Comments Welcome

A New Compensation Mechanism for Preference Erosion in the Doha Round

By

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Abstract. The Doha Round is intended to advance the interests of developing countries but it has run into problems because additional liberalization in sectors of interest to some developing countries could erode the preferences of others. None of the current proposals to deal with the issue, either through delaying liberalization or providing compensation have found widespread support. In this paper we explore a proposal to backload the phase-in of MFN tariff reductions in sensitive sectors and use the revenues generated to provide compensation for preference erosion. We argue that the approach would be both equitable and effective.

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A New Compensation Mechanism for Preference Erosion in the Doha Round

The concerns about preference erosion in the Doha Round bring to the fore the problem that two of the fundamental operating principles of the WTO are potentially contradictory. On the one hand, the first Article of the GATT enshrines equal treatment for all members with the obligation of Most Favored Nation (MFN); on the other hand, members have been encouraged to provide special and differential (S&D) treatment for developing countries by granting preferences through the GSP and other comparable programs.[2] The result is that exports from many developing countries now enter developed country markets at zero or reduced rates and these preferences now present obstacles when further MFN liberalization is contemplated.

In the Doha Round, the negotiations seek to reduce or eliminate MFN tariffs and non-tariff barriers. Additional goals are even deeper cuts on tariff peaks and ensuring that the product coverage is "comprehensive and without a priori exclusions." But these goals create problems for developing countries

[2] In 1971, GATT members were given a waiver authorizing voluntary, unilaterally granted, non-reciprocal tariff preferences under the Generalized System of Preferences (GSP). In the Tokyo Round (1973-79) these waivers were made permanent by the adoption of the Enabling Clause. See Santos dos, N.B., Farias, R. and Cunha, R.(2005).

with preferential access since their most valuable preferences are precisely in sectors where the MFN tariffs are high.

The dilemma presented by preferences for both the agricultural and non-agricultural market access (NAMA) negotiations has been officially recognized but not resolved. In the Agriculture Negotiating Group there have been proposals to delay implementation of certain market access provisions. In the NAMA deliberations, a variety of responses have been debated, but the issue remains unresolved. For example, Article 20 of the 2005 Hong Kong Ministerial Declaration, states

"…. we recognize the challenges that may be faced by non-reciprocal preference beneficiary Members as a consequence of the MFN liberalization that will result from these negotiations. We instruct the Negotiating Group to intensify work on the assessment of the scope of the problem with a view to finding possible solutions." [3]

And in more recent statements, the NAMA chairman states that "progress has been slow" [4] or "there is no consensus on possible solutions"[5].

As we write this paper in the summer of 2006, the Doha negotiations have been suspended because of other difficulties. Nonetheless, the question of how to deal with preference erosion could well stand in the way of the successful completion of the Round at some time in the future. The Round is

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[3] WT/MIN(05)/DEC 22 December 2005 DOHA WORK PROGRAMME Ministerial Declaration Adopted on 18 December 2005.

[4] The Negotiating Group on Market Access Progress Report by the Chairman, Ambassador Don Stephenson, to the Trade Negotiations Committee states: "… on issues such as treatment of paragraph 6 Members, small and vulnerable economies, non-reciprocal preferences, and newly acceded Members progress remains slow." WTO TN/MA/18/Rev.1 28 April 2006

[5] See also the Chairman's remarks with regard to non-reciprocal preferences on page 20 of the document "Towards NAMA modalities" JOB(06)/200, of 22 June 2006.

supposed to be particularly focused on the needs of the developing countries, indeed it has been dubbed the Doha Development Agenda, and this makes preference erosion particularly problematic since it exposes differences in the interests of developing countries. These concerns also allow those developed countries seeking to resist an agreement to present their opposition in a more favorable light by justifying it on the grounds that they do not wish to harm such countries. [6]

How big a problem is preference erosion? The answer has both economic and political dimensions. The economic studies generally conclude that in the aggregate the costs are likely to be modest, but that for some countries costs could be significant. [7] In estimates using a partial equilibrium framework, Limão and Olarreaga (2005) find the largest absolute potential losses for LDCs from a Doha Agreement that reduced MFN tariffs by 33% would be sustained by Bangladesh ($202 million), Malawi ($151 million) and Madagascar ($63 million). As a share of GDP the largest losses are Malawi (8.6%), Lesotho (2.7%) and Sao Tome and Prince (1.6%). For 26 of the 48 countries though, losses are less than 0.1% of GDP. To be sure, there will be losses to all countries that

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[6] Limao and Ollareaga (2005) page 2 note for example that in 2000 the European Commission resisted a reduction in Sugar price supports on the grounds that it would hurt developing countries exporting sugar to the EU under preferential arrangements.

[7] Similarly, Hoekman and Prowse (2005) for example, find significant impacts of preference erosion on small island economies and least developed countries dependent on sugar, bananas, and garments—Cape Verde, Haiti, Mauritania, Sao Tome and Principe. The effects are adverse as well for six middle income countries, Belize, Fiji, Mauritius, Guyana. St Kitts and Nevis, and St Lucia.

The average preference margin for LDCs in the Quad was estimated by the IMF to be 10.9%. But this number hides large disparities: only 10 out of the 47 countries enjoy an average preference margin greater than 10%. As for middle-income countries, the IMF (2004, p.24) estimated the average preference margin to be 4.9%, or 15.6% for the largest beneficiaries. Out of 76 middle-income developing countries, only 18 had preference margins above 5%. Grynberg and Silva (2004) obtain larger estimates of $1.72 billion but the bulk of these reflect losses due to the end of the Agreement on Textiles in 2005 and not the current Round.

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currently benefit from preferences, but for many these are small and would be offset by the benefits of additional liberalization in a successful Round. But this might not be true for all.

This means that the losses are politically problematic in the context of the WTO negotiations. The WTO operates by consensus. To be adopted, therefore, each agreement should be a Pareto improvement i.e. it should provide benefits, while at the same time, making no member worse off. If a group of countries is hurt by an agreement, obtaining their assent might not be easy.

Preferences such as GSP are extended unilaterally. They are allowed but not required by WTO rules. It might be possible, therefore, to pressure recalcitrant countries to go along by threatening them with additional losses of preferences or cuts in other forms of aid. But this would not be wise. There is a widespread view, particularly among the least developed countries that they were hurt by the previous Uruguay Round. The perception that the Doha Round has also failed in this respect could deal a major blow to the trading system's legitimacy.

Options

What should be done to respond to these concerns? One approach that has been considered is to avoid liberalization in sectors with significant preferences. This would take care of the concerns about losses, but it would also seriously undermine the goal of the Round to apply the deepest cuts to the highest tariffs and those of particular interest to developing country exporters. [8] It turns out that preference erosion is particularly important in sugar, bananas, and textiles and apparel and neglecting liberalization in such

[8] Both Bhagwati (2004) and Stiglitz and Charlton (2005) are vocal in opposing such delays.

sectors could be a very serious omission.[9] A variant of this approach, which has been seriously contemplated in the Agriculture Committee, is to delay implementation of liberalization in these sectors.[10] But by themselves such delays simply postpone the problem, rather than taking care of it.

Ideally, all parties should receive offsetting benefits from the Round, but if they cannot, the classic way to obtain consensus when some may lose from an agreement is through side payments. A second response, therefore, is to provide financial compensation. If the winners compensate the losers, universal support can be achieved. But how should such compensation be provided?

Hoekman and Prowse (2005) emphasize that the preferences have been granted bilaterally and argue that "compensation for losses should take place *outside* the WTO so as to make the trading system less distorted". Limão and Olarreaga (2005) also propose a bilateral solution in which developed countries granting preferences convert the preferences into import subsidies with equivalent values. With these in place, preference erosion would indeed no longer be a concern.

A fully decentralized approach might not, however, create binding WTO obligations and is likely to be seen as ignoring a problem that – for better or worse – *has*

[9] See for example Alexandraki and Lankes (2004)
[10] A chairman's summary of the discussions on liberalization modalities for agriculture in March 2003, for example suggested that "In implementing their tariff reduction commitments, participants undertake to maintain, to the maximum extent technically feasible, the nominal margins of tariff preferences and other terms and conditions of preferential arrangements they accord to their developing trading partners…tariff reductions affecting long-standing preferences in respect of products which are of vital export importance for developing country beneficiaries. *Such schemes may be implemented in equal annual installments over a period of [eight] instead of [five] years by the preference-granting participants concerned,* (italics added) with the first installment being deferred to the beginning of the [third] year of the implementation period that would otherwise be applicable See Paragraph 16 of the "First Draft Modalities for further Commitments", under the Special Session of the Agriculture Committee, WTO (TN/AG/A/1/Rev.1), of 18 March 2003.

been recognized multilaterally under the umbrella of Part IV of the GATT. A more centralized compensation plan that was binding on developed countries could be part of the Doha Agreement. However, there is considerable debate as to the form this should take. [11]One approach is to include provisions to provide such compensation as a component of the more general multilateral programs for "aid for trade" that are currently being discussed. Developing countries are however concerned that additional money might not actually be provided for this purpose and compensation funds would be diverted from other uses. To take care of this concern, therefore, a *special* fund could be established by the Round. Page (2005) has proposed a compensation fund that would be administered by developing agencies but allocated specifically to cover losses from non-reciprocal preferences. The proposal seeks a special fund of approximately US$ 500 million per annum for about ten years, mimicking the adjustment period for the Multi-Fiber Agreement. A concern about such a stand-alone fund voiced by the multilateral development agencies[12] is that it would be dissociated from existing mechanisms of developmental assistance in multilateral organizations or new processes such as the Integrated Framework. [13] This is a valid issue, but the more "oversight" and the less

[11] In 2003, for example, the IMF (2003) issued a communication arguing that given the limited number of countries seriously affected a new facility "would seem unnecessary and inefficient" and favored financing through "existing medium-term adjustment and program facilities".

[12] The Bretton Woods institutions originally stood on different sides on the issue of compensation for preference erosion. While the IMF ended up creating a formal mechanism for compensation of balance of payment losses related to trade adjustments, the Trade Integration Mechanism (TIM) in March 2004, the World Bank resisted offering compensation dissociated from an overall development framework (Page et al, 2005). More recently, both institutions have harmonized their positions under the Aid for Trade umbrella. The staffs of the Bank and the Fund have strongly discouraged the establishment of a new fund to deal with the issue of preference erosion or any other adjustment costs isolated from the overall perspective of poverty assessments and developmental policies in each country.

[13] The Integrated Framework was first mandated at the WTO Singapore Ministerial Conference, in 1996, to help LDCs integrate in the world trade system. In force since October 1997, it is a multi-agency initiative (IMF, ITC, UNCTAD, UNDP, World Bank and the WTO) that has the objective of mainstreaming trade into the national development plans such as the PRSPs of least-developed countries; and (ii) to assist in the coordinated delivery of trade-related technical assistance in response to needs identified by the LDC. A

automatically the funds are disbursed, the less effective this approach will be as a compensation mechanism.

Nonetheless, such concerns are beside the point unless the most important question is answered, which is where will the money for compensation come from? There are reasons why countries have provided assistance through the opaque channel of trade preferences rather than explicit and more transparent import subsidies. Despite their conceptual equivalence, it is easier politically to forego money that would otherwise be raised through tariffs by providing preferences than it is to actually raise money through taxes and then dispense it as foreign assistance. Since developed countries will be richer if the round is successful, they should be willing to compensate the losers to facilitate agreement, but it has proven much easier to provide compensation through trade concessions than to obtain monetary payments. In general, the currency of the WTO is trade concessions and there is strong resistance to introducing monetary payments into the system.

In sum, there seem to be two approaches to dealing with preference erosion. The first involves limits on (or delays in) trade liberalization and is generally referred to as a "trade solution". The second involves financial compensation. Both are controversial. [14]

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central piece of the IF strategy are the DTIS (Diagnostic Trade Integration Study), which have been completed in 21 countries. Overall funding has been modest, and as of April 2005 the IF Trust Fund had total pledges of US$ 30.2 million. See www.integratedframework.org.

[14] It is no surprise that according to the report of the Chairman of the Negotiating Group on Market access in late April 2006, "Positions continue to be extremely polarized on the issue of non-reciprocal preferences. While more work has been done in respect of assessing the scope of the problem, and there is a recognition that both the number of Members and number of products affected are limited, in the view of some Members' further assessment of the scope of the problem has to be undertaken on a line-by-line, and country-by-country basis. Others feel that the scope of the problem has been assessed and there now needs to be trade solutions to address the identified problems. Such a trade solution could take the shape of a correction coefficient or longer implementation periods for affected products. However, another view has

The trade approaches are contentious because they pit developing countries that are dependent on preferences against those that are not. The alternative of financial compensation, by contrast breaks down along North-South lines i.e between those who would provide money and those who would not.

Proposal for a Compensation Mechanism

In our view, there is a compromise approach that should be acceptable to all parties. It combines some delay with financial compensation. Developed Countries should be granted a temporary and limited waiver from meeting their liberalization obligations in particular product categories *on condition that the additional funds so raised are paid as compensation for preference erosion*. WTO members would all adopt the comprehensive tariff-cutting formulas such as the Swiss formula that has been agreed on in the NAMA negotiations and the additional market access provisions in the negotiations on Agriculture. As with all dutiable imports, in the agreed product categories, developed country members of the WTO would experience declines in the tariff revenue they receive according to the scheduled tariff reductions, but the reductions would actually be delayed for several years. The money generated by the difference between tariffs charged, and the reductions scheduled in the agreement would then be used for compensation.

The precise details of the program is a matter for negotiation -- the countries to be compensated, the particular sectors to be included, the length of the delays in reducing the MFN rates, and the mechanisms for distributing the funds would all have to be

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been expressed that only a solution such as Aid for Trade would be required and acceptable, and a solution which would not be detrimental to other developing Members" decided. As with other provisions of any WTO agreement, waivers would only be granted when the requisite consensus is achieved.

Interestingly, the proposal seems to be compatible with the state of the debate on non-reciprocal preferences as summarized by the Chairman of the NAMA group in his text of 22 June on modalities: *"All Members support targeted Aid-for-Trade to address the underlying challenges faced by preference receiving countries – the diversification of their exports and strengthening of their competitiveness. Many Members are at least open to a discussion of a. trade solution, in addition to Aid-for-Trade, but only in respect of longer implementation periods…".* Additionally, the recent recommendations of the task force on operationalizing Aid for Trade[15] include objectives that are compatible with the proposal, such as *"to help developing countries, particularly LDCs, to build supply-side capacity and trade-related infrastructure in order to facilitate their access to markets and to export more, and to help facilitate, implement, and adjust to trade reform and liberalization".*

Several features of this proposal merit attention. First, the proposal avoids making exceptions for liberalization commitments in sectors in which preference erosion is significant. All sectors would be subject to same Swiss formula in NAMA, for example, and in the final year of the implementation period, the liberalization would be complete and comprehensive. The only difference for vulnerable commodities is that the phase-in of the liberalization is back-loaded instead of being adopted incrementally as with other commitments.

[15] See report WT/AFT/1, of 27 July 2006, prepared by the Task Force on Aid for Trade created by the Hong Kong Ministerial Declaration.

A second feature is that the money raised to finance compensation does not come at the expense of developed country government revenues. The mechanism per se requires no additional taxes. Treasuries in the developed countries will experience a reduction in tariff revenues from any new agreement, but the mechanism will make no difference to the amount of the reduction.

Third, the proposal *builds in* compensation for the losers by the winners. The winners from trade liberalization – typically consumers in the developed countries and (mostly developing country) exporters subject to MFN tariffs in the rest of world -- pay *implicitly* through some delay in their benefits. But both these parties are no worse off than they are today with the current MFN rates. Moreover, there is evidence that the existence of preferences in particular sectors has led to less liberalization.[16] Thus to the degree that our compensation mechanism mitigates resistance by preference recipients, it will lead to *greater* liberalization than would other wise be possible. This means that these "winners" would actually be better off with the plan than without it. Competitive developing countries would of course prefer a solution in which the developed countries provide generous financial compensation and their trade benefits are immediate. But this might not be feasible and without any compensation, an agreement might be impossible.

The plan should also help increase support for a Doha agreement in developed countries once it is negotiated. In the developed countries, producers that compete with imports will benefit temporarily by being given more time to adjust in what the presence of tariffs peaks and valuable preferences suggests are quite sensitive sectors. Distributors of developing country products that capture some of the preference rents would likewise

[16] See Limao and Olarreaga (2005)

have some of their losses mitigated. Both groups will therefore have an incentive to lobby for the plan's implementation so that the waiver can be granted.

Most importantly, however, the adversely affected developing countries would benefit in two ways. The delayed implementation would give them more time to adjust and second, they would be compensated for their losses thereafter.

We would favor providing countries experiencing preference erosion with full discretion over their use of the funds. These countries could independently determine to what purpose the compensation should be used. Ideally the funds would be sufficient to allow countries to provide exporters with a subsidy equal to the erosion of the preference benefit in perpetuity but countries might prefer to use the resources to promote diversification or for other developmental purposes. The least developed countries are not subject to the prohibition on export subsidies in the Subsidies and Countervailing Measures Agreement (SCM), but if necessary, we would favor an exemption for other developing countries to use the funds as export subsidies, for a limited period. Finally, this would be a separate program from the more general Aid for Trade initiative to highlight the fact that the funds provided are clearly additional and for a different purpose. It would also have the benefit of not being embroiled in the issue of how to distinguish between assistance for trade capacity and support for a general economic development agenda on the other.[17]

[17] For a discussion see OECD (2006).

Show me the money.

However appealing this proposal might be in principle, a crucial question is whether it is practical. In particular, could sufficient funds be raised in relatively limited periods of time, so that delays in implementation could be short and the revenues adequate to compensate for performance erosion? The answer to this question is obviously dependent on (a) the value of the benefit erosion; (b) the particular beneficiaries/programs that are covered; (c) value of revenues raised currently through MFN and MFN-related tariffs and (d) the MFN liberalization that is contemplated.

We will report on exercises undertaken with a focus on the benefits enjoyed by the ACP countries (which include 41 out of the 50 least developed countries) through their preferences in the US and the European Union. In both cases, we will demonstrate that the funds that could be raised through fairly short delays in implementation are more than adequate to provide generous compensation for preference erosion. In particular, we estimate that a delay of four years by the EU in the implementation of a reduction in tariffs in preference-sensitive sectors could generate sufficient funds to compensate the least developed countries for about twenty-five years worth of preference erosion even where these are valued at the full margin over MFN. Compensation could also be generous, albeit incomplete, with delays of shorter periods and/or partial liberalization phase-ins. Similar delays in the case of the United States yield even greater amounts of money, indeed numbers that are multiples of the current aid programs the US has for the least developed countries and by itself sufficient to fund the program proposed by Page (2005).

We should emphasize that what follows are simply illustrative examples and in making the estimates we have had to make numerous simplifying assumptions. However, we have tried to be conservative, erring on the side of underestimating the proposal's viability. We should also make clear that these examples are not meant to prejudge the precise scheme that should be adopted. That is a matter for negotiation.

Preference valuation. There is no consensus in the literature on the value of preferences and the costs associated with erosion in the face of reductions in MFN rates. The most widely used definition of preference margin is simply the difference between the MFN tariff applied to a certain product and the preferential tariff enjoyed by a particular country. But there are several reasons this will overstate the value of the preference to the recipient country. The first is that there are additional production costs associated with meeting rules of origin to obtain preferences and additional administrative costs in proving eligibility. [18] The second is that if conditions are not competitive, third parties may capture some of the rents implicit in the preferences. [19]A third issue relates to the role played by competitors whose exports are not subject to MFN tariffs. Conceptually, the value of the preference should equal the difference between the domestic and world price. If other countries have access to the domestic market of the preference granting member at less than MFN rates, the difference between domestic and world price could be less than the preference margin. Indeed, if a tariff line is served only by preferential imports, say, garments from Mexico and CBI, the US price for those

[18] François, Hoekman and Manchin (2005) quantify the value of the administrative burden at 4% on average. They use a threshold technique applied to a gravity model for ACP countries under the EU Cotonou agreement. The results have serious implications when one realizes that 21 out of the 47 LDCs surveyed have average preference margins below 4%. See also Steverns and Kennan (2004)

[19] Ozden and Sharma (2004) find for example that African exporters of clothing to the United States under AGOA capture only a third of the available rent.

products will be determined by the highest import price resulting from the preferential schemes, and not by the MFN tariff. In this case, reducing the MFN tariff will leave the value of preferences unaffected. [20] Finally, if MFN tariffs are reduced, there are going to be general equilibrium effects that should be taken into account. For example, world market prices could be expected to rise when MFN tariffs are reduced, and this would provide countries with an offsetting benefit. For all these reasons, simply multiplying the preference margin by the value of imports -- the approach we will adopt -- will give an upper bound estimate of the value of preferences. The table below summarizes recent estimates of losses from preference erosion.

[20] To deal with this issue Low, Piermartini and Richtering (2005) develop a competition-adjusted preference margin which weighs the tariffs on competitors by their market shares. This can be justified under some models of competition but, if imported goods are all perfect substitutes, under competitive conditions as long as some products come in at MFN rates the domestic price will differ from the world price by the MFN rate.

Recent Estimates of losses from Preference Erosion*

Authors	Affected Countries	Granting Countries	Policy Change	PE or CGE	Assumptions	Estimated Losses (US$ million) Exports(X) or GDP	(%)	Additional Observations
IMF (2003) Subramanian	LDCs	Quad	40% cut in MFN tariffs	PE	Elasticity of export supply=1 and ROO no constraint	US$ 530 million (X) US$ 265 million(GDP)	1.7% of X	26 countries, losses < than 2% of exports; 15 countries, losses < than 5% of exports; losses > 5% of exports: Malawi(11.5%), Mauritania(8.8%), Haiti(6.4%), Cape Verde (6.3%), São Tomé e Príncipe (5.2%). Absolute losses greater for Bangladesh (US$ 222 m.), Cambodia (US$ 54m.), Malawi (US$49m), Mauritania (US$40m.) and Tanzania (US$ 29m.)
Alexandraki and Lankes (2004)	76 middle-income countries	Quad	40% cut in preference margin	PE	Aggregate preference margins calculated from product-specific margins, specific calculations for sugar and bananas. Three different elasticities for export supply (e=0, 1 and 1,5)	US$ 914 million (X) US$ 457 million (GDP)	Under e=0, losses <2% of X for 59 countries. Maximum loss=11.5% of exports (Mauritius)	Sugar and banana explain ¾ of preference margins for countries where preference margins >5%. With a 0 elasticity of export supply (e), greatest losers in % of exports are Mauritius (11.5%)), St.Lucia (9.8%), Belize(9.1%), St.Kitts and Nevis(8.9), Guyana(7.9%) With a 1.5 e, fall in export revenues to Mauritius reaches 23.7%. In terms of GDP losses, the greatest losers are Guyana (5.8%), Mauritius (4.4%) and Fiji(2.2%). On average, for all 76 countries, losses are between 0.5% and 1.2& of total exports, depending on e.
Lippoldt and Kowalski (2005,a)	Developing countries	Quad and Australia	50% cut in average protection	CGE	Measure of protection for each product and country is the difference between the trade-weighted *ad valorem* equivalent across all partners and the bilateral *ad valorem* equivalent. Three liberalization scenarios: Quad countries individually, as a group and all countries		GDP losses <0.41% in all scenarios	In individual liberalizations simulation, results are characterized by large negative correlation between preference-margin enjoyed ex ante. The majority of developing countries enjoy welfare gains in all three scenarios. Greatest losers from an individual EU liberalization are Rest of North America (0.35%), Mozambique and Bangladesh (0.21%), Zambia and Madagascar(0.14%), Morocco and Uganda (0.11%).For a US liberalization, greatest loser is the rest of Sub-Saharan Africa(RSSA) (0.02%). When Quad liberalizes as a group, Bangladesh, Madagascar and Malawi experience welfare gains. Losers are RSSA (0.01%), Tanzania(0.08%), Morocco(0.09%), Uganda(0.11%), Zambia(0.14%) and Mozambique(0.21%). In the overall liberalization, most of developing countries experience gains. Vietnam is the largest winner (2.6%). Some countries win, such as Morocco, Bangladesh and Zambia, but some countries still lose, like Tanzania and Uganda.
Lippoldt and Kowalski (2005,a)	Bangladesh, Madagascar, Morocco, Mozambique, Tanzania, Uganda and Zambia	Quad and Australia	50% cut in average protection	CGE	Same as above, countries selected for having welfare losses >0.05% in previous study		GDP per capita losses<0.3%	Negative welfare primarily driven by terms of trade losses from decline of export prices. Confirmed negative correlation between initial preference margin and overall welfare losses, with African countries particularly at risk. Index of Structural Adjustment measures

								percentage of productive resources relocation as a result of liberalization. Impact in countries < than 1.5% of GDP. But only for three out of the seven countries preference erosion is offset by welfare gains.
François, Hoekman and Manchin (2005)	Developing countries, focus on LDCs	OECD	Full MFN tariff liberalization	CGE	Two scenarios, liberalization for the EU and for all countries, adjustment for administrative cost > than a 4-4.5% preference margin			Heavy losses for SSA countries and Asian countries from EU liberalization will be offset by overall OECD MFN liberalization. Impact of preference erosion in countries like Bangladesh and Madagascar reduced by accounting for compliance costs, because assumption of full utilization of preferences overestimates costs. Conclusion that African LDCs as a group do not suffer large losses from preference erosion, but individual countries do. Study confirms large bilateral impact of preference erosion (EU).
Bouët, Fontagné and Jean (2005)	Developing countries	All countries	Liberalization in agriculture	CGE	Scenario 1 is a tiered tariff-cutting formula in agriculture and Scenario 2 allows 2% of tariff lines to be reduced by only 15%. Scenarios are repeated including and excluding preferences.		Scen. 1: GDP grows 0.14% and 0.18% (w or w/o pref.). Scen. 2: GDP grows 0.14% and 0.18%	Underutilization of preferences is not very large in agriculture. Preference erosion is a problem of limited magnitude, relevant for a few countries and products. But schemes such as the Cotonou for ACP countries and the US CBI for Caribbean countries are particularly important. Most affected products are sugar, bananas, textile, clothing and meat.
Limão and Olarreaga (2005)	Developing countries, focus on LDCs benefiting from GSP	EU, US and Japan	33% cut in MFN tariffs in 170 countries	PE	HT6 tariff lines with no substitution or income effects.	US$ 624 million (X)	GDP losses <0.1% for 26 LDCs	The main individual losses in exports accrue for Bangladesh (US$ 202 m.), Malawi(US$151 m.) and Madagascar(US$ 63m.). In percentage of GDP, most affected countries are Malawi(8.6%), Lesotho(2.7%) and São Tomé and Príncipe.(1.6%). The authors propose an import subsidy scheme to compensate countries losing from preference erosion, assuming it is a stumbling block. In this case, LDCs would have an overall gain of US$ 520 million. The subsidy would be bilateral and allow for liberalization to proceed. Cost of the subsidy in comparison to preferences arises because of MFN reduction.
Grynberg and Silva (2004)	Developing countries	Quad	Full preference erosion	PE	Includes losses due to ATC quotas	US$ 1.7 billion (X)		The value of preferences in agriculture – banana, sugar and beef – is US$ 536 m. And US$ 1.32 b. in textiles. Considering an adjustment period of 14 years and using a 3% annual discount rate, the NPV of losses to be financed is between US$ 6 and 13.8 billion.
UNCTAD (2005)	LDCs	EU, US and Japan	Full preference erosion (excl. sugar)	PE	No quantitative restrictions	US$ 52.6 million (X)		Study assumes the net result to be the difference between trade creation and trade diversion after elimination of preferences. This number is negative considering end of preferences in EU and Japan and positive in the US, where Asian LDCs are expected to gain and Lesotho and Madagascar to lose.

* Table partially based on Hoekman, Martin and Primo Braga (2006, p.338) and Phillips, Page and te Velde (2005, p.3).

Vulnerable products. In November 2005, building on previous proposals of the African Group and the ACP, Mauritius presented a communication to the NAMA negotiating group that sets a number of conditions aimed at limiting the number of products to which would be regarded as vulnerable to preference erosion.[21] These criteria narrowed the vulnerable products of interest for ACP countries in the EU and US market to 170 tariff lines at the 6-digit HS.

EU Example[22]. To facilitate computational tractability, we have selected the 28 most important of these products from the ACP list for our simulation. In 2004 the LDCs exported \$8.13 billion dollars worth of these products to the world of which \$3.73 billion were exported to the EU duty free. As Reported in Table 1 the MFN tariff rates on these products ranged from 24.25 percent on Tuna to 5.5 percent on methanol. Overall, weighted by the value of 2004 exports to the EU this works out to an average preference of 11.1 percent with the revenue that would have been raised by the EU had this value of exports been subject to MFN tariffs equal to 11.1 percent or 414 million dollars. This attribution is of course an overstatement since it assumes all exports from eligible countries actually qualify for duty-free treatment, i.e. meet the requisite rules of origin.

In our simulation we will assume that in the Doha Round it is agreed that NAMA tariff reduction for developed countries will be undertaken using a Swiss formula with

[21] To be considered as vulnerable: (i) the vulnerability index should at least be equal to 1; (ii) the margin of preference enjoyed by the country on its exports to the partner country, in this case the EU and the US, is at least equal to 5 %; (iii) the product exported to the partner country should represent at least 5% in the total country export, aggregated at the level of HS4; (iv) the country market share in the partner country should represent at least 2% of a given product for it to be taken into account; and (v) the export share of the country in the world market should be less than 2 %." See Communication from Mauritius on Behalf of the ACP Group (JOB(05)/301), of 18 November 2005.
[22] The datasource for the EU is ITC/WTO Trademap and MacMap, available at www.trademap.org .

maximum post liberalization rate (the A coefficient) of 10 percent. [23]We will assume, following the phase-in used in the Uruguay Round for most products, that the phase-in is undertaken in four equal installments, so that in the fifth year of implementation the new MFN-tariffs would be in place.

The Swiss - formula we use implies that once the new MFN tariffs on the products for the EU are phased in, they would average 4.9 percent. With import values at 2004 levels this would yield revenues of $184 million. Thus an upper bound estimate of the value of the erosion would be equal to $230.6 million in 2004. This is the full value of the tariff foregone assuming that all products from these countries are actually able to meet the rules of origin for the preferences, and assuming that otherwise these products would have to pay the MFN rate.

2004 revenues. Had the EU subjected all its non-LDC imports in these product categories to its MFN tariffs in 2004, it would have raised 3.5 billion dollars. However, the EU also granted other importers preferences so this overstates the potential revenue. Some imports entered under GSP [24] and some under other preferential trading agreements. In many cases, the EU ties its GSP preferences to MFN rates and some products from countries with Free Trade Agreements will enter the EU at MFN rates where they cannot meet qualifying rules of origin. Unfortunately, our data base does not provide us with a precise matching of revenues and particular imports. We assume therefore (a) all imports from beneficiaries of non-reciprocal preferences enter at the

[23] In the Swiss formula T1 = A* T0 / (A+ T0) where T1 is the final tariff, T0 the initial tariff and the parameter A is the maximum tariff after liberalization. In the example we use above A = 10 percent.

[24] Non-sensitive products enter duty free. Most sensitive products benefit from a tariff reduction –generally by 3.5 percentage points off MFN ad valorem duties. In the case of textiles rates are reduced by 20 percent and for specific duties a 30 percent reduction is the rule. For a more complete description see. Francois, Hoekman and Manchin (2005)

preferential rate; (b) all imports from countries that do not have preferential trading arrangements with the EU enter at MFN rates; (c) all imports from developing countries come in at GSP rates and (d) a third of other imports (i.e. from preferential trading partners other than beneficiaries of non-reciprocal preferences) enter at MFN rates. [25] As reported in Table 2, making these assumptions we estimate that in 2004, EU tariff revenues on these products amounted to \$1.821 billion dollars of which \$289.9 million came from countries paying the full MFN tariffs, \$914 million entered under GSP rates and another \$628.5 million from countries with PTAs.

Using 2004 import levels as the base year value and the assumption that the EU reduces its tariffs using a Swiss-formula with a parameter of 10 percent, these MFN-related tariff revenues would fall to \$848 million dollars when the program was fully phased in. Over a four-year phase in period with reductions in equal annual installments revenues would amount to \$4.927; by contrast maintaining MFN tariffs at their initial levels would raise (4 * 1.82) 7. 28 billion thereby generating \$2.356 billion for the compensation fund.

Adopting our plan would mean that there would be no erosion in preferences in the first four year of the program. In the fifth year, with liberalization fully implemented and the scheme no longer generating revenues, the erosion would be the full \$230.6 in 2004 dollars. Assuming a (real) interest rate of 4 percent, by that time, as reported in Table 3 the compensation fund would have accumulated \$2.45 billion. Again assuming an interest rate of 4 percent, this would be sufficient to provide compensation at the level of 230.6 million (2004) dollars for an additional 24 years beyond the four year

[25] It is fairly common that exports from countries with free trade agreements with the EU enter at MFN rates because exporters prefer to avoid the additional costs associated with meeting FTA rules of origin.

implementation period. To be sure, this might be deemed too generous and the period of delay could then be reduced. A two year delay followed by a return to the full phase in schedule could finance an additional five years worth of compensation for a total of seven years relief. This example suggests therefore that a very generous program is quite feasible.

United States

We again use the 170 tariff lines characterized as vulnerable products[26] by the ACP group to calculate the average annual total revenues raised by MFN tariffs over the period 2002 to 2005. It turns out that the US collects a disproportionately large amount of its trade duties from these products. US imports of these products from all sources totaled US$ 117 billion or just 8.2% of total US merchandise imports during the same period. But the US$ 9.8 billion in revenues from duties on these products in the list corresponded to about forty seven percent of all duties collected by the US. To make our exercise tractable we have selected the top 28 products from the list. These account for 72% of the total duties collected from the 170 lines and 31.2% all US collected duties between 2002 and 2005[27]. These numbers demonstrate that these products are important, not only because the LDCs are vulnerable to preference erosion, but also because these products constitute a disproportionately large share of the remaining barriers to the US market. This fact turns out to make our plan a substantial revenue raiser. China is by far

[26] See WTO, JOB(05)/301, of 18 November 2005.
[27] Source is the US International Trade Commission Interactive and Trade Dataweb, available at http://dataweb.usitc.gov.

the largest contributor to collected duties, followed by Hong Kong, Indonesia, India and Vietnam. [28]

In Tables 4a and 4b, we estimate the additional revenues that would be collected over a four year implementation period if the US MFN tariffs on these products were kept in place for four additional years instead of a (a) a 33 percent reduction in average ad valorem MFN tariffs phased in with equal installments and (b) a reduction using a Swiss Formula with the parameter equal to 10 percent also phased-in in equal installments. In estimating the MFN tariff revenues that would be collected we multiply the average annual import values between 2002 and 2005 by the MFN tariff rates that are given at the HT6 level. Given the growth in trade over the period this biases our estimates downwards. Nonetheless, the sums are considerable.

Our calculations indicate that delaying the introduction by four years and fully phasing the liberalization in the fifth year would raise an additional $3.6 billion dollars in the case of a one third reduction and an additional $5.8 billion in the case of the Swiss-Formula. At the start of the fifth year, when the plan would no longer operate, with a four percent interest rate, compensation funds of $3.8 billion and $6.0 billion would be generated with the 33 percent and Swiss-formula reductions respectively. Simply skipping the phase-in in just the first year, and then phasing in two installments in the second year would generate $357 and $580 million for the 33 percent and Swiss-formula reductions respectively. Skipping the phase-in for two years and introducing three installments in the third year would raise funds of $1.1 and $1.8 billion from each of these programs.

[28] 78.5% of the imports of such products enter the US without claiming any special program, i.e., paying at least MFN duties.

Moreover, we have reason to believe that these revenues are underestimated. First, the estimates used here are obtained by multiplying the dutiable values by the six digit MFN tariffs. But the US reports actual duties collected by HTs categories. These indicate that the annual average duty actually collected on imports of these products between 2002 and 2005 was $6.56 billion – about fifty percent larger than our estimates using the MFN rates at the 6 digit level. As shown in Table 5, taking a weighted average of the underestimates suggests that in the case of the 33 percent reduction, for example, the MFN revenues would be as $4.8 billion dollars rather than $3.6 billion we have obtained. With the interest rate at four percent, a five billion dollar fund could support annual payments of 500 million for 14 years for a total of almost twenty years of compensation. In addition, our sample included products accounting for only 28 products accounting for 72 percent of overall tariff revenues, thus revenues could be almost forty percent larger if the relationships of the omitted categories were proportional.

We have not tried to estimate the revenue foregone by unilateral preferences and the costs of preference erosion in the case of the US – this is not a simple task given the complexity of the US tariff schedule. However, Limão and Olarreaga (2005) use a partial equilibrium model to calculate the value of preference erosion for LDCs from a reduction in tariffs by a third at Doha. They estimate that the loss to LDCs from such reductions by the US would amount to $166 million. (They estimate similarly that losses from a one third reduction would be $441 million for the EU and $17 million for Japan). To fully compensate for such the present discounted value with a four percent discount rate the US would require 166 * 25 = 4.15 billion dollars an amount easily raised through our proposal. Interestingly, the plan proposed by Page required $500 million per year for ten years, and could be financed by our approach. In sum, in the case of the US the LDCs could be fully compensated for the present discounted value of their preference erosion using this proposal.

Conclusions

We have shown how the current deadlock over unilateral preferences in the Doha Round could be broken by a program that would combine delays in introducing MFN reductions with an allocation of the funds generated by these delays to countries hurt by preference erosion. The fact that MFN tariffs are relatively high in sectors of importance to developing countries has generated friction and deadlock among developing countries. On the one hand, highly competitive developing countries have the much to gain if these tariffs are reduced; on the other hand, some of the poorest and least developed countries have much to lose if their preferences are eroded. For our proposal to work though, the relatively high tariffs in vulnerable sectors are a virtue because it means that modest delay in implementation can generate sufficient funds to compensate those who lose from preference erosion.

The scope for additional compensation through further trade liberalization is limited to the degree that the least developed countries have already been given -- or are scheduled to receive -- full duty-free market access for everything but arms (EBA) as in the case of the EU. The scope in the case of the US, however, remains considerable and should be explored. [29] Moreover, there are other ways of compensating the losers more directly through the trade concessions that should also be explored. Exporters of

[29] The US has agreed at the Hong Kong Ministerial to increase to 97 percent the share of tariff lines available to LDC products duty free and quota free by 2008 or when a final Doha agreement is implemented. However, the initiative is a political commitment and not a binding obligation and of course a few tariff lines can account for a large share of trade. Inside US Trade, December 19, 2005 page 4.

textiles and apparel could be given more liberal rules of origin; [30] exporters of labor services could be given special S&D benefits under mode four in the GATS negoitations; and non-LDC exporters of agricultural products such as sugar and bananas could be given more generous tariff rate quotas. But once these channels are exhausted, we have shown here, there exists another mechanism should seriously be considered.

The empirical work in this paper has been limited, in part by data availability and we are well aware that more work needs to be done. We offer three areas in which this should occur. First, there should be explorations of the plan using better data and different groups of beneficiaries. Second, there should be more thought about how the funds should be used. And finally, consideration could be given as to the merits and dangers of the mechanism we have proposed here as a more general approach to generating aid for trade.

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[30] See Inama (2003).

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Tables

Table 1: Preference Erosion on ACP Exports to the EU (from indicative list of vulnerable products) US$ 1,000 and %

HS6 Code	HS6 Description	(1) 2004 World	(2) 2004 EU	(3) MFN*	(4) MFNred**	((3) - (4)) * (2) **Erosion**	Current Tariffs ACP	LDC	GSP
760110	Aluminium unwrought, not alloyed	2,075,438	1,111,521	6.00%	3.75%	**25,009**	0.00%	0.00%	0%
160414	Tunas, skipjack & Atl bonito,prepard/preservd,whole/in pieces,ex mincd	563,013	532,308	24.25%	7.08%	**91,397**	0.00%	0.00%	20.50%
610910	T-shirts, singlets and other vests, of cotton, knitted	833,342	383,952	12.00%	5.45%	**25,149**	0.00%	0.00%	9.60%
30613	Shrimps and prawns, frozen, in shell or not, including boiled in shell	421,842	301,295	13.20%	5.69%	**22,627**	0.00%	0.00%	4.20%
30420	Fish fillets frozen	354,306	293,723	9.87%	4.97%	**14,392**	0.00%	0.00%	0.00%
30269	Fish nes, fresh or chilled excl heading No 03.04, livers and roes	220,484	194,771	10.55%	4.97%	**10,868**	0.00%	0.00%	4.50%
30410	Fish fillets and other fish meat, minced or not, fresh or chilled***	175,521	127,021	13.58%	5.76%	**9,933**	0.00%	0.00%	0.00%
30749	Cuttle fish and squid,shelled or not frozen, dried, salted or in brine	148,057	122,753	6.83%	4.06%	**3,400**	0.00%	0.00%	2.10%
760120	Aluminium unwrought, alloyed	166,932	106,045	6.00%	3.75%	**2,386**	0.00%	0.00%	0.00%
30379	Fish nes, frozen, excluding heading No 03.04, livers and roes	200,244	101,826	11.82%	5.42%	**6,517**	0.00%	0.00%	4.50%
290511	Methanol (methyl alcohol)	812,164	97,493	5.50%	3.55%	**1,901**	0.00%	0.00%	2.00%
30759	Octopus, frozen, dried, salted or in brine	225,644	89,885	8.00%	4.44%	**3,200**	0.00%	0.00%	2.80%
620520	Mens/boys shirts, of cotton, not knitted	156,777	50,990	12.00%	5.45%	**3,340**	0.00%	0.00%	9.60%
620342	Mens/boys trousers and shorts, of cotton, not knitted	732,614	45,080	12.00%	5.45%	**2,953**	0.00%	0.00%	9.60%
30490	Fish meat nes, minced or not, frozen	50,758	36,106	9.05%	4.75%	**1,553**	0.00%	0.00%	11.50%
610990	T-shirts,singlets and other vests,of other textile materials,knitted	101,131	29,095	12.00%	5.45%	**1,906**	0.00%	0.00%	9.60%
441213	Plywood, outer ply of tropical hardwood, ply <6mm	19,174	15,606	9.00%	4.74%	**665**	0.00%	0.00%	6.50%
732690	Articles, iron or steel, nes	51,580	15,334	2.70%	2.13%	**87**	0.00%	0.00%	0.00%
621210	Brassieres and parts thereof, of textile materials	180,940	14,817	6.50%	3.94%	**379**	0.00%	0.00%	5.20%
620343	Mens/boys trousers and shorts, of synthetic fibres, not knitted	220,886	10,764	12.00%	5.45%	**705**	0.00%	0.00%	9.60%
640399	Footwear, outer soles of rubber/plastics uppers of leather, nes	57,253	9,907	7.30%	4.22%	**305**	0.00%	0.00%	4.50%
620462	Womens/girls trousers and shorts, of cotton, not knitted ***	273,106	9,081	12.00%	5.45%	**595**	0.00%	0.00%	9.60%
520812	Plain weave cotton fabric,>/=85%, >100 g/m2 to 200 g/m2, unbleached	12,277	8,095	8.00%	4.44%	**288**	0.00%	0.00%	6.40%
441214	Plywood, outer ply of non-conifer wood nes,ply <6mm	13,710	7,885	7.00%	4.12%	**227**	0.00%	0.00%	3.50%
620349	Mens/boys trousers and shorts, of other textile materials, not knitted	27,202	6,989	12.00%	5.45%	**458**	0.00%	0.00%	9.60%
640359	Footwear, outer soles and uppers of leather, nes	10,400	4,623	7.63%	4.33%	**153**	0.00%	0.00%	1.50%
620640	Womens/girls blouses and shirts, of man-made fibres, not knitted	10,020	1,728	12.00%	5.45%	**113**	0.00%	0.00%	9.60%
620469	Womens/girls trousers & shorts,of other textile materials,not knitted	17,010	1,435	12.00%	5.45%	**94**	0.00%	0.00%	9.60%
	Total	**8,131,825**	**3,730,128**			**230,601**			

* From MacMap, Ad valorem equivalent equivalent average MFN tariff
** From MacMap, tariff after swiss formula reducation (10%)
*** Not included in the temporary indicative list of vulnerable products

Table 2: Estimated EU Tariff Collections on Vulnerable Products 2004

HS6	MFN imports 2004	MFN Tariff	Est. revenue MFN (1)	Preferential Imports	Est. revenue Pref. (2)	GSP Tariff	GSP Imports	GSP Tariff/ MFN Tariff	Est. revenue GSP (3)	Total Rev. (1)+(2)+(3)
760110	212,093	6.00%	12,726	791,701	15,834	0.00%	1,310,998	0.00	0	**28,560**
160414	200,619	24.25%	48,650	341,999	27,645	20.50%	175,829	0.85	36,045	**112,340**
610910	178,530	12.00%	21,424	2,628,134	105,125	9.60%	1,649,563	0.80	158,358	**284,907**
30613	82,835	13.20%	10,934	512,123	22,533	4.20%	1,124,925	0.32	47,247	**80,714**
30420	366,224	9.87%	36,146	946,327	31,134	0.00%	733,570	0.00	0	**67,280**
30269	15,339	10.55%	1,618	448,222	15,762	4.50%	15,897	0.43	715	**18,096**
30410	6,369	13.58%	865	288,956	13,080	0.00%	73,638	0.00	0	**13,945**
30749	84,761	6.83%	5,789	237,871	5,416	2.10%	457,789	0.31	9,614	**20,818**
760120	348,955	6.00%	20,937	2,396,739	47,935	0.00%	147,673	0.00	0	**68,872**
30379	57,149	11.82%	6,755	23,025	907	4.50%	108,510	0.38	4,883	**12,545**
290511	341,865	5.50%	18,803	350,451	6,425	2.00%	0	0.36	0	**25,228**
30759	5,437	8.00%	435	233,832	6,236	2.80%	100,250	0.35	2,807	**9,477**
620520	220,245	12.00%	26,429	844,607	33,784	9.60%	659,909	0.80	63,351	**123,565**
620342	0	12.00%	0	2,207,957	88,318	9.60%	1,030,412	0.80	98,920	**187,238**
30490	65,354	9.05%	5,915	67,692	2,042	11.50%	44,722	1.27	5,143	**13,100**
610990	28,662	12.00%	3,439	714,025	28,561	9.60%	489,616	0.80	47,003	**79,004**
441213	1,094	9.00%	98	41,448	1,243	6.50%	265,505	0.72	17,258	**18,600**
732690	344,731	2.70%	9,308	166,544	1,499	0.00%	644,042	0.00	0	**10,807**
621210	0	6.50%	0	552,177	11,964	5.20%	915,172	0.80	47,589	**59,553**
620343	89,370	12.00%	10,724	376,069	15,043	9.60%	312,561	0.80	30,006	**55,773**
640399	0	7.30%	0	991,356	24,123	4.50%	3,200,388	0.62	144,017	**168,140**
620462	92,954	12.00%	11,154	2,017,980	80,719	9.60%	1,142,370	0.80	109,668	**201,541**
520812	110,423	8.00%	8,834	25,611	683	6.40%	223,384	0.80	14,297	**23,813**
441214	170,695	7.00%	11,949	20,684	483	3.50%	282,543	0.50	9,889	**22,320**
620349	0	12.00%	0	80,573	3,223	9.60%	111,064	0.80	10,662	**13,885**
640359	30,971	7.63%	2,363	133,257	3,389	1.50%	146,307	0.20	2,195	**7,947**
620640	20,574	12.00%	2,469	586,308	23,452	9.60%	225,399	0.80	21,638	**47,560**
620469	8,609	12.00%	1,033	299,107	11,964	9.60%	345,699	0.80	33,187	**46,184**
Total	**35,418,568**		**278,798**	**18,324,775**	**628,523**		**15,937,735**	**15.10**	**914,491**	**1,821,812**

Table 3: EU Tariff Revenues Raised with Swiss-Formula = 10 Phased in over five years

HS6	Product	Year 0	Year 1	Year 2	Year3	Year 4	Compensation Funds Raised	Fund Accumulation*
760110	Aluminium unwrought, not alloyed	28,559.60	25,882.14	23,204.68	20,527.21	17,849.75	26,774.63	27,867.20
160414	Tunas, skipjack & Atl bonito,prepard/preservd,whole/in pieces,ex mincd	112,339.97	92,454.64	72,569.31	52,683.97	32,798.64	198,853.33	206,967.82
610910	T-shirts, singlets and other vests, of cotton, knitted	284,907.01	246,029.07	207,151.14	168,273.20	129,395.27	388,779.35	404,644.04
30613	Shrimps and prawns, frozen, in shell or not, including boiled in shell	80,714.48	69,234.07	57,753.66	46,273.25	34,792.83	114,804.12	119,488.86
30420	Fish fillets frozen	67,280.47	58,930.05	50,579.64	42,229.23	33,878.82	83,504.13	86,911.63
30269	Fish nes, fresh or chilled excl heading No 03.04, livers and roes	18,096.10	15,703.30	13,310.50	10,917.70	8,524.89	23,928.02	24,904.44
30410	Fish fillets and other fish meat, minced or not, fresh or chilled	13,944.99	11,937.44	9,929.90	7,922.35	5,914.81	20,075.44	20,894.65
30749	Cuttle fish and squid,shelled or not frozen, dried, salted or in brine	20,818.28	18,707.49	16,596.71	14,485.92	12,375.14	21,107.84	21,969.18
760120	Aluminium unwrought, alloyed	68,872.08	62,415.32	55,958.57	49,501.81	43,045.05	64,567.58	67,202.35
30379	Fish nes, frozen, excluding heading No 03.04, livers and roes	12,545.15	10,846.99	9,148.83	7,450.67	5,752.51	16,981.59	17,674.54
290511	Methanol (methyl alcohol)	25,227.51	22,991.44	20,755.36	18,519.29	16,283.21	22,360.75	23,273.21
30759	Octopus, frozen, dried, salted or in brine	9,477.48	8,423.11	7,368.74	6,314.37	5,260.00	10,543.70	10,973.95
620520	Mens/boys shirts, of cotton, not knitted	123,564.94	106,703.48	89,842.01	72,980.55	56,119.08	168,614.66	175,495.22
620342	Mens/boys trousers and shorts, of cotton, not knitted	187,237.83	161,687.67	136,137.51	110,587.34	85,037.18	255,501.62	265,927.73
30490	Fish meat nes, minced or not, frozen	13,099.61	11,543.58	9,987.55	8,431.52	6,875.49	15,560.31	16,195.27
610990	T-shirts,singlets and other vests,of other textile materials,knitted	79,003.58	68,222.88	57,442.18	46,661.49	35,880.79	107,806.96	112,206.18
441213	Plywood, outer ply of tropical hardwood, ply <6mm	18,599.73	16,398.76	14,197.79	11,996.82	9,795.86	22,009.67	22,907.81
732690	Articles, iron or steel, nes	10,806.63	10,236.28	9,665.93	9,095.58	8,525.23	5,703.50	5,936.24
621210	Brassieres and parts thereof, of textile materials	59,552.78	53,689.12	47,825.46	41,961.80	36,098.15	58,636.58	61,029.33
620343	Mens/boys trousers and shorts, of synthetic fibres, not knitted	55,773.02	48,162.32	40,551.63	32,940.94	25,330.24	76,106.93	79,212.58
640399	Footwear, outer soles of rubber/plastics uppers of leather, nes	168,140.46	150,405.09	132,669.73	114,934.37	97,199.00	177,353.63	184,590.79
620462	Womens/girls trousers and shorts, of cotton, not knitted	201,541.20	174,039.22	146,537.25	119,035.27	91,533.30	275,019.76	286,242.33
520812	Plain weave cotton fabric,>/=85%, >100 g/m2 to 200 g/m2, unbleached	23,813.38	21,164.14	18,514.90	15,865.66	13,216.42	26,492.38	27,573.44
441214	Plywood, outer ply of non-conifer wood nes,ply <6mm	22,320.28	20,024.48	17,728.68	15,432.88	13,137.08	22,958.00	23,894.84
620349	Mens/boys trousers and shorts, of other textile materials, not knitted	13,885.06	11,990.33	10,095.60	8,200.87	6,306.13	18,947.33	19,720.50
640359	Footwear, outer soles and uppers of leather, nes	7,946.86	7,087.60	6,228.34	5,369.08	4,509.82	8,592.61	8,943.24
620640	Womens/girls blouses and shirts, of man-made fibres, not knitted	47,559.50	41,069.61	34,579.72	28,089.83	21,599.94	64,898.91	67,547.20
620469	Womens/girls trousers & shorts,of other textile materials,not knitted	46,184.46	39,882.21	33,579.95	27,277.70	20,975.44	63,022.55	65,594.27
		1,821,812.43	**1,585,861.84**	**1,349,911.25**	**1,113,960.67**	**878,010.08**	**2,359,505.88**	**2,455,788.82**

Note: * Fund Value in Year 5 4% interest rate

Table 4a: Estimated Revenues from US Imports of Vulnerable Products (33% reduction)

HS6	Product	Dutiable Value (av 2002-2005)	MFN Tariff	Estimated Duties	Duties on 33% Reduction over five years Year 1	Year2	Year3	Year4
611020	SWEATERS, PULLOVERS, SWEATSHIRTS, VESTS COTTON,	4,998,962,213	10.70%	534,888,957	489,898,297	444,907,637	404,915,939	359,925,279
611030	SWEATERS, PULLOVERS, SWEATSHIRTS, VESTS MANMADE FIBERS	2,546,258,778	15.30%	389,577,593	356,476,229	325,921,124	292,819,759	262,264,654
640399	FOOTWEAR, WITH OUTER SOLES OF RUBBER, PLASTICS OR COMPOSITION LEATHER	7,057,377,970	7.70%	543,418,104	501,073,836	451,672,190	409,327,922	366,983,654
620462	WOMEN'S OR GIRLS' TROUSERS,COTTON, NOT KNITTED OR CROCHETED	3,494,773,444	8.20%	286,571,422	262,108,008	237,644,594	216,675,954	192,212,539
620520	MEN'S OR BOYS' SHIRTS OF COTTON, NOT KNITTED OR CROCHETED	2,000,267,740	14.20%	284,038,019	260,034,806	238,031,861	214,028,648	190,025,435
620342	MEN'S OR BOYS' TROUSERS, COTTON, NOT KNITTED OR CROCHETED	2,161,051,357	8.90%	192,333,571	177,206,211	159,917,800	144,790,441	129,663,081
640299	FOOTWEAR, NOT COVERING THE ANKLE	2,661,384,123	1.40%	37,259,378	34,597,994	31,936,609	29,275,225	23,952,457
610510	MEN'S OR BOYS' SHIRTS OF COTTON, KNITTED OR CROCHETED	1,065,028,394	19.70%	209,810,594	192,770,139	174,664,657	157,624,202	140,583,748
620630	WOMEN'S OR GIRLS' BLOUSES, SHIRTS COTTON, NOT KNITTED OR CROCHETED	1,308,198,051	9.30%	121,662,419	111,196,834	102,039,448	91,573,864	81,108,279
620463	WOMEN'S OR GIRLS' TROUSERS, SYNTHETIC FIBERS, NOT KNITTED OR CROCHETED	778,611,375	11.80%	91,876,142	84,090,029	77,082,526	69,296,412	61,510,299
621210	BRASSIERES, WHETHER OR NOT KNITTED OR CROCHETED	969,396,716	10.30%	99,847,862	92,092,688	83,368,118	75,612,944	66,888,373
610910	T-SHIRTS, SINGLETS, TANK TOPS COTTON, KNITTED OR CROCHETED	938,953,484	16.50%	154,927,325	141,781,976	129,575,581	116,430,232	104,223,837
640391	FOOTWEAR, COVERING THE ANKLE	2,057,884,323	7.80%	160,514,977	148,167,671	133,762,481	121,415,175	107,009,985
420222	HANDBAGS, WITH OUTER SURFACE OF PLASTIC SHEETING OR OF TEXTILE MATERIALS	1,026,841,267	9.70%	99,603,603	91,388,873	83,174,143	74,959,412	66,744,682
620640	WOMEN'S OR GIRLS' BLOUSES, MANMADE FIBERS, NOT KNITTED OR CROCHETED	597,753,635	14.10%	84,283,262	77,110,219	70,534,929	63,361,885	56,188,842
640419	FOOTWEAR, WITH OUTER SOLES OF RUBBER OR PLASTICS AND UPPERS OF TEXTILE MATERIALS,	481,960,603	26.90%	129,647,402	119,044,269	108,441,136	97,356,042	86,752,909
620343	MEN'S OR BOYS' OF SYNTHETIC FIBERS, NOT KNITTED OR CROCHETED	620,270,157	12.70%	78,774,310	72,571,608	65,748,637	59,545,935	52,722,963
610610	WOMEN'S OR GIRLS' BLOUSES AND SHIRTS OF COTTON, KNITTED OR CROCHETED	578,267,957	19.70%	113,918,787	104,666,500	94,835,945	85,583,658	76,331,370
611120	BABIES' GARMENTS AND CLOTHING ACCESSORIES OF COTTON, KNITTED OR CROCHETED	1,123,767,949	14.00%	157,327,513	143,842,297	131,480,850	117,995,635	105,634,187
630260	TOILET AND KITCHEN LINEN OF COTTON TERRY TOWELING	942,935,079	9.10%	85,807,092	78,263,612	71,663,066	64,119,585	57,519,040
620530	MEN'S OR BOYS' SHIRTS OF MANMADE FIBERS, NOT KNITTED OR CROCHETED	439,119,123	19.70%	86,506,467	79,480,561	72,015,536	64,989,630	57,963,724
420212	TRUNKS, SUITCASES, WITH OUTER SURFACE OF PLASTICS OR OF TEXTILE MATERIALS	560,333,601	12.40%	69,481,366	63,878,031	58,274,695	52,111,025	46,507,689
610462	WOMEN'S OR GIRLS' TROUSERS, OF COTTON, KNITTED OR CROCHETED	616,834,137	12.60%	77,721,101	71,552,760	64,767,584	58,599,243	51,814,068
620433	WOMEN'S OR GIRLS' JACKETS SYNTHETIC FIBERS, NOT KNITTED OR CROCHETED	255,710,086	14.80%	37,845,093	34,776,572	31,708,051	28,383,820	25,315,299
610343	MEN'S OR BOYS' TROUSERS, OF SYNTHETIC FIBERS, KNITTED OR CROCHETED	296,448,417	19.40%	57,510,993	52,767,818	48,024,644	43,281,469	38,538,294
640359	FOOTWEAR, NOT COVERING THE ANKLE	807,068,965	6.50%	52,459,483	48,424,138	43,581,724	39,546,379	35,511,034
620452	WOMEN'S OR GIRLS' SKIRTS COTTON, NOT KNITTED OR CROCHETED	671,621,113	8.10%	54,401,310	49,699,962	45,670,236	40,968,888	36,267,540
420221	HANDBAGS, LEATHER, COMPOSITION LEATHER OR PATENT LEATHER	673,130,815	8.10%	54,523,596	49,811,680	45,772,895	41,060,980	36,349,064
	Total	**41,730,210,868**		**4,346,537,741**	**3,988,773,619**	**3,626,218,695**	**3,275,650,304**	**2,916,512,327**
				Plan Funds	**357,764,122**	**720,319,046**	**1,070,887,437**	**1,430,025,414**
				Plan Accumulation*		**1,092,393,733**	**2,206,976,919**	**3,725,281,410**

Table 4b: Estimated Revenues from US Imports of Vulnerable Products (Swiss Formula=10%)

HS6	Product	Dutiable Value (av 2002-2005)	MFN Tariff	Estimated Duties	Duties on Swiss Formula Reduction = 10% over five years Year1	Year2	Year3	Year4
611020	SWEATERS, PULLOVERS, SWEATSHIRTS, VESTS COTTON,	4,998,962,213	10.70%	534,888,957	465,766,833	396,644,710	327,522,586	258,400,462
611030	SWEATERS, PULLOVERS, SWEATSHIRTS, VESTS MANMADE FIBERS	2,546,258,778	15.30%	389,577,593	330,679,004	271,780,416	212,881,827	153,983,238
640399	FOOTWEAR, WITH OUTER SOLES OF RUBBER, PLASTICS OR COMPOSITION LEATHER	7,057,377,970	7.70%	543,418,104	484,317,547	425,216,991	366,116,434	307,015,878
620462	WOMEN'S OR GIRLS' TROUSERS,COTTON, NOT KNITTED OR CROCHETED	3,494,773,444	8.20%	286,571,422	254,292,773	222,014,124	189,735,475	157,456,825
620520	MEN'S OR BOYS' SHIRTS OF COTTON, NOT KNITTED OR CROCHETED	2,000,267,740	14.20%	284,038,019	242,371,285	200,704,551	159,037,816	117,371,082
620342	MEN'S OR BOYS' TROUSERS, COTTON, NOT KNITTED OR CROCHETED	2,161,051,357	8.90%	192,333,571	169,691,127	147,048,682	124,406,238	101,763,794
640299	FOOTWEAR, NOT COVERING THE ANKLE	2,661,384,123	1.40%	37,259,378	36,115,449	34,971,521	33,827,593	32,683,665
610510	MEN'S OR BOYS' SHIRTS OF COTTON, KNITTED OR CROCHETED	1,065,028,394	19.70%	209,810,594	175,018,770	140,226,946	105,435,122	70,643,298
620630	WOMEN'S OR GIRLS' BLOUSES, SHIRTS COTTON, NOT KNITTED OR CROCHETED	1,308,198,051	9.30%	121,662,419	107,006,195	92,349,971	77,693,747	63,037,523
620463	WOMEN'S OR GIRLS' TROUSERS, SYNTHETIC FIBERS, NOT KNITTED OR CROCHETED	778,611,375	11.80%	91,876,142	79,443,362	67,010,581	54,577,800	42,145,019
621210	BRASSIERES, WHETHER OR NOT KNITTED OR CROCHETED	969,396,716	10.30%	99,847,862	87,182,431	74,517,000	61,851,570	49,186,139
610910	T-SHIRTS, SINGLETS, TANK TOPS COTTON, KNITTED OR CROCHETED	938,953,484	16.50%	154,927,325	130,811,279	106,695,233	82,579,187	58,463,141
640391	FOOTWEAR, COVERING THE ANKLE	2,057,884,323	7.80%	160,514,977	142,930,471	125,345,965	107,761,459	90,176,953
420222	HANDBAGS, WITH OUTER SURFACE OF PLASTIC SHEETING OR OF TEXTILE MATERIALS	1,026,841,267	9.70%	99,603,603	87,342,753	75,081,904	62,821,054	50,560,205
620640	WOMEN'S OR GIRLS' BLOUSES, MANMADE FIBERS, NOT KNITTED OR CROCHETED	597,753,635	14.10%	84,283,262	71,955,524	59,627,785	47,300,047	34,972,308
640419	FOOTWEAR, WITH OUTER SOLES OF RUBBER OR PLASTICS AND UPPERS OF TEXTILE MATERIALS,	481,960,603	26.90%	129,647,402	106,019,251	82,391,100	58,762,949	35,134,797
620343	MEN'S OR BOYS' OF SYNTHETIC FIBERS, NOT KNITTED OR CROCHETED	620,270,157	12.70%	78,774,310	67,756,317	56,738,325	45,720,332	34,702,339
610610	WOMEN'S OR GIRLS' BLOUSES AND SHIRTS OF COTTON, KNITTED OR CROCHETED	578,267,957	19.70%	113,918,787	95,028,214	76,137,641	57,247,067	38,356,494
611120	BABIES' GARMENTS AND CLOTHING ACCESSORIES OF COTTON, KNITTED OR CROCHETED	1,123,767,949	14.00%	157,327,513	134,383,917	111,440,322	88,496,726	65,553,130
630260	TOILET AND KITCHEN LINEN OF COTTON TERRY TOWELING	942,935,079	9.10%	85,807,092	75,586,614	65,366,136	55,145,657	44,925,179
620530	MEN'S OR BOYS' SHIRTS OF MANMADE FIBERS, NOT KNITTED OR CROCHETED	439,119,123	19.70%	86,506,467	72,161,540	57,816,612	43,471,684	29,126,757
420212	TRUNKS, SUITCASES, WITH OUTER SURFACE OF PLASTICS OR OF TEXTILE MATERIALS	560,333,601	12.40%	69,481,366	59,865,642	50,249,917	40,634,192	31,018,467
610462	WOMEN'S OR GIRLS' TROUSERS, OF COTTON, KNITTED OR CROCHETED	616,834,137	12.60%	77,721,101	66,888,293	56,055,485	45,222,676	34,389,868
620433	WOMEN'S OR GIRLS' JACKETS SYNTHETIC FIBERS, NOT KNITTED OR CROCHETED	255,710,086	14.80%	37,845,093	32,198,849	26,552,605	20,906,362	15,260,118
610343	MEN'S OR BOYS' TROUSERS, OF SYNTHETIC FIBERS, KNITTED OR CROCHETED	296,448,417	19.40%	57,510,993	48,023,635	38,536,278	29,048,920	19,561,562
640359	FOOTWEAR, NOT COVERING THE ANKLE	807,068,965	6.50%	52,459,483	47,293,019	42,126,554	36,960,090	31,793,626
620452	WOMEN'S OR GIRLS' SKIRTS COTTON, NOT KNITTED OR CROCHETED	671,621,113	8.10%	54,401,310	48,314,976	42,228,641	36,142,307	30,055,972
420221	HANDBAGS, LEATHER, COMPOSITION LEATHER OR PATENT LEATHER	673,130,815	8.10%	54,523,596	48,423,580	42,323,565	36,223,549	30,123,534
	Total	**41,730,210,868**		**4,346,537,741**	**3,766,868,650**	**3,187,199,558**	**2,607,530,467**	**2,027,861,375**
				Plan Funds	**579,669,091**	**1,159,338,183**	**1,739,007,274**	**2,318,676,366**
				Plan Accumulation*		**1,762,194,037**	**3,571,689,073**	**6,033,233,002**

Table 5: Adjusted Estimates of US Additional Revenues.

HS6	Annual Average 2002-2005: Collected Duties	Dutiable Value	MFN Tariff	Est. Collected Duties	Difference	Weight	Total Implementation Period*: Additional Revenues 33% MFN reductions	Additional Revenues Adjusted
611020	834,183,190	4,998,962,213	10.70%	534,888,957	299,294,233	0.14	441,283,389	604,866,799
611030	793,678,988	2,546,258,778	15.30%	389,577,593	404,101,395	0.18	321,401,514	542,268,730
640399	660,132,447	7,057,377,970	7.70%	543,418,104	116,714,343	0.05	448,319,936	512,111,777
620462	576,008,607	3,494,773,444	8.20%	286,571,422	289,437,185	0.13	236,421,423	394,617,327
620520	395,836,681	2,000,267,740	14.20%	284,038,019	111,798,662	0.05	234,331,366	295,436,473
620342	354,903,896	2,161,051,357	8.90%	192,333,571	162,570,325	0.07	158,675,196	247,530,259
640299	273,555,543	2,661,384,123	1.40%	37,259,378	236,296,166	0.11	30,738,987	159,889,930
610510	210,785,651	1,065,028,394	19.70%	209,810,594	975,057	0	173,093,740	173,626,671
620630	202,175,396	1,308,198,051	9.30%	121,662,419	80,512,977	0.04	100,371,495	144,376,979
620463	198,748,711	778,611,375	11.80%	91,876,142	106,872,568	0.05	75,797,817	134,210,500
621210	163,996,118	969,396,716	10.30%	99,847,862	64,148,256	0.03	82,374,486	117,435,604
610910	157,296,273	938,953,484	16.50%	154,927,325	2,368,948	0	127,815,043	129,109,824
640391	179,769,141	2,057,884,323	7.80%	160,514,977	19,254,164	0.01	132,424,856	142,948,486
420222	146,523,098	1,026,841,267	9.70%	99,603,603	46,919,495	0.02	82,172,972	107,817,472
620640	160,578,624	597,753,635	14.10%	84,283,262	76,295,361	0.03	69,533,692	111,233,978
640419	161,046,349	481,960,603	26.90%	129,647,402	31,398,946	0.01	106,959,107	124,120,636
620343	127,624,593	620,270,157	12.70%	78,774,310	48,850,283	0.02	64,988,806	91,688,605
610610	114,312,956	578,267,957	19.70%	113,918,787	394,168	0	93,983,000	94,198,438
611120	108,067,296	1,123,767,949	14.00%	157,327,513	-49,260,217	-0.02	129,795,198	102,871,344
630260	86,357,306	942,935,079	9.10%	85,807,092	550,214	0	70,790,851	71,091,578
620530	123,520,204	439,119,123	19.70%	86,506,467	37,013,736	0.02	71,367,836	91,598,206
420212	94,246,565	560,333,601	12.40%	69,481,366	24,765,199	0.01	57,322,127	70,857,890
610462	92,145,871	616,834,137	12.60%	77,721,101	14,424,770	0.01	64,119,909	72,003,966
620433	68,933,467	255,710,086	14.80%	37,845,093	31,088,374	0.01	31,222,202	48,213,983
610343	84,018,319	296,448,417	19.40%	57,510,993	26,507,326	0.01	47,446,569	61,934,515
640359	75,617,934	807,068,965	6.50%	52,459,483	23,158,452	0.01	43,279,073	55,936,646
620452	55,094,846	671,621,113	8.10%	54,401,310	693,536	0	44,881,081	45,260,142
420221	61,637,357	673,130,815	8.10%	54,523,596	7,113,761	0	44,981,967	48,870,091
Total	**6,560,795,423**	**41,730,210,868**		**4,346,537,741**	**2,214,257,682**		**3,585,893,636**	**4,796,126,850**