Preferential Tariffs, WTO and Developing Countries: Do the Gains from Multilateral Market Access Outweigh Preferential Access?

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1. Introduction

Preferential Trade Arrangements (PTAs) constitute an increasingly significant feature of the world trade system. In agriculture, these PTAs are particularly significant given the high protection levels compared to industry. Among the world's leading economies, the European Union (EU) and the United States (US) engage in several PTAs with developing countries. In addition to reciprocal bilateral PTAs, the EU engages in non-reciprocal PTAs like the Cotonou Agreement (formerly Lome), the General System of Preferences (GSP), and the Every-Thing-but Arms (EBA) initiative. The United States also engages in the GSP, the Caribbean Basin Initiative (CBI) and the African Growth and Opportunity Act (AGOA).

While these preferential trade arrangements confer advantages to beneficiary countries, continuing liberalization of trade regimes may erode benefits to the countries participating in them. This is why preferential exporters fear that multilateral liberalization would likely displace some of their trade with consequences for the viability of their agricultural production. At the same time, the proliferation of preferential agreements with developing countries has tended to reduce the value of trade preferences for other developing countries. This raises the question of whether developing countries would gain more by holding on to the current preferences or by across-the-board multilateral liberalization. Therefore, when we consider multilateral trade liberalization, the impact of these preferential agreements on further market access liberalization

could be significant, and their expected impact is likely to vary between regions and commodities. However, the implications for preferential exporters from multilateral trade reforms are not a priori clear given the trade off between the trade contracting effect from preference erosion and the trade expanding effect of liberalization. Sorting out the overall effect is an empirical question that depends on commodities, regions, and preferential regimes in place. Quantitative analyses of agricultural liberalization impacts on trade for developing countries have yielded contrasting results showing that the impact is not uniform, partly due to omission of preferences. In the case of the European Union, only few recent empirical analyses have addressed the issue preferences and trade (Inama, 2003; Bouet et al, 2003; Candeau et al., 2004; Alexandraki and Lankes, 2004). Lack of comprehensive database that adequately represent preferences has made it difficult to tackle the preferential regimes in empirical trade policy analyses. Moreover agricultural trade preferences are complex and vary greatly in both breath (product coverage) and depth (preference margins); preferential tariffs are heterogeneous often subject to two-tier tariffs within and above TRQs. The recent inclusion of preferences into the GTAP database version 6.0 is a significant improvement and this represent a starting point for the present analysis.

In this study we examine the role of preferences in the context of multilateral trade liberalization focusing on developing countries trade with the European Union. The EU is the world largest importer and exporter of agricultural and food products and a large share of agricultural imports into the EU come from preferential partners. Only a few countries export to the EU under MFN. In 2002, 47 % of dutiable agricultural products entered the EU under preferential schemes (OECD, 2005). Hence, assessing the implications of its preference schemes on trade patterns have important ramifications for global trade.

A key question we address is whether gains from trade expansion due to tariff liberalization outweigh losses from preference erosion. We address this issue in this paper by considering some stylized scenarios allowing for unilateral MFN tariff cuts by the EU, with and without comparable cuts in preferential tariffs. First, we examine the direct implications of trade reform on agricultural commodities for both preferential and MFN partners. The impact of trade liberalization will be felt differently among exporters as the magnitude of the cut differs among exporters due to the existence of preferences. Moreover, the implications for trade and production adjustments will also vary for each exporting partner to the EU, depending on the composition of agricultural trade, the share of exports to the EU market, the initial tariff level, and the initial volume of trade.

We also examine how these changes hold up when we allow for equivalent cuts in preferential tariffs, keeping to some extent existing preference margins. The logic behind this latter scenario is that the EU may want to moderate, at least in part, the impact felt by its preferential partners for preference erosion in these sectors following MFN cuts. Restoring the margin of preference to selected preferential partners has been used by the EU following trade liberalization commitments of the Uruguay Round. Sorting out these issues require a global trade model backed by a detailed protection database that covers preferences tied to specific preferential schemes, countries, and products.

This study makes two contributions in the area of agricultural preferences and trade. The first is to quantify empirically whether trade liberalization is more beneficial to preference beneficiaries than existing preferences. The second is to contribute to the global preference data developments which are key to rigorous empirical analyses in this area. In this study, we apply a global multi-region multi-sector CGE model, with a particular focus on the European Union

trade preferential regimes. Before presenting the empirical analysis, we begin with a brief overview of EU preferential regimes and the importance of EU preferential trade.

2. Overview of EU Preferential Trading Arrangements and Agricultural Trade Patterns

The European Union engages in several non-reciprocal and reciprocal preferential agreements. Agricultural products (treated as sensitive by the EU) are typically treated separately, where the inherent preferences for domestic goods are safeguarded and the market access concessions are consistent with the Common Agricultural Policy (CAP).

The oldest non-reciprocal preferential program is the GSP which provides preferential access to developing countries consisting of suspended or reduced tariffs for non-sensitive products (excluding agriculture, textiles and clothing). In 2001, the GSP programs allowed agricultural products deemed non-sensitive to enter the EU market duty-free. For sensitive products, ad valorem (AV) tariffs are reduced by 3.5 percentage points for agricultural goods subject to AV duties and by 30% when subject to specific duties. In the presence of both AV and specific duties, only the AV portion is reduced. For textiles and clothing tariffs are reduced by 20%.

The Cotonou agreement is a non-reciprocal preferential scheme between the EU and a group of countries from Africa, Caribbean and Pacific (ACP) region. With this agreement, products originating from ACP (other than CAP commodities) enter the EU at preferential rates. In the case of sugar, preferential access is subject to quotas with guaranteed prices equivalent to domestic EU sugar prices. Beef and veal meat exports are subject to quotas and reduced duties. For fruits and vegetables, imports from ACP countries benefit from reduced tariffs within quota

but they are subject to the full enforcement of the entry price which guides most imports of fresh fruit and vegetables into the European Union[1].

More recently, the EU expanded the GSP for the Least Developed Countries (LDC) under the EBA Initiative. EBA extends duty-free and quota-free access of imports from all products including agricultural and food commodities but excluding arms and munitions. As such, EBA provides the most favorable regime available, but as a GSP scheme it includes safeguard measures and rules of origin which can determine the extent of effective market access. Although EBA offers equal or lower tariff duties compared to the Cotonou agreement, EBA is subject to tighter administrative requirements and rules of origin compared to other programs.

Beside non-reciprocal regimes, The EU has engaged in many bilateral free trade agreements (FTAs), initially involving neighboring countries (Eastern European countries before enlargement, Mediterranean countries), but recently expanded beyond its periphery (South Africa, Mexico, and Chile). The common feature of these bilateral trade agreements is their reciprocity and gradual liberalization toward free trade in non-agricultural commodities. For agricultural products that fall under the CAP regime, preferential market access is limited, often consisting of commodity-specific reciprocal concessions consisting of lower or zero duties within tariff rate or preferential quotas.

How much trade with the European Union comes from preference-receiving countries? Table 1 shows the value of agricultural exports to EU for 2001 from both preferential and MFN partners. The preferential partners, as a group, account for significant shares of the EU's total value of agricultural and food imports (Table 1, column 9). For most products the import shares

[1] The entry price system implies that a relevant surcharge is applied when the CIF price of imports falls below the entry price bound in the WTO schedule of the EU.

from PTA partners accounts for one-third to two-thirds for most products except dairy (chapter 4) and beverages (chapter 22). Viewed from the perspective of preferential exporters, the lower panel of table 1 shows the share of the partner's total exports that are imported by the EU. This share indicates the degree of dependence of exporters on the EU market for their exports. For example 74.6 percent of ACP sugar exported is shipped to the EU but only 10.3 percent of exported cotton is shipped to the EU. This table highlights the key agricultural sectors that are dependent on the EU market and therefore point to the potential impact of erosion of preferences. For the ACP group as a whole, except for dairy products, cotton and tobacco, most other agricultural commodities are shipped disproportionately to the EU.

The GSP-only group, which encompasses a larger number of developing countries that do not qualify for the ACP is on the whole less dependent on the EU than the ACP countries who also qualify for the GSP. The highest share of exports to the EU is the 31.2 percent for chapter 9 products (Coffee, tea and spices). These are also the least protected product categories which many facing zero MFN duties. For bilateral preferential partners like Turkey, SoMed (North Africa), and ZAF (South Africa), there is strong dependence on EU market for traditional exports like fresh fruits and vegetables (Turkey, Morocco, Tunisia, South Africa), olive oil (Tunisia), cotton (Egypt, Turkey) and wine and beverages (South Africa, Chile) (table 1).

3. Mulitaeral versus preferential schemes in the EU Case: A Quantitative Assessment

3.1. Model and Data

In this paper we employ the widely used GTAP model (Hertel, 1997) to carry out the analysis. Unlike the previous versions, the GTAP database version 6.0 incorporates preference-inclusive tariffs, developed jointly by ITC-WTO, Geneva and CEPII, France. In this tariff database, preferential and MFN tariffs were calculated at the 6-digit level of the Harmonized

System (HS) and were aggregated up to the GTAP commodity level as AV tariffs and the AV equivalent (AVE) of specific tariffs. Table 2 illustrates the tariff data in the EU case. The aggregation method from 6-digit HS to GTAP level uses the concept of "reference group" for weights, meaning that it is the imports of a reference group (not the individual country in that group) that is used as weight[2]. This approach was justified as a solution to the downward bias associated with the individual country imports. However, the "reference group" scheme itself introduces biases into the calculated tariffs. This method doesn't take into account the actual composition of what is exported or imported, raising the possibility that product tariffs are assigned to countries that do not even export the product itself. Moreover, for highly aggregate food products, the great disparity of tariffs between products within the aggregate may also lead to sharp differences in the calculated levels of tariff cuts. For these reasons, in this study, we opt for an alternative weighting scheme for tariffs using the country's product exports to the world as the basis for weights. This way, we avoid both the problems of the "reference group" and the bias built in bilateral trade.

The model regions considered in this analysis consist of aggregating the world economy into 21 regions. These include the European Union, the Cotonou group (exclusive of EBA-eligible countries), the GSP (not including EBA-eligible or Cotonou-eligible countries), and the EBA group. Countries with bilateral free trade agreements with the EU such as Southern Mediterranean, Turkey, South Africa, Mexico, and Chile. The model also includes the major

[2] The reference group is set up on the basis of a combination of 2001 PPP GDP per capita and trade openness statistics. With this criterion all countries are placed in one of the following five groups types: (1) richest countries; (2) High openness, middle income countries; (3) Low openness, middle income countries; (4) High openness, low income countries; (5) Low openness, low income countries.

MFN partners to the EU, and finally an aggregate "rest of world" region[3]. The commodity aggregation distinguishes 22 aggregate sectors of which 17 are in food and agriculture. The non-agricultural sectors were aggregated into textiles, clothing, "other manufacturing", extractive, and services sectors. (see table 3 for a complete list of model regions and sectors.)

4. Scenarios and Results

4.1 Scenarios

Before modeling the impacts of unilateral trade by the EU we carry out a preliminary "projection" simulation to bring the world economy from 2001 benchmark to 2005, bringing EU to post-enlargement stage, allowing for implementation of recent MFA textile quota removal and complementing the EBA initiative.

Taking the updated 2005 database as the starting point, we carry out two scenarios to examine the trade impact on preferential and non-preferential partners facing EU tariff cuts. In scenario 1, we consider an across-the-board tariff cut in EU by 50% of the MFN level. This means that products subject to lower preferential tariffs will be subject to lower or no cuts at all (if below 50% MFN level). In scenario 2, we consider an across-the-board tariff cut in EU by 50% whether the starting level is MFN or (lower) preferential rates. This latter scenario preserves to some extent the margins of preference that are eroded under scenario 1. By comparing Scenario 1 and 2 we can assess the relative significance of the preference advantage in the context of trade liberalization.

4.2 Results

[3] Even though Brazil, Argentina are also eligible for GSP, Mercosur is treated as a separate region given the current negotiations for a free trade region with the EU. China and India, two GS-eligible countries are also separated out given their significance in world trade.

Given the limited space, this section discusses only the change in trade balances (which is the difference in the value of *f.o.b.* exports and *c.i.f.* imports) for the two scenarios. Change in net trade balance capture both supply and demand factors and therefore offers a quick assessment of trade results. Moreover, we can easily identify the most significant traded sectors that are affected by the policy change.

For scenario 1 (Table 4, top panel), the reduction of MFN tariffs by 50% (with lower or no tariff cuts on preferential rates) results in a significant expansion of MFN exports to the EU. For preferential exporters as a whole, facing lower tariff cuts for their exports result in smaller changes in trade. However, the results are not uniform between the various preferential groups. The GSP group, with smaller margin of preferences, does improve its trade balances under EU tariff cuts. However, for both the GSP and MFN partners, the gains in trade vary by commodity. For Mercosur, the biggest gains are in beef and white meats and in processed food. For the U.S. the trade gains are in rice, white meats, processed foods and various crop products. Australia and New Zealand gain more in dairy products as expected. However, in the case of New Zealand, there is a substantial trade loss in bovine meats much of which was captured by the Mercosur exporters. This is mostly due to the great disparity of tariffs between the various suppliers, with Australia and New Zealand facing the lowest tariffs, while suppliers like Mercosur face higher tariffs for bovine meat (table 4).

On the whole, a unilateral across-the-board tariff cuts by the EU does result in substantial trade gains for MFN partners while ACP and EBA partners show little trade change with the EU as preference margins are reduced. The GSP group shows moderate gains in net trade balances owing to smaller preference margins that cover fewer products.

Can further cuts in preferential tariff help preferential partners under across-the-board MFN cut? Under scenario 2, the change in the net trade balance for the agriculture and food sector as a

whole is only slightly different for MFN suppliers compared to scenario 1. For preferential partners, however, there is a significant improvement in the trade position, except for EBA, which unequivocally loses out under both trade liberalization scenarios. The EBA countries already benefit from almost total duty free access and any tariff concessions can only benefit competing suppliers.

For the other preferential partners, most of the trade gains come from a small number of key sectors. For the ACP group, sugar and beef exports benefit under scenario 2 with the trade gains more than compensating for smaller negative balances in other sectors (grains, non-beef meats, vegetable oils and processed foods). Southern Mediterranean partners show trade gains mostly in vegetable (olive) oil, bovine meats, and some gains in fruits and vegetables. For Turkey, however, the gains come more from white meats, vegetable oils and dairy. The GSP group, which includes a larger set of countries, show trade gains in a wider set of products, most notably white meats, fruits and vegetables, rice and processed foods.

5. Summary and Conclusions

In this paper we examine the significance of agricultural preferences in the context of global trade liberalization. We focus our quantitative assessment on the European Union and examine the differential impact of cutting MFN tariffs on preferential and non-preferential partners. The numerical results reported in this paper are preliminary and reflect work in progress. Results show that EU preferences confer a market access advantage for beneficiary countries, especially the EBA and ACP countries, which is eroded under MFN tariff cuts. A combination of across-the-board MFN and preferential tariff cuts (to preserve margins of preference) enable some but not all preferential partners to preserve or increase its trade with the EU. For example, under the MFN tariff cut only, the ACP group experiences a slight decrease in its trade balance; but when

the preferential tariffs are also cut by half, ACP shows a significant trade boost equivalent to one-third of initial exports to the EU. The EBA group, however, loses out under both scenarios as it cannot benefit fro any further trade liberalization. Overall, these results indicate that loss of preference margins would be felt by preferential partners but the composition of trade changes and the magnitude of trade loss will vary between partners and products and the specifics of the preferential regime.

There are a number of caveats to bear in mind in interpreting the results. First, the trade results reflect a simplistic scenario--that of a unilateral trade opening by the EU, an unlikely outcome without reciprocal cuts by industrial and developing countries, including preference beneficiaries. Allowing for these would provide a fuller assessment of trade and welfare impact of existing preferences. Another issue is that the scenarios examined only changes in relative tariffs and did not directly address the quantitative limits to preferences, including under tariff rate quotas. This affects a number of key agricultural commodities and most preferential regions (except LDCs). These issues are currently under examination in the present study.

6. **References**

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Table 1. Agriculutral exports (value and shares) to the European Union by partner (2001).

		IMPORTS TO THE EUROPEAN UNION FROM ($US MILLION):											
		WORLD	PREFERENTIAL PARTNERS							MFN PARTNERS			
		Extra-EU	ACP	GSP	EBA	TUR	SOMED	ZAF	PREF TOT	PREF SHR	AUS/NZL	MERCS	USA	CHN
HS	**Products**													
2	Meat and edible meat offal	4413.9	128.0	271.0	4.9	1.8	4.8	31.0	441.5	**10.0**	816.6	987.5	38.4	54.7
4	Dairy prod; birds' eggs; natural ho	2580.8	6.8	54.1	1.1	4.6	0.2	0.1	66.9	**2.6**	399.3	57.5	24.7	36.2
6	Live tree & other plant; bulb, root	1305.1	67.6	477.0	234.7	12.9	9.4	26.9	828.6	**63.5**	12.9	12.8	85.7	21.7
7	Edible vegetables and certain roots	3386.7	30.7	523.3	190.4	114.4	326.5	13.6	1198.9	**35.4**	58.0	87.8	151.4	219.1
8	Edible fruit and nuts; peel of citr	8401.6	242.4	2145.6	530.9	856.2	303.0	782.6	4860.6	**57.9**	288.6	718.3	807.2	56.8
9	Coffee, tea, matn and spices.	3921.7	109.9	1526.6	651.7	19.2	10.5	79.5	2397.4	**61.1**	1.2	843.0	23.2	79.1
10	Cereals	1860.5	57.4	336.7	0.5	39.4	5.4	1.3	440.6	**23.7**	65.8	261.6	448.3	7.0
15	Animal/veg fats & oils & their clea	2505.6	113.1	1119.9	81.0	77.7	137.6	3.7	1532.9	**61.2**	12.9	91.7	170.3	17.3
17	Sugars and sugar confectionery.	1822.3	713.4	71.1	75.0	20.0	28.3	6.7	914.5	**50.2**	1.2	27.5	41.8	20.0
20	Prep of vegetable, fruit, nuts or o	3493.9	62.3	623.8	65.3	371.6	80.5	74.8	1278.2	**36.6**	27.9	582.4	194.1	283.5
22	Beverages, spirits and vinegar.	3851.6	225.1	111.4	4.4	24.5	19.5	271.8	656.8	**17.1**	699.8	83.1	698.1	21.6
24	Tobacco and manufactured tobacco su	2566.4	352.3	159.1	189.7	115.2	0.2	2.8	819.4	**31.9**	0.3	374.9	767.5	16.1
52	Cotton.	4070.9	68.9	834.3	301.9	501.3	248.4	9.2	1964.0	**48.2**	77.7	84.4	103.7	150.6
	Total Agriculture/Food ($US Mi)	76244.7	3105.4	11813.3	5129.0	2377.0	1917.6	1551.6			2814.7	10971.0	7342.2	2091.8
	Share of Total Imports to EU (%)		**4.1**	**15.5**	**6.7**	**3.1**	**2.5**	**2.0**			**3.7**	**14.4**	**9.6**	**2.7**

		SHARE OF TOTAL EXPORTS SHIPPED TO EU:									
		PREFERENTIAL PARTNERS						MFN PARTNERS			
		ACP	GSP	EBA	TUR	SOMED	ZAF	AUS	MERCS	USA	CHN
HS	**Products**										
2	Meat and edible meat offal	48.9	25.0	15.2	4.1	69.6	44.8	29.6	34.3	1.0	7.8
4	Dairy prod; birds' eggs; natural ho	0.5	7.9	1.9	12.0	4.3	0.5	4.9	10.4	3.3	18.1
6	Live tree & other plant; bulb, root	88.4	20.7	87.4	78.3	57.0	64.8	22.7	71.2	25.4	24.3
7	Edible vegetables and certain roots	63.6	16.6	68.8	26.9	88.3	31.6	10.0	26.4	7.8	11.2
8	Edible fruit and nuts; peel of citr	55.6	25.7	17.6	58.4	73.7	55.3	16.9	46.1	20.0	8.9
9	Coffee, tea, matn and spices.	30.2	31.2	28.8	36.8	78.1	48.3	7.7	49.2	7.3	8.3
10	Cereals	30.7	7.2	2.0	19.5	0.0	0.7	0.2	7.0	3.7	0.4
15	Animal/veg fats & oils & their clea	55.7	14.6	62.2	41.9	80.9	13.1	4.7	5.0	10.0	12.4
17	Sugars and sugar confectionery.	74.6	1.5	31.1	6.8	19.3	1.2	0.5	0.8	6.3	6.9
20	Prep of vegetable, fruit, nuts or o	60.0	25.5	78.2	65.3	5.2	35.3	11.2	31.2	11.0	20.5
22	Beverages, spirits and vinegar.	22.9	16.6	5.7	50.2	49.7	50.8	47.1	20.6	31.7	3.2
24	Tobacco and manufactured tobacco su	17.5	19.9	30.8	21.0	12.3	6.4	1.0	28.8	16.9	6.7
52	Cotton.	10.3	10.5	21.1	54.3	50.9	18.1	6.4	20.6	2.2	2.7

Source: COMTRAD Database

Table 2. Tariffs facing exports to the European Union by sector and partner (% ad valorem).

	ACP	EBA	GSP	SoMED	ZAF	MERCS	USA	AUS	CHN
Rice	25.3	19.5	91.9	69.1	44.3	70.7	83.6	58.5	141.0
Wheat	0.0	0.2	0.4	0.5	0.0	1.6	1.2	2.7	0.0
Grains	16.1	1.1	9.0	0.9	7.7	27.1	7.1	17.8	19.0
FruitVeg	20.7	12.0	33.8	10.7	11.0	13.7	4.5	5.1	42.0
OthCrops	0.9	0.7	1.6	1.7	1.5	5.2	11.4	3.1	3.8
LiveAnimals	0.5	0.2	0.3	0.6	0.7	4.9	0.8	3.7	0.1
AnimalProd	0.6	0.1	1.7	0.1	0.0	2.0	2.2	0.2	3.0
BovineMeats	76.9	3.4	47.5	139.1	72.7	87.3	20.3	12.8	8.8
WhiteMeats	7.6	6.7	22.6	6.1	1.8	28.7	26.9	8.1	10.7
VegOils	0.2	0.0	5.1	73.5	1.7	1.0	6.5	6.4	1.3
Dairy	10.7	9.1	24.8	15.3	38.0	32.5	31.6	36.0	4.1
Sugar	146.7	75.8	81.0	7.9	39.3	134.5	23.4	53.4	140.9
Bev_Tobac	4.0	1.4	11.2	11.7	7.6	8.1	11.2	5.9	7.4
OtherFood	2.5	0.2	8.9	1.6	12.4	12.1	15.5	14.5	10.3
Textiles	0.4	0.9	6.6	0.2	2.0	5.7	6.5	4.6	8.6
Apparels	0.4	1.3	9.2	0.1	3.7	4.1	10.2	7.2	10.8

Source: GTAP database version 6.5

Table 3. Model Aggregation.

SECTORS

1	Wheat	Wheat
2	Grains	Cereal grains nec
3	FruitVeg	Vegetables, fruit, nuts
4	OilSeeds	Oil seeds
5	OthCrops	Sugar cane, sugar beet, Crops nec
6	Cotton	Plant-based fibers
7	LiveAnimals	Cattle,sheep,goats,horses
8	AnimalProd	Animal products nec, Raw milk, Wool, silk-worm cocoons
9	ExtractMnrls	Forestry, Fishing, Minerals nec
10	Energy	Coal, oil, gas
11	BovineMeats	Meat: cattle,sheep,goats,horse
12	WhiteMeats	Meat products nec
13	VegOils	Vegetable oils and fats
14	Dairy	Dairy products
15	Rice	Paddy rice, Processed rice
16	Sugar	Sugar
17	OtherFood	Food products nec
18	Bev_Tobac	Beverages and tobacco products
19	Textiles	Textiles
20	Apparels	Wearing apparel
21	OthMnfcs	Other manufacturing
22	Services	Service sectors

REGIONS

1	ACP	Botswana, Zimbabwe, Rest of South African CU, Rest of the Caribbean, Rest of FTAA, Rest of South America, Rest of Oceania, Rest of SADC
2	ASIA4	Hong Kong, Korea, Taiwan, Singapore
3	AUS	Australia
4	CAN	Canada
5	CHL	Chile
6	CHN	China
7	EBA	Bangladesh, Malawi, Mozambique, Tanzania, Zambia, Madagascar, Uganda, Rest of Sub-Saharan
8	EFTA	Switzerland, Rest of EFTA
9	REUR	Ex-Yugoslavia, Bulgaria, Romania, rest of Europe
10	EU25	25 Member European Union
11	GSP	Indonesia, Malaysia, Philippines, Thailand, Vietnam, Colombia, Peru, Venezuela, Rest of Andean Pact, Central America, Russian Federation, Rest of Former Soviet Union, Rest of Middle East
12	IND	India
13	JPN	Japan
14	MERC	Argentina, Brazil, Uruguay
15	MEX	Mexico
16	NZL	New Zealand
17	SAFR	South Africa
18	SMED	Morocco, Tunisia, Rest of North Africa
19	TURK	Turkey
20	USA	United States
21	ROW	Albania, Bulgaria, Romania, Sri Lanka, Rest of East Asia, Rest of South Asia, Rest of North America

Table 4. Changes in trade balance ($US millions).

	Experiment 1- 50% cuts in MFN tariffs; proportional (or no) cuts in preferential tariffs										
	ACP	**EBA**	**GSP**	**So_MED**	**TURK**	**S_AFR**	**MERCS**	**USA**	**AUS**	**NZL**	**CHN**
Rice	-25.4	11.9	-58.3	-3.9	-0.4	0.3	-2.9	104.9	8.4	0.0	241.8
Wheat	4.7	5.4	38.6	32.8	5.2	2.3	-119.2	-32.1	-7.2	-0.5	-6.8
Grains	2.4	0.9	2.9	6.9	0.2	2.0	21.6	39.4	3.0	-0.2	6.4
FruitVeg	-4.4	-16.3	-16.2	-9.7	-14.7	-20.8	58.8	6.3	0.0	31.7	203.1
OthCrops	-4.2	-27.6	4.2	3.6	19.2	-1.7	-210.0	185.5	-2.1	-3.8	-32.9
LiveAnimals	-0.3	0.1	-9.5	1.4	0.4	0.1	-6.4	-26.2	-6.3	-0.6	-0.6
AnimalProd	1.5	3.0	2.9	2.6	4.5	-0.3	-44.0	38.8	-1.9	-52.6	-61.5
BovineMeats	-20.7	1.1	18.3	5.9	-0.5	-1.5	2699.3	82.7	25.1	-227.1	-2.7
WhiteMeats	4.6	1.4	36.7	2.2	4.4	-1.1	314.1	255.6	9.7	5.1	-48.2
VegOils	3.7	12.7	75.0	6.2	7.2	3.7	-154.7	-0.9	-0.2	-0.4	-14.8
Dairy	2.6	1.9	17.9	7.6	1.0	0.8	-29.3	71.3	148.2	583.6	-3.3
Sugar	-14.5	-55.8	21.7	4.1	0.0	4.9	30.3	11.8	3.8	2.9	-0.2
Bev_Tobac	-3.3	4.6	-1.7	2.1	0.6	-4.1	-1.9	86.2	31.5	1.0	1.9
OtherFood	-14.1	-32.5	-16.6	-0.1	-6.5	-3.3	675.5	446.0	23.1	-0.6	-3.9
TOTAL AG/FOOD	**-67.2**	**-89.1**	**115.8**	**61.9**	**20.8**	**-18.7**	**3231.0**	**1269.5**	**235.2**	**338.5**	**278.3**
	Experiment 2 - 50% cuts in MFN and preferential rates										
	ACP	**EBA**	**GSP**	**So_MED**	**TURK**	**S_AFR**	**MERCS**	**USA**	**AUS**	**NZL**	**CHN**
Rice	-26.8	38.4	115.5	9.0	0.7	0.4	-1.5	75.9	7.3	0.0	174.5
Wheat	-38.7	10.8	-65.1	-13.7	8.4	-0.1	-96.0	1.1	6.1	-0.3	-4.6
Grains	-5.4	2.2	-17.6	-3.2	-1.3	1.9	35.2	63.5	4.1	-0.2	9.2
FruitVeg	29.4	-70.3	1012.1	55.0	-29.4	55.0	16.3	-30.3	2.1	12.0	187.2
OthCrops	-131.7	50.7	-219.8	-7.3	29.7	-6.6	-174.1	196.4	0.8	-2.8	-23.0
LiveAnimals	-4.0	1.2	-34.5	-10.9	0.5	0.1	-6.0	-31.1	6.9	-0.2	-0.6
AnimalProd	-13.8	5.6	-33.0	-3.7	-3.2	-4.7	-41.6	40.1	-11.8	-48.9	-56.1
BovineMeats	334.2	3.6	43.0	125.0	9.0	28.0	2496.5	77.5	19.4	-238.6	-2.4
WhiteMeats	-24.3	4.6	622.9	2.1	48.8	-3.3	295.6	254.9	6.8	-0.4	-40.3
VegOils	-31.0	9.6	3.0	454.0	251.0	2.1	-129.9	-7.0	-0.3	-0.6	-10.7
Dairy	-7.4	4.1	43.2	2.1	64.8	3.5	-26.5	62.6	139.3	573.9	-3.7
Sugar	1269.8	-546.1	40.9	-15.2	20.7	3.3	-2.7	-2.3	10.3	0.1	-1.2
Bev_Tobac	1.7	9.7	0.7	4.8	6.2	17.7	-2.0	75.9	23.5	0.4	0.1
OtherFood	-65.8	-38.7	164.0	-16.9	21.6	37.6	593.7	450.6	25.9	1.6	4.5
TOTAL AG/FOOD	**1286.2**	**-514.6**	**1675.5**	**581.2**	**427.5**	**134.9**	**2957.1**	**1227.8**	**240.4**	**296.1**	**232.8**

Source: Authors' model simulations