Can the Doha Round be a Development Round? Setting a Place at the Table*

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Abstract

[To be added in the next draft]

1   Introduction

[To be added in the next draft].

2   Non-reciprocal negotiations and developing countries

A key objective of the current Doha Round of GATT/WTO multilateral trade negotiations is to bring developing countries into the world trading system. It is widely observed that developing countries have gained little if at all from a half century of GATT/WTO-sponsored tariff negotiations. For example, based on interviews with WTO delegates and Secretariat staff members, Jawara and Kwa (2003, p. 269) offer the following assessment:

> "Developed countries are benefitting from the WTO, as are a handful of (mostly upper) middle-income countries. The rest, including the great majority of developing countries, are not. It is as simple as that."

The empirical findings of Subramanian and Wei (2007) are also consistent with this position. They find that GATT/WTO membership is associated with a large and significant increase in trade volumes for developed countries; however, for developing country members, the impact of membership on trade volumes is weak or non-existent.[1]

One fact to keep in mind is that, while developed countries have negotiated deep reductions in their tariffs under GATT auspices, developing countries have committed to few tariff cuts over the 8 GATT multilateral negotiating rounds that span 50 years. In the Data Appendix we reproduce four relevant tables taken from the WTO World Trade Report for 2007. Table 5 records the impressive overall results from 60 years of negotiated tariff reductions under GATT and the first decade of the WTO (created in 1995 as a result of the Uruguay Round). Table 9 then confirms that these overall results mask a striking lack of tariff commitments ("binding coverage") for developing countries prior to the last completed (Uruguay) GATT round, while Appendix Tables 8 and 9 record the much more significant tariff bindings made by developed countries over the GATT years.[2] The asymmetry in GATT/WTO tariff commitments across developed and developing countries is a result of the exception to the reciprocity norm that has been extended to developing countries and codified under "special and differential treatment," or SDT, clauses. This exception was thought to ensure that developing countries would get a "free pass" on the MFN tariff cuts that the developed countries negotiated with one another. Apparently, though, negotiations among developed countries have not generated a significant impact on the trade volumes of developing country members of GATT/WTO.

Why hasn't GATT/WTO membership generated the anticipated trade-volume impact for developing countries? One possible explanation is that developed countries have found ways around the MFN principle, so that their tariff bargaining in fact discriminates against non-participating GATT/WTO members. Bown's (2004) findings, however, weigh against this explanation. He finds that countries do indeed abide by the MFN principle, at least in the context of GATT/WTO bilateral dispute settlement negotiations. Here, we explore a second explanation, namely, that the non-reciprocal approach anchored in SDT lies behind the absence of meaningful trade gains for developing countries. Since the non-reciprocal approach is also a feature of the current Doha negotiations, our explanation suggests that these negotiations may also be structured in a way that will fail to generate appreciable impact on the trade volumes of developing country members of GATT/WTO.

To develop our explanation, we begin by sketching a simple general equilibrium model of trade in two goods between three countries. Suppose that the home country imports good x from foreign countries 1 and 2, and that the two foreign countries import good y from the home country,

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[1] This particular finding of Subramanian and Wei (2007), that it is mainly large developed countries that have enjoyed significant trade effects of GATT/WTO membership, is confirmed for example in Chang and Lee (2010), and also by Eicher and Henn (2011) once controls suggested by the "terms-of-trade theory" of trade agreements are introduced (we describe this theory more fully below).

[2] Moreover, as is well known (see for example Diakantoni and Escaith, 2009), even the impressive binding coverage for less developed countries achieved in the Uruguay Round is potentially misleading, because a large proportion of those bindings were set significantly above the tariff rates actually applied by these countries.
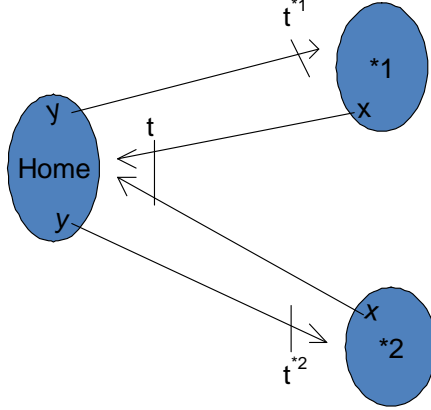
Figure 1

with all goods produced in perfectly competitive markets. For simplicity, we assume that the two foreign countries do not trade with one another. The local relative prices in the home and foreign countries are denoted as $p \equiv p_x/p_y$ and $p^{*i} \equiv p_x^{*i}/p_y^{*i}$, respectively, where we use an asterisk to denote foreign country variables and where $i = 1, 2$. The home country selects an ad valorem and non-discriminatory (i.e., MFN) tariff rate, t, for imports of good x. For foreign country i, the ad valorem import tariff rate on good y is denoted as t^{*i}. The world price for trade between the home country and foreign country i is $p^{wi} \equiv p_x^{*i}/p_y$. Notice that p^{wi} is thus foreign country i's terms of trade. Defining $\tau \equiv 1 + t$ and $\tau \equiv 1 + t^{*i}$, we have that $p = \tau p^{wi}$ and $p^{*i} = (1/\tau^{*i})p^{wi}$. Since the home country applies a non-discriminatory tariff, we thus see that $p^{w1} = p^{w2} \equiv p^w$; that is, the two foreign countries must share the same terms of trade when the home country adopts an MFN tariff policy. We thus have that $p = \tau p^w$ and $p^{*i} = (1/\tau^{*i})p^w$. Finally, we note that the home country's terms of trade in this MFN setting is given as $1/p^w$. The pattern of trade and trade policies for each country are depicted schematically in Figure 1.

In a given country, once the local and world prices are determined, all economic quantities (production, consumption, tariff revenue, imports, exports) are also determined. In turn, for a given set of tariffs, $(\tau, \tau^{*1}, \tau^{*2})$, once we determine a market-clearing world price, $\widetilde{p}^w(\tau, \tau^{*1}, \tau^{*2})$, then all local prices are determined. This follows since the pricing relationships just presented then yield the local prices as $p(\tau, \widetilde{p}^w) = \tau \widetilde{p}^w$ and $p^{*i}(\tau^{*i}, \widetilde{p}^w) = (1/\tau^{*i})\widetilde{p}^w$, respectively. Finally, the market-clearing world price is determined as the world price which ensures that the home-country imports of good x equals the sum of exports of good x from foreign countries 1 and 2; in other words, $\widetilde{p}^w(\tau, \tau^{*1}, \tau^{*2})$ is the value for p^w which solves

$$M(p(\tau, p^w), p^w) = E^{*1}(p^{*1}(\tau^{*1}, p^w), p^w) + E^{*2}(p^{*2}(\tau^{*2}, p^w), p^w). \tag{1}$$

As is standard, for each country, we assume as well that import and export functions are defined in a manner that satisfies trade balance requirements:

$$
\begin{aligned}
p^w M(p, p^w) &= E(p, p^w) \\
M^{*i}(p^{*i}, p^w) &= p^w E^{*i}(p^{*i}, p^w) \text{ for } i = 1, 2,
\end{aligned}
\tag{2}
$$

where $E(p, p^w)$ denotes home-country exports of good y and $M^{*i}(p^{*i}, p^w)$ represents foreign-country-i imports of good y. The market clearing requirement for good y is then implied by (1) and (2).

We assume that each of these three countries is "large," in the traditional sense that a change in the country's tariff results in a change in the market-clearing world price. We emphasize, though, that for some countries the resulting world-price change may be small in size; that is, some countries may be much less large than are others. We assume that prices depend on tariffs in the "standard" manner. Thus, a country achieves a terms of trade gain when it raises its own import tariff:

$$
\frac{\partial \widetilde{p}^w}{\partial \tau} < 0 < \frac{\partial \widetilde{p}^w}{\partial \tau^{*i}}, \quad i = 1, 2.
\tag{3}
$$

Likewise, when a country raises its import tariff, the local price of the import good relative to the export good rises in that country:

$$
\frac{dp(\tau, \widetilde{p}^w)}{d\tau} > 0 > \frac{dp^{*i}(\tau^{*i}, \widetilde{p}^w)}{d\tau^{*i}}.
\tag{4}
$$

Intuitively, if a country raises its import tariff, then some of the incidence is borne by foreign exporters, who receive a lower export price for their product, and some of the incidence is passed on to domestic consumers, who pay a high local price for the imported good. We will discuss below specific evidence relating to the ability of importing countries to impose the incidence of tariffs on foreign exporters, but here we note that there is strong evidence that the incidence of trade costs more generally are borne disproportionately by exporters. For example, according to a recent paper by Anderson and Yotov (2010), sellers/exporters bear a significant portion of trade costs relative to buyers/importers, with exporters' incidence in the early 1990's roughly 5 times larger than that borne by importers according to Anderson and Yotov's estimates.

Having sketched the general equilibrium model of trade, let us now return to the discussion above and consider the possibility that the home country and foreign country 1 negotiate a reciprocal reduction in import tariffs while foreign country 2 takes a "free pass" and leaves its tariff unaltered. What can we say about the implications of this negotiation for foreign country 2's volume of trade?

To address this question, we place two restrictions on the negotiation between the home country and foreign country 1. First, the home country tariff satisfies the MFN requirement. This restriction is already imposed in the description of the model. Second, the negotiation satisfies the *principle of reciprocity* for the home country and foreign country 1. In broad terms, this means that the resulting changes in tariffs bring about changes in the volume of each negotiating country's imports that are of equal value to changes in the volume of its exports. Formally, we suppose that the home country

and foreign country 1 undertake a negotiation in which they change their tariffs from some initial tariff pair, (τ_A, τ_A^{*1}), to a new tariff pair, (τ_B, τ_B^{*1}). The tariff of foreign country 2 is fixed throughout at its initial level, τ_A^{*2}. We denote the initial and new world prices as $\tilde{p}_A^w \equiv \tilde{p}^w(\tau_A, \tau_A^{*1}, \tau_A^{*2})$ and $\tilde{p}_B^w \equiv \tilde{p}^w(\tau_B, \tau_B^{*1}, \tau_A^{*2})$, and similarly we represent the initial and new local prices in foreign country 1 as $p_A^{*1} \equiv p^{*1}(\tau_A^{*1}, \tilde{p}_A^w)$, and $p_B^{*1} \equiv p^{*1}(\tau_B^{*1}, \tilde{p}_B^w)$. For foreign country 1, the principle of reciprocity thus requires that the resulting change in tariffs satisfies

$$\tilde{p}_A^w[E_B^{*1} - E_A^{*1}] = [M_B^{*1} - M_A^{*1}], \tag{5}$$

where $M_A^{*1} \equiv M^{*1}(p_A^{*1}, \tilde{p}_A^w)$, $E_A^{*1} \equiv E^{*1}(p_A^{*1}, \tilde{p}_A^w)$, $M_B^{*1} \equiv M^{*1}(p_B^{*1}, \tilde{p}_B^w)$ and $E_B^{*1} \equiv E^{*1}(p_B^{*1}, \tilde{p}_B^w)$.[3]

Under GATT/WTO rules, trade liberalization negotiations are not required to satisfy the principle of reciprocity. It is frequently observed, however, that countries seek to obtain a "balance of concessions" in their negotiations. We may thus understand the principle of reciprocity as a negotiation norm. While more evidence is needed before the empirical issue is settled, we note that some recent studies (Shirono, 2004; Limao, 2006, 2007; Karacaovali and Limao, 2008) provide empirical support for the view that actual tariff bargaining outcomes in the GATT/WTO conform to a reciprocity norm.

Following Bagwell and Staiger (1999, 2005), we now use the balanced trade condition (2) for foreign country 1, which must hold both at the initial tariffs and the new tariffs, to rewrite the reciprocity condition (5) as

$$[\tilde{p}_B^w - \tilde{p}_A^w]E_B^{*1} = 0. \tag{6}$$

Using (6), we thus see that mutual changes in trade policy for the home country and foreign country 1 satisfy the principle of reciprocity if and only if they leave the world price unchanged. When countries reduce tariffs in a manner that satisfies the principle of reciprocity, therefore, they achieve higher trade volumes even though their terms of trade are unaltered.[4] The higher trade volumes arise entirely as a consequence of the induced changes in local prices in each negotiating country.

We are now in position to consider the implications of this negotiation for foreign country 2's volume of trade. The main finding is that foreign country 2 experiences *no change* in its trade volume, when the home country and foreign country 1 exchange tariff reductions that satisfy the principles of non-discrimination and reciprocity. To establish this finding, we observe first that foreign country 2's terms of trade, $\tilde{p}^w$, are unaltered. The principle of non-discrimination ensures that foreign country 2 enjoys the same terms of trade as does foreign country 1, and as argued just above the principle of reciprocity in turn ensures that foreign country 1's terms of trade are

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[3]As we explain below in footnote 6, if the described change in tariffs satisfies the principle of reciprocity from the perspective of foreign country 1, then the tariff change also satisfies the principle of reciprocity from the perspective of the home country.

[4]If the home country were to violate MFN and adopt discriminatory tariffs, then its bilateral terms of trade with foreign country 1 would differ from its bilateral terms of trade with foreign country 2. The home country's multilateral terms of trade might then change even when a negotiated tariff change with foreign country 1 preserves its bilateral terms of trade with foreign country 1. We assume here, though, that the home country adopts non-discriminatory tariffs, and so the home country's bilateral and multilateral terms of trade are all represented by a common expression, $1/\tilde{p}^w$. See Bagwell and Staiger (1999, 2005) for further discussion.

unaltered by the negotiated reduction in tariffs. A second observation is that foreign country 2's local price, $p^{*2}(\tau^{*2}, \widetilde{p}^w)$, is also unaltered. This follows since foreign country 2's terms of trade are unaltered and foreign country 2 does not undertake a tariff change of its own. With its world and local prices unchanged, foreign country 2 thus experiences no change in its production, consumption, tariff revenue, imports or exports.

This finding is perhaps surprising, since as Figure 1 reflects and as we have emphasized, foreign country 2 receives a (non-discriminatory) tariff cut from the home country. How can a country experience no change in its trade volume, when the import tariff of its trading partner is reduced and it offers no tariff cut of its own? The key point is that the negotiation between the home country and foreign country 1 alters the local price in foreign country 1. Following the reciprocal tariff reduction, the local price of the import good relative to the export good in foreign country 1 must fall (i.e., p^{*1} must rise). As a consequence, consumers in foreign country 1 substitute consumption toward the import good and away from the export good, and resources for production shift from the import good toward the export good. For both of these reasons, when foreign country 1 cuts its import tariff, its export volume (production minus consumption of the export good) rises.[5] The principle of reciprocity then has the effect of ensuring that the expansion in export volume from foreign country 1 exactly satisfies the increased demand for imports coming from the home country. In other words, foreign country 2's hope of a "free pass" to greater export volume is thwarted by the fact that, while the home country now offers a more open market on a non-discriminatory basis to all comers, foreign country 2 must compete for sales in that market with a more "high-export-performing" foreign country 1.[6]

More generally, this finding suggests a simple maxim for trade negotiations: what you get is what you give. A country that reciprocates and cuts its own import tariffs in exchange for MFN tariff cuts in markets served by its exporters will see its exporters gain more export volume from the additional access in those markets than will exporters from countries that did not reciprocate (i.e., that did not agree to tariff cuts of their own). Indeed, in the simple three-country model presented above, if one foreign country liberalizes in a manner that satisfies the principle of reciprocity, while another foreign country does not liberalize on its own, then the latter country sees no change in its trade volume whatsoever.

At a general level the importance of this finding is also supported by a wide body of empirical studies that confirm the key mechanism: a country's own tariff cuts stimulate its exports. We mention here three recent studies that are of special relevance. Trefler (2004) examines the impact of Canadian tariff concessions in the Canadian-US free trade agreement and reports that Canada's own tariff cuts raised labor productivity in Canada by 15 percent in the most impacted, import-competing group of industries, thereby quantifying a large and positive industry-level productivity effect associated with own-tariff cuts. In another study, Mostashari (2010) focuses on explaining

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[5]This is simply an instance of the Lerner symmetry theorem, which ensures in this two-good setting that a reduction in a country's import tariff has the same effect as would an increase in its export subsidy.

[6]Given that trade volume from foreign country 2 is unaltered, it is now apparent that, if the principle of reciprocity is satisfied from the perspective of foreign country 1, then it is also satisfied from the perspective of the home country.

the changing distribution of export shares among countries exporting to the United States and finds that, especially for less developed countries, their own liberalizations have been quantitatively much more important in explaining changes in bilateral trade shares to the United States than the impact of US liberalizations. Finally, Tokarick (2007, p. 207) reports evidence that "developing countries could expand their exports by a much larger percentage by eliminating their own tariff barriers, rather than waiting for tariff reductions from rich countries."

What are the implications of this discussion for the Doha Round? Here we emphasize two. The *first implication* is that Doha's largely non-reciprocal approach, still anchored in a long GATT tradition of SDT, will not deliver meaningful trade gains for developing countries, just as this approach did not do so over the previous half century. To substantially share in the trade-volume gains from negotiated trade liberalization, developing countries must come to the bargaining table and negotiate reciprocally with each other and with developed countries. This implication seems to run counter to much current thinking on the Doha Round. For example, the recently released Bhagwati-Sutherland Report (2011) states:

> "...The expectation that in most cases developing countries should be entitled to flexibilities in the application of tariff cuts that are not available to developed WTO states has also followed from the widening of the membership and the development of a body of thinking about the pace and depth of liberalization that is appropriate for developing countries. This assumption – that a development friendly trade deal must demand less of countries in a way that is proportionate to their state of development – permeates the Doha Round and the final package will rightly have to be measured against it.
> "This means that developed countries have to accept that the outcome will be asymmetrical, even vis-a-vis large and competitive exporters like China and Brazil who remain in development." (p. 6).

Our discussion above is at odds with this position, and suggests that, rather than accepting and embracing the non-reciprocal approach embodied in SDT as an appropriate standard for the Doha Round, the success of the Doha Round as a Development Round hinges on rejecting SDT as the cornerstone of the approach to meeting developing country needs in the WTO.[7]

The second, and more speculative, implication concerns the manner in which negotiations must proceed if developing countries are to benefit (i.e., advance their own objectives). To develop this implication, we must dig somewhat deeper and consider the purpose of a trade agreement.

According to the terms-of-trade theory, the purpose of trade agreements is to facilitate an escape from a terms-of-trade driven Prisoners' Dilemma. In the absence of a trade agreement, governments

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[7] As will become clear below, to the extent that developing countries are "small" in their relevant markets, they should not be expected to offer tariff concessions in a trade agreement according to the terms-of-trade theory; but this observation holds equally for developed countries, and hence would provide no rationale for an SDT-type norm applied to developing countries (see Staiger, 2006, for an elaboration on some of these themes as they relate to developing countries and the WTO).

would set optimal unilateral trade policies. For the government of a large country, a higher import tariff raises the local relative price of the import good and also lowers the relative price of the import good on the world market. This latter effect means that a higher import tariff improves the importing country's terms of trade and results in a deterioration of the terms of trade for the exporting country. A higher import tariff from a large country thus imposes a negative terms-of-trade externality on its trading partner, whose exporters receive a lower world price. Governments fail to internalize this externality in the absence of a trade agreement, and as a consequence tariffs are higher than would be efficient, where efficiency is measured relative to government preferences. Starting from this inefficient outcome, governments can then gain from a trade agreement in which they reciprocally lower tariffs. The gains come from eliminating the local-price distortions that arise under unilateral tariff setting when foreign exporters pay part of the cost of domestic import protection.

A growing body of evidence provides support for the key features of this theory.[8] We mention here four sets of findings. First, Broda, Limao and Weinstein (2008) provide evidence that even seemingly "small" countries are large in some markets and that unilateral tariff setting responds to cost-shifting incentives where countries are large. Second, Broda, Limao and Weinstein (2008) and Bagwell and Staiger (forthcoming) find that the pattern of GATT/WTO negotiated tariff cuts is consistent with the elimination of the cost-shifting component of unilateral tariffs. Third, empirical work by Ludema and Mayda (2010) indicates that GATT/WTO tariff bindings exhibit remnants of a cost-shifting component where one would expect to find such remnants, given MFN and the pattern of non-reciprocity. And finally, Eicher and Henn (2011) find that the trade effects associated with WTO membership are largest for countries that were large in world markets at the time of their accession to the GATT/WTO (and hence would be expected to have a significant cost-shifting component in their unilateral tariffs and therefore to negotiate large tariff reductions in the GATT/WTO according to the terms-of-trade theory).

The terms-of-trade theory of trade agreements thus suggests that developing countries stand to gain from reciprocal trade liberalization wherever they are big enough that foreign exporters "feel the pain" of their tariffs (i.e., care about access to their markets). When this is true, foreign countries are motivated to engage with the developing country and identify mutually beneficial and reciprocal tariff reductions. Since many developing countries are "latecomers" to the tariff bargaining arena, however, a potential concern is that developed countries may have already eliminated local-price distortions through previous tariff negotiations. In other words, given the existing tariffs of developed countries, it may be difficult to identify mutually beneficial and reciprocal tariff bargains with developing countries. This concern is more speculative in nature, but it points to a potential *second implication* of our discussion: in order to "make room at the table" for developing countries, developed countries may need to find a way to in effect renegotiate their existing tariff commitments with one another.

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[8]See Bagwell and Staiger (2010) for a recent survey.

In particular, for manufacturing products, developed countries may have already achieved the degree of "openness" that they desire. If this is true, then two issues potentially follow. First, developed countries at this point may have preserved an inadequate amount of bargaining power; specifically, developed countries may have little left to offer developing countries in reciprocal bargains. This issue naturally complicates any process under which developing countries are to gain through a reciprocal exchange of tariff reductions with developed countries. A second issue is that a kind of "globalization fatigue" may be present in the developed world. The point here is that the existing MFN tariffs of developed countries may be broadly efficient for these countries in the world trading system as it currently stands, but may be too low for a world in which developing countries are fully integrated into the world trading system. To the extent that these issues arise, one potential solution would be to allow for some degree of renegotiation (upward) of existing tariff commitments among developed countries, in order to "make room" for negotiations (downward) with developing countries.

The possibility that developed countries might need to renegotiate their existing tariff commitments in order to be able to accommodate the entry of developing countries into the world trading system sounds admittedly extreme, though we will later suggest that other less extreme sounding possibilities may have much the same effect. Still, it is important to note that the underlying issues described above are far from new or unfamiliar to trade negotiators. Rather, a struggle with the basic problem of how to accommodate "latecomers" has been in evidence from very early in the GATT/WTO history. For example, in his assessment of the reasons for the somewhat disappointing outcome of the 1950-51 Torquay Round, the third negotiating round sponsored under GATT auspices, Executive Secretary of the Interim Commission for the International Trade Organization E. Wyndham White highlighted the bargaining power issue as follows:

> "Another inhibiting factor was the problem presented by the disparities in the levels of tariffs. A number of European countries with a comparatively low level of tariff rates considered that they had entered the Torquay negotiations at a disadvantage. Having bound many of their rates of duty in 1947 and 1949, what could these low-tariff countries offer at Torquay in order to obtain further concessions from the countries with higher levels of tariffs? The rules adopted by the Contracting Parties for their negotiations stipulate that the binding of a low duty or of duty-free treatment is to be recognized as a concession equivalent in value to the substantial reduction of high tariffs or the elimination of tariff preferences. Some thought that, in observance of this rule, the high-tariff countries should make further reductions in their duties in exchange for the prolongation of the binding of low duties. But although the high-tariff countries were sometimes willing to offer concessions without expecting comparable reductions from countries with low tariffs, they were not prepared to grant what they considered to be unilateral and unrequited concessions. No general solution was found at Torquay, but the question will be further explored in the near future. Meanwhile, the area of negotiations between some of the European countries was restricted by this divergence

of view." (ICITO, 1952, pp. 9-10).

And on a smaller scale, there is also evidence that the second issue of "globalization fatigue" was already very real at Torquay as well. As E. Wyndham White wrote at the time:

> "The Torquay negotiations took place under conditions of much greater stress than those which prevailed at the time of the Geneva or Annecy Conferences. Besides, those earlier negotiations had covered much of the ground, and many of the countries participating at Torquay felt that they had largely exhausted their bargaining power or that they had gone as far as was justified in the process of tariff reduction in view of present-day uncertainties. They felt they needed more time to digest and to assess the effects of the concessions already made before making further cuts in their tariffs." (ICITO, 1952, p. 9).

Hence, the issues associated with accommodating "latecomers" at the bargaining table have posed long-standing challenges for the GATT/WTO, though these issues arguably present a more central and acute problem for the Doha Round given its expressed intension to meaningfully integrate its developing country membership into the world trading system.

In their interim report on the Doha Round, Bhagwati and Sutherland (2011) propose a deadline for the round of December 31, 2011. In this context, we note that the first implication of our analysis - that developing countries must come to the bargaining table and negotiate reciprocally with each other and with developed countries - could be implemented over a short time span. Our second and more speculative implication, however, that developed countries may need to renegotiate their existing tariff commitments, may be more challenging to implement effectively over a short time span, and for this reason our second implication potentially may be of greater relevance for future negotiation rounds. Nevertheless, it is possible to interpret ongoing efforts in the Doha negotiations as in effect helping to achieve ends consistent with our second implication, and after considering in the next section the nature of the agriculture negotiations we return to this possibility in section 4.

3   Agriculture

Another key objective of the current (Doha) round of GATT/WTO multilateral trade negotiations is to extend GATT/WTO disciplines to the agriculture sector. The central role of this objective is revealed by the prominent efforts to reduce agricultural export subsidies and by the high-profile Doha negotiation failures that have resulted. In the Doha Round so far, the approach has been to encourage negotiations that deliver reductions in agricultural export subsidies in exchange for reductions in import tariffs. This approach is strikingly different from traditional GATT/WTO bargaining, in which countries exchange market-access commitments through agreements to reciprocally lower import tariffs. Traditional market-access bargaining has been successful, and the benefits of such a negotiation approach can be readily understood using the terms-of-trade theory of trade agreements. The negotiation approach taken in the Doha Round, by contrast, has fared

rather poorly so far, and we argue in this section that one explanation may be that the underlying economics of this approach are less sound. We thus suggest that the liberalization of agriculture should reorient toward a focus on traditional market-access bargaining.

Blustein (2009) provides an interesting historical account of negotiations over agriculture policies in the Doha Round. He describes the terms of the agriculture bargain that emerged from Doha in 2005 as follows:

> "The package was based on a hardheaded political calculation, in the finest tradition of WTO- and GATT-style mercantilism. Curbing farm subsidies might be a desirable policy for the United States as a whole, but it was a 'sacrifice' that American politicians could accept only if most farm groups were assured that their export opportunities would burgeon. A Kansas wheat grower who might ordinarily rebel at seeing his federal check shrink would presumably acquiesce provided his crops stood a better chance of gaining access to European consumers or the booming emerging markets of India and China." (pp. 205-6).

But with the suspension of the round in 2008, Blustein observes:

> "Agriculture groups felt that the deal on the table simply wouldn't provide enough new market access for U.S. farm exports to compensate for the reduction in the cap on U.S. subsidies...the handwriting seemed to be on the wall: Although U.S. exporters would gain additional sales in high-income markets, such as the European Union, for beef, pork, and some other products, they wouldn't gain much, if anything, in the world's emerging markets, because the loopholes granted to developing countries were too large." (p. 269)

In light of this experience, it is natural to ask: Why hasn't Doha's approach to agriculture liberalization succeeded?

To address this question, we begin by emphasizing that, contrary to Blustein's assertion, exchanging cuts in export subsidies for cuts in import tariffs departs from the "tradition of WTO- and GATT-style mercantilism" in a number of crucial respects. For one thing, the traditional political tradeoff of export interests against import-competing interests that has characterized all previous rounds is absent. Instead, the negotiated changes produce costs (reduced export subsidies) and benefits (lower import tariffs) for export interests, with a net effect that may be small or even negative. As a result, there may be no domestic group ready to push for the round. Anecdotal evidence of this possibility is also reported by Blustein:

> "It was really sobering to hear the ag and NAM [National Association of Manufacturers] people say, 'Hmmm, this isn't worth the trouble,' recalls one congressional staffer who attended the meetings. "How would you get that passed in Congress?" (p. 270)
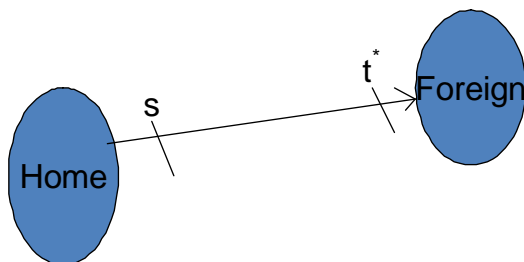
Figure 2

By contrast, traditional market-access bargaining exchanges domestic tariff cuts for foreign tariff cuts, ensuring that at least one domestic group (namely, domestic exporters) is ready to push for the round.

A second and more fundamental difference between traditional market-access bargaining and the Doha approach concerns the extent to which the negotiation may be expected to generate efficiency gains and thus a potential for a mutually beneficial agreement. As described in the preceding section, under traditional market-access bargaining in which reciprocal tariff cuts are exchanged, governments can enjoy mutual gains as they eliminate local-price distortions without suffering terms-of-trade losses. Consider now the Doha approach, under which one country reduces its export subsidy in exchange for a reduction in the import tariff of its trading partner. The basic problem is most easily understood when the exchange is balanced, so that the export subsidy and import tariff are reduced at the same rate. In this case, the net tariff (i.e., the import tariff less the export subsidy) faced by exporters is unaltered; as a consequence, the price received by exporters is unchanged, and so trade volume is unaffected. In fact, the sole consequence of a balanced exchange of this kind is a monetary transfer from the importing country (whose tariff revenue declines) to the exporting country (whose subsidy expenses decline). Clearly, a balanced exchange of this kind cannot lead to mutual gains for the negotiating countries, and from this perspective it is not surprising that an agreement has been difficult to achieve using the Doha approach.

The described case of a balanced exchange is somewhat special, and so it is important to emphasize that our concerns with the Doha approach are not limited to this case. Consider, for example, a two-country partial-equilibrium setting, in which one country exports a good to another country, as illustrated schematically in Figure 2. To fix ideas, suppose further that each government seeks to maximize the real income of its country and that markets are perfectly competitive. The efficient trade volume is then the volume that is achieved when both countries adopt free-trade policies. The efficient trade volume is also achieved, however, when the specific (i.e., per-unit) export subsidy offered by the exporting country (s) equals the specific import tariff imposed by the importing country (t^*), so that the net tariff ($t^* - s$) is zero. Starting from such a point, global
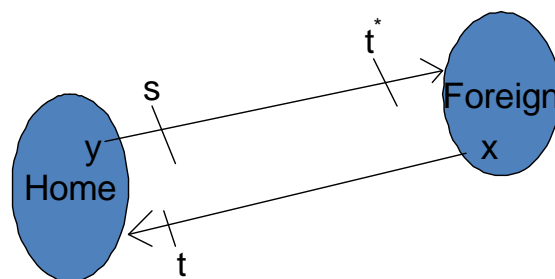
Figure 3

welfare would drop if export subsidies were banned and import tariffs remained positive.[9] Likewise, if the initial net tariff were positive, then trade volume would be inefficiently low. In this case, a reduction in the level of export subsidization would itself lower trade volume further and could only enhance efficiency if it were exchanged for an even greater reduction in the import tariff. There is certainly no guarantee, though, that the importing country would find such an exchange beneficial.

For these reasons, we conclude that the agricultural package on the table in the Doha Round is not in the tradition of GATT-WTO market-access bargains. And the main implication of our discussion is even more pointed: the Doha approach of negotiating reductions in agricultural export subsidies in exchange for reductions in agricultural import tariffs may in fact be unworkable, because it is unlikely to lead to an agreement in which all parties to the agreement gain. This is not to say that cuts in export subsidies couldn't be part of a broader bargain in which traditional market access bargaining over tariffs also took place. For example, as suggested schematically in Figure 3, where each country now has a good that it exports to the other, a bargain in which the home country agrees to reduce its import tariff t and its export subsidy s in exchange for a commitment from the foreign country to reduce its import tariff t^* could generate mutual gains for the home and foreign countries, if the agreed reductions in s and t^* imply a reduction in the *net* tariff $(t^* - s)$ on the foreign import good (or at least no increase in the net tariff); but our point is that these gains would come *in spite* of the agreed reduction in s, not because of it. In this sense we suggest that efforts to liberalize agriculture in the Doha Round are more likely to succeed if they reorient toward a focus on traditional market-access bargaining.

Our agriculture discussion thus far has abstracted from third-country issues, but such issues are certainly relevant for the agriculture negotiations in the Doha Round. It is therefore important to note that the simple insights that we have emphasized above extend to a multi-country setting,

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[9]This is a "second-best" argument, which is analogous to the well-known trade-diversion logic that arises when evaluating free trade areas. Intuitively, if the exporting government removes its export subsidy while the importing country maintains its import tariff, then trade is diverted from potentially more efficient firms in the exporting country to potentially less efficient firms in the import-competing sector of the importing country.
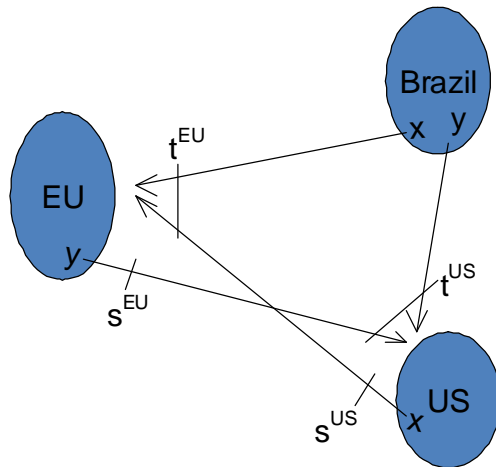
Figure 4

and in some respects are even strengthened.

To illustrate this, we now extend the basic setting depicted in Figure 3 to a three-country partial equilibrium setting, in which two of the countries utilize export subsidies but the third country does not. We refer to the two countries that apply export subsidies as the EU and the US, to convey the fact that it is mainly the developed countries that subsidize their agricultural exports, and we refer to the third country that possesses no export subsidy policies as Brazil. For the moment we continue to assume that these three countries trade two goods (plus the usual traded numeraire good in the background of this partial equilibrium setup), with the EU exporting good y and importing good x, the US exporting good x and importing good y, and Brazil exporting both goods x and y. The pattern of trade and trade policies for each country are depicted schematically in Figure 4. It is now easy to see that our earlier discussion in the two-country setting applies as well to this extended three-country setting, but with one additional complicating effect: owing to Brazil's exports of x and y to the EU and the US, respectively, any net tariff reductions that the EU and US might negotiate in the context of also reducing their export subsidies will now cause a leakage of some of the joint surplus that their negotiations create to the third country, as Brazil enjoys rising world/export prices (i.e., its terms of trade improve). This, of course, only makes it harder for the EU and the US to find a way to jointly gain from a broader agreement that also cuts export subsidies, and as we emphasized above any such gains would come in spite of the agreed reduction in export subsidies, not because of it.[10]

Finally, we note that the addition of a third country does introduce the possibility that the

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[10]On the other hand, it is easily checked that in this setting, the EU and the US *could* gain from a negotiation over their tariffs and export subsidies that cut tariffs and *raised* export subsidies, and that such a negotiation could be consistent with world-wide efficiency. So it is the constraint to reduce export subsidies that is the problem here, as we emphasize in the text.
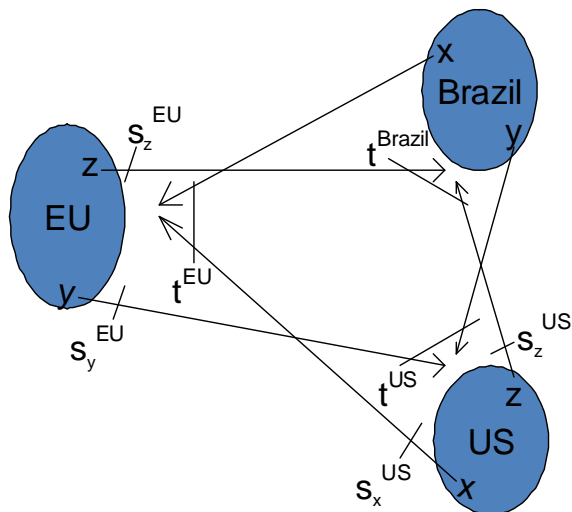
Figure 5

EU and the US could in fact gain from an agreement to reduce their export subsidies, in the sense that their joint gain derives directly from their agreed restriction on export subsidies rather than in spite of this agreed restriction. To see this possibility, we now introduce a third good z into the three-country partial equilibrium setting just described, and assume that good z is imported by Brazil and exported by both the EU and the US. We suppose further that Brazil applies an import tariff on good z while the EU and the US each subsidize the exports of z to Brazil, where the net tariff along each trade channel is positive. Relative to our discussion just above, the novel feature here is that the EU and the US are now competing exporters (of good z) into Brazil, and absent an agreement on export subsidies they are locked in an export-subsidy competition for Brazil's market.[11] Figure 5 depicts this three-country three-good setting. The important new element is that now an agreement between the EU and the US to restrict their export subsidies will raise the world price of good z, which by itself marks a terms-of-trade improvement for the EU and the US and can therefore offer a joint benefit to these two countries. Of course, this joint benefit comes at the expense of Brazil, who suffers the counterpart terms-of-trade deterioration. And it is easy to show that the benefit that the EU and the US enjoy here marks an inefficient victory of exporter interests over importer – and world – interests. Hence, while it is possible to see in this three-country three-good setting how the EU and the US *could* actually benefit from an agreement to restrict their export subsidies, if this describes the underlying logic of Doha's approach to agriculture then any agriculture agreement that does emerge from Doha would not advance the wider goals of the WTO membership.

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[11] The interpretation of export subsidy agreements that we describe here is formalized and developed more fully in Bagwell and Staiger (2001) and Bagwell and Staiger (2002, Ch. 10). See also Bagwell and Staiger (2009) and Mrazova (2010) for alternative possible interpretations of export subsidy agreements.

We are therefore left with a pessimistic view of the Doha approach to agriculture negotiations when this approach is evaluated on its own merits. Nevertheless, taking a broader perspective and viewing the attempts to limit export subsidies within the wider context of the challenges associated with integrating the less-developed-country members into the world trading system, it is possible to interpret the efforts to limit export subsidies as playing a useful role in helping to address the issues associated with "latecomers" to the GATT/WTO bargaining table as we described these issues in section 2. We turn to this interpretation next.

4   Making the Doha Round a Development Round

We have suggested above that the success of the Doha Round as a Development Round hinges on moving away from the non-reciprocal SDT norm as the cornerstone of the approach to meeting developing country needs in the WTO. Rather, if developing countries are to share in the gains from GATT/WTO market access negotiations, we have argued that they must come to the bargaining table and negotiate reciprocally with each other and with developed countries. We have also suggested that in the context of the Doha Round the WTO may be facing a critical challenge associated with the problem of "latecomers" to the GATT/WTO bargaining table, in that developed countries at this point may have preserved an inadequate amount of bargaining power with which to engage developing countries in reciprocal bargains; and in addition a kind of "globalization fatigue" may be present in the developed world whereby the existing MFN tariff levels of developed countries may be too low for a world in which developing countries are fully integrated into the world trading system. And we have indicated that to address this problem, developed countries might need to renegotiate (upward) their existing tariff commitments in order to "make room at the table" and accommodate the entry of developing countries into the world trading system. Finally, we have observed that, when evaluated on its own merits, the Doha approach to agricultural negotiations and its emphasis on the reduction of agricultural export subsidies in exchange for cuts in tariffs seems suspect on economic grounds.

We now suggest that, when viewed from the wider perspective of the Doha Round's central goal of integrating the WTO's developing country members into the world trading system, the emphasis on reducing and eliminating agricultural export subsidies might itself be reinterpreted as an initiative that could help "make room at the table" for developing countries, and can in this way be interpreted as a coherent part of this broader whole. Put simply, a Doha Round that (i) engages developing countries to come to the bargaining table and negotiate reciprocally with each other and with developed countries, and, as part of the bargain, (ii) reduces and/or eliminates the agricultural export subsidies of developed countries, could be viewed as a way to engineer trade volume gains for developing country members while using the reduction/elimination of agricultural export subsidies both as a bargaining chip to entice developing countries to agree to lower their tariffs, thereby generating bargaining power for the "low-tariff" developed world, and as a device to mitigate the overall trade effects of integrating developing countries into the world trading system,

thereby addressing the issue of developed-world "globalization fatigue." That is, *if* the developed world is struggling with how to handle the latecomers problem, then the negotiated reduction in agricultural export subsidies might be seen as a solution to that problem.

This point can be seen both from the perspective of the general equilibrium model that we sketched in section 2, and from the partial equilibrium perspectives developed in section 3. From a general equilibrium perspective, the point derives from the observation that an import tariff acts like an export tax once its general equilibrium impacts are accounted for, which is why as we have described in section 2 a cut in a country's own tariffs, in raising the volume of its imports, will also stimulate its exports, acting much like the introduction of a program of export subsidies. By the same token, a cut in a country's own export subsidies, in reducing the volume of its exports, will also contract its imports, acting much like an increase in the country's import tariffs. Viewed in this light, a Doha agreement to reduce/eliminate the agricultural export subsidies of the developed countries can "make room at the table" and accommodate the entry of developing countries into the world trading system, because it will have much the same effect as if developed countries had instead renegotiated (upward) their existing tariff commitments. Hence, the negotiated reduction in agricultural export subsidies might be seen as a solution to the latecomers problem.

To see the same point from a partial equilibrium perspective, it is useful to refer back to Figure 5. There it is clear, for example, that a cut in s_x^{US}, the US export subsidy on good x, would help reorient EU imports of good x away from US exporters and toward Brazil exporters, at the same time that it would (i) reduce overall import volume of good x into the EU, and (ii) raise the price received by Brazil exporters of good x. Similarly, a cut in s_y^{EU}, the EU export subsidy on good y, would help reorient US imports of good y away from EU exporters and toward Brazil exporters, at the same time that it would (i) reduce overall import volume of good y into the US, and (ii) raise the price received by Brazil exporters of good y. Clearly, these cuts in export subsidies could then (i) help address "globalization fatigue" in the EU and US by mitigating the overall trade effects of reciprocal tariff cuts negotiated between the EU and Brazil and between the US and Brazil, and (ii) if offered as a carrot to Brazil in exchange for tariff cuts from Brazil, could serve as an extra bargaining chip for use by the "low-tariff"/developed countries EU and US in their reciprocal tariff bargains with Brazil. Hence, from this partial equilibrium perspective as well, it is clear that the negotiated reduction in agricultural export subsidies might be seen as a solution to the latecomers problem.[12]

Finally, it is worth emphasizing the *one key change* in the substance of the current approach to Doha Round negotiations that is required for the economic interpretation that we have sketched above to hold together: developing countries (Brazil in Figure 5) must come to the bargaining table and offer reciprocal tariff cuts of their own. Absent tariff cuts from developing countries, the analysis we have sketched above cannot lend support to the basic Doha approach to negotiations.[13]

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[12]It is also interesting to note that the effort to reduce/eliminate export subsidies and the effort to more fully integrate developing countries into the world trading system are being attempted in the same round of GATT/WTO negotiations. There could of course be many reasons for this, but the interpretation we offer here is one of them.

[13]The other change we have suggested above – that the agriculture negotiations, which are currently focused on

5 Conclusion

The declaration from the WTO Ministerial Conference in Doha, Qatar, November 14, 2001, states in part:

> "We commit ourselves to comprehensive negotiations aimed at: substantial improvements in market access; reductions of, with a view to phasing out, all forms of export subsidies; and substantial reductions in trade-distorting domestic support. We agree that special and differential treatment for developing countries shall be an integral part of all elements of the negotiations...".

The main message of this paper comes in two parts. First, these stated aims are incoherent from the perspective of economic analysis, and if pursued as stated they are unlikely to deliver the meaningful trade gains for developing countries that the WTO membership seeks. And second, these aims can form the basis of a coherent plan for delivering trade gains for developing countries with one key change: the Doha Round must move away from the non-reciprocal "special and differential treatment" norm as the cornerstone of the approach to meeting developing country needs in the WTO, and instead developing countries must come to the bargaining table and negotiate reciprocally with each other and with developed countries.

6 Data Appendix

The following Tables 5, 9 and Appendix Tables 8 and 9 are taken from the WTO World Trade Report 2007.

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negotiating reductions in agricultural export subsidies in exchange for reductions in agricultural import tariffs, should be reoriented toward a focus on traditional market-access bargaining – can from the perspective we offer here be seen less as a change of substance than a change in emphasis and interpretation within a broader package, because within this broader package export subsidies are still cut, but the purpose of an agreement to reduce export subsidies is now solely to facilitate market access (i.e., tariff) negotiations between developed and developing countries.

Table 5
GATT/WTO – 60 years of tariff reductions
(MFN tariff reduction of industrial countries for industrial products (excl. petroleum))

Implementation Period	Round covered	Weighted tariff reduction	Weights based on MFN imports (year)
1948	Geneva (1947)	-26	1939
1950	Annecy (1949)	-3	1947
1952	Torquay (1950-51)	-4	1949
1956-58	Geneva (1955-56)	-3	1954
1962-64	Dillon Round (1961-62)	-4	1960
1968-72	Kennedy Round (1964-67)	-38	1964
1980-87	Tokyo Round (1973-79)	-33	1977(or 1976)
1995-99	Uruguay Round (1986-94)	-38	1988(or 1989)

Note: Tariff reductions for the first five rounds refer to the United States only. The calculation of average rates of reductions are weighted by MFN import values.

Source:

Geneva (1947): US Tariff Commission, Operations of the Trade Agreements Program, June 1934-April 1948, Part III Table 16 (non-agricultural products).

Annecy (1949): US Tariff Commission, Operations of the Trade Agreements Program, April 1949-June 1950, Chapter 5, Tables 7 and 8. Refers to all products.

Torquay (1950-51): United States Tariff Commission, Fifth Report, July 1951-June 1952, Chapter 4, pp.149-170, Tables 5 and 6.

Geneva (1955-56): Estimates based on United States Tariff Commission, Ninth Report, July 1955-June 1956, Chapter 3, pp.100-108 and US Department of State Publication 6348, Commercial Policy Series 158, released June 1956.

Dillon Round (1961-62): Estimates based on United States Tariff Commission, 13th Report, July 1959-June 1960, pp.17-29 and US Department of State Publication 7408, Commercial Policy Series 194, released July 1962.

Kennedy Round (1964-67): Preeg, E.(1970), *Traders and Diplomats*, Tables A2 and A3. Refers to four markets: United States, Japan, EEC(6) and United Kingdom. Own calculations for the aggregate based on 1964 M.F.N. import values.

Tokyo Round (1973-79): GATT, COM.TD/W/315, 4.7.1980, p.20 and 21 and own calculations. Refers to eight markets (United States, EEC(9), Japan, Austria, Finland, Norway, Sweden and Switzerland).

Uruguay Round (1986-94): GATT, *The Results of the Uruguay Round of Multilateral Trade Negotiations*, November 1994, Appendix Table 5 and own calculations. Refers to eight markets (United States, EU(12), Japan, Austria, Finland, Norway, Sweden and Switzerland).

Table 9
Pre- and post-Uruguay Round binding coverage for agricultural and non-agricultural products

| | Agricultural products | | | | Non Agricultural products | | | |
| | Percentage of tariffs lines bound | | Percentage of imports under bound rates | | Percentage of tariffs lines bound | | Percentage of imports under bound rates | |
	Pre UR	Post UR	Pre UR	Post UR	Pre UR	Post UR	Pre UR	Post UR
Developing economies	17	100	22	100	21	73	13	61
Transition economies	57	100	59	100	73	98	74	96
Latin America	36	100	74	100	38	100	57	100
Central Europe	49	100	54	100	63	98	68	97
Africa	12	100	8	100	13	69	26	90
Asia	15	100	36	100	16	68	32	70

Source: GATT (1994).

Status of tariff bindings: developed countries and industrial products, 1972-2000
(Percentage – Coverage based on tariff lines)

	Post-Kennedy Round 1972	Post-Tokyo Round 1987	Post-Uruguay Round 2000
Canada	74-74	98-98	99.7
United States	100-100	100-100	100.0
Japan	90-91	97-97	99.6
EU [a]	98-99	99-99	100.0
Denmark	97-91	-	-
United Kingdom	93-94	-	-
Austria	86-87	96-96	-
Finland	55-86	97-97	-
Sweden	94-95	97-97	-
Norway	79-81	95-95	100.0
Switzerland	98-98	99-99	99.7
Australia	...	11-17	96.5
New Zealand	...	39-51	99.5

[a] Refers to EEC(6) for Post-Kennedy, to EEC(9) for Post-Tokyo and to EU(15) for Post-Uruguay Round (including ITA).

Note: Lower end of binding coverage range refers to totally bound tariff lines while upper end includes partially bound tariff lines.

Source: GATT (1971) Basic Documentation for the Tariff Study. Supplementary Tables, Geneva. (Kennedy Round). GATT (1987), Importance des consolidations tarifaires établies dans le cadre de l'Accord Général, GATT document: MTN.GNG/NG1/WW/2/Rev.1*, 27 mars 1987. (Tokyo Round). WTO (2007), World Tariff Profiles. (Uruguay Round).WTO (2007), World Tariff Profiles. (Uruguay Round).

Status of tariff bindings: developed countries and agricultural products, 1987 and 2000
(Percentage – Coverage based on tariff lines)

	Post-Tokyo Round	Post-UR Round
Canada	90-91	100.0
United States	90-93	100.0
Japan	60-63	100.0
EU [a]	63-65	100.0
Austria	55-62	-
Finland	51-56	-
Sweden	46-50	-
Norway	67-69	100.0
Switzerland	44-46	< 100.0
Australia	26-32	100.0
New Zealand	48-54	100.0

[a] Refers to EEC(9) for Post-Tokyo and to EU(15) for Post-UR Round (incl. ITA).

Note: Lower end of binding coverage range refers to totally bound tariff lines while upper end includes partially bound tariff lines.

Source: GATT (1987), Importance des consolidations tarifaires établies dans le cadre de l'Accord Général; GATT document: MTN. GNG/NG1/WW/2/Rev.1*, 27 mars 1987 (Tokyo Round); WTO (2007), World Tariff Profiles (Uruguay Round).

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