, with most of the tariff reductions being granted by the Central American countries. That is misleading for two reasons. First there really were some significant tariff barriers in the United States for agricultural commodities under the CBI. Many of these are removed under CAFTA. Second, the current favorable special treatment of the five Central American countries under the CBTPA and the CBI will expire in 2008 if CAFTA is not implemented. CAFTA makes permanent the tariff concessions of the CBI and the liberalized rules of origin of the CBTPA. That is particularly important for the maquila industry. CAFTA does not represent much of a change from current arrangements, but it does represent significant trade liberalization relative to what the situation might otherwise be after 2008 when the CBTPA has expired.

The fact that the tariff reductions and TRQs granted by the Central American countries under CAFTA will not cause significant price reductions does not mean that domestic producers will be unaffected by the agreement. In the long run the level of protection of many important commodities such as rice, pork and poultry will be significantly lower. But the tariff reductions in these sectors are gradual. That gives farmers time to adjust and to become more competitive. What will be critical from a

policy perspective is that this time is used wisely to increase productivity, switch to more profitable crops and take advantage of the new opportunities opened up by CAFTA.

TRADE LIBERALIZATION UNDER CAFTA: AN ANALYSIS OF THE AGREEMENT WITH SPECIAL REFERENCE TO AGRICULTURE AND SMALLHOLDERS IN CENTRAL AMERICA

Samuel Morley¹

I. INTRODUCTION

The Central America Free Trade Agreement (CAFTA) is an ambitious attempt to meld the markets and interests of the United States with those of the five Central American countries and the Dominican Republic. The treaty is an expression of the belief that removing barriers to trade and investment is the surest way to raise income and enhance growth prospects in developing countries. The treaty determines the time path of trade liberalization between the United States and each of the Central American trading partners as well as rules regarding the treatment of foreign direct investment, intellectual property rights, labor rights, environment and conflict resolution.

The proposed treaty has ignited a contentious debate both in the United States and Central America about the impact it will have on farmers, poverty, the environment and on the development prospects in the countries of Central America. The treaty will bring significant trade liberalization for both industrial and agricultural commodities in Central America. But there are widespread fears that this could cause significant hardships particularly for smallholders by exposing them to low-cost and subsidized agricultural products from the United States. Many in the region also feel that their countries have been too generous in the proposed treatment of foreign investment and the environment. This paper is the first of a set of studies which will attempt to analyze some of the issues raised by CAFTA. It will focus on the changes in tariffs in agriculture and in processed agricultural commodities, the likely impact of these changes on domestic prices in Central America and the effect on producers in Central America of the reductions in protection in the United States contained in the CAFTA agreement.

¹ Sam Morley is a Visiting Research Fellow at IFPRI's Development Strategy and Governance Division.

In section one of the paper we summarize the main components of the CAFTA agreement. We use disaggregated tariff data and the classification of products in the agreement to make an estimate of both the level and the rate of change of protection for agricultural and processed agricultural commodities. We pay particularly close attention to the changes in the level of protection for certain commodities such as beans, corn and rice which are important for the poor either because they are big components in their food baskets or because they provide significant employment for small farmers. In section two we look at changes in tariffs and quotas in the United States and their likely effect on producers in Central America. There are three areas of interest: first the effect of liberalized quotas for commodities such as sugar and beef, second the impact of CAFTA on the increasingly important maquila² sector and third, the effect of tariff reductions for products for which Central American producers have already had success in exporting to Europe and the rest of the World, but not in the United States. These are sectors in which improved access to the U.S. market will expand the export potential of products in which Central American producers have already shown that they are competitive in the rest of the world. Our purpose in each of these sections is mainly descriptive. The paper will describe the changes in tariff protection under CAFTA highlighting those of particular interest to farmers and those for which CAFTA represents a significant change from the current situation.

² Maquila refers to the clothing industry that assembles finished clothin from inputs that are generally imported.

II. THE CAFTA AGREEMENT: WHAT DOES IT CHANGE AND HOW IMPORTANT IS THIS LIKELY TO BE?

In order to put the CAFTA agreement into context, we first summarize the relevant conditions of previous trade agreements between the US and the five Central American countries. These establish the base from which CAFTA departs. The five Central American countries are part of the so-called Caribbean Basin Initiative (CBI) proposed by President Ronald Reagan in February 1982 as part of a more comprehensive foreign policy program "to promote economic revitalization and facilitate expansion of economic opportunity in the Caribbean Basin region." The CBI trade preferences and other benefits were granted to the countries of the region by the Caribbean Basin Economic Recovery Act (CBERA) enacted in 1983 and put into effect beginning January 1, 1984.

The CBERA granted unilateral preferential treatment (duty-free or lower than applicable preferential tariffs) to many products imported into the United States from 24 countries in the Caribbean Basin designated as beneficiaries. Some significant tariff and phytosanitary barriers to Central American exports of agricultural commodities were left in place, as we shall see in our discussion of the changes in protection in the US under CAFTA. Eligible for duty-free treatment under CBERA are all otherwise dutiable products except: textiles and apparel subject to textile agreements, as well as footwear ineligible for the Generalized System of Preferences (GSP) as of January 1, 1984, canned tuna, petroleum and its products, and watches and watch parts containing any material originating in countries denied the most-favored-nation (MFN) status.

It is important to note that duty free entry into the US market was not granted permanently under the CBERA. If the CAFTA agreement is not implemented successfully that access is scheduled to expire in 2008. CAFTA makes duty-free access to the US market permanent. This should be kept in mind when constructing CAFTA counterfactuals. Comparing tariff rates in the United States pre and post CAFTA is incorrect. Rather for the United States one should compare the CAFTA tariffs to what the tariffs would be in the absence of the CBERA.

Textiles were not given special tariff-free access to the US market under the CBERA. However they were exempted from the world-wide quota system then in place provided that they were produced from inputs produced in the United States. Under the CBERA the US granted identical trade and tariff treatment of textiles from both Mexico and the Caribbean Basin countries. Both were accorded MFN treatment (non-discriminatory treatment), both were eligible for tariff benefits under the "production sharing" program (a program highly used by US companies), and both were GSP beneficiaries. That changed in 1990 with the passage of the Caribbean Economic Recovery Expansion Act (CBEREA). It reduced tariffs for the Caribbean and Central American countries by 20% over a five year period with a 2.5% floor. Thus between 1990 and the implementation of NAFTA, the Central American countries enjoyed significant advantages over Mexico because of lower US tariffs.

NAFTA which entered in force on January 1, 1994 changed the position of maquila in Central America. An unintended side effect of the agreement was that the initial advantages of CBEREA beneficiary countries over Mexico was virtually eliminated because Mexican products now entered the US duty free. To make matters worse for Central American producers of maquila, Mexican producers were not subject to the restrictive rules of origin on intermediate inputs. To offset this unintended and unfavorable effect of NAFTA on Central America, in 2000 the United States-Caribbean Basin Trade Partnership Act (CBTPA) was passed. CBTPA beneficiary products include all textile and apparel products, footwear, tuna, petroleum and petroleum products, and watches and watch parts. Textile and apparel products are the centerpieces of the new legislation. They were granted the same duty free access to the US market and liberalized rules of origin granted to Mexico under NAFTA. This has provided a big impetus to the growth of the maquila industry in all of the Central American countries as we will see. There is a catch however and that is that the CBTPA like the CBI unless renewed or supplanted by either CAFTA or a full Latin American Free Trade area, is scheduled to expire in 2008. It is a unilateral, discretionary and temporary agreement which the United States could terminate or change at any time or which it could allow to expire by doing

nothing. These facts and this deadline were very much on the minds of the Central American negotiators of the CAFTA agreement.³

Trade Liberalization under CAFTA:

In order to appreciate how big the impact of CAFTA is likely to be, it is useful to look first at how much protection there was prior to CAFTA. We show a recent estimate of the average level of tariffs and tariff dispersion for several years in the 1990s in table one. As the reader can see, tariffs have been significantly reduced everywhere, but particularly in Costa Rica and Honduras. Trade liberalization, a key component of the reform agenda, significantly lowered trade barriers during the 1990s in each of the Central American countries, with the possible exception of Nicaragua, where the data for 1990 are somewhat suspect.⁴ The implication of this is that trade liberalization under CAFTA cannot be too significant on average. But it could still be very important in particular sectors or commodities where tariffs remained high prior to CAFTA. To get a sense of how important that could be one has to look at the disaggregated tariff data in detail. That is what we will do in the next several sections of this paper.

The CAFTA agreement is a treaty which spells out in great detail how the United States and the five countries of the region, and now the Dominican Republic as well will move toward a trading system that, with some significant exceptions such as sugar, is free of tariffs and other trade barriers. As written, the treaty has been formally approved by El Salvador, the Dominican Republic Guatemala Nicaragua Honduras and the United States and is being debated by Costa Rica. (as of January 2006). Our analysis will be with the treaty as written for the Central American countries and the United States. The treaty should be thought of as a collection of bilateral free trade agreements between the six countries and the United States. It does not change the existing trade arrangements between the Central American countries, and in fact could well be a step backward for a

³ The section on previous trade agreements in the region draws heavily on Dypski (2002) and on a release from the embassy of El Salvador called background of the new CBI legislation.”

⁴ In Nicaragua the average tariff level was 21% in 1987, 8% in 1990 and 17.4% in 1994. Those variations have more to do with the changes in the composition of imports over those years than increases and decreases in tariff rates.

potential Central American Common Market because there could be trade diversion away from intraregional trade to imports from the United States at a zero tariff. The treaty could also result in an apparent increase in intraregional trade in which imports from the United States to the lowest tariff country are transhipped to other countries in the region.⁵ If that happens rising intraregional trade would not imply rising intraregional production.

Table 1. Average Tariff Levels and Dispersion in Central America by Country and Year

	1990	1995	1997	1999
Tariff Levels				
Costa Rica	16.4	11.2	9.9	3.3
El Salvador	16	10.2	10.2	5.7
Guatemala	16	12	11.4	7.6
Honduras	41.9	9.7	9.7	8.1
Nicaragua	8	10.7	6.9	10.9
Tariff Dispersion				
Costa Rica	8.8	8.5	5.5	7.8
El Salvador	8.6	7.6	5.7	3.4
Guatemala	8.6	7.5	6.3	4.4
Honduras	21.8	7.5	5.4	7.8
Nicaragua	4.6	7.4	4.8	7.3

Source: Lederman et al. World Bank.

The CAFTA treaty specifies precisely how tariffs on all commodities are going to be eliminated or reduced over time. For each country the agreement contains a long and very detailed list of commodities with both the current most favored nation (MFN) tariff and a tariff category to which the commodity has been assigned. These categories determine how fast tariffs will be reduced over time. The categories which are common to all five countries are shown in Table 2. In addition there are separate categories for various products for which the liberalization process is handled differently in each country.

⁵ This trade pattern is called triangulation, and is a concern within the region. The countries of the region have imposed requirements that there be some addition to value added in the exporting country within the region in order for the tariff-free access to be permitted by the importing country.

Table 2. Tariff Categories Under CAFTA

Category		Applies to
A	Immediate tariff reduction to zero	All countries
B	Linear reduction of tariffs to zero over five years	All countries
C	Linear reduction of tariffs over ten years.	All countries
D	Linear reduction of tariffs over fifteen years	All countries
E	Six Year grace period, then reduction of 33% over next four years, then full liberalization from 12 th to 15 th year.	All countries
F	Ten year grace period, then linear reduction to zero over the next ten years.	All countries
G	Goods in this category already have zero tariff rate	All countries
H	Goods in this category are excluded from tariff reductions under CAFTA, with tariffs remaining at the rates agreed to in WTO.	All countries
M	Non-linear reduction in tariffs to zero. 2% in 1 st year, 8% per year from 3 rd to 6 th year and 16% per year from 7 th to 10 th year.	All countries
N	Elimination of tariffs in 12 equal annual steps.	All countries
O	Six year grace period and then elimination in nine non-linear steps, 40% from 7 th to 11 th year and 60% from 12 th to 15 th year.	ES,GT,HN,NI
P	Ten year grace period, then elimination over 7 years. 33% from 11 th to the 14 th year and 67% from the 15 th to the 18 th year.	ES,GT,HN,NI
Q	Elimination over 15 years. 15% in 1 st year, 33% from the 4 th to the 8 th year and 67% from 9 th to the 15 th year.	ES,NI

Source: CAFTA-DR Treaty

For a subset of sensitive agricultural products CAFTA also expands a system of tariff rate quotas (TRQ's) originally set up under the WTO which define amounts of certain commodities that can be imported free of tariffs.⁶ In addition for many products safeguard provisions permit a country to apply the MFN tariff level if imports from the US or in the case of the US, imports from Central America exceed the safeguard level. Safeguards are provisions permitted under WTO (and GATT) regulations by which imports beyond the safeguard level can be temporarily restricted if the affected industry

⁶ These are products that are politically sensitive and or produced or consumed by the poor.

can show that it will suffer serious injury from the level of imports beyond the safeguard level. In most cases the safeguard level tariffs fall over time.

Changes in the Protection of Agriculture based Products under CAFTA

In Table 1 we displayed the level of tariffs averaged over all the separate commodity classes. But that does not give the information we want on changes in the level of protection for agricultural commodities or processed agricultural commodities under CAFTA. We now turn our attention to these changes. As we pointed out above, under CAFTA commodities are divided into various categories according to the time profile of programmed tariff reductions under the agreement. Table 3 shows the amount of trade in each of the tariff categories for all agricultural and processed agricultural products and the level and changes in the average tariff in each of the categories. For example in category A, tariffs are eliminated immediately while in B they are reduced to zero in five equal installments over the first five years and in C over the first ten years. Note that these averages are all weighted averages of individual tariff rates, where the weights are determined by the share of the commodity in total imports. As is well known this method of averaging can seriously under estimate the average level of protection when there are tariffs so high that they choke off imports. The last category in each table is comprised of all the commodities which have quotas other than those such as yellow corn which is shown separately for some countries. In most countries the dominant commodity in the final quota line is rice.

Table 3 gives a clear picture of where tariffs are significant, where they will be cut and over what time period. The reader will note that except for Nicaragua all the average tariff levels are higher than those shown in Table 1. That reflects the fact that the level of protection in agriculture is higher than in industry. It also stems from the high level of imports and high-published tariff rates in the last or quota category in each of our five countries. The averages in the table are calculated using the legal bound tariff rates for each commodity, not actual tariff collections. The quota category is almost entirely comprised of rice imports for which the tariff rates vary between 29% to over 60% in the

five countries. We used the tariff rates in the table applied to the actual level of imports to calculate the hypothetical tariff collections by category. But it not clear whether these rates were actually imposed, particularly for yellow corn.⁷ Since imports and calculated tariffs in the quota category comprise such a high proportion of total imports and tariff collections and since there is a good deal of uncertainty on the tariff rate actually charged for these products, we recalculated the average tariff on all agricultural commodities other than rice and yellow corn. Those tariffs are shown below the tariff rate for each country, and are in all cases substantially lower than the overall average tariff rates shown in the table itself, particularly in Guatemala and Honduras. What this says is that apart from rice and corn, the average level of pre-CAFTA protection in agriculture was quite low, well below ten percent in all five countries. Between 40% and 54% of agricultural imports were in category G on which tariffs were already zero before CAFTA. In Costa Rica which did not have a category G, 70% of imports were in its category A where the average tariff was only 2.3% before CAFTA. For all of these commodities, CAFTA does not represent any change in conditions. This is important to keep in mind when thinking about the likely effect of CAFTA on agriculture.

Tariffs in Categories A and B are either eliminated immediately or over the first five years of the agreement. Products in these categories are broadly comprised of prime cuts of beef, fish, flowers, various fresh fruits and vegetables, potatoes, and inputs to processed food such as soups and dog food. For the most part, these are not products in which US imports compete with local producers. For fish, fruits and vegetables it is unlikely that US prices would be competitive with local product even at a zero tariff. The picture in beef is more complicated. Central American cattle growers do not now produce prime cuts of beef, so the increase in tariff-free imports should have little effect on local producers. In fact, because CAFTA grants beef import quotas in the U.S., the treaty is on balance likely to be favorable to them.

⁷ There are a number of trade reports that discuss actual tariff rates for yellow corn. In Guatemala the rate was said to be 15% rather than the published rate of 35%, in Honduras, 20% rather than 45%, and in Nicaragua a zero tariff on imports at the WTO TRQ which was higher than actual imports.

Table 3. Agriculture and Processed Food Tariffs by Tariff Class

Tariff Category	Trade			Average Tarrif				
	Imports	Exports	No. prod	Pre CAFTA	First year	5th year	10th year	15th year
El Salvador								
A	18,836	1,055	398	13.39%	0.00%	0.00%	0.00%	0.00%
B	9,376	898	141	12.85%	10.28%	0.00%	0.00%	0.00%
C	17,553	7,614	153	15.33%	13.80%	7.68%	0.00%	0.00%
D	6,249	34,825	89	18.24%	16.96%	12.17%	6.07%	0.00%
G	146,154	576	245	0.00%	0.00%	0.00%	0.00%	0.00%
N	2,135	335	17	21.18%	19.49%	12.36%	3.53%	0.00%
Yellow corn	48,854	0	1	15.00%	15.00%	15.00%	9.00%	0.00%
White corn	644	0	1	20.00%	20.00%	20.00%	20.00%	20.00%
Quota	19,276	42	42	38.58%	38.50%	38.50%	38.50%	25.68%
total	268,433			8.53%	7.35%	6.43%	4.62%	1.89%
Costa Rica								
A	202,155	563,697	519	2.33%	0.00%	0.00%	0.00%	0.00%
B	9,613	124,921	104	10.77%	8.62%	0.00%	0.00%	0.00%
C	10,910	7,121	151	15.12%	13.61%	7.57%	0.00%	0.00%
D	22,653	131,168	216	15.21%	14.15%	10.15%	5.07%	0.00%
F	16	188	3	66.00%	66.00%	66.00%	66.00%	33.00%
N	16,655	6,226	34	14.55%	13.39%	8.49%	2.43%	0.00%
S	1,826	1	9	12.76%	12.76%	12.76%	7.66%	0.00%
T	956	13,463	4	15.00%	15.00%	13.50%	7.50%	0.00%
Quota	23,805	594	34	37.85%	37.85%	37.85%	37.85%	22.71%
total	288,589			7.85%	5.94%	5.41%	3.71%	1.87%
without rice				4.99%				
Guatemala								
A	98,554	247,504	451	8.98%	0.00%	0.00%	0.00%	0.00%
B	25,057	17,175	105	14.96%	11.97%	0.00%	0.00%	0.00%
C	38,423	12,777	144	13.90%	12.51%	6.95%	0.00%	0.00%
D	11,772	197,898	93	12.14%	11.29%	8.09%	4.04%	0.00%
F	47	0	4	15.00%	15.00%	15.00%	15.00%	7.50%
G	187,038	23,875	248	0.00%	0.00%	0.00%	0.00%	0.00%
N	123	706	4	17.52%	16.12%	10.22%	2.92%	0.00%
O	2,110	2	1	20.00%	20.00%	20.00%	12.00%	0.00%
Quota	101,893	177	40	44.07%	39.20%	15.07%	5.30%	0.00%
total	465,017			13.92%	10.65%	4.18%	1.32%	0.00%
total without rice and yellow corn				6.62%				
Honduras								
A	26,000	192,298	365	12.66%	0.00%	0.00%	0.00%	0.00%
B	5,908	30,360	124	13.98%	11.19%	0.00%	0.00%	0.00%
C	15,670	9,227	175	16.57%	14.92%	8.29%	0.00%	0.00%
D	16,685	50,656	137	14.73%	13.70%	9.82%	4.90%	0.00%
F	78	10	7	15.00%	15.00%	15.00%	15.00%	7.50%
G	107,545	830	235	0.00%	0.00%	0.00%	0.00%	0.00%
N	4,510	0	10	13.85%	12.74%	8.08%	2.31%	0.00%
O	869	379	4	15.00%	15.00%	15.00%	9.00%	0.00%
Quota	50,482	1,514	33	41.58%	41.58%	41.58%	41.58%	27.73%
total	227,747			13.58%	11.85%	10.73%	9.66%	6.15%
total without rice and yellow corn				7.20%				
Nicaragua								
A	21,928	106,318	311	13.83%	0.00%	0.00%	0.00%	0.00%
B	5,467	7,189	190	14.40%	11.52%	0.00%	0.00%	0.00%
C	7,422	375	205	14.24%	12.82%	7.12%	0.00%	0.00%
D	14,505	68,625	139	15.81%	14.70%	10.55%	5.26%	0.00%
F	22	370	11	33.18%	33.18%	33.18%	33.18%	16.59%
G	58,359	150	196	0.00%	0.00%	0.00%	0.00%	0.00%
N	5,608	655	27	11.56%	10.64%	6.74%	1.93%	0.00%
Q	88	46,426	10	30.00%	4.50%	3.91%	1.03%	0.00%
Quota	10,751	2,096	39	36.55%	36.55%	33.99%	32.90%	18.50%
total	124,150			9.49%	6.65%	4.91%	3.56%	1.60%
total without yellow corn and rice				8.69%				

Source: Worksheets made available by CEPAL, Mexico

Note: The import and export levels are for 2002. The quota category includes all commodities with TRQs.

Category C commodities are those with a ten-year linear tariff reduction schedule. This group is comprised primarily of processed foods and in the case of Guatemala, frozen meat in addition to processed food. D and F category commodities have a very gradual reduction of tariff protection over either 15 or 20 years (Table 2). Thus whatever impact CAFTA will have on producers in these two categories will necessarily be quite drawn out. The bulk of D category products are what could be called processed agricultural commodities such as animal or vegetable fats, candies and products made from sugar, products made from chocolate, leather, flour, beverages and products made from vegetables or fruits. In Honduras the category also includes also potatoes and some beans. The F category where there is a ten-year grace period followed by ten-year tariff elimination is used in four of the countries and is comprised completely of dairy products.

Tariff Reductions for Sensitive Commodities

Certain commodities like beans, corn and rice are of particular importance to either the income or the consumption of the poor. We have used the information on tariff categories and initial tariffs in table two to calculate the time path of tariff reductions for a number of these “sensitive” commodities and show the results in Table 4. Note that the table shows only the tariff level, not the impact of quotas which we will discuss in a moment.

Other than white corn in several countries, tariff protection for all of these sensitive products will disappear over twenty years. But for most products, the liberalization will be very gradual, much of it occurring at least ten years after the treaty goes into effect. This is important. In Central America many have protested that CAFTA will hurt small farmers by reducing protection of commodities of particular importance to smallholders and the poor. The evidence in the table makes it quite clear that this will not the case, at least for the first five to ten years. It seems that the Central American negotiators of CAFTA were not willing to impose shock treatment on their producers of these sensitive commodities. But it is also clear that over the long run, the reductions in

Table 4. Tariff Reductions Over Time for Selected Sensitive Products⁸

	Yellow Corn	White Corn	Rice	Beans	Beef	Pork	Poultry	Dairy
Costa Rica								
initial	0.01	0.15	0.36	0.15	0.15	0.47	0.79	0.53
year one	0.00	0.14	0.36	0.14	0.14	0.47	0.54	0.52
year five	0.00	0.00	0.36	0.09	0.00	0.47	0.39	0.47
year ten	0.00	0.00	0.36	0.03	0.00	0.00	0.19	0.42
year fifteen	0.00	0.00	0.22	0.00	0.00	0.00	0.11	0.18
year twenty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
El Salvador								
initial	0.15	0.20	0.40	0.15	0.15	0.40	0.37	0.00
year one	0.15	0.20	0.40	0.12	0.00	0.40	0.31	0.00
year five	0.15	0.20	0.40	0.00	0.00	0.40	0.25	0.00
year ten	0.10	0.20	0.40	0.00	0.00	0.27	0.23	0.00
year fifteen	0.00	0.20	0.21	0.00	0.00	0.00	0.12	0.00
year twenty	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Guatemala								
initial	0.35	0.20	0.29	0.20	0.15	0.15	0.90	0.14
year one	0.32	0.20	0.29	0.19	0.14	0.14	0.86	0.13
year five	0.18	0.20	0.29	0.13	0.10	0.10	0.82	0.13
year ten	0.00	0.20	0.29	0.02	0.05	0.05	0.82	0.13
year fifteen	0.00	0.20	0.16	0.00	0.00	0.00	0.46	0.06
year twenty	0.00	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Honduras								
initial	0.45	0.45	0.45	0.15	0.15	0.15	0.55	0.12
year one	0.45	0.45	0.45	0.14	0.12	0.15	0.52	0.12
year five	0.45	0.45	0.45	0.10	0.00	0.15	0.45	0.12
year ten	0.30	0.45	0.45	0.05	0.00	0.09	0.41	0.11
year fifteen	0.00	0.45	0.25	0.00	0.00	0.00	0.23	0.05
year twenty	0.00	0.45	0.00	0.00	0.00	0.00	0.00	0.00
Nicaragua								
initial	0.15	0.10	0.62	0.23	0.25	0.15	0.70	0.34
year one	0.15	0.10	0.62	0.20	0.13	0.14	0.67	0.32
year five	0.15	0.10	0.62	0.10	0.07	0.10	0.55	0.32
year ten	0.10	0.07	0.62	0.05	0.03	0.05	0.55	0.31
year fifteen	0.00	0.00	0.35	0.00	0.00	0.00	0.31	0.15
year twenty	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: CEPAL tariff worksheets, and CAFTA treaty

⁸ Our estimate of protection for poultry is heavily affected by very high tariff rates on chicken legs which are intended to offset US willingness to sell this commodity at a very low cost because it is less desirable in the US market

tariffs for these commodities are considerable. Domestic producers are given a fairly long time to adopt new crops or new and more efficient production techniques. But in the long run, they will have to adjust to a far lower level of protection, particularly in rice, beans, poultry and dairy.

The table also makes clear the high level of protection afforded to domestic producers of sensitive products, particularly dairy, poultry and rice. This pattern may, at least to some extent reflect the desire by the Central American governments to protect their producers from subsidized exports from the United States. A recent study estimated that subsidies in the US amounted to 41% of the value of production of rice, 50% for milk and 32% for corn.⁹

⁹ Monge et al (2004).

II. THE TREATMENT OF QUOTA COMMODITIES

There are three types of commodities where CAFTA potentially could have a large and immediate impact, namely those in categories A and B where whatever protection there was pre-CAFTA falls rapidly to zero, and the special quota commodities where under CAFTA a certain quantity of imports will be permitted to enter free of tariffs. These are the products with the highest average tariff levels and comprise between 10% and 25% of total imports in the five countries. As we have already indicated, the A and B category imports are primarily those which do not compete with local producers. We now look more closely at the special subclass of commodities which were granted tariff-free import quotas.

Certain commodities of particular importance to the poor, either as consumers or producers, were given special treatment under CAFTA. Tariffs for these commodities were typically quite high prior to CAFTA, and the rate of tariff reduction under CAFTA in most cases will be slow as shown in Tables 3 and 4. But CAFTA also established tariff-rate quotas (TRQs) for each signatory in many of these commodities making possible faster liberalization that is apparent from the tariff category in which these commodities were placed. These are the commodities in which CAFTA could have a significant effect in the short run since it permits tariff-free imports up to certain quantitative limit as soon as the treaty is implemented (or in the case of chicken legs, in year three). We now look at the most important of these commodities and then ask what is the impact of the TRQs likely to be in practice.

A summary of the CAFTA TRQs and safeguards is displayed in Table 5. Note that for dairy products and meat there are separate quotas for many different commodities. We show only the totals in the table. For most products the TRQs grow over time and imports above the TRQ limit are subject to a tariff which falls over time according to the tariff category in which the commodity was placed. For most of the commodities even those without quotas there are also safeguards.

Table 5. Tariff Categories and Tariff Rate Quotas by Commodity and Country under CAFTA

Commodity	Tariff Category	Initial Quota (in metric tons)	Growth in Quota	Safeguard % of Quota	Initial Tariff
Costa Rica					
Dairy	F	1050	5% per year	130%	15-66%
Rice unmilled	V	51000	1000 mt annually	110%	36%
Rice-milled	V	5250	250 mt annually	110%	36%
Chicken leg quarters	U	330	+90 mt annually	130%	151%
Pork	R	1100	100 mt per year for first 5 years, then 150 mt per year for next 10 years.	140%	47%
Potatoes	B,H	2931	5% per year	50 mt	47%
Onions	H	600	2% per year		47%
Black beans	D	---	---	1200 mt	47%
White beans	D	---	---		11%
Red beans	D	---	---		47%
El Salvador					
Dairy	F	1070	5%	130%	15-40%
Rice-unmilled	P	62220	2%	---	20%
Rice-milled	P	5625	2%	110%	40%
Yellow Corn	O	367500	5%	---	15%
White Corn	H	35700	2% per year to year 15, then 700mt per year		20%
Chicken leg quarters	P	464 mt starting in year three	+434 mts per year after year three	130%	164.4%
Pork	O	1650 mt	10%	130%	40%
Beef	D	105 mt	5%	---	15%
Sorghum	D	263 mt	5%	110%	15%
Black beans	D	---	---	60 mt	20%
White beans	N	---	---		20%
Red beans	D	---	---		15%

Commodity	Tariff Category	Initial Quota (in metric tons)	Growth in Quota	Safeguard % of Quota	Initial Tariff
Guatemala					
Dairy	F	1292	5%	130%	15%
Rice-unmilled	P	54600	4.8%	110%	29.2%
Rice-milled	P	10500	5%	110%	29.2%
Yellow Corn	C	525000	5%	---	35%
White Corn	H	20400	400 mt per year	---	20%
Chicken leg quarters	P	21810 or 5% of national production, whichever is bigger	-1316 mt per year	130%	164.4%
Pork	D	4148	5%	130%	15%
Beef	D	1060	5.7%	---	15%
Black beans	O	---	---	---	20%
White beans	C	---	---	50 mt	20%
Red beans	A	---	---	---	15%
Honduras					
Dairy	F	2202	5%	130%	15%
Rice-unmilled	P	91800	2%	110%	45%
Rice-milled	P	8925	5%	110%	45%
Yellow Corn	E	190509	5%	---	45%
White Corn	H	23460	460 mt	---	45%
Chicken leg quarters	P	534 starting in third year	+534 mt per year	130%	164.4%
Pork	O	2150	7%	130%	15%
Black beans	D	---	---	---	15%
White Beans	B	---	---	---	15%
Red Beans	D	---	---	---	15%
Nicaragua					
Dairy	F	1425	5%	130%	15-40%
Ice Cream	F	72815 ltr	5%	130%	40%
Rice-unmilled	P	92700	3%	110%	45%
Rice-milled	P	13650	5%	110%	62%
Yellow Corn	E	68250	5%	115%	15%
White Corn	H	5100	100 mt per year	---	10%
Chicken leg quarters	P	317 mt starting in third year	+317 mt per year	130%	164.4
Pork	D	1100	100 mt per year	---	15%
Black beans	D	---	---	700 mt	30%
White Beans	D	---	---	---	10%
Red Beans	D	---	---	---	30%

Source: CAFTA agreement

Before looking at the various commodities, consider the impact of a quota in the domestic market of a product protected by a high tariff. We are primarily interested in the effect of the quota on domestic price and on domestic producers and consumers. Obviously there also a fiscal effect resulting from the loss of tariff revenue as well but we will ignore this. It turns out that the effect we are interested in is ambiguous. Whether or not a new quota has an effect on the domestic price depends on the size of the quota relative to previous imports, which in turn depends on the position of the domestic supply and demand curves.

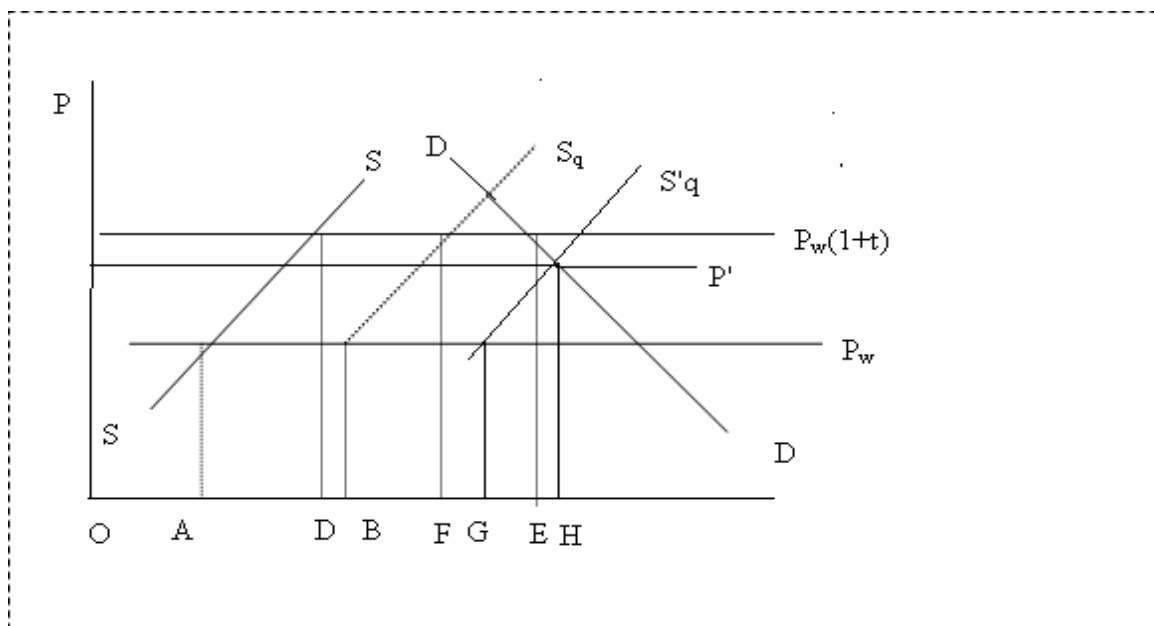
Consider Figure 1. Domestic supply and demand curves prior to the quota are the solid lines DD and SS. The world price is the horizontal line P_w and the domestic price of imports is the line $P_w(1+t)$ where t is the tariff. Absent the quota, domestic supply is OD, imports are DE and the internal market price of the commodity is $P(1+t)$. Suppose now that a tariff-free import quota in the amount AB is granted. This shifts out the supply curve to the dashed line S_q which now represents domestic supply plus duty-free imports. Domestic supply is now OA plus BF. But since BF is equal to AD, total production is unchanged. As the reader can see, the market-clearing price is also unchanged at $P_w(1+t)$. Nor is there any change in total imports. However AB is now imported tariff free, while FE is imported and pays the tariff. Thus, for this particular situation the quota has no effect on either producers or consumers. Its only effect is to transfer government tariff revenue to the holders of the quotas.¹⁰

This is not the only possible result. Suppose that the domestic demand curve intersected the domestic supply curve at a price less than P_w . There would then be no imports either before or after the quota, and the quota would as in the previous case have no effect, either on producers, consumers or government revenue. The only circumstance in which the quota does have a price and production effect is if the quota is larger than the current level of imports. Suppose, for example that the quota is AG rather than AB. In that case the supply curve shifts out to S'_q . Now domestic production is OA

¹⁰ This will undoubtedly make the distribution of income more unequal since the quota holds are likely to be wealthy to start with.

plus GH. But GH is smaller than AD, so domestic supply contracts. In this case the larger quota replaces some domestic production as well as all the pre quota imports at $P(1+t)$. Here the domestic price falls to P' and total consumption rises by EH. Here consumers gain from the quota and producers lose. To summarize, quotas only have an effect if they are larger than the amount previously imported. In the two other possible cases where either there are no imports or where the quota is smaller than previous imports, the quotas have no effect, either on price, producers or consumers.

Figure 1. The Effect of Quotas on the Domestic Goods Market



With this discussion in mind we look now at the commodities which will have additional quotas under CAFTA (Table 6). The four most important are yellow corn, rice, pork and dairy products. In Table 6 we have added domestic production because even if quotas are large relative to imports, if both are small compared to domestic production, the impact of quotas on price and production will be small. Conversely, if total production is small even relatively large quota effects will have small effects on total agricultural production or employment. Table 6 allows us to compare the quotas, imports and domestic production for main TRQ commodities in our five countries.

Table 6. Quotas and Imports from the United States by Commodity and Country (in metric tons)

Country Product	Costa Rica			El Salvador			Guatemala			Honduras			Nicaragua		
	Initial Quota	Imports	Prod'n.	Initial Quota	Imports	Prod'n.	Initial Quota	Imports	Prod'n.	Initial Quota	Imports	Prod'n.	Initial Quota	Imports	Prod'n.
rice, unmilled	51000	158697	220361	62220	85676	35616	54600	57127	40714	91800	95573	7746	92700	105155	272974
rice, milled	5250	7		5625	1921		10500	1358		8925	2877		13650	5553	
yellow corn	--		na	367500	381118	0	525000	516992	155000	190509	168928	0	68250	0	0
white corn	--		na	35700	4499	604132	20400	9411	938730	23460	46098	485938	5100	6004	463806
cheese	410	183	8079	410	618	2400	450	231	11250	410	894	9052	575	97	22500
ice cream	150	76		120	22		160	135		100	83		73	16	
other dairy	140	243		120	174		182	377		140	114		50	3566	
powder milk	200	9		300	664		400	5831		300	1712		650	605	
pork	1100	209	34565	1650	969	9160	4148	3388	25250	2150	2175	9828	1100	170	6158
chicken legs	330	221	83158	464*	129	78550	21810	14761	155000	534*	513	74000	317*	489	62273

Source: Angel and Hernandez, Angel (2005) and the CAFTA agreement.

Note: Imports are for 2003 except for rice in Nicaragua for which the average of 2000-2002 taken from US Rice Federation is used.

Production figures are the average of 2000-2003, and taken from Todd, et. Al., Angel (2005) and directly from the FAO data base. Note that the domestic production of chicken is a three year average 2001-2003 as is the production of corn in Guatemala. both are taken from Angel (2005). For chicken leg quarters, quotas with an asterisk start in year three. Imports of chicken legs and production of chicken are taken from Angel (2005).

Changes in Protection of Sensitive Commodities in the Short and Long Run

Rice: In the short run CAFTA's impact on rice prices will be through the TRQs shown in Table 5 since tariffs will not fall for at least ten years according to Table 4. In Costa Rica and El Salvador the TRQs are both significantly less than the average level of imports, so it is unlikely that the prices for either consumers or producers will be affected by the change. In Guatemala and Nicaragua the TRQ is much closer to the previous level of imports, but unless conditions change both countries are likely to continue importing quantities of rice above the TRQ which would imply that prices to producers at the margin would continue to be equal to the world price plus the pre-CAFTA tariff rate. Honduras has a slightly different situation. Like Guatemala and Nicaragua it has set its TRQ to be about equal to the level of pre-CAFTA imports. But unlike those two countries, its domestic production of rice is so small that even if prices were to fall because of the TRQ the negative effect on rice producers would be dwarfed by the positive effect of lower prices on consumers of rice.

Thus to summarize, in the short run the most likely outcome for all five countries is that domestic rice prices are going to be unaffected by CAFTA. If there is any effect it will be in Honduras. But there, if there is any effect, it will be positive since the number of rice producers who could be hurt by a decline in prices is much smaller than the number of consumers who will be helped. We also note that Central American negotiators must have been aware of the importance of rice, for not only did they establish quotas which were less than average imports in recent years, but they put rice in category P or U for which tariffs on out of quota imports will be unchanged for the first ten years, after which they are gradually liberalized. They also set safeguard levels very close to the quota (110% of quota). That will permit the authorities to take special steps to slow down or stop imports if they unexpectedly surge at some time in the future. But one should emphasize here that this lack of impact is only in the short run. Ten years out, domestic producers of rice in all four of the other countries are going to face a fairly severe decline in tariff protection and in all probability in prices (Table 4 for an estimate).

Corn: Corn is a critical product because of its importance in the diet of the poor and in the output of small farmers. How is it handled under CAFTA? Here there is an important ambiguity to be cleared up at the outset. For corn it is important to distinguish between white and yellow corn. These two were clearly treated differently by negotiators. In three of the countries white corn is virtually the only commodity which was exempted from any tariff reductions. (It was put into tariff category H). In Central America white corn is used for human consumption while yellow corn is primarily used in animal feed. More important for our purposes yellow corn is only produced in Guatemala and possibly Costa Rica¹¹. What corn is produced is white corn. This must be why the negotiators of CAFTA permitted very large TRQs of yellow corn but very small ones of white corn. If there is a big rise in the importation of yellow corn because of these new TRQs, that will not hurt corn producers even if the price of yellow corn falls unless consumers change their preferences. But if there is a price reduction, that will help domestic chicken and livestock producers for whom yellow corn is an input. It will also hurt domestic producers of sorghum which is a substitute animal feed. (Angel, 2005).

The key question is white corn. First Table 4 tells us that there will be no changes at all in tariffs for white corn in El Salvador, Guatemala and Honduras and only limited changes for the first ten years in Nicaragua. Costa Rica put white corn into category D where tariffs fall linearly over 15 years. And, since the pre-CAFTA tariff on white corn was only 15%, CAFTA will have a price effect but it will be only 1 percentage point per year.

The main impact of CAFTA on white corn producers will be through the TRQs shown in Table 5. In El Salvador and Guatemala the white corn TRQ is significantly higher than pre-CAFTA imports. Therefore we should expect domestic prices to decline. But how much they decline depends on the change in the total supply implied by the high TRQ imports. That in turn depends on the level of domestic production. When one looks at that in Table 6 for these two countries, one sees that the TRQ implies only a small

¹¹ See Angel (2005), table 2. We have no information on yellow corn production in Costa Rica, however, the tariff rate for yellow corn in Costa Rica was 1% prior to CAFTA.

increase (2-5%) in the total supply of white corn to the domestic market. That implies that while prices are likely to decline, the decline will be small. In the remaining two countries, Honduras and Nicaragua, not only are white corn TRQs less than or just equal to pre-CAFTA imports, but they are also small relative to total supply. We conclude that in no case will the CAFTA agreement have a significant effect on domestic prices, domestic producers or indeed on consumers. That is true both in the short run and the long run.

Pork: CAFTA is likely to have a significant effect on pork producers in both the short and the long run. For the first ten years the effect will be mainly through the TRQs which equal or exceed the current level of imports in all five countries and which are also a significant addition to domestic production-between 15-20% in El Salvador, Honduras, Guatemala and Nicaragua. Note however that the absolute level of tariffs is only 15% in Guatemala, Honduras and Nicaragua, which limits the impact that even generous TRQs can have in these three countries. In the long run, the reduction in tariffs will be more important than the TRQs in the two high tariff countries, Costa Rica and El Salvador, but in all five countries CAFTA will have a significant impact on domestic prices.

Dairy: For dairy products our information on local production is less complete than for the other commodities. For cheese both the quotas and pre-CAFTA imports are small relative to total supply, so CAFTA-induced price changes are likely to be small. We suspect that the situation is similar for other dairy products. One of the reasons that CAFTA is not likely to have a big effect is that for these products imports from the United States compete against the other big world dairy producers, the EU, New Zealand and Canada. Pre CAFTA, the US share of dairy imports to Central America was only 10-15%. In addition whatever tariff protection there is for the particular products with quotas will not change rapidly. All the dairy products with quotas are in category F where tariffs remain at their pre-CAFTA levels for ten years, and then fall gradually to zero over the next ten years.

Beans: Beans are one of the most sensitive products in agriculture, not only because they are an important product of small farmers, but also because of their role in the

consumption basket of the poor. As the reader can see from Table 5, CAFTA is very cautious in its treatment of beans. To start with, no country granted a tariff-free access (TRQ) to imported beans. Nor did they permit a rapid reduction of WTO level tariffs. Guatemala is the one important exception. It will eliminate its 15% tariff on red beans upon approval of the CAFTA agreement. Except for red beans in Guatemala, for most types of beans in all five countries tariffs will be only gradually reduced over 12-15 years which means that the tariffs will decline by 2-3 percentage points per year at most, and then only for imports from the United States, which has not previously been an important supplier of beans. Furthermore, to guarantee that CAFTA would not cause any dramatic reduction in the price of beans, all the countries save Honduras imposed a very stringent or low level safeguard beyond which they would be permitted to revert to pre-CAFTA tariff levels. With the exception of red beans in Guatemala, we conclude that the effect of CAFTA on the market for beans will be small, at least over the next ten years unless there is a significant relaxation of the safeguards.

Poultry: Chicken is also given a special treatment under CAFTA. Chicken legs and hindquarters are among **the** most highly protected commodities in agriculture, with tariffs of 151% in Costa Rica and 164.5% in the other four countries. A very modest liberalization is programmed under CAFTA. As shown in Table 5, chicken legs and hindquarters are in tariff reduction category P or U where there is a ten-year grace period and then gradual elimination of tariffs over the next eight years. As the reader can see in Table 4, the average level of tariff protection is high for chicken meat imports and will not decline rapidly. So in the short or medium run it is TRQs which will have the largest potential impact. And since the tariffs are high for these commodities, TRQs could have a relatively large short run impact on domestic prices. Note that this TRQ applies only the chicken leg quarters. They are given a special treatment because in the US market breast quarters are preferred so the leg quarters are exported at a low price. All five countries have TRQs, but as the reader can see, they are very small relative to the total domestic production of chicken. All of this is the short run. In the long run tariff protection will

completely disappear (Table 4) and that could have a very significant effect on domestic producers.

III. TRADE LIBERALIZATION IN THE U.S. MARKET

We now turn to the other side of the story: liberalization in the United States under CAFTA. There are very few commodities for which CAFTA grants increased access to the US market for the simple reason that the CAFTA countries already have tariff free access for most products under the CBI and the CBTPA. But there are some, the most important of which are sugar, beef, peanuts, dairy and textiles. We report the treatment of these commodities under CAFTA in Table 7. Note that the quota for sugar is technically a TRQ, but since the out of quota tariff is prohibitive, (over 100%) and since this tariff will not be reduced, the quotas shown in the table are in effect an absolute limit

Table 7. Quotas and TRQs in the United States for CAFTA Exports

Commodity	Beneficiary Country	Tariff Category	WTO Quota (mt)	Addl Cafta Quota mt	Growth in Quota	Initial Tariff
Beef	Costa Rica	D		10536		26.4%
Beef	El Salvador	D		105		26.4%
Beef	Honduras	D		525		26.4%
Beef	Nicaragua	D		10500		26.4%
Sugar	Costa Rica	H	15796	11000		>100%
Sugar	El Salvador	H	27379	24000		>100%
Sugar	Honduras	H	10530	8000		>100%
Sugar	Nicaragua	H	22114	22000		>100%
Sugar	Guatemala	H	50546	32000		>100%
Peanuts	El Salvador	E		500		131-164%
Peanuts	Nicaragua	E		10000		131-164%
Peanuts	Rest of CA	E		---		na
Milk	Costa Rica	F		407461 ltrs	5%	77 cents/ltr
Milk	El Salvador	F		366715 ltrs	5%	77 cents/ltr
Milk	Honduras	F		560259 ltrs	5%	77 cents/ltr
Milk	Nicaragua	F		254663 ltrs	5%	77 cents/ltr
Milk	Guatemala	F		305596 ltrs	5%	77 cents/ltr
Ice Cream	Costa Rica	F		67087 ltrs	5%	50 cents/kg + 17%
Ice Cream	El Salvador	F		77670 ltrs	5%	50 cents/kg + 17%
Ice Cream	Honduras	F		48544 ltrs	5%	50 cents/kg + 17%
Ice Cream	Nicaragua	F		266989 ltrs	5%	50 cents/kg + 17%
Other Dairy	Costa Rica	F		550	5%	Various
Cheese,	El Salvador	F		630	5%	Various
Butter,	Honduras	F		450	5%	Various
Powder	Nicaragua	F		725	5%	Various
Milk	Guatemala	F		750	5%	Various

Source: CAFTA agreement and US Trade Representative Fact Sheets.

on the amount that can be exported from each of the Central American countries. How important will liberalized treatment of exports to the United States from CAFTA be to producers of these commodities in Central America?

In addition to the quotas shown in Table 7, under CAFTA the US will eliminate tariffs on tobacco over 15 years, except where current duty treatment under the CBI grants duty-free access. For those products the tariff will be set to zero immediately. For ethanol, duty-free access into the US market under CBI will not change. In addition El Salvador was granted a share of the non-local stock TRQ not to exceed 10% of the total TRQ and Costa Rica was granted a fixed share of the non-local stock TRQ of 31,000 gallons (15% of the regional TRQ) with no growth.

Sugar: Sugar is one of the most highly protected and highly subsidized products grown in the United States. Each Central American country had a TRQ prior to CAFTA. Imports above the TRQ are stopped by a prohibitive out of quota tariff of 33-35 cents per kilo which is higher than the market price of sugar. CAFTA approximately doubles the TRQ for each of the countries (Table 8). This expansion of quotas is undoubtedly valuable for Central America. At the current price of sugar (about \$240 per ton) the new quotas are worth about \$24 million to the region. But when one compares the additional quotas with the level of current production of sugar in the region, it is clear that they will not have much of an effect on producers since they amount to less than 1% of total supply in each of the five countries. CAFTA does not significantly expand the US market for Central American sugar.

Table 8. Sugar Production and Sugar Quotas under CAFTA (in metric tons)

	Current Quota	Additional Quota, year one	Year 15 Quota	Production, avg 2000-2003
Costa Rica	15796	13000	16860	3614579
El Salvador	27379	24000	36040	4769315
Guatemala	50546	32000	49820	17119300
Honduras	10530	8000	10240	4147750
Nicaragua	22114	22000	28160	3347787

Source: CAFTA agreement for quotas and Todd et al for production.

Beef: The United States' 26 percent out-of-quota tariff on beef will be phased out over a 15-year period. TRQ access will be established for the following countries. The CAFTA TRQ will open only if the existing WTO TRQ fills.

Costa Rica: TRQ of 10,340 MT, growing at 5 percent per year

El Salvador: TRQ of 100 MT, growing at 5 percent per year

Honduras: TRQ of 500 MT, growing at 5 percent per year

Nicaragua: TRQ of 10,000 MT, growing at 5 percent per year

At the end of 15 years there will be unlimited access and no tariff on imports. At present Costa Rica and Nicaragua are the only two countries with significant meat exports to the United States, averaging \$22-24 million per year over the period 1998-2002. For both of these countries, the increase in TRQs appears to be significant. Between 2000 and 2003 according to the FAO, Costa Rica's annual production of beef was around 75,000 metric tons, and Nicaragua's was 58,000 metric tons. (Todd et al. p.7). Thus the new TRQs amount to an expansion of between 13% and 16% of the domestic market. Since both countries now export to the US, it should be possible to expand production to take advantage of this market opening, particularly since the TRQs will be expanding relatively rapidly at the same time that the 26% tariff is falling at about two percentage points per year.

Textiles (Maquila): Textiles are an area of potentially large benefits but equally large and uncertain risks because of the expiration of the Multifiber Agreement in January 2005. In the past, (before 2000) in Central America maquila was almost entirely limited to the assembly of clothing from imported inputs. Recall the situation facing this industry prior to CAFTA. From 1984, with the passage of the Caribbean Basin Economic Recovery Act, the maquila industry was exempted from the world-wide quota system then in force. But its products were not exempt from U.S. tariffs until the passage of the Caribbean Basin Economic Recovery Expansion Act in 1990. With the passage of NAFTA in 1994 Mexican producers gained a significant advantage over producers in Central America because they got quota-free and tariff free access to the US market, and

more generous rules of origin denied to producers in Central America. This advantage was eliminated by the CBTPA passed in 2000. It extended to the Central American countries the market access conditions for maquila granted to Mexico under NAFTA with similar liberalized restrictions on rules of origin. Imports of knitted or shaped apparel were permitted free of tariffs provided that the intermediate inputs from the yarn forward were produced in a CAFTA country.¹² This has had a major impact on production in Central America as we shall see in a moment. But note also that the CBTPA has a sunset provision. It will expire in 2008 unless CAFTA is implemented

What CAFTA does for textiles is to make permanent the liberalized rules of origin for inputs to the maquila industry granted temporarily under the CBTPA. It has also further liberalized the rules of origin for a number of apparel products by extending tariff-free access to products wholly produced in CAFTA countries or produced with non-CAFTA fibers.¹³ This has turned out to be a big stimulus to cotton production and to the intermediate textile products such as yarn, thread and fabrics. Already there has been an expansion of cotton production in several Central American countries.

However there is a potentially serious problem affecting the potential benefits from CAFTA for textiles and their inputs and that is the elimination of the MFA quota system on January 1, 2005. This has led to a big surge of clothing exports from China to the United States. It is unclear whether Central American clothing producers will be able to compete with Chinese products. They do retain a tariff advantage over the Chinese in the US market, but that may be insufficient to offset Chinese cost advantages either in the manufacture of clothing or in the cost of inputs. We simply do not know yet what the outcome will be of this new world-wide competition for the US market.

We do know that the question is critical to the future. Maquila has become a leading export in every Central American country with the exception of Costa Rica where Intel and other products dominate the export picture. Some idea of how big maquila has

¹² Tee shirts and socks were subject to a maximum tariff-free import ceiling.

¹³ This means that products do not have to be made with US yarn or cotton. CAFTA also raised the minimum permissible value of non-CAFTA inputs from 7% to 10% of the final product.

become in Central America is given by the data for 2002 displayed in Table 9. The export of clothing comprises around 60% of total exports in Honduras and El Salvador and around 40% in Nicaragua and Guatemala.

Table 9. Maquila in Central America (2002)

	Exports of Clothing	Imports of Maquila Inputs	Maquila/ Total Exports	VA in Maquila/GDP
	Total World			
Costa Rica	769,209	450,910	10.11%	1.9%
El Salvador	1,789,206	205,676	57.07%	11.1%
Guatemala	1,776,381	453,599	35.66%	5.7%
Honduras	2,648,637	45,473	60.11%	39.5%
Nicaragua	455,085	35,844	39.55%	10.5%

Source: ERS data

Data in thousands of dollars

Imports are sitc 26+65+84, textile fiber, yarn, fabric and clothing

Gross exports undoubtedly overstate the contribution of maquila to the economies of Central America because some fraction of the total value of production had to be imported either from the US or elsewhere. In the table we show a crude estimate of total imported inputs which we have approximated as the sum of the imports in SITC codes #26, textile fiber, #65 which includes, yarn, thread and fabrics and SITC 84 which is clothing.¹⁴ The difference which we call value added and compare with GDP in the righthand column of Table 9 is an approximation of the direct and indirect contribution of maquila to national income. As the reader can see from the table, maquila is particularly important in Honduras where it comprises 20% of industrial employment, 60 % of exports and as much as 39% of GDP.¹⁵ It is less important in the other four countries but

¹⁴ Some imports to maquila in some countries, are put under miscellaneous.(SITC 89) In El Salvador we know that this is the case. Including SITC 89 for El Salvador increases imports by \$73 million, but only cuts the contribution of maquila to GDP by .5%.

¹⁵ Employment estimate was taken from Latin America Press Organization, May 6, 2005. The figures for GDP in current dollars were taken from the World Bank database. We compare the value of the national contribution to maquila to GDP rather than manufacturing because some part of the gross value of maquila production must have been drawn from domestic agriculture and services. If we had included all of

still it comprises around 10% of GDP in El Salvador and Nicaragua, 5% in Guatemala but only 2% in Costa Rica. In short this is an important sector both for employment, and for the foreign exchange it generates. As we will see now, it is also important as a market for import substitution in inputs that had to be imported prior to CAFTA.

The Caribbean Trade Preference Act (CBTPA) went into effect in 2000. The act was intended to level the playing field between Mexican and Central American clothing producers by giving Central American producers the same liberalized rules of origin to inputs enjoyed by Mexican producers after NAFTA. Table 10 documents the powerful positive effect of the act, especially in Honduras, El Salvador Nicaragua and Guatemala. In the 1990s prior to the passage of the act, each country imported intermediate inputs amounting to between one half to over two thirds of the value of maquila exports. After year 2000 those imports fell sharply in every country, but particularly in Honduras, Nicaragua and El Salvador even though the total value of exports continued to rise quite rapidly. Those intermediate inputs did not shift from the US to some other suppliers. Rather it appears that in each country domestic suppliers were able to successfully move

miscellaneous manufactured imports as going to maquila, the contribution to GDP would have fallen by less than one percentage point.

Table 10. Intermediate Imports to Maquila and Exports of Maquila to the US (000s)

	Costa Rica		Guatemala		Honduras		Nicaragua		El Salvador	
	Intermediate Imports/ Exports	Exports	Intermediate Imports/ Exports	Exports	Intermediate Imports/ Exports	Exports	Intermediate Imports/ Exports	Exports	Intermediate Imports/ Exports	Exports
1989	0.6218	\$337,875.00	0.8163	\$138,202.00	0.7470	\$88,764.00			0.9763	\$43,814.00
1990	0.5801	397,396.00	0.7304	203,152.00	0.7526	115,972.00			0.8107	56,195.00
1991	0.6213	453,874.00	0.6368	350,886.00	0.6474	201,728.00	3.29	1,254.00	0.7144	93,719.00
1992	0.6010	607,103.00	0.7292	477,870.00	0.5551	377,220.00	1.48	3,627.00	0.5750	171,667.00
1993	0.6124	671,935.00	0.7867	573,916.00	0.5009	522,149.00	0.55	11,464.00	0.5087	259,651.00
1994	0.6349	704,679.00	0.7802	623,632.00	0.5249	666,270.00	0.34	29,721.00	0.4660	411,762.00
1995	0.6195	777,931.00	0.7894	714,076.00	0.5263	955,968.00	0.23	76,501.00	0.5138	600,254.00
1996	0.7197	721,992.00	0.7792	831,629.00	0.5968	1,267,559.00	0.19	146,112.00	0.4800	740,099.00
1997	0.7070	869,141.00	0.7135	1,001,814.00	0.5634	1,725,449.00	0.21	186,623.00	0.4909	1,077,950.00
1998	0.7629	839,706.00	0.6154	1,183,679.00	0.6236	1,946,140.00	0.20	237,407.00	0.5344	1,198,861.00
1999	0.6089	846,579.00	0.4010	1,280,196.00	0.5497	2,243,648.00	0.21	284,056.00	0.4289	1,360,733.00
2000	0.4130	846,841.57	0.0711	1,545,178.77	0.0090	2,463,275.16	0.04	345,849.37	0.0522	1,640,939.21
2001	0.3965	791,031.62	0.0602	1,677,452.78	0.0077	2,485,702.66	0.03	390,607.98	0.0611	1,671,170.31
2002	0.3667	747,225.75	0.1492	1,727,038.17	0.0076	2,556,299.31	0.03	445,767.42	0.0496	1,712,661.46

Source, ERS data

Note: Intermediate inputs are the sum of sitc 26+65+84.

back up the supply chain increasing dramatically the domestic content of maquila exports.

Table 10 also documents the rapid growth of the entire maquila industry since 1989, particularly in Honduras, Nicaragua and El Salvador. Most of this growth came from expanding trade with the United States. One can see that for the year 2002 by comparing maquila exports to the US in 2002 from this table with maquila exports to the entire world for the year 2002 shown in Table 9. In none of the five Central American countries is the US/Total export ratio less than 95%. Of equal significance, this industry now comprises an important part of total industrial activity and total exports in each of the four countries other than Costa Rica and even there maquila contributes 6.5% of total industrial value added.¹⁶ The normal procedure for measuring the impact of a change in tariffs is to compare the tariff structure before and after the change. This is what forms the basis of counterfactual calculations. For maquila this procedure is inadequate. As discussed above, CAFTA makes permanent the rules of origin regulations put into effect under the CBTPA passed in year 2000. Those liberalized rules of origin for the inputs into clothing exported to the United States from Central America will expire in 2008 in the event that CAFTA is not implemented. Thus for maquila CAFTA does not just liberalize. Rather its biggest effect is to make permanent liberalization granted earlier under the CBTPA. Central American maquila producers will not be made better off than they are now by having CAFTA. Rather they are better off than they would be after 2008 when the CBTPA expires if CAFTA is not in place.

This is not a trivial matter. Indeed the advantages made permanent under CAFTA to the maquila industry may well be the single most important benefit of CAFTA to Central America. As we have already pointed out, the ratio of imports of intermediates from the US to exports of maquila to the US dropped dramatically after 2000. For example, in 2002 if the import ratios for exports to the United States had been what they were in 1995 the drop in the domestic value of production would have amounted to 1%

¹⁶ Maquila comprises between one and two thirds of total exports and around one-third of industrial activity. It is particularly important in Honduras and El Salvador.

in Costa Rica, 3% in Nicaragua, about 5% in Guatemala and El Salvador and 20% in Honduras.¹⁷

Other U.S. Tariff Reductions: Because the United States granted many products tariff free access to the US market under the CBI and the CBTPA, many have assumed that tariff reductions under CAFTA were primarily granted by the Central American countries and not by the United States. While that may well be true in general and for industrial products, it is a misleading picture for agriculture and agroindustrial products. There are currently many exceptions to tariff free-entry to the U.S. market, some of which are eliminated under CAFTA.

Here we are interested in changes that could have a significant positive impact on export potential for Central America. Obviously, not all trade liberalization will make a difference to Central American exporters because they may not be competitive in the United States even with zero tariffs. To find areas of potential export expansion we should first look at products which are already competitive in world trade, even if they are not exported to the United States. Indeed we should concentrate on those products where Central American exporters are able to sell in the rest of the world, but not in the United States, presumably because they have faced some sort of trade or phytosanitary barrier. Among all such products we should then look at those which were exempted from the CBI and CBTPA and whose tariffs were eliminated by CAFTA. This is the subset of products which should enjoy a particularly strong positive impact from CAFTA.

Monge et al (2004) have made a disaggregated (at the 8 digit SITC level) list of sectors which satisfy the first two of these criteria. Each of the products on the list has a revealed comparative advantage in trade with the world but not in the United States. That is, their share of exports to the world is higher than average for their country and their share of exports to the United States is lower than average. The list was prepared to give the negotiators of the agreement a clear idea of products for which the evidence

¹⁷ To get this estimate we took the value of exports to the US in 2002 and applied the ratio of intermediate inputs imported from the US in 1995. All calculations used ERS data at the two digit SITRC level.

suggested the existence of barriers to entry in the US market. Altogether they found 136 such products for Costa Rica comprising 10.7% of total exports, 116 for El Salvador comprising 6% of exports, 181 for Guatemala and 9% of exports, 75 for Honduras and 8% of exports and 82 for Nicaragua amounting to 35% of total exports.

Apparently this list had an effect on the negotiations. To see this we matched the products on the list with the tariff treatment by the United States under the U.S. tariff annex to the CAFTA agreement. We found that 159 of the products on the lists of the five countries were either on the US A list or were granted TRQs under the agreement. These are products that had tariff protection before CAFTA which will be eliminated over the next decade under CAFTA. An additional 126 had zero tariffs prior to CAFTA which implies that the lack of Central American exports was due either to phytosanitary or other barriers or to US competitiveness in these products.

Production for many of the products on Monge's list that will get tariff reductions or free entry under CAFTA is small. While these commodities may well represent promising areas for future export expansion, we focus on products with at least \$1 million in average exports to the world in the period 1998-2000 and which are in either the A or G tariff categories or which were granted a TRQ. Table 11 displays a list of these products. These are products with significant exports in which the country has a revealed comparative advantage in its exports to the world but not to the United States. All of the products shown in the table will either have tariff free access to the US market or TRQs under CAFTA. The table also indicates which of the commodities were excluded from the CBI. Since we are interested in products for which the changes under CAFTA could lead to an expansion of exports to the United States we have excluded several dairy products from the Nicaragua list since the heavy subsidy to dairy in the United States makes it unlikely that this will be a promising market opening for Nicaraguan farmers. We also eliminated tobacco and cigarettes from Guatemala's list because of the special circumstances of this market in the United States.

The table shows the products which presumably are ready to take advantage of a market opening in the United States. Except for Costa Rica, the absolute amount of

Table 11. Competitive Products with Market Opening under CAFTA

SAC	Exports to World	Excluded from CBI	Tariff Category	Product
Costa Rica				
	in millions			
2031100	944	x	A	pork meat
3034200	1123	x	G	tuna
3052000	1606	x	G,A	fish eggs and livers
5111000	2224	x	G	bull semen
8045010	4361		A	mangoes fresh
8071900	62757		A	other fruit
12071010	5963	x	G	plam nuts
15111000	33566	x	G	palm oil
16041300	6042	x	G,A	sardines
17041000	2339		A	chewing gum
19053000	14585	x	G	sweet crackers and wafers
20097090	1188	x	nc	concentrate of apple juice
21069030	41695		Q	preparations for beverages
Total	178393			
El Salvador				
3023900	1090	x	G,A	fresh tuna
9023000	1285	x	A	black tea
15179090	1117		A	food preparations based on animal or vegetable
17019900	2597		Q	saccarin
19021900	1659	x	A	pastas -wo eggs
21039000	2882		Q	prep for sauces
23099020	2114	x	nc	birdfood
Total	12744			
Guatemala				
4090000	1773		A	honey
7020000	6078		A	fresh tomatoes
7096010	1940		A	peppers
10051000	2644	x	G	seed
11041200	2953		A	oat flour
12074010	4254	x	G	sesame seed
15179090	3872		A	food preps based on animal or veg oils
19021900	2412	x	A	pastas w/oeggs
19041000	28919		A	toasted grain-based products
19059000	10547	x	A	biscuits, pastries bread
21021090	1593		A	other prepared foods
22089010	2142	x	G	ethyl alcohol-called bitters in US translation
Total	69127			
Honduras				
7082000	1267		G,A	beans
7133200	7594		A	red beans
15119010	1414	x	A	palm oil
17049000	4438		G,A	confeccions of sugar
20055900	1319		A	conserved vegetables
20094000	4366		A	pineapple juice
20097010	4471	x	nc	concentrate of apple juice
Total	24869			
Nicaragua				
1029000	15982		G	live cows
2011000	4712		Q	beef carcasses
4063000	2964		Q	cheese
12074010	1197	x	G	sesame seeds
Total	24855			
Grand Total	309988			

Source: Monge et al (2004) and author worksheets.

Note: Q-quota, nc-product not covered by agreement

production in these products is small. In total they amount to around \$310 million for the five countries compared to total agricultural and processed agricultural commodities including maquila exports from those countries of over \$21 billion.¹⁸ Thus one might conclude that the market opening is unlikely to have much of a positive impact on Central American farmers. But that ignores possible dynamic considerations. In the first place, given the size of the U.S. market it is possible that over a period of time there could be an expansion in production in a sector with a revealed comparative advantage many times larger than current sales to the rest of the world. Second, as we have seen, the U.S. also reduced tariffs on a large number of products, some of which are not currently particularly competitive in world markets. But improved market access in the U.S. could trigger a process of productivity-increasing investments to make other sectors competitive in the U.S. market. Thus the procedure that generated Table 11 is undoubtedly too narrow, both because it ignores dynamic induced investments in sectors which are currently exporting to the rest of the world, and because it ignores the potential impact of U.S. tariff reductions in other sectors.

¹⁸ This is for 2002, the latest year for which we have detailed data for agricultural exports by commodity.

IV. CONCLUSIONS

Despite the concerns of some and the positive expectations of others, a careful analysis of the CAFTA treaty suggests that in the short run at least, the impact of its trade liberalization components is likely to be small. There are several reasons for this. First, for the Central American countries tariffs are already quite low, especially for non-agricultural products. Second, for sensitive products in agriculture, the reductions in tariffs were intentionally designed to be gradual, or in several cases, non-existent. In the short run TRQ's could potentially have a bigger impact than tariff reductions on domestic producers in agriculture. But we show that the actual TRQs granted by the Central American countries in almost every case are either less than the current level of imports or small relative to current domestic supply. That means that neither the TRQs nor tariff reductions are likely to cause significant price reductions for most agricultural commodities in the region, especially in the short run.

Since the U.S. already grants tariff-free access under the CBI, on its face trade liberalization in the CAFTA treaty appears to be asymmetric, with most of the tariff reductions being granted by the Central American countries. That is misleading for two reasons. First there really were some significant tariff barriers in the United States for agricultural commodities under the CBI. Many of these are removed under CAFTA. For example significant TRQs were granted to Costa Rica and Nicaragua for beef and to Nicaragua for peanuts. In addition tariffs were eliminated for a number of other products in which Central America appears to have a comparative advantage judging by non-US exports.

Second, the current favorable special treatment of the five Central American countries under the CBTPA and the CBI will expire in 2008 if CAFTA is not implemented. CAFTA makes permanent the tariff concessions of the CBI and the liberalized rules of origin of the CBTPA. That is particularly important for the maquila industry. CAFTA does not represent much of a change from current arrangements, but it does represent significant trade liberalization relative to what the situation might

otherwise be after 2008 when the CBTPA has expired. This may be the most important concession in the Treaty. But it is impossible at present to know how much that is likely to mean to the maquila industry because CAFTA roughly coincides with the end of the Multifiber Agreement. The end of the MFA quota system may permit Chinese or Asian exports to sweep Central American producers of clothing out of the U.S. market in spite of CAFTA's liberalization of the rules of origin on inputs to the industry.

The fact that the tariff reductions and TRQs granted by the Central American countries under CAFTA will not cause significant price reductions does not mean that domestic producers will be unaffected by the agreement. In the long run the level of protection of many important commodities such as rice, pork and poultry will be significantly lower. But the tariff reductions in these sectors are gradual.¹⁹ That gives farmers time to adjust and to become more competitive. What will be critical from a policy perspective is that this time is used wisely to increase productivity, switch to more profitable crops and take advantage of the new opportunities opened up by CAFTA. That will require a significant investments in research, training and infrastructure. As a first step a serious effort needs to be made to examine the production inefficiencies and marketing bottlenecks for the commodities which either are or could be produced by small holders using a micro-based market chain analysis. Such an analysis could identify specific commodities with market potential under CAFTA and it would give policymakers the information they need to formulate policy measures and investment plans to help the agriculture sector take advantage of the expanded market opportunities under CAFTA as well as to meet the long run threat of lower protection that will be faced by Central American farmers.

¹⁹ Dairy and beans could also face significantly lower protection but that depends mainly on the administration of safeguards in the case of beans and on competition between US and other international suppliers in the case of dairy

REFERENCES

- Angel, Amy, (2005), “CAFTA, Cuotas y Consecuencias para la Agricultura Centroamericana,” (FUSADES, processed).
- Angel, Amy and N. Hernandez, (2004) “El Impacto del DR-CAFTA sobre la Integración Económica Regional,” (ISEADE- FEPADE, processed)
- Calderon, Claudia M, L. Barquero and C. Blanco O. (2001), “Efectos de la Maquila en el Sector Real y en la Balanza de Pagos de El Salvador,” (Banco Central de Reserva de El Salvador, processed).
- CEPAL, (2004), “La Integración Centroamericana: Beneficios y Costos: Documento Síntesis,” (CEPAL, Mexico Office, processed).
- Dypski, Michael, (2002), “The Caribbean Basin Initiative: an Examination of Structural Dependency, Good Neighbor Relations and American Investment,” *Journal of Transnational Law and Policy*, (vol. 12, Fall), 95-133.
- Economic Research Service, Dept. of Agriculture, “WTO: recommended data products.”
- FAO, (2000), *Multilateral Trade Negotiations on Agriculture: A Resource Manual*, (FAO:Rome).
- Hathaway, Dale, 2004. *US Central Free Trade Agreement: Main Effects on Agricultural Products*, in Marcos Jank, ed. *Agricultural Trade Liberalization: Policies and Implications for Latin America*, (Inter-American Development Bank: INTAL).
- Hathaway, Dale, , 2003. “The Impacts of US Agricultural and Trade Policy on Trade Liberalization and Integration via a US Central American Free Trade Agreement,” (Inter-American Development Bank, INTAL-SITI working paper 4).
- Hornbeck, J.F. (2005), “The Dominican Republic-Central America-United States Free Trade Agreement (DR-CAFTA)”, (Congressional Research Service, Library of Congress, processed).
- Jank, Marcos, I. Fuchsloch and G. Kutas, (2004), “Agricultural Liberalization in Multilateral and Regional Trade Negotiations,” in Jank ed. *Agricultural Trade Liberalization: Policies and Implications for Latin America*, (Inter-American Development Bank: INTAL).
- Lederman, Daniel, G. Perry, and R. Suescun, (2002), “Trade Structure, Trade Policy and Economic Policy Options in Central America,” (World Bank).
- Monge, Ricardo, M.L. Sagot, and C. Gonzalez, (2004), “Retos y Oportunidades para los Sectores Agropecuario y Agroindustrial de Centroamérica ante el Tratado de Libre Comercio con los Estados Unidos,” (Academia de Centroamerica, #9).
- Monge-Gonzalez, Ricardo, Claudio Gonzalez-Vega and M.A. Francisco-Monge, (2004a) “Impacto de CAFTA sobre Ventajas Comparativas de Centroamérica,” (Academia de Centroamerica).

- Moreno, Raul, "Investment," in Bloque Popular Centroamericano, *Why we Say No to CAFTA: Analysis of the Official Text*, (published on line at: www.citizen.org/documents/WhyWeSayNOtoCAFTA.pdf)
- Oxfam, (2003), *Make Trade Fair for Central America: Agriculture, Investment and Intellectual Property: three Reasons to Say No to CAFTA*, (Oxfam: America Briefing Note #3).
- Taylor, J. Edward, (2002), "Trade Integration and Rural Economies in Less Developed Countries: Lessons from Micro Economy-wide Models with Particular Attention to Mexico and Central America," (Report to the World Bank, processed).
- Taylor, J. Edward, and Susan Materer, (2002), "CAFTA and Migration: Lessons from MicroEconomy-wide Models and the New Economics of Labor Migration," (U.C. Davis, processed).
- J. Edward Taylor, Antonio Yunez and Nancy Jesuran-Clements, (2005), "Los Posibles Efectos de la Liberalizacion Comercial en los Hogares Rurales de El Salvador Honduras y Nicaragua a Partir de un Modelo Desagregado para la Economia Rural," (Inter-American Development Bank, RE 2-05-010).
- Todd, Jessica, Paul Winters and Diego Arias, (2004), "CAFTA and the Rural Economies of Central America: A conceptual Framework for Policy and Program Recommendations," (Inter-American Development Bank).
- United States International Trade Commission, (2004) *U.S.-Central America-Dominican Republic Free Trade Agreement: Potential Economywide and Selectged Sectoral Effects*, (USITC, Publication # 3717).
- United States Trade Representative, (2005), "CAFTA-Agriculture: Specific Fact Sheet," (USTR, processed).
- Washington Office on Latin America, (2003), "CAFTA and the Rural Sector: Fair Trade or FreeTrade? Understanding CAFTA, published on line at: www.wola.org/economic/cafta_briefing_packet_dec03.pdf).

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