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Does the ‘Development Round’ Foster Development?

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I. Introduction

After the failed attempts in Seattle in late 1999, the Ministerial Conference in its Fourth Session in Doha, on November 9-14, 2001 launched the agenda for a new comprehensive round of multilateral trade negotiations. At the behest of the European Union (EU), the ministerial declaration emphasised that the Doha Round should provide a major opportunity for developing countries. Consequently the agenda for the new WTO round has been coined the 'Doha Development Agenda' (DDA). On September 10-14, 2003 the fifth Ministerial Conference in Cancún ended without reaching a consensus.

According to press reports and subsequent statements by those present at that meeting, the apparent and proximate cause of the Ministerial's collapse was a failure to agree on launching formal negotiations on the so-called Singapore Issues. Others, however, have put forward alternative explanations for the meeting's failure, including poor chairmanship of the Ministerial meeting by Mexico's Foreign Minister, Mr. *Luis Ernesto Derbez*; a failure to agree on the modalities for negotiations on agricultural trade barriers,

export subsidies, and domestic support policies; the inability of many WTO members to negotiate or discuss many issues simultaneously during and before the Cancún Ministerial Conference; and a perception that some national representatives in Cancun were not prepared to go beyond pre-determined demands of others and showed little propensity to 'negotiate seriously' with other delegations.¹

The Doha Round was after all aiming at opening markets in order to foster growth and alleviate poverty in the developing world. In this respect Cancún was a 'disaster' which could badly hit the developing countries, in particular the least developing countries (LDCs), notwithstanding the emergence of the G90 and G22.² Although the previously-agreed commitments by WTO members are still binding, the Cancún failure may have political consequences. On the one hand liberalization (market access) is delayed; on the other hand representatives of the United States and the EU immediately afterwards expressed their sympathy with a switch in their trade policy preferences towards more bi- or unilateralism.

Before Cancún, public opinion was focusing on the interpretation of the TRIPs agreement, concerning the enforcement of intellectual property rights for affordable medicines (compulsory licenses, production of generic drugs) to protect health in case of diseases such as AIDS. The WTO TRIPs agreement of August 30, 2003 together with a similar solution of the EU for this problem (Council Regulation 953/2003) has been a major achievement in legal and economic terms and from a moral point of view. It is, however the only result of Cancún.

Some commentators argue that the present round was not only 'overburdened' by the so-called Singapore Issues (which are primarily in the interest of the developed world) but also by putting development considerations at the centre of the Doha Round. *Evenett* even questions the new development mandate of the WTO at all. This agenda is an intricate menu of objectives and means that could lead to deceptive or undesired outcomes.³

The DDA contains a series of other key issues on which progress has been delayed as a follow up of Cancún (even the follow-

¹ *Evenett* (2003), 11.

² *Fontagné* (2003), 3.

³ *Evenett* (2003), 16.

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up conference in Geneva on December 15-16, 2003 did not bring a break-through):

- 1) Implementation-related issues: The developing world considers that developed economies have not fulfilled their commitments of Marrakech (1994) concerning the pace of liberalization in labour intensive industries (implementation of the Agreement on Textiles and Clothing – ATC), whereas their own commitments (TRIPs) are disproportionate.
- 2) Agriculture: Market access as well as the distorting domestic policies (subsidies in the USA and EU) are key issues.
- 3) Services (GATS).
- 4) Market access for non-agricultural products.
- 5) The four Singapore issues: the relationship between trade and investment policy; the interaction between trade and competition policies; transparency in public procurement practices; and trade facilitation practices (more efficient customs procedures).
- 6) LDCs: Considering their specific needs: duty-free, quota-free market access for their products; Special and Differential Treatment (SDT); technical co-operation and capacity building etc.

The DDA raises a lot of concerns which are dealt with in this article. In the next chapter the relationship between market access (trade liberalization) and development and its complex connections with poverty reduction are analysed. Their relationships are far from clear. The third chapter addresses market access issues, ranging from the problems of tariff peaks and escalation to more subtle forms of protectionism still in place *vis-à-vis* the developing countries. The fourth chapter looks at gains from further liberalization or more generally, the potential loss of welfare and income in the developing countries due to a delayed Doha Round. Conclusions are drawn at the end.

II. Multilateral Trade Liberalization and Development

A. Openness, Growth and Poverty Reduction

In the discussion of whether trade liberalization and foreign direct investment have helped to spur growth in China and India, the answer by participants at a conference organized by the IMF and India's National Council of Applied Economic Research in New Delhi, November 14-16, 2003 was a unanimous and resounding 'yes', while in the case of broader capital account liberalization,

opinions were more divided.⁴ Although poverty reduction in both India and China has been strongly correlated with economic growth, the wide regional differences within the two countries suggest that other policies are also relevant in enhancing the 'poverty-reduction efficiency of growth'. Participants in this conference sought to identify the factors behind the two countries' impressive track record over the past two decades. Interestingly, both are nowadays fast growing developing countries but had a quite different attitude towards trade liberalization and membership in world trade organizations. India is a GATT signatory country since July 8, 1948 and WTO member since January 1, 1995. China became a WTO member only on December 11, 2001.

Both countries witnessed an increase in openness. In 1980 the ratio to GDP of total trade in goods and services in both India and China stood at about 15 percent. By 2001, this ratio had more than tripled to about 50 percent in China, while it had risen to only around 25 percent in India.

1. The Trade and Development Linkage

In general the question whether more openness is better for growth and development and whether it is even a remedy for poverty reduction is not always easy to answer. There is a huge amount of development literature on this topic. The nexus of openness and poverty reduction is ambiguous and complex. *Reimer* surveys and classifies thirty-five studies of the emerging literature which quantifies how international trade affects the poor in developing countries.⁵ A general discussion of the problems connected with trade and development linkages is also offered by the UNCTAD.⁶ The manifold relationships between trade and development may be demonstrated with the Figures 1 and 2.

Let's look first to the mainstream 'Panglossian' view in Figure 1. Representatives of researchers, seeing a positive link between openness and growth (arrow 1) are *Sachs and Warner*; *Dollar and Kraay*; *Dowrick*; *Dowrick and de Long*; and *Greenaway, Morgan and Wright*.⁷

⁴ IMF (2003).

⁵ *Reimer* (2002).

⁶ UNCTAD (2003).

⁷ *Sachs / Warner* (1995); *Dollar / Kraay* (2001, 2002); *Dowrick* (1994); *Dowrick / de Long* (2001); *Greenaway / Morgan / Wright* (1998).

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For a sample of up to 73 countries *Greenaway, Morgan and Wright*⁸ estimate in a panel over the period 1975 to 1993 a 'core' new growth theory model. Growth of real GDP per capita is explained by the GDP per capita as in 1965 (catching-up variable), the level of secondary school enrolment as in 1965, a terms of trade index, population, the ratio of gross domestic investment to GDP (proxy for capital input) and liberalization dummies. They use three different definitions of liberalization, those of *Sachs and Warner*, *Dean et al.* and one provided by the World Bank.⁹ The first is constructed on the basis of measuring whether an economy is open or not. Their index of openness is based on five criteria relating to non-tariff barriers, average tariff levels, the black market exchange rate, whether state monopolies exist for major exports and whether the economy is socialist or not. By contrast, *Dean et al.* are more qualitatively based.¹⁰ They use information on average nominal tariffs, QR coverage and average black market premia to identify when reform has taken place. The liberalization indicator provided by the World Bank is indicated by Structural Adjustment Loans (SAL) as one of a number of possible determinants of growth, export and investment performance.¹¹ *Greenaway, Morgan and Wright* equate the first year of a SAL with a trade component as the beginning of the liberalization **episode [nicht 'period']?**. The authors find the following empirical results: A low initial GDP and high initial level of schooling are associated with faster growth in GDP per capita as are a higher investment ratio and favourable terms of trade movement. Faster population growth is associated with slower GDP per capita growth and liberalization appears to have on average a favourable and substantial (2.7%) impact on growth in years following liberalization. Looking at the impact of the timing of reform on growth they estimate the **current [nicht 'initial']?** impact of liberalization and the effects of two years later. They find evidence of a 'J curve effect' of liberalization on per capita GDP growth: in year 1 of liberalization the impact on growth

⁸ *Greenaway / Morgan / Wright* (1998).

⁹ *Sachs / Warner* (1995), *Dean et al.* (1994); World Bank (1993).

¹⁰ *Dean et al.* (1994).

¹¹ World Bank (1993).

is negative (but not significant), positive (but insignificant) in year 2 and positive, larger and significant in year 3.¹²

Whereas *Dollar* and *Kraay* find no effect from openness to inequality (arrow [2]), *Kuznets* sees no effect at all between growth and income inequality (arrow [3]). *Dollar* and *Kraay* find generally that ‘growth is good for the poor’. But when average incomes rise, the average incomes of the poorest fifth of society rise proportionately. This holds across regions, periods, income levels, and growth rates.¹³

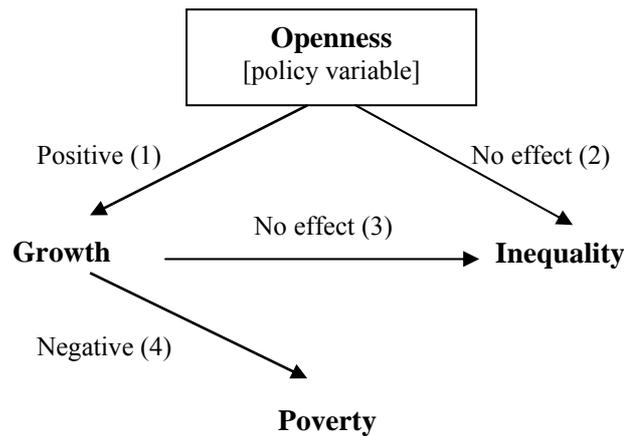


Figure 1: The Mainstream Panglossian View that Openness is Sufficient for Poverty Reduction.

Source: *Milanovic* (2002)

In a less simplistic view it is found that openness is not a choice variable and its effects on poverty reductions are ambiguous and complex (see Figure 2). Many authors, such as *Rodríguez* and *Rodrik*, *O'Rourke*, and *Vamvakidis* find that the link between openness and growth is not always positive (arrow [1] in Figure 2).¹⁴ Openness, however, may have a more indirect positive impact on growth via technology spill-overs. *Coe* and *Helpman* for the industrial countries and *Coe*, *Helpman* and *Hoffmaister* for the ‘North-South trade’ in particular – in line with the endogenous growth

¹² *Greenaway / Morgan / Wright* (1998).

¹³ *Dollar / Kraay* (2001), *Kuznets* (1995).

¹⁴ *Rodríguez / Rodrik* (2001), *O'Rourke* (2000); *Vamvakidis* (1998).

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theory – study the effects of R&D spillovers via imports on TFP growth in the importing countries.¹⁵ Hence, more openness may potentially lead to more growth.

A positive link between growth and openness is postulated by *Bairoch* in a world historic perspective. He sets the record straight on twenty commonly held myths about economic history. Among these are that free trade and population growth have historically led to periods of economic growth; that a move away from free trade caused the Great Depression; and that colonial powers in the nineteenth and early twentieth centuries became rich through the exploitation of the Third World. *Bairoch* argues that these beliefs are based on insufficient knowledge and misguided interpretations of the economic history of the United States, Europe, and the Third World.¹⁶ This position is comparable to that of *Chang*. By historically analysing the reasons why the poor countries remain poor he reaches the conclusion that the nowadays-rich industrial countries (like the USA, England, Germany, and Japan) and the newly industrializing countries (NICs; like Korea, Taiwan) followed a different strategy than they suggest to the developing countries. They did not start their development by liberalising trade. In contrast they started with protecting their markets and made industrial and export-led (subsidy) policy. When becoming successful they simply 'kicked away the ladder'. A similar strategy was also followed by the rapid growing China.¹⁷

The relationship between openness and inequality may be positive, neutral or even negative (arrow [2]). Representatives of studies with such ambiguous results are *Milanovic*, *Ravallion*, and *Barro*.¹⁸ The link between growth and inequality is unclear. Many authors find a negative relationship, whereby the causality runs from inequality to growth (arrow [3]). More (less) inequality is bad (good) for growth.¹⁹ For a recent survey of the literature on the link between inequality and growth, see *Leoni* and *Pollan*.²⁰ It is often

¹⁵ *Coe / Helpman* (1995); *Coe / Helpman / Hoffmaister* (1997).

¹⁶ *Bairoch* (1993).

¹⁷ *Chang* (2002).

¹⁸ *Milanovic* (2003), *Ravallion* (2003), *Barro* (1999).

¹⁹ See *Alesina / Rodrik* (1994); *Persson / Tabellini* (1994); *Perotti* (1993); *Perotti* (1996).

²⁰ *Leoni / Pollan* (2003).

claimed – not only by globalization critiques – that growth may have a negative impact on poverty, meaning more growth is connected with greater poorness (arrow [4]). Even if trade liberalization results in aggregate welfare gains over all households, it is possible that the poorest households could lose. *Harrison, Rutherford* and *Tarr* demonstrate with a computable general equilibrium (CGE) model two approaches to designing trade liberalization in Turkey which ensure that the poor will not lose. The first approach uses direct compensation to losers. The second approach uses limited policy reform, where exceptions to the across-the board reform are chosen to meet the equity goal. In each case, the authors map out some of the efficiency costs of attaining these equity [nicht 'equality'?] goals so as to inform policy makers about the least costly way of attaining them.²¹

Anderson et al. evaluate the fear that China's accession to WTO will impoverish its farmers via greater import competition in its agricultural markets. Results of simulations with the GTAP CGE world model suggest that farm/no-farm income inequality may well rise within China but rural-urban income inequality need not.²²

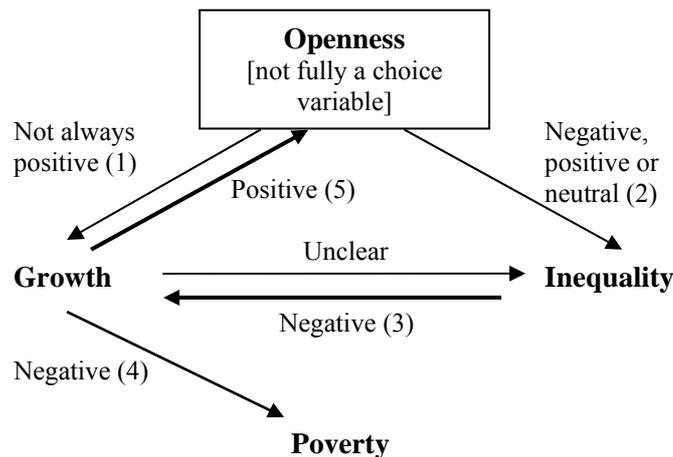


Figure 2: A Less Simplistic View: Openness is not a Choice Variable and its Effects on Poverty Reduction are Ambiguous and Complex

Source: *Milanovic* (2002)

²¹ *Harrison / Rutherford / Tarr* (2003).

²² *Anderson et al.* (2004).

2. What Determines the Huge Income Differences in the World?

In a comprehensive study, *Rodrik, Subramanian and Trebbi* as well as *Rodrik* estimate the respective contributions of institutions, geography, and trade in determining income levels around the world. Their results indicate that the quality of institutions 'trumps' everything else. Once institutions are controlled for, measures of geography have at best weak direct effects on incomes; also trade is almost always insignificant, and often enters the income equations with the 'wrong' (i.e., negative) sign.²³

In the voluminous literature on the determinants of the huge income differences in the world (average income levels in the world's richest and poorest nations differ by a factor of more than 100), three strands of thoughts stand out:²⁴

- 1) *Geography*: Geography is a key determinant of climate, endowment of natural resources, disease burden, transport costs, and diffusion of knowledge and technology from more advanced areas. Geography has a direct effect on incomes, through its effect on agricultural productivity and morbidity. This is shown with arrow (1) in Figure 3. It may also have an indirect effect through its impact on distance from markets and the extent of integration (arrow [2]) or its impact on the quality of domestic institutions (arrow [3]). As geography is as exogenous a determinant as an economist can ever hope to get, it is easiest to identify the causality. Representatives of this school are *Diamond*; *Gallup*, *Sachs* and *Mellinger*, and *Sachs*.²⁵
- 2) *Integration view*: Another camp emphasizes the role of international trade as a driver of productivity change. This view (also identified as trade fundamentalists) gives market integration, and impediments thereof, a starring role in fostering economic convergence between rich and poor regions of the world. This school and also the third school of institutionalists have it harder, since they have to demonstrate the causality of their preferred determinants, as well as identify the effective channels through which it works (see Figure 3). For the trade fundamentalists the task consists of showing that arrows (4) and (5) –

²³ *Rodrik/Subramanian/Trebbi* (2002); *Rodrik* (2003a); *Rodrik* (2003b).

²⁴ See *Rodrik / Subramanian / Trebbi* (2002), 1-5.

²⁵ *Diamond* (1997); *Gallup / Sachs / Mellinger* (1998); *Sachs* (2001).

capturing the direct impact of integration on income and the indirect impact through institutions, respectively – are the relevant ones, while arrows (6) and (7) – reverse feedbacks from incomes and institutions, respectively – are of minor importance. Research in this area includes *Frankel and Romer*, and *Sachs and Warner*.²⁶

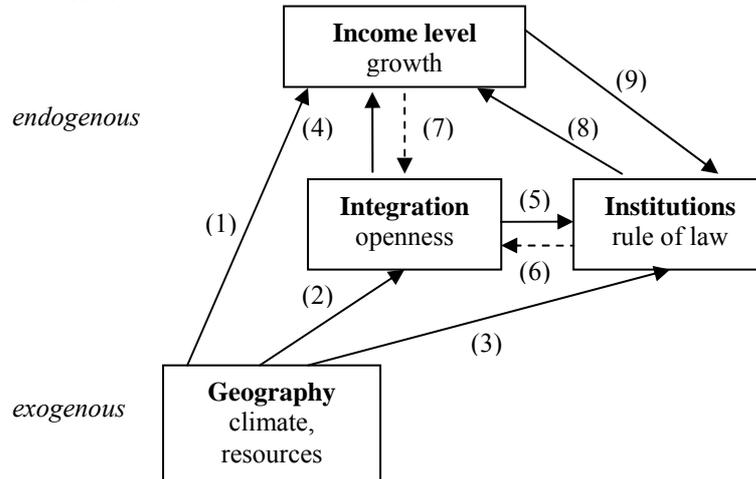


Figure 3: What accounts for the income difference between the richest and the poorest nations?

Source: *Rodrik / Subramanian / Trebbi (2002), 24.*

3) *Institutionalists*: This group of explanations centres on institutions, and in particular the role of property rights and the rule of law. According to them, what matters are the rules of the game in a society and their conductiveness to desirable economic behaviour. They have to worry about different kinds of reverse causality. They have to show that improvements in property rights, the rule of law and other aspects of the institutional environment are an independent determinant of incomes (arrow [8] in Figure 3), and are not simply the consequences of higher incomes (arrow [9]) or of greater integration (arrow [5]). This view is associated primarily with *North*. It has received careful econometric treatment by *Hall and Jones*, who focus on what they call ‘social infrastructure’, and by *Acemoglu, Johnson* and

²⁶ *Frankel / Romer (1999); Sachs / Warner (1995).*

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Robinson, who focus on the expropriation risk that current and potential investors face.²⁷

Growth theory has traditionally focused on physical and human capital accumulation, and, in its endogenous growth variant, on technological change. But long-term economic development is a very complex phenomenon, which cannot easily be explained by any one of the above determinants. Therefore *Rodrik*, in line with historians and many social scientists prefers nuanced, layered explanations of centuries of economic history, where the factors of the three schools interact with human choices and many other not-so-simple twists and turns of fate.²⁸

As is indicated in Figure 3, the extent to which an economy is integrated with the rest of the world and the quality of its institutions are both endogenous, shaped potentially not just by each other and by geography, but also by income levels. Problems of endogeneity and reverse causality plague any empirical researcher trying to make sense of the relationships among these factors.

Rodrik, *Subramanian* and *Trebbi* estimate the following equation:²⁹

$$\log y_i = \mu + \alpha INS_i + \beta INT_i + \gamma GEO_i + \varepsilon_i \quad (1)$$

where y_i is income per capita (in Purchasing-Power-Parity in US\$, PPP GDP, in 1995) in country i , INS_i , INT_i , and GEO_i are respectively measures for institutions,³⁰ integration (measured by openness = ratio of nominal imports plus exports to GDP), and geography (distance from equator of capital city), and ε_i is the random error term. The authors are interested in the size, sign, and significance of the three coefficients α , β , and γ . Three country samples are used, one with 64, one with 80, and one with 140 countries. First, there is a clear and unambiguously positive relationship between income and its possible three determinants. Also the OLS (one stage least-square) estimation of equation (1) results in the correct (positive) signs for all three indicators – institutions, openness, and geography. This suggests that countries with stronger

²⁷ *North* (1990); *Hall / Jones* (1999); *Acemoglu / Johnson / Robinson* (2001).

²⁸ *Rodrik* (2003b).

²⁹ *Rodrik / Subramanian / Trebbi* (2002), 6.

³⁰ Institutional quality measure by *Kaufman / Kraay / Zoido-Lobaton* (2002).

institutions, more open economies, and more distant from the equator (measure of geography) are likely to have higher levels of income. However, if one takes into account the possibility of reverse causality, omitted variables bias, and measurement errors, equation (1) cannot be interpreted as causal or accurate. To address these problems, the authors employ a two-stage least squares estimation procedure, using instruments to determine the variables INS_i and INT_i , respectively. As a result, once the institutional variable is added, geography and openness do not have any additional power in explaining growth and hence development. Institutions trump geography and openness. The importance of institution building for development is also stressed by the World Bank.³¹

B. Is WTO Membership Good for Trade at All?

In provocative papers, *Rose* asserts that WTO membership does not stimulate trade. He estimates the effect on international trade of multilateral trade agreements: the World Trade Organization (WTO), its predecessor the General Agreement on Tariffs and Trade (GATT), and the Generalized System of Preferences (GSP) extended from rich countries to developing countries. He uses a standard ‘gravity’ model of bilateral merchandise trade and a large panel data set covering over fifty years and 175 countries. An extensive search reveals little evidence that countries joining or belonging to the GATT/WTO have very different trade patterns than outsiders. The GSP does seem to have a strong effect, and is associated with an approximate doubling of trade.³²

To estimate the effects of international institutions on trade, *Rose* uses the following specification of the gravity model:³³

$$\begin{aligned} \ln(X_{ij})_t = & \beta_0 + \beta_1 \ln D_{ij} + \beta_2 \ln(Y_i Y_j)_t + \\ & + \beta_3 \ln(Y_i Y_j / \text{Pop}_i \text{Pop}_j)_t + \beta_4 \text{Lang}_{ij} + \beta_5 (\text{FTA}_{ij})_t + \\ & + \beta_6 (\text{CU}_{ij})_t + \beta_7 (\text{GSP}_{ij})_t + \beta_8 (\text{WTO}_{ij})_t + \\ & + \beta_9 (\text{IMF}_{ij})_t + \beta_{10} (\text{OECD}_{ij})_t + \text{Dummies} + \varepsilon_{ijt} \end{aligned} \quad (2)$$

where i and j and denote trading partners, t denotes time, and the variables are defined as follows: X_{ij} denotes the average value of real bilateral trade between countries i and j ; Y is real GDP; Pop is

³¹ World Bank (2002), chapter 3.

³² *Rose* (2003); *Rose* (2004).

³³ *Rose* (2003), 5-6.

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population; D is the distance between i and j ; $Lang$ is a binary 'dummy' variable which is unity if i and j have a common language and zero otherwise; FTA is a binary variable which is unity if i and j both belong to the same regional trade agreement (e.g. EU countries); CU is a binary variable which is unity if i and j use the same currency ('currency union') at t ; GSP is a binary variable which is unity if i extended a GSP concession to j at t or vice versa; WTO is a binary variable which is unity if i and j are GATT/WTO members at t ; IMF is a binary variable which is unity if i and j are IMF members at t ; $OECD$ is a binary variable which is unity if i and j are OECD members at t ; *Dummies* represent all the additional variables used in the gravity model, such as sharing a land border, landlocked countries, islands, area of countries in square kilometres, colony countries, colonizer countries, fixed effects etc.; ε_{ij} represents the omitted other influences on bilateral trade.

Rose finds the following benchmark results (OLS estimation; using other estimation techniques the key results remain quite robust): Distance (in the geographic, linguistic, monetary, and historical senses) reduces trade, while greater economic 'mass' (real GDP and/or GDP per capita) expands it. The effects are economically and statistically significant.³⁴ The coefficients of interest concern the effects of membership in international organizations; what do they reveal? There are two surprises; one negative and one positive. The negative surprise is that membership in neither the GATT/WTO nor the IMF is associated with deeper trade. Indeed, the point estimates for all four coefficients (both or one of the countries being in the GAT/WTO or IMF) are negative. The other surprise is the effect of OECD membership on trade that appears to be strong and positive. The estimations suggest that trade between one OECD member and another is 55% higher (between one OECD member and a non-member is 49% higher). Belonging to a regional free trade arrangement (NAFTA, EFTA, EU etc.) leads to trade creation by a considerable amount. According to *Rose's* estimates bilateral trade between FTA members may rise by around 200%.³⁵ In contrast to GATT/WTO membership, the extension of the GSP from one country to another (which primarily concerns North-South trade) seems to have a large positive effect on trade. Trade may be

³⁴ *Rose* (2004), 9-14.

³⁵ 222% in *Rose* (2003), and 232% in *Rose* (2004).

raised to around hundred percent.³⁶ Belonging to a currency union raises trade by around 200%.³⁷ This is also good news for the EMU of the European Union.

In concluding, *Rose* finds his results puzzling in many respects. If WTO membership is irrelevant, why is it so attractive for many (also developing) countries to become members of WTO? Why should one care whether China is in the WTO? Anyhow, membership seems to be a big deal. Perhaps the GATT and WTO have large effects on income or welfare but only through mechanisms other than trade. Perhaps, he conjectures, the GATT and WTO have acted as an international public good, freeing trade for all countries independent of whether they are members or not.³⁸ However, one cannot test this hypothesis, since there is no data for the counterfactual GATT-free world. It is an open question whether the liberalization of world trade after World-War II would have happened without GATT. Anyway, estimates by *Baier* and *Bergstrand* indicate that post-war growth of world trade, although primarily stimulated by income growth, was nevertheless propelled by tariff reductions.³⁹ Similar results were found by *Badinger* and *Breuss* in a dynamic panel data approach to estimate the relative contributions of income growth, income convergence, and the reductions in tariffs and trade costs to the growth of intra-EU trade over the period 1960 to 2000.⁴⁰ The results suggest that income growth was the major force, accounting for approximately two third of total growth. Trade liberalization still had a sizeable effect, accounting *de facto* for the rest of growth, while income convergence played only a minor role. Reductions in trade costs had no significant effect on the growth of intra-EU trade. Of course this leaves open the question whether this was due to the institution of GATT. *Rose* concludes by speculating that perhaps the GATT has not had much of an effect on trade, but the WTO will. Members of WTO use a more wide-reaching permanent framework to resolve disputes about trade in goods, services, and intellectual property.⁴¹

³⁶ 93% in *Rose* (2003), and 136% in *Rose* (2004).

³⁷ 194% in *Rose* (2003) and 206% in *Rose* (2004).

³⁸ *Rose* (2004), 22-23.

³⁹ *Baier / Bergstrand* (2001).

⁴⁰ *Badinger / Breuss* (2004).

⁴¹ *Rose* (2004), 22.

III. After Eight GATT Rounds - Markets Remain Still Subtly Protected: Market Access Issues

A. Patterns of Protection

Even after eight GATT rounds of trade liberalization improving market access is still an 'unfinished business'.⁴² Despite low average level of protection, agriculture and labour intensive industries carry a much higher level of protection than the average.

The IMF and the World Bank notice in this context that averages of most-favoured-nation (MFN) applied tariffs by importing country or region provide an incomplete picture of protection.⁴³ First, a number of barriers are not covered by the standard MFN databases, including specific tariffs (that is an absolute monetary value per unit of imports), tariff rate quotas (TRQs), prohibitions, contingent protection (refers to import barriers which, rather than being permanent, are introduced on a temporary and often selective basis in response to certain events – import surges, alleged unfair trading practices), the costs of rules of origin, and environmental and technical standards. Second, the averages do not capture the impact of tariff dispersion, in particular tariff peaks and escalation (international tariff peaks are defined as tariffs of 15 percent or higher; escalation refers to tariffs rising with the degree of processing of imports, and the resultant high levels of effective protection). Third, because of preference schemes (GSP) and differing export structures, the barriers faced by exporters to the same market can vary widely. Finally, uncertainty about market access, related to contingent protection, interpretation of norms and procedures, and the discretionary nature of many preference schemes, may represent a further disincentive to exporters.

In the context of the DDA, WTO members are committed to negotiations aimed at substantially improving market access for agricultural and industrial products,⁴⁴ in particular for developing countries in general and for the LDCs.⁴⁵ There are a lot of subtle barriers

⁴² See WTO (2002).

⁴³ IMF / The World Bank (2002), 11.

⁴⁴ IMF / The World Bank (2002) studies in detail the problems of market access for developing countries in the sectors agriculture and textiles and clothing.

⁴⁵ See Doha Ministerial Declaration, paras. 13 and 16; WTO (2001). 'Least-Developed Countries' means 40 countries designated as such by

to market access for developing countries. There remain ‘pockets of protection’ in products of particular interest to developing countries.⁴⁶

The patterns of protection the development countries are confronted with are characterized by the following features:⁴⁷

B. Divergence of Applied Tariffs and their Bindings

Industrial countries have generally set applied tariff rates close to their tariff bindings (legally committed maximum tariff rates), enhancing the predictability and transparency of market access regimes (see Table 1). In contrast, most developing countries bind their tariffs at levels well above their applied rates so that they could in principle substantially increase their applied tariffs without infringing their WTO commitments. Applied tariff rates in 2001 varied considerably across country groupings.⁴⁸ Sub-Saharan African countries continue to have the highest simple average tariff protection (17.2 percent), followed by the Middle East and North Africa (16.8 percent). Among broad country groupings, it is notable that the average tariff of the LDCs (17.9 percent) is higher than that of other developing countries (14.0 percent) and well above that of industrial countries (5.2 percent).

Table 1: Bound and Applied Tariffs on Industrial Products
(Simple Averages)

Import markets	End of implementation period	Share of bound tariffs	Simple MFN average bound	Simple average applied	Year	Δ bound and applied tariffs
NORTH AMERICA						
Canada	2000	99.6	5.2	4.8	1998	0.4
United States	2000	100.0	3.9	4.3	1999	-0.3
LATIN AMERICA						
Argentina	2005	100.0	31.0	13.7	1998	17.3
Chile	2005	100.0	25.0	10.9	1997	14.1
Colombia	2005	100.0	35.5	11.2	1998	24.3
Costa Rica	2005	100.0	44.6	6.4	1998	38.2

the United Nations; 30 of which are WTO members (see http://www.wto.org/english/thewto_e/whatis_e/tif_e/org7_e.htm).

⁴⁶ IMF / The World Bank (2002), 5.

⁴⁷ *Ibidem*, 10 *et seqq.*

⁴⁸ See Table 1 and IMF / The World Bank (2002), 11.

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Import markets	End of implementation period	Share of bound tariffs	Simple MFN average bound	Simple average applied	Year	Δ bound and applied tariffs
Mexico	2005	100.0	34.8	12.6	1998	22.2
Peru	2005	100.0	30.0	13.0	1998	17.0
WESTERN EUROPE						
EC	2000	100.0	4.1	5.0	1998	-0.9
Norway	2000	100.0	3.4	3.3	1998	0.1
Turkey	2000	36.3	42.6	7.5	1996	35.1
EASTERN EUROPE						
Czech Republic	2000	100.0	4.3	4.8	1998	-0.5
Hungary	2000	95.4	7.4	9.0		-1.6
Romania	2000	100.0	30.1			
Slovakia	2000	100.0	4.3	4.9	1998	-0.6
ASIA						
Australia	2000	95.9	14.2	5.8	1998	8.4
Hong Kong (China)	2005	23.5	0.0	0.0	1998	0.0
India	2005	61.6	58.7			
Japan	2000	99.2	3.5	4.2	1998	-0.7
Republic of Korea	2005	90.4	11.7	7.9	1998	3.8
Macao (China)	2005	9.9	0.0	0.0		0.0
Philippines	2005	58.6	26.1	9.5	1998	16.6
Singapore	2005	65.5	4.6	0.0		4.6
AFRICA						
Cameroon	2005	0.1	17.6	17.6	1999	0
Chad	2005	0.4	17.6	17.6	1999	0
Gabon	2005	100.0	15.5	17.6	1999	-2.1
Senegal	2005	32.3	13.8			
South Africa	2005	98.1	17.7			
Tunisia	2005	46.3	34.0			
Zimbabwe	2005	8.8	11.3			

Source: UNCTAD (2003), 11 based on Bacchetta / Bora (2001).

C. Developing Countries Face Higher Barriers to their Exports than Industrial Countries

There are large variations in market access conditions depending on the type of product and the particular exporter-importer combination.⁴⁹ Table 2 presents combined *ad valorem* tariff equivalents (AVEs) of a range of protective measures, while taking into account

⁴⁹ *Ibidem*, 13.

preferences and export structures.⁵⁰ The results suggest that the EU protection is heavily skewed against imports from middle-income developing countries, as the US protection is against imports from LDCs. The geographical patterns of Canadian and Japanese protection are less marked, although the former's protection pattern appears tilted against LDCs and the latter against other low-income countries. Levels of protection in other OECD markets, and in middle-income developing countries as a group tend to be well above those in the Quad (Canada, the EU, Japan and the United States). Given the potential for trade among the developing countries, now at 40 percent of their total exports, barriers to this trade are increasingly significant. The AVEs in the North-North (intra-OECD) trade are around 1.5 to 2.5 percent for manufactures and 14.5 to 41.5 percent for agriculture (see Table 2). The AVEs in the South-South (intra developing countries) trade are 6.5 percent for manufactures and 17 percent for agriculture. Generally therefore, the impediments to trade in agricultural products remain far greater than in manufacturing trade. In the context of the Uruguay Round, quantitative restrictions and other nontariff measures (NTMs) were converted into tariffs. While improving transparency, the modalities of conversion have in many cases allowed an increase in effective protection. Specific tariffs and tariff-rate quotas, which are most frequent in agricultural trade, account for a significant share of the AVEs.⁵¹ The average rate of duty on agricultural imports into Quad

⁵⁰ The Market Access Maps database has been developed by the International Trade Centre UNCTAD/WTO (ITC), Geneva (<http://www.intracen.org/home.htm>), and offers broader coverage of restrictions and preferences schemes than other sources. It incorporates the market access regimes of 137 countries, including preferential regimes, anti-dumping measures, and *ad valorem* equivalents of specific duties and tariff rate quotas (the current release does not yet incorporate recent preferential agreements, such as the EU's 'Everything-but-Arms' (EBA) initiative and the United States' African Growth and Opportunity Act (AGOA), which would further reduce applied tariffs on imports from LDCs (see footnote i to Table 2). These data are combined with bilateral product-specific trade flows from the United Nations' COMTRADE database. Information on tariff and other barriers refers to 2000, on trade flows of the most recent available year. For more information about this database and the methodology for calculating AVEs, see *Bouët et al.* (2001).

⁵¹ IMF / The World Bank (2002), 13.

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markets from LDCs, excluding specific tariffs and effect of tariff-rate quotas, is 1.7 percent.⁵² *Ad valorem* tariff equivalents (not covering domestic measures of support or the effect of export subsidies) of middle-income developing countries are broadly comparable with those of the Quad (see Table 2).

Table 2: Effective *Ad-Valorem* Tariff Equivalents on Bilateral Trade Flowsⁱ⁾ⁱⁱ⁾

Importers	Exporters				
	LDCs	Other Low-Income Countries	Middle-Income Countries	All Developing Countries	OECD
	Total Trade				
Canada	6.7	5.4	4.4	4.4	-
EU	2.8	7.0	10.3	7.2	-
Japan	4.9	6.4	4.5	4.7	-
USA	13.6	6.2	3.6	4.5	-
Other OECD Countries	8.7	13.1	10.4	10.2	-
Developing Countries	-	-	-	7.5	-
Middle Income Countries	8.1	11.9	12.7	-	-
	Trade in Agriculture				
Canada	3.4	18.7	16.3	17.5	33.7
EU	7.6	13.4	24.8	20.0	41.6
Japan	29.1	16.3	21.2	21.9	28.3
USA	28.1	9.5	13.0	12.7	14.5
Other OECD Countries	19.6	28.0	35.4	32.5	42.1
Developing Countries	-	-	-	17.0	14.5
Middle Income Countries	18.2	18.4	23.1	-	-
	Trade in Manufactures				
Canada	7.7	4.2	2.0	2.9	2.0
EU	0.0	5.7	5.5	4.5	2.5
Japan	0.1	5.0	1.4	2.5	1.2
USA	8.0	5.9	2.1	3.6	1.6
Other OECD Countries	5.0	10.8	5.7	7.4	7.4

⁵² See Bacchetta / Bora (2002).

Importers	Exporters				
	LDCs	Other Low-Income Countries	Middle-Income Countries	All Developing Countries	OECD
Developing Countries	-	-	-	6.4	6.9
Middle Income Countries	6.0	11.1	10.9	-	-

Source: IMF / The World Bank (2002), 12, based on ITC.ⁱⁱⁱ⁾

- i) The information in the table does not yet reflect the EU's EBA initiative and the United States' AGOA. Taking account of the former would reduce AVEs on EU agricultural imports from LDCs significantly, though not to zero (restrictions remain on sugar, rice and bananas for a transition period). AGOA would lower AVEs on both agricultural and manufactured imports into the United States for some African LDCs and low-income countries, but the extent of the reduction is hard to predict.
- ii) The protection levels of importing countries in this table are weighted by the imports of the reference group this country belongs to, with the grouping criteria being GDP per capita. This is done to minimize the potential endogeneity bias of using national import weights (a high tariff can limit imports, and in the extreme could carry zero weight if its level is prohibitive).
- iii) For the methodology in calculating AVEs, see *Bouët et al. (2001)*.

D. Tariff Peaks and Tariff Escalation

As far as the current pattern of protection is concerned, tariff barriers to exports from developing countries appear to be heavily concentrated in agriculture, textiles and clothing, and other sectors of export interest to developing countries. The post-Uruguay Round protection pattern is characterized by a high dispersion in tariff rates, with a large number of tariff peaks concerning products of interest to developing countries in agriculture, food, textiles, apparel and some mid-technology products. Tariff escalation also affects trade flows in a number of products of interest to developing countries. It is a pervasive feature in both developed and developing countries and concerns both agricultural and industrial goods.⁵³

Even tariffs are sometimes applied as specific or mixed rates or tariff rate quotas, whose *ad valorem* or percentage equivalents can be difficult to estimate. Tariff duties are sometimes waived under a

⁵³ UNCTAD (2003), VIII.

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variety of national schemes. Non-tariff barriers (NTBs) are inherently complex, they have multiple effects and their incidence varies across time and trade partners. The UNCTAD reports that reductions of tariff rates have gone together with the reduced use of NTBs.⁵⁴

Participation in the WTO has been a mixed experience for the developing countries, providing benefits and also challenges. On the one hand it means an improved and more secure access to third country markets. On the other hand it entails taking on an increasing level of obligations, including market opening and the application of WTO rules.

The future challenge – in particular *vis-à-vis* the developing countries – is the mitigation of the problem of tariff peaks and tariff escalation. All important world-trade related international institutions identify the reduction (phasing out) of tariff peaks and tariff escalation as the most important issue to increase market access for the developing world.⁵⁵

1. Tariff Peaks

While negotiations on reducing trade barriers and support measures in agriculture are part of the 'built-in-agenda' established during the Uruguay Round, market access in industrial products was added to the negotiating agenda in Doha. WTO members, acknowledging the importance of enhanced market access for developing countries, started to negotiate on the reduction or elimination of tariff peaks, high tariffs and tariff escalation. It was pointed out that 'tariff peaks' and 'high tariffs' are not defined in the WTO.⁵⁶ Following the practice of the OECD, tariff peaks may be defined as rates that are more than three times the national average.⁵⁷ IMF and World Bank define international tariff peaks as tariffs of 15 percent or higher.⁵⁸ It is widely agreed among trade economists that a relatively uniform or flat tariff structure is preferable to one exhibiting considerable dispersion. At least two reasons are advanced in favour of a flat tariff structure. First, the costs in terms of welfare and

⁵⁴ *Ibidem*, 13.

⁵⁵ See European Commission (2002), 83; IMF / The World Bank, (2002), 5, 20; UNCTAD (2003), 16 *et seqq.*; WTO (2003), XIX, 45, 61.

⁵⁶ UNCTAD (2003), 18.

⁵⁷ OECD (1997).

⁵⁸ IMF / The World Bank (2002), 11.

economic efficiency of a tariff regime increase as the degree of dispersion increases. Tariff peaks increase the economic inefficiency stemming from protection, as it hampers the exploitation of increasing returns to scale across different markets, while reducing competition and specialization according to comparative advantage.

Second, political economy arguments support a flat tariff structure. Uniform tariff rates are more transparent and easier to administer than non-uniform tariffs, and are less likely to be determined by the relative political power of domestic industries. Finding a formula to reduce tariff peaks is therefore highly desirable.⁵⁹

The UNCTAD gives a comprehensive picture on the problems of tariff peaks in agriculture and manufactures. The incidence of international tariff peaks is calculated by comparing each tariff line with a 15 percent benchmark. This gives an indicator for international peaks. They are more frequent in developing (22.5%) than in developed countries (OECD, 7.3%). The international tariff peaks for manufactured exports from developing countries are highest in South Asia (55.12%) and Sub-Saharan Africa (31%) and Latin America (28.4%), followed by Asian NICs (19.7%) and North Africa and Middle East (10.8%).⁶⁰

⁵⁹ See UNCTAD (2003), 19.

⁶⁰ *Ibidem*, 19-25.

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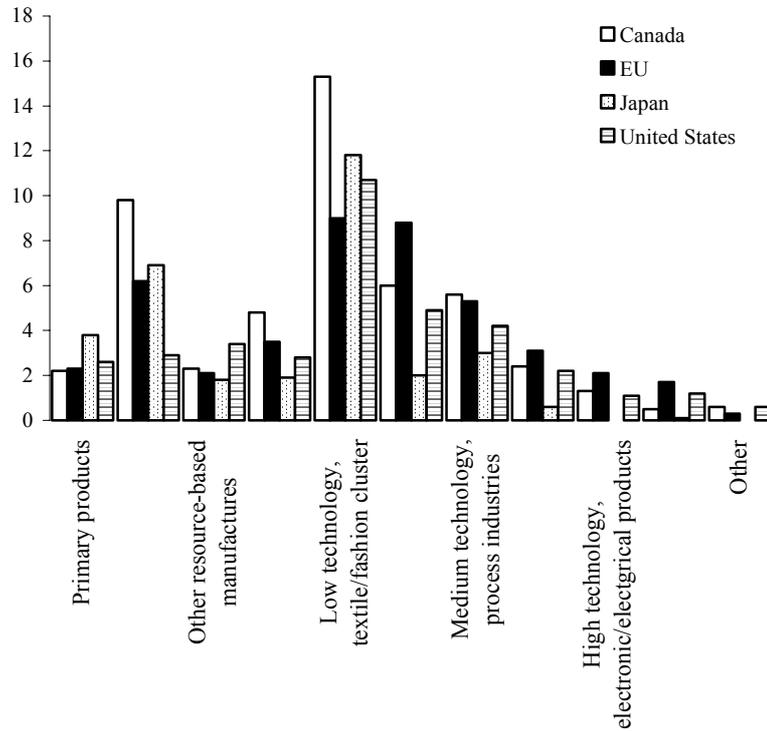


Figure 4: Weighted MFN Tariffs Applied by Quad Countries on Exports from Developing Countries, 2000.

Source: UNCTAD (2003), 26.

To understand the extent by which the structure of world protection may hamper the possibility for developing countries to follow an export-driven shift from traditional commodities to high-value added products one may look at market access opportunities offered by developed countries to developing countries in different technology-differentiated products. Figure 4 shows that, overall, protection in Quad markets is quite clearly concentrated in typical export categories of interest to low- and middle-income developing countries, such as textiles and agriculture. Developing countries which are mainly specialised in raw materials and primary agricultural products are facing higher trade barriers when trying to move into the subsequent production stages (low technology sectors such as processed agricultural products and textiles, or medium technologies such as automobiles).

According to the World Trade report of the WTO the average applied tariff across 23 categories used during the Uruguay Round shows that the average tariff in the agricultural categories is higher than that in most of the industrial categories (see Figure 5). The highest rates are applied to animals, beverages and spirits, dairy products and tobacco. In general the pattern of protection is lower on lower value-added products such as cut flowers, fruits and vegetables, coffee and tea.⁶¹

According to the report the incidence of high tariffs in agricultural products poses a particular challenge to negotiations. Furthermore, some developed countries have insulated sensitive sectors from international trade reform: the United States (peanuts), Canada (dairy and poultry), Japan (rice) and the Republic of Korea (rice).⁶²

⁶¹ WTO (2003).

⁶² *Ibidem*, 128.

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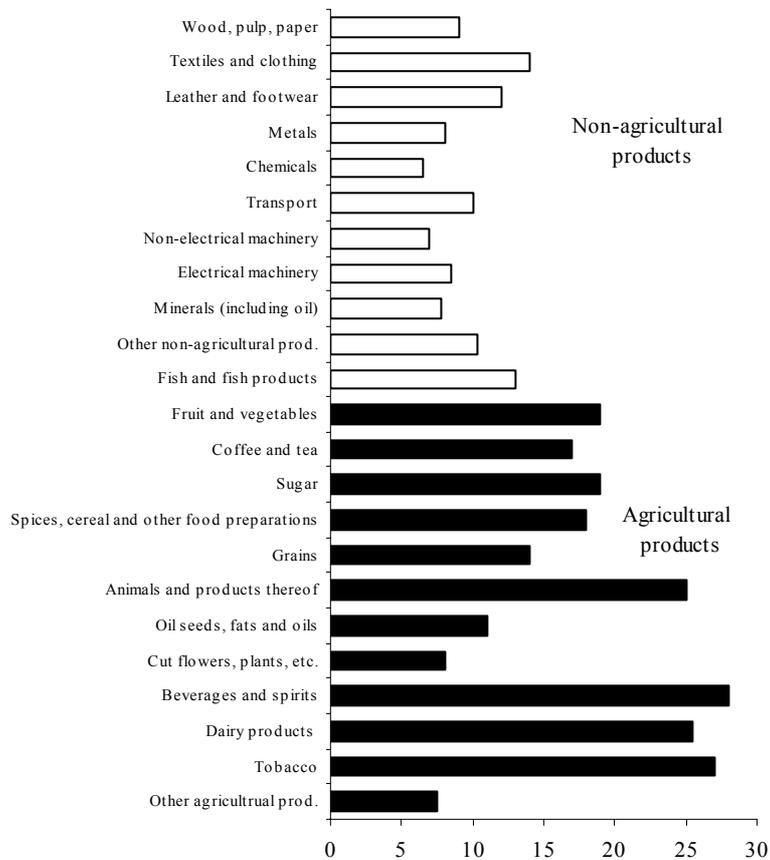


Figure 5: Average MFN Applied Rates by Product Category
Source: *WTO* (2003), 128.

According to the IMF and the World Bank between 6 and 14 percent of Quad tariff lines are subject to tariff peaks, in some cases at rates well over 100 percent.⁶³ Tariff peaks are also a prominent feature of tariff regimes in developing countries. Most preference schemes, moreover, offer little relief from tariff peaks.⁶⁴ In Canada and the United States, tariff peaks are concentrated in textiles and clothing, and in the cases of the EU and Japan in agriculture, food products and footwear. Notably, estimates suggest that the capping

⁶³ IMF / The World Bank (2002), 13 *et seq.*

⁶⁴ See *Hoekman et al.* (2001).

of all peaks at the threshold of 15 percent would reduce AVEs in textiles and clothing by around 20 percent for imports from most source countries into the United States, and by 59 percent for imports from China. In agriculture and food products, they would decline by 40-60 percent on imports into the EU.⁶⁵ According to simulations by *Hoekman et al.* full duty and quota free access for LDCs in the Quad for tariff peak products would result in a 11 percent increase in their total exports – on the order of \$ 2.5 billion. Exports to Quad countries of tariff peak products would expand by 30 to 60 percent.⁶⁶ Given that LDC exports on tariff peak items account for only a small share of total developing country exports, granting LDCs duty free access would have a negligible impact on other developing countries. For the same reason, Quad imports increase only marginally, suggesting that this should not be a factor constraining implementation of duty free access for the poorest countries.

Most developing countries enjoy preferential access to Quad markets, either through unilateral schemes such as the GSP,⁶⁷ or through free trade agreements such as NAFTA or EU Association Agreements. In the case of Canada, Japan and the EU, around 170 developing countries benefit from GSP (or better) preferences. In the case of the US, 29 developing countries are excluded from GSP, so that only 140 developing countries benefit from some sort of preferential access. Preferences granted by the Quad are of a cascading nature.⁶⁸ Countries with FTAs generally get the best treatment, followed by LDCs and other developing countries (see Table 3). The US grants preferences to the members of the Andean Pact (ATP) and the Caribbean countries (CAR), and to Mexico under NAFTA. For the EU, in Table 3 both Lomé preferences (ACP), and the FTA preferences granted to Eastern Europe (Europe Agreements) and Mediterranean countries are reported. In the case of the EU three different groups of countries are constructed: Non-ACP LDCs; ACP countries (broken down into LDCs and non-LDCs); and non-ACP, non-LDC developing countries that benefit from

⁶⁵ See *Bouët et al.* (2001).

⁶⁶ *Hoekman et al.* (2001).

⁶⁷ The EU was the first customs territory to grant GSP preferences to developing countries in 1971. See *Kennan / Stevens* (1997) for a detailed description of the European GSP.

⁶⁸ See *Hoekman et al.* (2001), 13.

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GSP treatment. Finally, in the case of Canada, developing countries are grouped into those benefiting from LDC, GSP, or Caribbean preferences, and Mexico and Chile that benefit from FTAs.

On average these preferential schemes are quite generous. In the EU, the average tariff (for all goods) faced by LDCs or ACP members is below 1 percent, compared to the 7.4 percent average MFN tariff. GSP preferences in the EU are close to 50 percent (see Table 3; last column). In the United States LDC and GSP preferences offer more than a 50 percent average margin – LDC preferences being more generous around 65 percent. Japan offers a 48 percent preference margin under their GSP regime, and an average 60 percent preference for LDCs. Canada gives a 25 percent preference to GSP countries and 45 percent to LDCs (see Table 3). Preferences are much less generous for tariff peak products (see Table 3, third column). Except for the EU, the preference margins are significantly below the average across all products.⁶⁹

Table 3: Tariff Peaks and Preferential Duty Rates in the Quad, 1999

Preferential Trade Agreements/GSP	Number of Countries	Average Preference Rate (unweighted in %)	
		Tariff Peak Products	All Goods at HS-6
U S			
Canada	1	0.6	0.1
Mexico	1	1.6	0.3
Israel	1	0.6	0.1
ANDEAN /a	4	14.0	1.7
Caribbean Community /b	22	13.5	1.6
GSP-only beneficiaries /c	80	16.0	2.4
LDCs /d	38	14.4	1.8
Others (MFN Rate)		(20.8)	(5.0)
E U			
Eastern Europe and Middle East /e	30	20.1	1.8
GSP-only beneficiaries /f	42	19.8	3.6
LDCs (ACP) /g	37	11.9	0.8
Other ACP Countries /h	32	12.4	0.9
Other LDCs /i	11	12.6	0.9
Others (MFN Rate) /j		(40.3)	(7.4)
J a p a n			

⁶⁹ For a very detailed analysis by products, see *Hoekman et al. (2001)*.

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Preferential Trade Agreements/GSP	Number of Countries	Average Preference Rate (unweighted in %)	
		Tariff Peak Products	All Goods at HS-6
GSP-only beneficiaries /k	127	22.7	2.3
LDCs /l	42	19.0	1.7
Others (MFN Rate)		(27.8)	(4.3)
Canada			
United States	1	7.1	1.6
Australia	1	28.2	7.8
New Zealand	1	28.2	7.8
Mexico	1	15.9	3.1
Chile	1	12.2	2.4
Israel	1	11.8	2.5
Caribbean countries /m	18	23.3	4.3
GSP-only beneficiaries /n	108	28.2	6.2
LDCs /o	47	22.8	4.4
Others (MFN Rate)		(30.5)	(8.3)

Notes:

- /a Bolivia, Colombia, Ecuador, Peru under Andean Trade Preference Act.
- /b Based on 20 Caribbean countries under Caribbean Basin Economic Recovery Act and Bahamas, Nicaragua.
- /c Included 80 developing countries or territories under GSP scheme but excluding 29 other developing economies.
- /d Based on UN 48 LDCs but excluding 10 countries.
- /e Including countries with reciprocal and non reciprocal trade agreements with the EU.
- /f Most developing countries in Latin America and Asia; excludes Hong Kong, Korea and Singapore (non-GSP nations).
- /g Included 37 ACP and LDCS under Lomé Convention.
- /h Included ACP 32 countries not under the group of LDCs.
- /i Included 11 LDCs but not under ACP countries.
- /j Included all industrial countries, Hong Kong, Korea, Singapore and 14 transition countries.
- /k 127 countries; excludes Albania, Bosnia, Estonia, Latvia, Lebanon, Lithuania, Macedonia, Moldova, Vietnam, Yugoslavia.
- /l Excludes 3 LDCs: Comoros, Djibouti and Tuvalu. 3 others (Congo DR, Kiribati and Zambia) are included in the GSP group.
- /m Included 18 Caribbean countries or territories under Commonwealth Caribbean Countries Tariff.
- /n Excluded 8 developing countries: Albania, Aruba, Bosnia & Her, Macedonia, Mongolia, Oman, Saudi Arabia, Yugoslavia.
- /o Excluded Myanmar.

Source: *Hoekman / Ng / Olarreaga* (2001), 14.

2. Tariff Escalation

The practice of tariff escalation biases exports towards unprocessed resource-based commodities, characterized by low value-added. This may cause difficulties to commodity-dependent developing countries in their attempt to diversify their export base. The pattern of protection creates particular hurdles for countries taking the first steps up the technology ladder. According to the IMF and the World Bank protection is relatively low for primary products, but increases sharply for low-technology, labor-intensive food processing and light industries, declines somewhat in the medium-technology range – such as automotive products – and is lowest at the upper end of the technology spectrum (see also Figure 4).⁷⁰ In a snapshot of the post-Uruguay Round tariff levels by product and by processing stage in the Quad markets the UNCTAD study shows the following picture: First, with few exceptions, post-Uruguay Round tariffs escalate (that means increase between these categories) not only between raw and semi-finished but also between semi-finished and finished goods.⁷¹

On average, the escalation in Canada and Japan and the EU is higher between raw and finished, while in the United States the highest average escalation is found between semi-finished and finished goods. Tariffs tend to escalate not only in agriculture but also in manufacturing. The average post-Uruguay Round tariff for all industrial products ranges from 0.8 percent on raw materials to 4.8 percent on the finished product, resulting in an average tariff level of around 3 percent.

A more detailed analysis of tariff escalation, distinguishing between markets of developing countries shows that tariff escalation is not just a feature of developed markets but is present in fact (sometimes even more prominently) in developing countries as well.⁷² As in the case of Quad countries, in most cases escalation in developing countries is greatest between raw and finished products. However, as in the case of the United States, in Asian NICs, there is de-escalation between raw and semi-finished products, and the highest escalation is found between semi-finished and finished products. Of course the pattern of escalation is different in the

⁷⁰ IMF / The World Bank (2002), 14.

⁷¹ UNCTAD (2003), 27.

⁷² *Ibidem*, 28.

world regions analysed by the UNCTAD: Asian NICs, South Asia, North America, Sub-Saharan Africa, Oceania, North Africa and Middle East, Latin America.⁷³ In summary, the evidence shows that tariff escalation is a quite widespread phenomenon that affect both agricultural and industrial products, and is present in markets of both developed and developing countries (for a compact representation, see Figure 6).

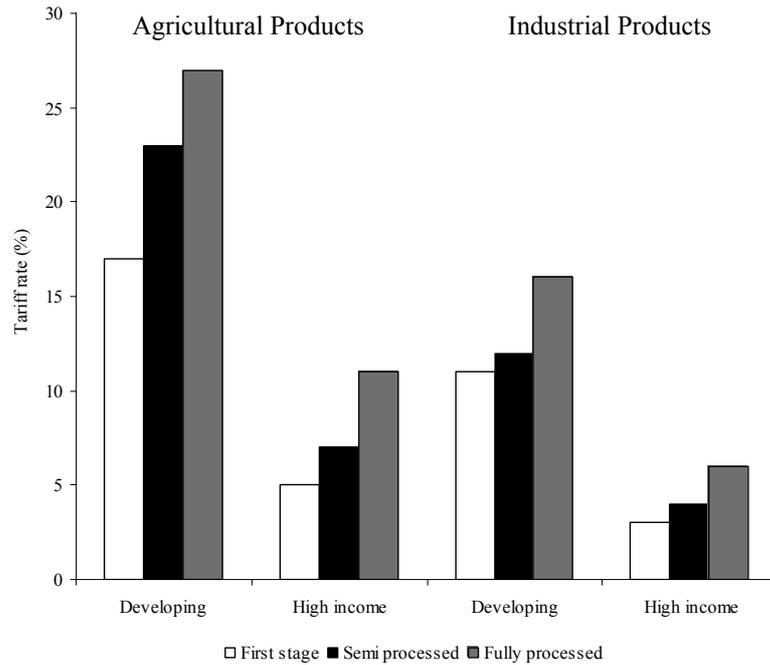


Figure 6: Tariff Escalation
 Source: *European Commission* (2002), 83

At the May 2001 3rd UN Conference on LDCs, all industrialised countries for the first time committed to the objective of duty and quota free access for all exports originating in LDCs. Such an emulation of the unilateral EU *‘Everything But Arms’* (EBA) initiative (opening markets to all LDC exports, by allowing duty and quota free access) launched in early 2001 by other major industrialised nations, would contribute significantly to LDCs’ opportunities for trade based growth. The EU was the major destination for

⁷³ *Ibidem.*

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LDCs' exports even before the EBA initiative was adopted.⁷⁴ In 1998, the EU accounted for 56 percent of their total exports. Moreover, the EU already had very low tariffs for LDC imports. Exports of the main products liberalised by EBA were, however, very low. Eliminating protection will certainly enhance trade in the products concerned. Studies by the UNCTAD and *Ianchovichina et al.* on the impact of EBA have forecasted large increases in welfare as a result – between US\$ 400 and US\$ 317 million depending on the study.⁷⁵ However, even prior to the adoption of EBA, levels of protection against LDC exports were far higher in other Quad countries than in the EU (see Figure 7). Thus if all Quad members were to adopt similar measures, the welfare impact would be much higher (US\$ 1.8 bn to US\$ 2.5 bn).⁷⁶

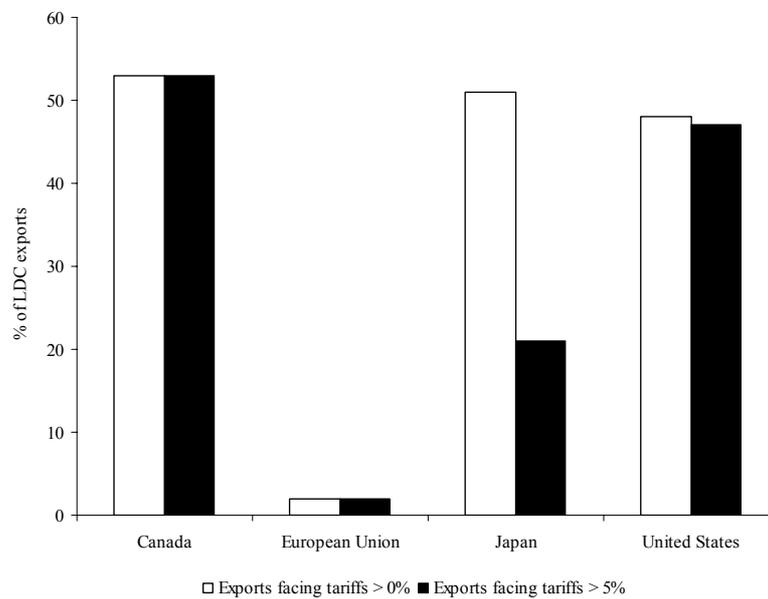


Figure 7: Pattern of Protection Facing LDC Exports (pre-EBA)
Source: European Commission (2002), 75.

⁷⁴ Council Regulation (EC) No 416/2001 of February 2001.

⁷⁵ UNCTAD (2001); *Ianchovichina et al.* (2001).

⁷⁶ See European Commission (2002), 84.

Table 4: Liberalization in Agriculture: The Role of Tariff Escalation Results of Model Simulations of a 50 % Worldwide Cut in Tariffs on Processed Agricultural Products

Regions	Welfare effects		Aggregate trade data	
	Percentage change	Total value ('97 US\$ mill.)	Exports	Terms of trade
			Percentage change	
Asian NICs	0.101	994.9	0.578	0.037
China	0.040	475.4	0.697	-0.059
South Asia	0.047	230.7	1.215	-0.243
Western Europe	0.022	1,613.2	0.340	0.038
North America	0.018	1,415.7	0.403	0.080
Transition economies	0.098	750.0	1.150	-0.039
Sub-Saharan Africa	0.049	153.0	1.324	-0.220
Oceania	0.232	951.4	1.425	1.003
North Africa and Middle East	0.260	2,036.4	1.706	-0.408
Latin America	0.057	1,013.8	1.042	0.042
Japan	0.058	2,127.0	1.196	-0.255
Rest of the World	0.096	242.1	1.843	0.183
Total		12,003.4		

Source: UNCTAD (2003), 45 *et seq.*

The effects of the elimination of tariff escalation in agriculture were evaluated by the UNCTAD with the help of CGE model simulations.⁷⁷ The model used in the simulations was the standard static GTAP5 model, with perfect competition in all sectors and constant returns to scale.⁷⁸ The database was GTAP5 (1997 data), modified by the UNCTAD to account for tariff preferences (related to GSP, no-reciprocal agreements as the Lomé-Cotonou agreement, and regional trade agreements) available from the UNCTAD TRAINS database.⁷⁹ The model was aggregated to cover 12 world

⁷⁷ UNCTAD (2003), 45 *et seq.*

⁷⁸ See Dimarana / McDougall (2002).

⁷⁹ UNCTAD-TRAINS (Trade Analysis and Information System) is a comprehensive computerized information system at the HS-based tariff line level covering tariff, para-tariff measures as well as import flows by origin for more than 140 countries. See the UNCTAD-TRAINS website at <http://r0.unctad.org/trains/>. In country notes this homepage also informs on trade control measures adopted by selected developing countries. HS is the harmonized system of tariff classification.

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regions (3 of which comprise developing countries: South Asia, Sub-Saharan Africa, North Africa and Middle East) and 6 sectors (natural resources, manufactures, primary agriculture, processed agricultural products, textiles and apparel, services).⁸⁰

A 50 percent worldwide cut in tariffs on processed agricultural products would result in increase world welfare by about 12 US\$ billion, roughly half those obtained from the liberalization of all agricultural sectors. The largest welfare gains are received in Oceania, North Africa and Middle East and in the Asian NICs (see Table 4). The elimination of tariff escalation in the agricultural sector improves export chances for developing regions such as South Asia, Sub-Saharan Africa as well as North Africa and Middle East (see Table 4).

E. Contingent Protection

1. Antidumping Measures

Among the trade remedies permitted under WTO rules, antidumping has become by far the most widely used, in both industrial and developing countries. Since 1995 over 1,800 antidumping investigations have been initiated.⁸¹ While industrial countries (511 cases) have traditionally been the main users of such measures, developing countries (1086 cases) have been more active in recent years, led by India, Argentina, Brazil, and South Africa. The transition countries initiated 248 cases since 1995. In the seven years to 2001, developing countries initiated almost two thirds of all investigations, well in excess of their share in world trade. However, developing countries have also been the target of nearly 60 percent of investigations, mostly initiated by other developing countries.

According to the IMF and the World Bank the recent steep rise in antidumping investigations may put at risk the predictability and non-discriminatory application of trade policies.⁸² Recent enforcement practices have raised serious concerns about the influence of special interests on public policy, and may impose large costs on consumers and downstream industries in importing countries. Moreover, the deterrent effect of an investigation typically reaches well beyond the targeted exporter, and impedes incentives to pass

⁸⁰ See UNCTAD (2003), 50 *et seq.*

⁸¹ See IMF / The World Bank (2002) 15.

⁸² *Ibidem*, 15 *et seq.*

on efficiency gains.⁸³ Additionally the frequency of antidumping measures increases during, and may thus reinforce, economic downturns.⁸⁴ Small firms and countries face greater uncertainty as they often lack the resources to challenge antidumping. The introduction of competition law principles and of public interest clauses, giving affected importers and users legal standing to argue against protection, could reduce the protectionist bias of antidumping.⁸⁵

2. Standards and Non-tariff Barriers to Trade

Many developing countries are concerned that they are ill-prepared to meet increasingly complex and burdensome standards and regulations. Such regulations play an important role in facilitating trade by ensuring quality, safety and technical compatibility. However, there is often a risk that such regulations may be captured by special interests, particularly when regulatory processes are not transparent. And because the industrial countries are leaders in such standards, conditions might be imposed that are tighter than needed to achieve their objectives and hence just serve as a new kind of protectionist measure.

Technical barriers have become a key concern regarding market access. Annual notifications of new technical barriers (including health and safety standards, and product standards) to GATT/WTO increased steadily from a dozen or two in the early 1980s to over 400 in 1999. Low- and middle-income countries reported that over the period from 1996-1999 more than 50 percent of their potential exports of fresh and processed fish, meat, fruit and vegetables into the EU were 'prevented' by their inability to comply with SPS (Sanitary and Phytosanitary Measures) requirements.⁸⁶ SPS and other technical requirements have been viewed by developing country trade officials as a greater constraint on their ability to exploit their comparative advantages and hence to export than tariffs and quantitative restrictions.

According to *Henson et al.* surveying government officials in 65 low- and middle-income countries SPS requirements were considered the most significant impediment to exports to the EU.⁸⁷ Other

⁸³ *Finger* (1993).

⁸⁴ *Knetter / Prusa* (2000).

⁸⁵ *Hoekman / Mavroidis* (1996).

⁸⁶ See IMF / The World Bank (2002), 16.

⁸⁷ *Henson et al.* (2000).

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technical requirements (e.g. labeling regulations or compositional standards) were also considered significant impediments to trade. Other factors of impediments are transport and other direct export costs, tariffs and only at the last palce quantitative restrictions.⁸⁸ Overall, the developing countries have found it difficult to participate in designing standards in ways that better reflect their concerns and capabilities, and to challenge them where they were imposed in a discriminatory manner. A number of agreements in the Uruguay Round have addressed these concerns by strengthening international rules governing product standards in order to minimize their abuse for protectionist purposes. Among others, these are the Agreement on Technical Barriers to Trade (TBT, for trade in manufactured products), and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS, relating to health and safety for humans and animals). Nevertheless, SPS and TBT adversely affect LDCs exports.⁸⁹

F. Trade Preferences

Most developing countries have preferential access to industrial country markets for a wide range of products. This departure from the traditional non-discrimination principle of the GATT has been sanctioned under the GSP. In 2001, some 15 such schemes were in effect, though country coverage and preference margins over applied MFN tariffs varied widely. In addition to GSP an important recent development has been the proliferation of bilateral and regional free trade agreements between industrial and developing countries. Such agreements have to cover substantially all trade, unlike GSP schemes. However, the drawbacks related to rules of origin apply to both measures.

According to the IMF and the World Bank the benefits of many GSP schemes for their beneficiaries have been limited.⁹⁰ The reason is that preference margins are smaller for products that the importing country deems to be sensitive – which are also among the most protected.⁹¹ *Ozden* and *Reinhard* found evidence that the availability of unreciprocated market access preferences has undermined the incentives of benefiting countries to engage in trade

⁸⁸ See also IMF / The World Bank (2002), 17.

⁸⁹ See *Fontagné* (2003), 5.

⁹⁰ IMF / The World Bank (2002), 18.

⁹¹ *Ibidem*.

liberalization, thus at times perpetuating anti-export biases in their trade regimes.⁹² The cost of monitoring of rules of origin to avoid transshipment may have reduced the benefits expected from such schemes. Rules of origin are akin to local content requirements (value added thresholds). Costs arise both from exporters seeking to benefit from preferences by producing inputs from less efficient sources (trade diversion), and from the administration of, and accounting for 'origin'.⁹³ *Brenton* and *Manchin* have shown that as a result of unattractive rules of origin, only one-third of imports that were eligible for preferential treatment did in fact enter the EU market with reduced duties.⁹⁴ This problem is particularly acute for textiles and clothing.

Recently market access under GSP schemes has been enhanced on a regional basis, in particular for African countries. To date 36 Sub-Saharan African countries have qualified in principle for preferential access under the United States' AGOA (African Growth and Opportunity Act), adopted in 2000 (signed into law on May 18, 2000).⁹⁵ Margins of preference are substantial for textile and apparel products as well as for a range of other light manufactures and food products. In order to benefit from this scheme, countries have to meet, in addition to relatively tight rules of origin and standard GSP criteria, requirements relating to child labour and the protection of internationally recognized workers' rights. The administrative requirement involved in documenting eligibility may explain why only 15 countries had availed themselves of benefits under this scheme in the year 2002, with most of the benefits accruing to four countries – Gabon, Lesotho, Nigeria, and South Africa and with fuel accounting for 85 percent of AGOA imports.⁹⁶ *Mattoo et al.* estimate that by 2008 the volume of African exports to the US market may rise by an additional 6-7 percent.⁹⁷ Presently Sub-Saharan African exporters hold their US market share in textiles and clothing of 1.6 percent. In 2002 the AGOA imports increased by 10 per-

⁹² *Ozden / Reinhardt* (2002)

⁹³ IMF / The World Bank (2002), 18 *et seq.* give examples in case of NAFTA and the EU.

⁹⁴ *Brenton / Manchin* (2002)

⁹⁵ IMF and the World Bank (2002), 19.

⁹⁶ *Ibidem*; and USITC website at <http://www.usitc.gov/>.

⁹⁷ *Mattoo et al.* (2002).

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cent to US\$ 9 billion. Excluding petroleum imports, the AGOA imports were less than US\$ 2.2 billion.⁹⁸ However, effective preference margins will decline as quotas under the WTO Agreement on Textiles and Clothing are phased out.

A number of industrialised countries have recently granted comprehensive tariff and quota free access to LDCs. The EU's EBA initiative has extended such preferential access since coming into effect in March 2001. It covers all products, except for sugar, bananas, and rice, which are to be liberalised more gradually.⁹⁹ Unlike the EU's GSP scheme, benefits under the EBA are extended on an indefinite basis, subject however, to broad safeguards. Similar schemes providing for virtually unqualified duty- and quota-free access for LDCs have also been adopted by New Zealand, Norway, and Switzerland. Such broad-based tariff-free market access for LDCs can assist in diversifying their export structures.¹⁰⁰ If such schemes are adopted by all Quad markets, LDC exports to the Quad might increase by US\$ 2.5 billion, or about 11 percent, with relatively limited cost in terms of trade diversion.¹⁰¹

Table 5: Market Access for LDCs

Duty-Free imports into developed countries from developing countries and LDCs, 1996-2001 (percent)						
	1996	1997	1998	1999	2000	2001
Excluding arms						
Developing countries	54.8	50.5	49.9	57.2	62.8	65.7
LDCs	71.5	67.2	77.7	77.1	75.4	75.3
Excluding arms and oil						
Developing countries	56.8	51.5	49.9	58.1	65.1	66.0
LDCs	81.1	75.5	75.0	73.6	70.5	69.1

Source: WTO (2003), 126.

In spite of all these activities the performance of the LDCs is mixed. The share of the value of LDC exports, excluding arms, that enters developed country markets duty-free has increase since 1996 (from 71.5 to 75.3 percent). However, when the figure is further

⁹⁸ See <http://www.agoa.gov/resources/TRDPROFL03.pdf>.

⁹⁹ See *Breuss / Griller / Vranes* (2003).

¹⁰⁰ *Bachetta / Bora* (2002).

¹⁰¹ IMF / The World Bank (2002), 20.

adjusted for oil there is a clear downward trend by around 12 percentage points (see Table 5). This downward trend reflects the shift in LDC exports to products and export markets that are not duty-free. In fact, the trade values show that there is basically no increase in the value of duty-free imports from LDCs while at the same time there is a significant increase in the dutiable imports from LDCs.¹⁰²

In 2001, the average trade weighted tariff facing LDC agricultural exports into developed country markets was 3.2 percent. The equivalent figures for textiles and clothing are 4.5 and 8.5, respectively.¹⁰³

LDCs account for less than one half of one percent of world trade. In the Doha Ministerial Declaration, Ministers committed themselves to considering additional measures to progressively improve market access for LDCs and to the objective of duty-free and quota-free access for products originating in LDCs. Similar goals were also proclaimed in the context of the eighth Millennium Development Goal (MDG). The WTO noticed that in 2000, the distribution of markets for LDC products remains heavily concentrated.¹⁰⁴ Sixty-three percent of all exports go to the EU and the United States. In addition to the EU and US, the major developed country markets are Australia, Canada, Japan, Norway and Switzerland. Together the developed countries import 69 percent of total LDC exports. Three of the top five markets are developing countries in East Asia, China, Republic of Korea and Thailand. These countries account for 20 percent of total LDC exports. The remaining top 10 markets are: Canada, India, Japan, Singapore and Chinese Taipei. The market penetration of LDC exports is greatest in India and Thailand at 2.1 percent, followed by the EU at 1.4 percent. This in a way underlines the general trend of the last decade of a steady increase of the South-South trade noticed by the WTO.¹⁰⁵ Accordingly, over the eleven-year period (1990-2001), South-South trade expanded twice as fast as world trade. The share of developing country exports to developing countries rose from 28 percent to 37 percent of their total exports. In the same period, the import share rose by 10 percentage points to over 41 percent. More than

¹⁰² WTO (2003), 126.

¹⁰³ *Ibidem*.

¹⁰⁴ *Ibidem*.

¹⁰⁵ *Ibidem*, 24 *et seqq.*

two-thirds of intra-developing country trade originates from and is destined to developing Asia.¹⁰⁶

G. Regionalism versus Multilateralism

1. Increasing Attractiveness of RTAs

The global trading system has seen a sharp increase in regional trade agreements (RTAs) over the past decade. A total of 259 RTAs had been notified to the GATT/WTO by the end of December 2002,¹⁰⁷ although only 176 RTAs are currently in force. An additional 70 RTAs are estimated to be operational although not yet notified and about 70 are under negotiation. As of March 2003, only four WTO members – Hong Kong, China; Macao, China; Mongolia and Chinese Taipei – were not party to a regional trade agreement. With the sole exception of Mongolia, these WTO members are all engaged in negotiations on preferential agreements.

While the recent rapid growth of RTAs began in the 1990s, the seeds of this development were sown in the early 1980s. Part of the impulse towards regionalism was driven then by the bleak prospects for progress on the multilateral agenda and the decision of the United States to explore the preferential approach to trade. The United States signed its first free trade agreement (FTA) with Israel in the mid-1980s, followed by an FTA with Canada in 1988 and the North American Free Trade Agreement (NAFTA) in 1994. The current negotiations on free trade for the Americas (FTAA) span two continents and involve over 30 countries. More recently, also Japan and other Asian countries have departed from exclusive reliance on MFN-based trade.

The WTO sees the major explanation for the expansion in the number of RTAs in the 1990s in the collapse of the COMECON (the preferential arrangement involving the old Soviet Union and Eastern European countries) and the alignment of the Central and Eastern European countries (CEEC) to the EU.¹⁰⁸ Of the 123 new RTAs in force since 1990 (see Table 6), covering trade in goods, about a third were signed among transition economies (e.g. CEFTA). Another third were agreements concluded as part of the effort of the transition economies to integrate with the EU (e.g. Europe Agreements).

¹⁰⁶ *Ibidem*, 25.

¹⁰⁷ *Ibidem*, 46 *et seq.*

¹⁰⁸ *Ibidem*, 46.

Regional agreements among developing countries (South-South RTAs) account for about 30-40 percent of all RTAs currently in force, including those not notified to the WTO. In Africa alone, there are about eighteen trading agreements. Partly, they establish customs unions or common markets. They tend to encompass a large number of countries and have extended transition periods, often 20 or 30 years, which makes some recent RTAs more a declaration of intent than agreements affecting actual trade flows.

The number of RTAs signed between developed and developing countries (North-South RTAs) has increased over the years. The EU has played a major role in this respect through a series of agreements with a number of countries including Turkey (customs union since 1996), Mexico, South Africa and Chile. Euro-Mediterranean Association Agreements have also been concluded or are being negotiated between the EU and the countries of North Africa and the Middle East. These replace the earlier non-reciprocal RTAs signed in the 1970s. Moreover, the post-Lomé Cotonou agreements will be negotiated between the EU and the ACP countries on the basis of reciprocal preferential trade.

Table 6: Notified RTAs in Goods by the Date of Entry into Force and Type of Partners (as of January 2003)

	N-N	N-S	N-E	S-S	S-E	E-E	Total
1958-1964	2	0	0	1	0	0	3
1965-1969	0	0	0	0	1	0	1
1970-1974	5	3	0	2	0	0	10
1975-1979	0	5	0	1	0	0	6
1980-1984	2	1	0	1	0	0	4
1985-1989	1	1	0	2	0	0	4
1990-1994	3	3	12	5	0	6	29
1995-1999	3	7	10	4	12	28	64
2000-2002	0	11	4	5	4	6	30
Total	16	31	26	21	17	40	151

N (North) = developed countries, including Canada, the United States, EU (15), EFTA, Japan, Australia and New Zealand; E (East) = transition countries, including the former Soviet Union, Eastern and Central Europe, the Baltic States and the Balkans; S (South) = developing countries, including the remaining countries.

Source: WTO (2003), 47.

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There are several economic and political considerations why countries are interested in regionalism.¹⁰⁹ Anyhow, the international trading system is increasingly characterized by a complex network of preferential trade regimes, sitting side-by-side with the WTO multilateral trading system.¹¹⁰ There is a rise in cross-regional bilateral agreements, the growing involvement of countries that have traditionally remained outside regional arrangements, the development of inter-linked (overlapping) agreements, and considerable variations in the design and content of RTAs. One third of the FTAs currently under negotiations are among countries that belong to different geographical areas. All major countries are involved in cross-regional FTAs. The EU has concluded FTAs with Mexico, Chile, South Africa and numerous other African and Middle Eastern countries and is in the process of negotiating regional agreements with ACP countries under the framework of the Cotonou Agreement. The EU is also negotiating an agreement with MERCOSUR. EFTA has signed a FTA with Mexico and various African countries, and is negotiating FTAs with Canada, Chile and South Africa. The United States signed a FTA with Jordan, and is negotiating with Australia, Chile, Egypt and Singapore. Countries that have traditionally remained outside regional agreements are now negotiating and joining RTAs. The last major country to join the trend is Japan, which signed a FTA with Singapore in January 2002.

Table 7: Preferential Trade Share of Intra RTAs Trade in Merchandise Imports, 2002 and 2005 (as of January 2003)

	2000	2005
Western Europe	64.7	67.0
Transition economies	61.6	61.6
North America (incl. Mexico)	41.4	51.6
Africa	37.2	43.6
Middle East	19.2	38.1
Latin America (excl. Mexico)	18.3	63.6
Asia	5.6	16.2
World	43.2	51.2

Source: WTO (2003), 48.

¹⁰⁹ See WTO (2003), 49 *et seqq.* for a discussion

¹¹⁰ See WTO (2003), 53 for an impressive world map of such a network.

The significance of RTAs is demonstrated in the Tables 7 and 8. Table 7 shows that 43 percent of world merchandise trade now occurs under the umbrella of preferential trade arrangements. This share will increase as more RTAs are negotiated in the future. If all RTAs under negotiation at present are successfully concluded within the next three years, over 50 percent of world merchandise trade will then occur among countries linked by preferential agreements.

Table 8: Intra-regional Export Shares, 1970-2001 (Ratio of trade among members over total trade with members and non-members)

	1970	1980	1985	1990	1995	2000	2001	in force since
Europe and North America								
CEFTA	14.6	11.5	12.4	1993
EU	59.5	60.8	59.2	65.9	62.4	62.1	61.2	1957
NAFTA	36.0	33.6	43.9	41.4	46.2	55.7	54.8	1994
Latin America and the Caribbean								
CACM	26.0	24.4	14.4	15.4	21.7	13.7	15.0	1961
Andean Group	1.8	3.8	3.2	4.2	12.2	8.8	11.2	1988
CARICOM	4.2	5.3	6.3	8.1	12.1	14.6	13.4	1973
MERCOSUR	9.4	11.6	5.5	8.9	20.3	20.7	20.8	1991
Africa								
CEMAC (UDEAC)	4.8	1.6	1.9	2.3	2.2	1.2	1.3	1999
COMESA ⁱ⁾	7.4	5.7	4.4	6.3	6.0	4.8	5.2	1994
ECCAS	9.8	1.4	1.7	1.4	1.5	0.9	1.1	1983 ⁱⁱⁱ⁾
ECOWAS	2.9	9.6	5.1	8.0	9.0	9.6	9.8	1975 ⁱⁱⁱ⁾
SADC ⁱⁱ⁾	4.2	0.4	1.4	3.1	10.6	11.9	10.9	1992 ⁱⁱⁱ⁾
UEMOA	6.2	9.9	8.7	12.1	10.3	13.0	13.5	2000
Middle East and Asia								
ASEAN/AFTA	22.4	17.4	18.6	19.0	24.6	23.0	22.4	1992
GCC	4.6	3.0	4.9	8.0	6.8	5.0	5.1	1981 ⁱⁱⁱ⁾
SAARC	3.2	4.8	4.5	3.2	4.4	4.3	4.9	1985 ^c

ⁱ⁾ Prior to 2000, data unavailable for Namibia and Swaziland.

ⁱⁱ⁾ Prior to 2000, data unavailable for Botswana, Lesotho and Swaziland.

ⁱⁱⁱ⁾ Year of foundation.

Source: WTO (2003), 56.

However, not all trade among preferential trading takes place at preferential rates. Most agreements exclude certain sensitive sectors or even agricultural trade altogether. Traders may choose to forgo

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preferential treatment because the costs of satisfying the requisite rules of origin might be higher than the advantage offered by the preferential margin.¹¹¹ Moreover, many applied MFN tariffs in developed countries are already zero. For these reasons, the estimates reported in Table 7 will overstate the impact of preferential trading arrangement as far as tariffs are concerned.

The WTO in defending multilateralism sees no strong evidence of trade creation due to RTAs.¹¹² Its own data can, however, also be interpreted differently (see Table 8). The share of intra-regional exports as a percentage of regional bloc exports has been increasing since 1970 in most of the major regional trade blocs. Over 60 percent of EU exports are to other EU-15 partners, a share which may increase by an additional 10 percentage points after enlargement by 10 new Member States on May 1, 2004. Taking into account that the EU and EFTA have free trade arrangements via the Free Trade Agreements of 1973 one must also add EU-EFTA intra-trade which accounts for another five percentage points. That amounts to a share of intra-EU-EFTA trade of around three quarters of their total trade. Over half of NAFTA exports are to other NAFTA partners. Whereas intra-regional export shares within the EU have remained nearly constant, the intra-NAFTA trade share has shown an upward trend well before NAFTA entered into force in 1994. Similar patterns can be identified for other major RTAs. MERCOSUR is an exception, where data show a sharp increase in intra-regional export shares after the agreement entered into force in 1991.

2. Does the EU Need the WTO at All?

The significance of RTAs depends on its degree of integration. Most of the RTAs are simple free trade agreements or customs unions. Only the NAFTA goes a little bit beyond this status implying besides free movements of goods also partial free movement of services and of capital and labour. The highest form of integration however, is reached in the EU. It not only consists of a customs union and the four freedoms (Single Market concept) but is also an Economic and Monetary Union (EMU) with a single currency (Euro). EU-25 together with the EU-EFTA free trade realtions will comprise a potential of nearly three quarters of intra-EU-EFTA regional trade relative to total trade. Other RTAs (with the ACP,

¹¹¹ WTO (2000), 48.

¹¹² *Ibidem*, 55.

with Mexico, South Africa, the Andean pact) make the EU a trading superpower of its own. In addition, in contrast to most RTAs the EU does go much beyond the WTO commitments.¹¹³

This provokes the question why the EU needs the WTO at all? Nearly three quarter of all merchandise trade is conducted with free trade partners. Measured by this huge intra-trade share the EU could easily forgo the multilateral commitments of the WTO. The EU is, however, also a leading world trader. The EU holds a world market share of around 19 percent (excluding intra-EU trade). Adding EFTA's world market share of around three percentage points and that of the 10 new EU members of Central and Eastern Europe of also around three percentage points this increases the world market share of the enlarged EU-EFTA to 25 percent. In comparison the United States hold a market share of 14 percent, Japan one of only nine percent and China nearly seven percent, followed by Canada with five percent. All other single countries are far below a five percent world market share (measured with exports figures of the year 2002).¹¹⁴ If the EU would just rely on its bilateral and unilateral agreements with developing countries via GSP and the Lomé-Cotonou agreements with the ACP countries it would be self sustainable. Intra-EU trade would cover industrial trade, EU-ACP trade would fulfil the function of supplying the necessary raw material inputs. The only important trade partners in the industrial world are the United States and to a lesser degree Japan.

From an optimal tariff theory point of view a dominant player in world trade (such as the EU) can improve welfare by imposing an optimal tariff rate which is usually very high (more than 100 percent), whereas the optimal tariff for small countries is zero (i.e. free trade).¹¹⁵ This implies that the starting position for trade liberalization is quite different for large and small (and developing) countries. Larger countries and regions tend to lose from unilateral reductions in protection, which move them further away from their optimal level of protection. Only mutual or co-operative tariff reductions can benefit all countries. This highlights the importance of the WTO multilateral negotiations for a co-operative solution to bring together the different interests of large and small, rich and poor countries, resulting in world-wide trade liberalization.

¹¹³ See OECD (2002).

¹¹⁴ See WTO (2003), 69.

¹¹⁵ See Breuss (2003), 140 *et seqq.*

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Bagwell and *Staiger* in formulating an economic theory of GATT/WTO reach the conclusion that GATT's major principles, reciprocity and non-discrimination are thus simple rules that, when used together can deliver an efficient outcome.¹¹⁶ Non-discrimination (the MFN clause) ensures that all international externalities are channelled through world-price movements, and the principle of reciprocity serves effectively to neutralize externalities of exactly this nature (terms-of-trade effects).

More interesting in answering the question whether the EU needs the WTO, however, is the treatment of cases of bilateral imbalances. *Maggi* analyses such cases in the context of a three-country CGE model of trade with the presence of bilateral imbalances of power, where the 'more powerful' country (e.g. the EU) in a given pair is the one that stands to lose less (or to gain more) from a trade war (increasing tariffs). Hence, in case of trade liberalization a large and powerful country would lose more (or gain less) than smaller countries.¹¹⁷ Seen from a world perspective of welfare maximization and the target of equality *Maggi* comes to the following conclusions: a) In the presence of bilateral imbalances of power (e.g. the EU versus small and developing countries), countries can sustain a higher symmetric welfare with multilateral enforcement (or punishment strategy whereby any defection is followed by a permanent Nash reversion in multilateral relationships) than with bilateral enforcement. b) Under bilateral enforcement (punishment strategy whereby any defection is followed by a permanent Nash reversion in bilateral relationships) the weaker partner makes a larger 'concession' than the stronger partner.¹¹⁸ The reverse is true under multilateral enforcement. To overcome this inequality, international transfers (e.g. development aid) could be used. According to *Maggi* such a strategy is, however, an imperfect substitute for multilateral enforcement.¹¹⁹ c) Under absent power imbalances (if all countries would be of equal size and power), bilateral and multilateral enforcement are equally efficient. An important conclusion of *Maggi's* game-theoretic analysis is that international trade institutions like WTO are important in order to neutralise the imbalances of power in world trade via rule-making procedures.

¹¹⁶ *Bagwell / Staiger* (1999); see also *Breuss* (2003), 140 *et seqq.*

¹¹⁷ *Maggi* (1999); see also *Breuss* (2003), 155 *et seqq.*

¹¹⁸ *Maggi* (1999), 198.

¹¹⁹ *Ibidem*, 200.

The more power the EU accrues in world trade the more is its attitude towards multilateral solutions of WTO no more than a fig leaf to calm down its own sole or the critiques of globalization or a demonstration of its good governance.

H. Developing Countries' Market Access in Agriculture

A key achievement of the Uruguay Round has been to extend multilateral discipline to domestic support in the farming sector, as well as to export subsidies. Domestic support related measures have been classified according to the associated level of market distortions. The so-called 'boxes' characterise what is prohibited, allowed, or to be phased out. A slight reduction in the market distortion (domestic support granted to farmers) can be observed in the 1990s. The ratio of producer support for the OECD was 31 percent in 2000-2002, compared to 36 percent in 1986-1988. The coefficient of nominal protection was 31 percent in 2002, compared to 57 percent in 1986-1988.¹²⁰

Agriculture belongs to the built-in Agenda of the Uruguay Round and hence also in the Doha Round. Rich countries can afford farm support. Therefore the US\$ 300 billion spent by the industrialised countries on farm support are often compared to the amount of their aid to development, which represents only a sixth of this sum.¹²¹ The Official Development Assistance (ODA) defined by the OECD¹²² as the sum of grants and concessional loans (i.e. with grant elements of at least 25 percent), undertaken by the official sector and with the primary objective of promoting the economic development stayed at US\$ 53 billion in the last decade (2002, US\$ 58.3 billion).¹²³ In contrast total long-term capital flows to developing countries increased from US\$ 98 billion in 1990 to over US\$ 295 billion in 2000.¹²⁴ Nevertheless the share of ODA decreased

¹²⁰ See OECD (2003).

¹²¹ See *Fontagné* (2003), 6.

¹²² Chapter 3 of the OECD (2004) report describes the „Millennium Development Goals' (MDG) defined at the UN Millennium Summit. The Millennium Declaration signed by 189 countries, including 147 Heads of State, in September 2000 can be found on the UN website at <http://ods-dds-ny.un.org/doc/UNDOC/GEN/N00/559/51/PDF/N0055951.pdf?OpenElement>.

¹²³ See OECD (2004), 22.

¹²⁴ See European Commission (2002), 65.

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from 0.33 percent in 1990 to 0.23 percent of GDP in 2002¹²⁵ and hence further away from the recommended aid target of 0.7 percent. In 2002 only five OECD members (Denmark, Luxembourg, Netherlands, Norway and Sweden) have reached the level of 0.7 percent GDP to be spent on ODA.

1. Costs of Agricultural Distortion

According to the comprehensive analyses of international organizations increased market access for agricultural products would work to directly address poverty reduction in developing countries.¹²⁶ While the rapid expansion of demand for unskilled labour in manufacturing and urban services in many developing countries has sharply reduced rural poverty, about three quarters of the world's poor still live in rural areas, where agriculture is often the dominant economic activity. Agriculture accounts for about 27 percent of GDP in developing countries, a similar share of exports and 50 percent of employment. This dependency on agriculture is most pronounced in LDCs and in Sub-Saharan Africa, where, in addition, production tends to be concentrated in only a small number of commodities.

Agricultural distortions inflict large costs on the global economy, by some estimates exceeding those of protection in the industrial sector. Based on CGE model simulations with the GTAP5 model the IMF and World Bank study finds that the global income loss from agricultural distortions worldwide may be well over US\$ 128 billion (US\$ 98 billion in industrial and US\$ 30 billion in developing countries).¹²⁷ Most of the cost results from market price support measures, of which tariffs are the dominant form. The losses of export revenues (US\$ 378 billion worldwide) are much larger, by a factor of three to four in the case of developing countries (US\$ 256 billion in industrial and US\$ 122 in developing countries).

Interestingly, both groups of countries suffer the most from their own restrictive policies. For developing countries, these policies are responsible for about 71 percent of the total income loss, while for developed (industrial) countries, the share is as high as 95 percent.

¹²⁵ See OECD (2004), 62.

¹²⁶ IMF / The World Bank (2002), chapter III; UNCTAD (2003), chapter III; WTO (2003), chapter II.

¹²⁷ IMF / The World Bank (2002), 32.

Within the group of the industrial countries the major players in protecting its agricultural markets are the United States and the European Union.¹²⁸ For example, the United States granted US\$ 3.6 billion subsidy to US cotton producers in 2001.¹²⁹

2. Removing Agricultural Subsidies alone is Negative for Developing Countries

While global liberalization of both tariffs and subsidies would benefit every region, the static effect of removing subsidies alone is likely to be negative for developing countries as a group and many individual countries.

It is less clear whether the various objectives contemplated in the DDA are mutually compatible.¹³⁰ If market access is favourable to growth in the LDCs, then liberalising imports in the North on a multilateral basis will erode the margin of preference conceded to LDCs and will reduce their access to these markets. If less distorting farm support in the North increases world prices of food products, LDCs that are net importers of food will be adversely affected through negative terms-of-trade effects.¹³¹

This can be demonstrated by the simulation outcomes of the UNCTAD study.¹³² The elimination of export subsidies in agriculture, without parallel changes in tariffs leads to modest worldwide welfare losses. The distributional implications are the following (see Table 9): After the elimination of subsidies, all regions except Europe start increasing their agricultural value-added. However, since many countries still face high protection against their agriculture export, this shift might be counterproductive. Most regions actually stand to lose from the elimination of subsidies, while the gains appear to be very concentrated in Western Europe – which (in particular due to the CAP of the EU) is the area characterised by the highest value of initial subsidies – and in regions that are net agricultural exporters, such as Oceania and Latin America. Western

¹²⁸ For a short description of the main features of the US Farm and Security and Rural Investment Act of 2002 and of the EU's Common Agricultural Policy (CAP) and its reform proposals, the 2002 mid-term review of the CAP, see IMF / The World Bank (2002), 29 *et seq.*

¹²⁹ See Fontagné (2003), 6.

¹³⁰ *Ibidem*, 3.

¹³¹ For similar results, see also Hoekman et al. (2002).

¹³² UNCTAD (2003), 44 *et seq.*

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Europe (the EU) gains both from better resource allocation (the elimination of subsidies brings the specialization pattern of this region more into line with its natural comparative advantages) and from improved terms of trade. On the other hand the removal of export subsidies directly reduces the agricultural exports of Western Europe, thus leading to a lower world supply for these goods and to improved terms of trade for Europe, whose exports are sold now at higher prices on international markets. As for the terms-of-trade effects on the other regions, they depend on their agricultural export pattern. Countries that are net agriculture and food exporters (e.g. North America, Oceania and Latin America) are likely to gain, while those that are not may lose (e.g. Asian NICs and North Africa and Sub-Saharan Africa) – which hits again primarily the developing countries.

Table 9: Liberalization in Agriculture: Export Subsidy Removal.
Results of Model Simulations of the Elimination of Export Subsidies in Agriculture, without Parallel Changes in Tariffs

Regions	Welfare effects		Aggregate trade data	
	Percentage change	Total value ('97 US\$ mill.)	Exports	Terms of trade
			Percentage change	
Asian NICs	-0.008	-73.9	0.008	-0.007
China	-0.015	-178.8	0.006	-0.013
South Asia	-0.000	-1.9	0.125	0.082
Western Europe	0.033	2,410.0	-0.124	0.065
North America	-0.001	-88.0	-0.013	0.013
Transition econ.	-0.117	-891.5	-0.056	-0.172
Sub-Saharan Africa	-0.113	-354.9	-0.234	-0.161
Oceania	0.024	100.1	0.107	0.119
North Africa and Middle East	-0.283	-2,209.7	-0.148	-0.296
Latin America	0.004	80.3	0.056	0.035
Japan	-0.013	-484.9	-0.047	-0.061
Rest of the World	-0.063	-158.7	-0.225	-0.189
Total		-1,851.7		

Source: UNCTAD (2003), 44 *et seq.*

3. Agricultural Liberalization Benefits all Countries

A comprehensive agricultural liberalization, which is both part of the built-in WTO agenda and one of the major pillars to the Doha

agreement could be beneficial for both the developing and the developed world. Whereas an isolated elimination of export subsidies may have negative effects for the developing countries, tariff liberalization is beneficial for all countries, depending, however, on the existing rates of protection in the particular commodities.

Table 10: Agricultural Tariff Liberalization: Results of Model Simulations of a Worldwide 50 % Cut in all Agricultural Tariffs

Regions	Welfare effects		Aggregate trade data	
	Percentage change	Total value ('97 US\$ mill.)	Exports	Terms of trade
			Percentage change	
Asian NICs	0.342	3,363.6	0.888	-0.072
China	0.082	964.0	1.199	-0.083
South Asia	0.074	361.2	1.954	-0.302
Western Europe	0.021	1,562.1	0.476	0.006
North America	0.046	3,613.3	0.914	0.266
Transition economies	0.118	900.8	1.474	-0.045
Sub-Saharan Africa	0.072	226.2	1.810	-0.210
Oceania	0.419	1,719.8	2.299	1.833
North Africa and Middle East	0.387	3,033.8	2.829	-0.595
Latin America	0.073	1,304.7	1.708	0.056
Japan	0.116	4,221.2	1.763	-0.392
Rest of the World	0.110	277.1	2.248	0.223
Total		21,547.9		

Source: UNCTAD (2003), 43.

According to UNCTAD simulations, a worldwide reduction of 50 percent in all agricultural tariffs brings about an aggregate welfare gain of US\$ 21.5 billion (see Table 6).¹³³ All the world regions appear to gain, but gains differ widely both in absolute and in relative terms. The largest absolute gains are captured by Japan, North America, the Asian NICs, North Africa and the Middle East and Oceania. In percentage terms, those regions that appear to gain most are Oceania, the Asian NICs and North Africa. The estimated percentage gain for Sub-Saharan Africa and Latin America are relatively low. The aggregate trade data indicate that the value of exports increases in all regions after liberalization. Lower worldwide protection in agriculture translates into increased worldwide

¹³³ *Ibidem*, 43.

import demand and improved trade opportunities in all areas. Interestingly, the strongest increases are in the developing regions North Africa and Middle East, Oceania and Sub-Saharan Africa. In Western Europe the export gains are modest (see Table 10).

In addition to this static welfare gains a worldwide liberalization in agricultural trade would cause additional gains. On the one hand it would stabilize agricultural prices and lead to a downward pressure on world prices for key commodities. Developing countries suffer the most from price instability as they have fewer resources available to smooth consumption and income flows. On the other hand agricultural liberalization is likely to have long-term, dynamic effects on world production and trade. These effects could include increased farm investment and enhanced technologies and productivity in response to better market opportunities. According to the IMF and the World Bank for the developing countries to reap the full benefits of liberalization, a framework of supportive policies is required – including the elimination of anti-agriculture biases in pricing policies so that (higher) world prices are passed through to the farm-gate – and essential infrastructure (transport, logistic, credit, extension services).¹³⁴

Hoekman and his collaborators in recognizing that a number of developing countries could lose from agricultural liberalization (in particular from reducing domestic support measures) suggest that agricultural reforms should be accompanied by compensation mechanism, which could include additional 'aid for trade'.¹³⁵

I. Developing Countries' Market Access in Textile and Clothes

The production of textiles and clothing is intensive in unskilled labour and uses only simple technology. Therefore, a regional shift in specialization (from the developed to the developing countries) took place since the sixties. In the mid-1960s, developing countries accounted for 15 percent of world textile exports and less than 25 percent of world clothing exports. By the end of the 1990s, these shares had reached 50 percent and 70 percent respectively.¹³⁶ Although exports of textiles and clothing (T&C) account only for 5.5 percentage points of total world exports (see Appendix, Table A1) their production is highly concentrated in the developing countries.

¹³⁴ IMF / The World Bank (2002), 33.

¹³⁵ *Hoekman and Hoekman et al.* (2002), 18.

¹³⁶ See IMF / The World Bank (2002), 36 *et seq.*

This development has created a high dependency on these products for export earnings. In some developing countries textiles and clothing account for more than 80 percent of total merchandise exports.¹³⁷ In Pakistan (73 percent), Mauritius (64 percent), Sri Lanka (54 percent), Tunisia (43 percent), Turkey (38 percent) and Morocco (34 percent) these products account for more than one third of their total exports. Then there is a group of countries with export shares between 20 and 30 percent (India, 28; Romania, 24; China, 21 percent).

Despite extensive quantitative restrictions discriminating against developing countries and high tariffs in developed countries (the main export markets for most developing countries) there was a remarkable growth in T&C exports. For nearly half a century, world trade in T&C has been subject to quantitative restrictions under derogation from GATT rules, beginning with Japan's 1955 voluntary export restraints on its export of cotton fabrics and clothing to the United States. These led to the multilateral Short-Term Arrangement regarding International Trade in Cotton Textiles in 1961, the Long-Term Arrangement in 1962, and eventually the Multifiber Arrangement (MFA) in 1974.¹³⁸ The MFA expanded quantitative restrictions beyond cotton products to wool and man-made fibre products and was extended several times until the Uruguay Round Agreement on Textiles and Clothing (ATC) took effect at the beginning of 1995. In the MFA's last year of operation, six participants (Austria, Canada, EU, Finland, Norway, and the United States) applied quotas under the Agreement.

The salient feature of the MFA was bilateral quotas. The MFA called on importing countries to endeavour to grow quota volumes by at least 6 percent per year. In practice quota growth was lower for established suppliers, while small and new exporting countries were generally granted more generous quota growth. MFA quotas act like bilateral export restrictions. The export tax equivalents of these quotas vary substantially across countries. The most competitive exporting countries, such as China and India, face more stringent restrictions than the less competitive countries. The export tax equivalents of quotas for textiles varied from zero in Japan to 7.8 percent in Canada (USA, 6.7 percent; EU, 4.5 percent). The tax

¹³⁷ Cambodia, Macao SAR and Bangladesh, see IMF / The World Bank, (2002), 38.

¹³⁸ See IMF / The World Bank (2002), 36.

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equivalents of quotas for clothing were higher (Japan zero; Canada, 16.8 percent; USA 11 percent; EU 5.3 percent).¹³⁹

Under the ATC, quotas are to be phase out progressively over a 10-year period (ending in 2005). In the first stage (January 1, 1995), WTO members were required to integrate products representing not less than 16 percent in volume terms of their 1990 imports of textiles and clothing products. In stage 2 (January 1998), not less than a further 17 percent had to be integrated, and in stage 3 (January 2002), a further 18 percent. Finally, on January 1, 2005, all remaining products (amounting to a maximum 49 percent) are to be automatically integrated. After integration, regular GATT safeguards apply.

In spite of the time plan of the ATC, market access barriers still remained. With the exception of Norway, whose T&C imports have been all freed from quotas, the major importers (the United States and the EU) eliminated only a small percentage of quotas originally in place during the first two stages (the USA from 750 quotas only 13, the EU from 219 only 14). Therefore, the vast majority of restrictions is left to be abolished at the end of the implementation period.¹⁴⁰

In addition to the MFA quotas, T&C imports are subject to exceptionally high tariffs. During the Uruguay Round tariffs on T&C were cut less than those on other manufactures, and tariff peaks and escalation (tariffs on clothing are higher than those on textiles) remain common in this sector. In OECD import regimes, tariff peaks affect 27 percent of total tariff lines on T&C. Tariffs in the United States for textiles are 11.2 percent (for clothing 13.3 percent; for all manufactures 2.8 percent), in the EU 9.1, 11.9 and 3.6 percent respectively, in Japan 8.5, 12.5 and 1.4 percent respectively and in Canada 15.7, 21.2 and 3.9 percent respectively.¹⁴¹ However, tariffs on T&C are also very high in developing countries (16 percent).

According to simulations with the GTAP model by the IMF and the World Bank, the cost of barriers to trade in T&C imports are a substantial burden on both developing and industrial countries. The combined income loss for developing countries quota and tariffs on industrial country imports amounts to US\$ 24 billion, and the export revenue loss to US\$ 40 billion. Industrial countries suffer

¹³⁹ *Ibidem*, 39.

¹⁴⁰ See *ibidem*, 41 for more details.

¹⁴¹ See *ibidem*, 39.

around half the income loss but almost the same export shortfall as developing countries, namely around US\$ 40-46 billion. As intra-developing country trade accounts for about half of their total exports of textiles and 20 percent of clothing exports, the cost of barriers (mainly import tariffs) are larger for developing countries (US\$ 28 billion) than for industrial countries (US\$ 3 billion). The losses of exports amount to US\$ 42 billion for developing countries and only for US\$ 9 billion for industrial countries. Overall, the incomes loss due to MFA quotas and T&C tariffs for the world amount to US\$ 66 billion, and the losses of export revenues are US\$ 137 billion world-wide.¹⁴² The same model simulated indicates that as many as 27 million jobs are foregone in developing countries due to the combined effect of quota and tariffs.¹⁴³ On average, each job saved in developed countries by tariffs and quotas is estimated to cost 35 jobs in developing countries, many of which are in China and India. MFA quotas and tariffs tend to be most hurtful to the poor, as T&C industries primarily employ low-skilled workers, often migrants from rural areas. Also, low-income households in industrial countries bear the brunt of the cost of MFA and high tariff restrictions as the poor spend a larger share of their income on necessities such as T&C.

The delay in the integration plan according to the ATC leads to adjustment needs. The above mentioned back loading of effective liberalization turns what was planned as a gradual adjustment process into a shock at the end of the transition period (in 2005) – for both importing and exporting countries. According to the IMF and World Bank study, this raises concern that political pressures might spark greater recourse to other forms of protection once quotas are phase out, with trade remedy action and perhaps non-transparent ‘voluntary’ export restraints (prohibited in principle under the WTO) becoming a ‘new line of defence’.¹⁴⁴ A sudden withdrawal of quota protection at the end of the transition period might also increase resistance to further reductions in tariffs. Accelerating the removal of quotas on textiles and clothing imports is an urgent priority. Additionally, the Doha round negotiations should lead to substantially lower tariffs on T&C trade, in both industrial and developing countries.

¹⁴² *Ibidem*, 42 *et seq.*

¹⁴³ *Ibidem*, 3.

¹⁴⁴ *Ibidem*, 44.

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Preferences for LDCs are not a long-term solution to problems of competitiveness, but schemes that provide LDCs with duty- and quota-free market access may ease problems of transition. Benefits of preferential market access can be substantially reduced and even negated by restrictive rules of origin, either because of the need to switch to higher-cost sourcing of intermediate goods, or because value added thresholds for preferential access are hard to meet. *Mattoo et al.* estimate that benefits under the AGOA could be reduced by as much as 75-80 percent because of onerous rules of origin (there are similar problems with EU preferential schemes).¹⁴⁵ In addition to the rules of origin, there is often a fine balance to strike on social and environmental conditions. As demonstrated in the case of minimum labour standards in connection with Cambodia's exports of T&C, minimum wages and other conditions for preferential access may have limited the benefits the country has drawn from these preferential schemes.¹⁴⁶

IV. Gains from Trade Liberalization under a Successful Doha Round

A. Formula Approaches to Market Access Negotiations

1. The General Procedure of Negotiations

Concerning market access for products, there are 146 members negotiating on thousands of products. Under such circumstances, any means for simplifying negotiations are welcome. One instrument is the 'formula approach'.

A variety of approaches has been used in the past to negotiate the reduction of bound tariffs starting with the request and offer approach. This technique, grounded in the selected product by product approach proved cumbersome and yielded results that were not particularly ambitious. Two significant departures from this approach occurred during the Kennedy Round. Industrialised countries adopted a linear tariff reduction technique and developing countries were granted 'less than full reciprocity'.¹⁴⁷

In the Tokyo Round an explicit reference was made to 'appropriate formulae'. A number of proposals were submitted in response to the mandate, including some that had the effect of higher

¹⁴⁵ *Mattoo et al.* (2002).

¹⁴⁶ See IMF / The World Bank (2002), 46 for a case study on Cambodia.

¹⁴⁷ *Hoda* (2001).

reductions for higher tariff rates in contrast to a linear reduction. The proposal from Switzerland was ultimately adopted by some countries.

In the so-called ‘Swiss formula’¹⁴⁸ the target tariff rate, t_1 depends non-linearly on the initial tariff rate t_0 and a coefficient a :

$$t_1 = \frac{at_0}{a + t_0}, \quad (3)$$

where a is a coefficient corresponding to the upper limit of desired tariff rates after the cut. In applying this formula some countries used a coefficient a equal to 14, others adopted 16. The formula was not universally applied by all countries and those that applied it did so with exceptions. *Francois* and *Martin* survey a range of formula options and examine both targeted and flexible applications of the Swiss formula that target tariff escalation and peaks, and would allow policymakers to directly target how far they will move towards free trade, while providing some flexibility for trading off reductions in peak tariffs against reductions in lower-tariff sectors.¹⁴⁹

The mandate for the Uruguay Round negotiations and the DDA did not specifically mention the use of formulae as the core modality. However, during both negotiations proposals for modalities based on formulae have figured prominently. In the current Doha agriculture negotiations some Members proposed the Swiss formula with a coefficient a equal 25. In the non-agricultural market access negotiations the Swiss formula was proposed by the United States with a coefficient of 8 for certain phases of their proposed tariff reduction plan. In addition, variants of the Swiss formula that take into account the diversity of Members’ profiles were proposed.¹⁵⁰

The Chair’s draft proposal for the Doha negotiations on agriculture followed the approach used during the Uruguay Round which was a target rate of reduction based on a simple average of out-quota tariff rates with a minimum cut per line. The reductions

¹⁴⁸ See WTO (2003), 150; *Fontagné* (2003), 6; *Francois / Martin* (2003).

¹⁴⁹ *Francois / Martin* (2003), see also *Panagariya* (2002) for more details on the general properties of formulas that have been used for reciprocal negotiations.

¹⁵⁰ See WTO (2003), 150 *et seq.* with references to the documents for the full variety of proposals.

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would apply across three different bands of tariffs with a higher average reduction for tariffs in the high range. Developing countries were proposed a similar approach, but with higher thresholds for tariffs to be reduced and lower percentage reductions.

In the Doha non-agricultural market access negotiations the Chair proposed a number of elements for the reduction of tariffs. The core element is the following formula to be applied on a line-by-line basis:

$$t_1 = \frac{Bt_a t_0}{Bt_a + t_0} \quad (4)$$

Where, t_1 is the final rate, to be bound in *ad valorem* terms; t_0 is the base rate for negotiations, t_a is the average of the base rates and B is a coefficient with a unique value to be determined by the participants.

Less than reciprocity in this context is incorporated into the formula through the t_a coefficient. A higher coefficient implies a lower reduction and developing countries in general have higher average applied and bound tariffs (see Table 1). The Chair further proposed that WTO members could consider the elimination of tariffs in certain sectors of export interest to developing countries. As with agriculture, the Chair's proposal in non-agricultural market access takes into account the issue of special and differential treatment (SDT) for developing countries.

The impact of a 50 percent Swiss-formula based reduction of average tariff bindings for industrial and developing countries has been demonstrated¹⁵¹ (see Table 11a and Table 11b).

With the implementation of the Uruguay Round commitments, average *ad valorem* tariffs in the industrial countries, generally are around 3 percent (see Table 11a, first column). However, there are important exceptions. One of these is textiles and clothing, where the average rate is roughly three times this overall average. This is reflected in the standard deviation and maximum tariff columns. With full implementation of current commitments, the estimated simple average industrial tariff in the United States is 3.2 percent, with a standard deviation of 4.3, and a maximum tariff of 37.5 percent. The European Union has a higher average (3.7 percent), but less dispersion (3.6 percent) and a maximum tariff rate of 17 percent. For the developing countries, average industrial tariffs range

¹⁵¹ *Francois/Martin* (2003); *Francois/van Meijl/van Tongeren* (2003).

from a low of 3 to 4 percent to a high of more than 20 percent. In Table 11a the data for three developing countries are presented: Brazil, India, and Thailand. Brazil's tariffs are all bound, though the average rate for industrial products is 14.9 percentage points above the currently applied rate (binding overhang). India and Thailand's tariffs are partially covered by bindings, again with significant binding overhang.

Table 11a: The Post-Uruguay Round and ITAⁱ⁾ Applied Tariffs in Selected Industrial and Developing Countries

	Post-UR and ITA tariffs (in %)			
	Simple average	Standard deviation	Maximum tariff	Binding overhang ⁱⁱ⁾
Agriculture				
EU	5.9	7.5	74.9	0.3
Japan	6.2	8.1	43.3	1.2
USA	3.5	7.4	90.0	0.5
Brazil	12.9	5.1	27.0	22.6
India	31.0	20.8	150.0	90.7
Thailand	26.5	14.4	65.0	7.1
Non-agriculture				
EU	3.7	3.6	17.0	0.4
Japan	2.3	3.4	30.9	0.1
USA	3.2	4.3	37.5	0.2
Brazil	15.9	6.0	35.0	14.9
India	19.2	16.5	40.0	3.9
Thailand	10.5	10.8	80.0	7.8

ⁱ⁾ ITA = Information Technology Agreement.

ⁱⁱ⁾ Binding overhang is the gap between the bound rate and the current applied tariff rate.

Source: *Francois/van Meijl/van Tongeren* (2003), Table 2.2.

Because of the small binding overhang in industrial countries a 50 percentage point tariff reduction according to the Swiss formula leads also to a comparable strong reduction in applied tariffs (see last column in Table 11b). In general, for developing countries, the binding overhang is large enough that reductions in the range of 50 percent are necessary to force any reductions in average applied rates for countries like Brazil. For many countries, even this will have little or no effect, as tariffs are largely unbound. This limits severely the negotiating leverage of developing countries in the WTO. This is also why the debate over using bound, applied, or

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'historic' rates in the WTO as a starting point for negotiations is important.¹⁵²

Table 11b: Effects of Basic Swiss Formula Reductions: Applied Tariffs after a 50 % Cut in Average Tariff Bindings

	Simple average	Standard deviation	Maximum tariff	Binding overhang	Ø % reduction
Agriculture:					
EU	3.0	2.9	10.9	0.1	-48.6
Japan	3.5	3.7	13.9	0.2	-43.0
USA	1.9	2.4	11.5	0.1	-46.6
Brazil	12.4	4.6	22.3	5.3	-3.7
India	29.5	14.9	70.8	31.3	-4.8
Thailand	15.1	6.3	30.1	1.7	-43.0
Non-agriculture					
EU	1.9	1.4	5.0	0.1	-47.7
Japan	1.2	1.4	5.6	0.0	-48.5
USA	1.7	1.6	6.1	0.0	-48.3
Brazil	13.5	4.2	16.7	1.9	-15.4
India	11.3	9.2	30.5	0.3	-41.3
Thailand	7.2	6.1	20.7	2.0	-31.6

Source: *Francois / van Meijl / van Tongeren (2003), Table 2.2.*

2. The Danger of Preference Erosion for the Developing Countries

A formula approach fits well the objectives of the DDA and has advantages and *caveats*:¹⁵³

1. *Advantages*: By strongly reducing tariff peaks, it offers better access to LDC exports in labour intensive and agricultural goods. It opens other developing countries' markets that remain currently highly protected and thus stimulates South-South trade. It allows a different *a* coefficient for developed and developing economies and, hence, respects the spirit of the SDT; last but not least it allows also a different coefficient for trade in manufactures and food products in order to match political economy constraints.
2. *Shortcomings*: This means, however, 'killing too many birds with one stone'.¹⁵⁴ The advantage of differentiating the *a* coeffi-

¹⁵² See *Francois / van Meijl / van Tongeren (2003), 3.*

¹⁵³ See *Fontagné (2003), 6 et seqq.*

¹⁵⁴ *Ibidem, 6.*

cient contradicts the objective of making agricultural markets more open, or of enhancing South-South trade. Tariff peaks potentially affect exports of LDCs which are nevertheless conceded preferential market access (ACP countries, the GSP scheme, AGOA, EBA, etc.). Hence, any (non-linear) formula approach will have two effects: a) to eradicate the remaining peaks faced by LCDs exporters, and b) to erode the margin of preferences they had been conceded. The net effect may be negative.

Fontagné by discussing a number of other subtle problems connected with the impact of formula based trade liberalization for developing countries simulates the different formula approaches with a multi-country CGE model (see Table 12).¹⁵⁵

Table 12: Formula Approaches – which Differences for Welfare Changes? (Simulations with a CGE world model)

Long-run welfare change in %	Linear formula	Linear formula excl. peaks	Swiss formula	Swiss formula + SDT
EU-25	0.38	0.14	0.55	0.47
USA	0.18	0.09	0.24	0.12
Japan	0.86	0.29	1.45	1.29
Cairns	0.30	0.14	0.35	0.39
Developing Asia	0.80	0.28	1.07	0.91
ACP countries	0.43	0.26	0.41	0.29
Other countries	0.55	0.20	0.79	0.70
World	0.42	0.16	0.61	0.51

Assumptions for coefficient $a = 35\%$ for the linear formula $t_1 = at_0$ and a Swiss formula, and a coefficient a equal to 28 (manufactures) or 58 (food). Source: *Fontagné* (2003), 8.

Fontagné focuses on market access with a menu of scenarios in which developing countries are conceded SDT. Bilateral tariffs at the product level (HS-6 level), derived from MAcMaps, are cut according to a linear formula (where tariff peaks¹⁵⁶ can be included or excluded from the liberalization), versus a truncated Swiss for-

¹⁵⁵ *Ibidem*, 7 et seq.

¹⁵⁶ Tariff peaks are defined as those superior to 15 percent in manufacturing, energy and raw materials, and those above 85 percent in agriculture and agrofood.

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mula¹⁵⁷ (applied to all tariffs). Coefficients of reduction are those suggested by previous rounds, and the SDT offered to developing countries is a lower coefficient of linear reduction and a larger a coefficient in the Swiss formula.¹⁵⁸

The results of Table 12 highlight that benefits of increased market access at the world level are much higher with a Swiss formula and, in contrast, rather limited if one adopts a linear formula excluding peaks. Considering the Swiss formula combined with the SDT, the largest benefits accrue to Japan, where agriculture is highly protected. This is also why EU gains are much larger than US ones. Lastly, ACP countries record very limited gains, in particular in comparison to developing Asia which has in the past been conceded less preferences by industrialised importers.

In summing up, *Fontagné* asserts that a formula approach leads to a sizeable erosion of preferences conceded to the poorest developing countries so far, with the aim of favouring exports of small and insufficiently diversified economies. The more specialised the exporters, the larger the benefits extracted in the past from preferential access schemes and the stronger the adverse effects of market opening they will have to cope with.¹⁵⁹

B. How to Estimate Gains from Multilateral Trade Liberalization?

The estimation in quantitative terms of the potential gains from trade liberalization is now done primarily with CGE models. The systematic use of CGE models to simulate the effects of trade negotiations started during the Tokyo Round.¹⁶⁰ Since then rapid progress has been made as regards both modelling and data collection and assembly. Results from CGE simulations found a wide echo before the conclusion of the Uruguay Round, showing that nearly all countries would have lost opportunities from a failure to reach agreement.¹⁶¹

¹⁵⁷ In a truncated Swiss formula, the reduction is linear up to the threshold defined as a tariff peak, and non-linear thereafter.

¹⁵⁸ *Fontagné* (2003), 8.

¹⁵⁹ *Ibidem*.

¹⁶⁰ See *Deardorff/Stern* (1981); *Deardorff/Stern* (1986); *Whalley* (1985).

¹⁶¹ See the surveys of *Harrison et al.* (1997), and *Francois et al.* (1994) and (1996).

In recent years, several CGE analyses of the effects of trade policy reforms in a future WTO Round have been produced.¹⁶² Some of them only consider agricultural liberalization (with welfare gains ranging from US\$ 27 billion to US\$ 384 billion, depending on the liberalization assumptions and the model type), others include manufacturing tariff reform (the welfare gains range from US\$ 284 billion to US\$ 1,210 billion). Only a few analyses consider the impact of service trade liberalization, mainly because of poor data on trade flows in the services sector and poor measurement of service trade barriers. The few studies considering liberalization in trade in services produce very large welfare gains.¹⁶³ These large gains are due to two reasons: 1) Services account for a large share in consumption in most middle and high-income countries, much larger than that of agriculture. 2) Services are major inputs in the production of manufactures. Estimations of the World Bank of the effects of a 100 percent cut in merchandise protection and a 100 percent cut in service protection lead to a welfare gain in the static case of US\$ 255 billion and in the dynamic version of US\$ 830 billion.¹⁶⁴ *Brown et al.* with the same liberalization experiment reach welfare gains of US\$ 1,857 billion.¹⁶⁵

There are several reasons for the large discrepancies in the estimations of welfare gains: a) assumption about the deepness of the liberalization; b) results are sensitive to model specifications: liberalization gains are higher in models allowing for increasing returns to scale and imperfect competition in the manufacturing sector. The gains are further enhanced in specifications allowing for dynamic (growth) effects of trade liberalization (trade-related changes in savings and investment or with development in productivity); c) also the chosen baseline influences the outcome; in most recent studies the GATP database (of 1997) is used to replicate the world economy. These most updated versions yield lower estimates of the world-wide liberalization effects since the status-quo level of trade barriers is lower (after the tariff cuts of the Uruguay Round); d) also the dimensionality of the models (the number of sectors and regions considered) influences the outcome.

¹⁶² For a survey, see UNCTAD (2003), 39, and also *Francois* (2000).

¹⁶³ See *Brown et al.* (2001); World Bank (2001).

¹⁶⁴ World Bank (2001).

¹⁶⁵ *Brown et al.* (2001).

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Notwithstanding the notable differences in results from the various CGE analyses, there are a number of common findings:¹⁶⁶ 1) Global welfare results of agricultural liberalization are quite similar across models and studies. This is due to the consensus of modelling agriculture as a constant returns to scale sector where trade-related dynamic gains are quite limited. 2) A common feature of static, constant returns to scale CGE models is that the global gains associated with (full) agricultural liberalization are not very different from those originating from trade liberalization in manufactures. 3) Concerning the source of gains, almost all studies show that the major source of the gains accruing to each country is its own liberalization, rather than that of partner countries. 4) As for the distribution of the global gains between developed and developing countries, in the majority of the studies it was found that the gains are shared quite equally between the two groups. Among developing countries, Asian countries will reap the largest gains, while the gains for Latin American and African countries will be more limited. Even possible losses are found for Sub-Saharan countries associated with agricultural liberalization, markedly with terms-of-trade developments as a consequence of export subsidies removal.

In the following two recent CGE model exercises are presented. One is a simulation of a world-wide cut of all merchandise tariffs (agricultural and manufactures) with a static model.¹⁶⁷ The other one by *Francois et al.* is more ambitious as it considers a complete liberalization package (agriculture, manufactures, services) and uses a model with imperfect competition and dynamic elements.¹⁶⁸

1. UNCTAD Simulations

UNCTAD uses a static CGE model based on GTAP5 data base with a benchmark year 1997, disaggregated to six sectors (natural resources, manufactures, primary and processed agricultural products, textiles and apparel, services) and twelve world regions of which four are developing country regions.¹⁶⁹ A worldwide 50 percent reduction of all merchandise tariffs (agricultural and manufactures) – a so-called comprehensive liberalization scenario – leads to the following results (see Table 13): The global welfare gain of

¹⁶⁶ See UNCTAD (2003), 40.

¹⁶⁷ *Ibidem*, 48 *et seq.*

¹⁶⁸ *Francois / van Meijl / van Tongeren* (2003)

¹⁶⁹ UNCTAD (2003), 48 *et seq.*

around US\$ 40 billion is almost twice as much than that arising from liberalization in agriculture only (see Table 10). The big gainers from adding manufacturing liberalization to agriculture liberalization are the Asian regions (+0.6 percentage points increase in welfare), followed by North Africa and Middle East (+0.4 percentage points), China and Oceania. Some countries, however, will not have an advantage from extending liberalization beyond agriculture. These are in particular North America (Canada, United States), transition economies (Hungary, Poland, the Rest of Central European countries, Former Soviet Union) and Sub-Saharan Africa, which would suffer from terms-of-trade losses by adding manufacturing liberalization. All these countries would see their market shares in textiles and clothing and other manufactures eroded by surging imports from Asia.

Table 13: A Comprehensive Doha Round Liberalization Scenario: Results of Model Simulations of a 50 % Worldwide Cut in Tariffs on all Merchandise Trade

Regions	Welfare effects		Aggregate trade data	
	Percentage change	Total value ('97 US\$ mill.)	Exports	Terms of trade Percentage change
Asian NICs	0.674	6,636.5	3.899	0.168
China	0.424	5,017.1	7.458	0.012
South Asia	0.282	1,383.3	12.043	-1.747
Western Europe	0.075	5,489.6	1.105	0.078
North America	0.023	1,778.0	2.591	-0.008
Transition economies	0.079	603.1	3.860	-0.483
Sub-Saharan Africa	0.004	13.3	4.590	-0.927
Oceania	0.386	1,584.1	4.265	1.435
North Africa and Middle East	0.476	3,735.8	5.004	-0.806
Latin America	0.079	1,414.0	5.719	-0.734
Japan	0.307	11,207.4	5.512	0.752
Rest of the world	0.281	706.3	8.789	0.091
Total		39,568.5		

Source: UNCTAD (2003), 48.

The removal of all tariff protection boosts exports in all areas (see Table 13). The increase is in general much stronger than that associated with the elimination of agricultural tariffs only. The bigger increases in exports occur in low- to middle-income Asian

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countries (China, South Asia), followed by other developing countries and by Japan and Oceania. Western Europe and North America do not achieve major expansion of their exports.

These results - not taking into account dynamic effects and imperfect competition in the manufacturing sectors - underline what was found in previous studies,¹⁷⁰ namely that the inclusion of manufacturing liberalization in a 'comprehensive round' of negotiations would be especially interesting for the developing countries. This conclusion holds for developing economies taken as a single broad aggregate. There are, however, regions, in particular Sub-Saharan Africa, that might actually lose from extending liberalization from agriculture alone to all merchandise trade.

2. CGE Model Simulations with Imperfect Competition

Francois, van Meijl and van Tongeren with a CGE model with imperfect (monopolistic) competition and investment (dynamic) effects simulated the potential gains from a comprehensive Doha-Round trade liberalization.¹⁷¹ They take the short-run (static) and the long-run (dynamic model) view. They include in their scenarios of trade liberalization tariff reductions (in agricultural, manufactures and in services trade), elimination of border controls, export subsidies, agricultural support and trade facilitation.

The data on tariffs are taken from the WTO's integrated database, with supplemental information from the World Bank's recent assessment of detailed pre- and post-Uruguay Round tariff schedules and from the UNCTAD/World Bank WITS dataset. All of this tariff information has been concorded to GTAP model sectors. Services trade barriers are based on the gravity model estimates. Also the schedule of China accession commitments is implemented. While the basic GTAP dataset is benchmarked to 1997, and reflects applied tariffs actually in place in 1997, the authors want to work with a representation of a post-Uruguay Round world. This includes the accession of China, the enlargement of the EU; and Agenda 2000 reforms a part of the baseline. In the baseline scenario therefore the following inclusions have been made:¹⁷²

¹⁷⁰ See *Hertel / Martin* (2000).

¹⁷¹ *Francois / van Meijl / van Tongeren* (2003).

¹⁷² *Ibidem*, 8.

- Implementation of the rest of the Uruguay Round tariff commitments,
- implementation of the ATC phasing-out quotas,
- implementation China's accession to the WTO,
- implementation of Agenda 2000,
- implementation of the EU enlargement by 12 countries (EU-27).

The CGE model has been aggregated to 17 sectors and 16 regions. Perfect competition is assumed in the agricultural sectors. The manufacturing and services sectors involve imperfect (monopolistic) competition. There is a dynamic link, whereby the static or direct income effects of trade liberalization induce shifts in the regional pattern of savings and investment. These effects relate to classical models of capital accumulation and growth, rather than to endogenous growth mechanism. How much these 'accumulation effects' will supplement static effects depends on the marginal product of capital and underlying savings behaviour. This specification allows to differentiate between short-run versus long-run effects. In the short-run capital stocks are fixed and in the long-run capital stocks adjust. The model includes the basic features of 'economic geography' models, including intermediate linkages, monopolistic competition, and returns from specialization.¹⁷³

In the model estimations three scenarios are carried out:¹⁷⁴ The first two are partial liberalization scenarios. In the 'Linear 50%' scenario all trade instruments are reduced by 50 percent. This involves a 50 percent reduction in agricultural and industrial tariffs and export subsidies, a 50 percent reduction in OECD domestic support for agricultures, a 50 percent reduction in the tariff-equivalent of services barriers, and a partial reduction in trading costs, related to trade facilitation measures (1.5 percent of the value of trade). The second partial liberalization experiment is called the 'Swiss formula' experiment. In this experiment the reduction in import tariffs in agriculture and manufactures is based on a straight Swiss formula with a coefficient of 25, meaning the maximum tariff is reduced to 25 percent. The third scenario simply involves full elimination of all trade barriers, implying in the case of trade facilitation a reduction of trade costs of 3 percent of the value of trade.

¹⁷³ *Ibidem*, 7.

¹⁷⁴ *Ibidem*, see also Table 14.

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Table 14: Three Liberalization Scenarios

Instruments	Scenario definition		
	Linear 50%	Swiss formula	Full liberalization
Import tariffs in agriculture and manufacturing	50% reduction	Swiss formula Reduction (with a max 25% tariff)	100% reduction
Estimated border measures in services	50% reduction	50% reduction	100% reduction
Export subsidies	50% reduction	50% reduction	100% reduction
Domestic agricultural support in OECD countries	50% reduction	50% reduction	100% reduction
Trade facilitation	1.5% of value of trade	1.5% of value of trade	1.5% of value of trade

Source: *Francois / van Meilj / van Tongeren (2003), Table 2.5*

The results are reported in Table 15.¹⁷⁵ They refer to static welfare gains from a linear 50 percent liberalization (scenario I). The overall effects of agricultural liberalization are not clear-cut. Liberalization of domestic support in the OECD is generally positive for the OECD (in particular positive for EU countries and North America), however, negative for the food-importing Sub-Saharan Africa. But also other developing countries would lose. Even Australia and New Zealand, both net agricultural exporters gain only marginally from liberalizing domestic support. Agricultural liberalization of border measures sees all countries as winners if assuming constant returns to scale. If, however, increasing returns to scale are considered a number of countries are losers: Mediterranean, China, India, Australia and New Zealand, South Africa and Sub-Saharan Africa.

¹⁷⁵ *Ibidem*, 11-15.

Table 15: Static Welfare Effects (Equivalent Variations) from a Linear 50% Liberalization (Scenario I of Table 14), US\$ mill.

	OECD	Developing countries	Other countries	Total (World)
Agriculture (border measures)	24.482 (16.818)	32.446 (11.083)	4.630	61.558 [96.743]
Agriculture (domestic support)	8.744	-	711	9.455 [12.368]
Manufactures (border measures)	12.057 (5.622)	22.230 (12.012)	2.789	37.076 [54.247]
Services liberalization	17.225 (17.918)	6.907 (5.609)	1.963	26.095 [53.053]
Trade facilitation	46.159 (41.204)	26.152 (21.953)	5.881	78.192 [150.870]
Total	108.667 (81.562)	87.735 (50.657)	15.974	212.376 [367.281]

The figures in round brackets refer to the constant returns to scale case; all other figures refer to the increasing returns to scale case.

The figures in square brackets refer to the overall welfare gains of a full liberalization (100 percent; scenario III of Table 10).

Source: *Francois/van Meijl/van Tongeren* (2003), Table 2.6 and Tables 4.1 to 4.4.

The results for manufacturing liberalization are more consistent and generally positive. Generally, with increasing returns to scale the effects are twice that of constant returns to scale. Similar to the UNCTAD results the developing countries gain nearly twice as much as the OECD countries from opening-up the markets for manufactures. The gains in the industrial world must be lower because the OECD tariffs are, on average, already below 3 percent for manufacturing whereas the tariffs of the developing countries are five times as high (see Table 11a). China will be hurt by significant manufacturing liberalization. Once the WTO accession is fully implemented, the Doha round cannot be expected to yield much additional gains for China. The negative results for China follow primarily from an erosion of its terms of trade.

Another important source of overall effects is services, which yield static income gains similar to those of liberalizing manufacturing. One obvious winner from services liberalization is the

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United States, which picks up more than half of the global welfare gains. Another big (not so obvious) winner is India.

An astonishing result of the simulations by *Francois, van Meijl* and *van Tongeren* is that the gains from trade facilitation amount to nearly half of the total welfare gains (see Table 15).¹⁷⁶ Biggest winners are North America and High Income Asia but also the EU.

Overall the total welfare gain from a really comprehensive Doha round liberalization would be between US\$ 212 billion (for a partial 50 percent liberalization) and US\$ 367 billion.

In terms of labour market effects, both unskilled and skilled labour gain from the partial and full liberalization scenarios in most regions, except for some cases in the CEEC economies and in China. Similarly, there are positive wage effects for unskilled workers in all regions, except for China in all scenarios and the CEEC in some cases.¹⁷⁷

Overall export effects are clear-cut.¹⁷⁸ Export growth, under all scenarios, is greatest in the developing countries, especially in Asia and the Pacific (including India and China), but also in the Mediterranean, African, and Latin American economies. The CEEC suffer from trade-erosion with respect to market access to the EU-15 economies. A decomposition of bilateral trade effects shows that much of the potential gains for developing countries depend on the realization of South-South trade opportunities. This would foster the positive development in this respect in the last decade.¹⁷⁹

The bilateral trade effects – decomposed into the broad aggregate trade flows between the major world regions: North-North, North-South and South-South – resulting from the liberalization experiments by *Francois, van Meijl* and *van Tongeren* underpin the above raised question whether the EU needs the WTO at all (see chapter II.F.2).¹⁸⁰

¹⁷⁶ *Ibidem*.

¹⁷⁷ *Ibidem*, 13.

¹⁷⁸ *Ibidem*, 13 and Figure 4.2.

¹⁷⁹ See WTO (2003), 24 *et seqq.*

¹⁸⁰ *Francois / van Meijl / van Tongeren* (2003), 14.

Table 16: Trade Effects of a Linear 50% Liberalization Experiment
(percentage change in value of bilateral exports; short-run results
with increasing returns to scale)

↓from→to	EU-27 NORTH	Non-OECD SOUTH	Other NORTH	Total exports
EU-27 NORTH	-6	21	13	2 (4)
Non-OECD SOUTH	30	39	25	30 (38)
Other NORTH	12	26	8	14 (15)
Total imports	3 (5)	28 (35)	14 (15)	12 (15)

The figures in brackets refer to the long-run (dynamic) results.

Source: *Francois/van Meijl/van Tongeren* (2003), Table 4.5.

The enlarged EU-27 can increase its total exports only by 2 percent compared to a 12 percent growth in world trade (see Table 16). One reason is that EU countries mostly trade amongst themselves. The benefits from removing the intra-EU barriers have already been realised in the past (customs union, Single Market) and there are no additional gains for intra-EU trade in a new WTO round. A second driver of this result is the increased competition for non-EU countries on EU markets. Simulated intra-EU-27 trade shrinks by 6 percentage points as other suppliers enter the EU markets. While in the past the share of trade within the EU (intra-EU trade) was biased upward (trade creation) lowering external trade barriers by the EU in the Doha round will inevitable lead to the erosion of the intra-EU trade preferences. One can expect that the current bias towards intra-EU trade will be reduced. The most impressive growth in markets share is realized by suppliers from developing countries, who are simulated to expand their exports to the EU by 30 percent, compared to the 12 percent increase of imports from other developed countries. Because there is no positive growth to be expected from intra-EU trade, European exports can only be increased by expansion in non-EU markets. Exports to developing countries will grow with 21 percent and exports to the other regions will grow with 13 percent. Developing countries obtain the highest growth in exports (30 percent). They expand exports to all destinations, though the largest trade surge is observed for intra-developing country (South-South) trade. This will expand by 39 percentage points.

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The simulation experiments by *Francois, van Meijl* and *van Tongeren*, including nearly all possible issues of market access issues under the Doha Round show remarkable welfare gains. Nevertheless Singapore issues (the relationship between trade and investment policy, the interaction between trade and competition policies, transparency in government procurement practices, and trade facilitation practices) are only partly and then somewhat exaggerated (e.g. in the case of trade facilitation) included. Very little is known about the welfare and/or growth effects of a more secure network of regulations concerning Foreign Direct Investments (FDI), a cornerstone of globalization of multinational firms.

V. Conclusions

The development agenda of the Doha Round may turn out to be a mere act of window-dressing. Most empirical studies confirm that there is no simple relationship between openness (trade liberalization) and growth and therefore development. Recent experience with the success and/or failure of poverty alleviation programs at the World Bank and the IMF may, however, help to teach the WTO that it should concentrate on its primal business, namely market access. The mandates of the WTO increased from Round to Round. In the Doha Round a climax in complexity seems to have been reached which may well be the reason that it is so difficult to reach an overall agreement. Given the heterogeneity of mandates, it is not always clear whether the various objectives (development, Singapore issues, market access in general) in the DDA are mutually compatible.

The simulation studies discussed above give a clear picture of winners and losers of a delayed Doha Round. The large industrial countries and regions (United States with NAFTA) and the enlarged European Union with its extended regional trade agreements (e.g. with the ACP) have no distinctive interest in further liberalising world trade. Its intra-trade shares are already – in particular in the case of the EU – so large that any further liberalization only hurts them. The big losers of further delayed trade liberalization are the developing countries. All simulations studies show that they would gain the most from further market access in particular when eliminating the still considerably high tariff peaks in products where they have comparative advantage *vis-à-vis* the industrial countries. Although the average industrial goods tariffs are already very low, there are still in place many subtle forms of protectionism (like

tariff peaks and escalation and contingent protection) - in particular in the relations between the North and the South. Furthermore the tariffs in the developing countries are generally higher than in the industrial countries. It is therefore of utmost importance to eliminate the tariff peaks and generally to cut tariffs in developing countries. This would increase welfare in the developed world and spur South-South trade.

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Appendix: Tables and Figure on World Trade

Table A1: World Merchandise Exports by Product, 2002
(Billion US\$ and percentage)

	Value		Share	
	2002	1995	1995	2002
All products ¹⁾	6272	100.0	100.0	100.0
Agricultural products	583	11.7	9.3	9.3
Food	468	9.0	7.5	7.5
Raw materials	114	2.7	1.8	1.8
Mining products	788	10.7	12.6	12.6
Ores and other minerals	63	1.2	1.0	1.0
Fuels	615	7.3	9.8	9.8
Non-ferrous metals	110	2.2	1.8	1.8
Manufactures	4,708	74.3	75.1	75.1
Iron and steel	142	3.1	2.3	2.3
Chemicals	660	9.7	10.5	10.5
Other semi-manufactures	460	7.9	7.3	7.3
Machinery and transport equipment	2,539	38.8	40.5	40.5
Automotive products	621	9.2	9.9	9.9
Office and telecom equipment	838	12.1	13.4	13.4
Other machinery and transport equipment	1,080	17.5	17.2	17.2
Textiles	152	3.0	2.4	2.4
Clothing	201	3.2	3.2	3.2
Other consumer goods	553	8.7	8.8	8.8

¹⁾ Includes unspecified products. They account for 3.3 percent of world merchandise exports in 2002.

Table A2: World Merchandise Exports by Region, 2002
(Billion US\$ and percentage)

	Value		Share	
	2002	1990	1995	2002
World	6,272	100.0	100.0	100.0
North America	948	15.4	15.5	16.9
United States	694	11.6	11.7	12.5
Latin America	350	4.3	4.6	5.8
Mexico	161	1.2	1.6	2.7
Western Europe	2,657	48.3	44.8	40.0
EU (15)	2,449	44.4	41.5	37.0

	Value		Share	
	2002	1990	1995	2002
C./E. Europe/Baltic States/CIS	314	3.1	3.9	4.3
C./E. Europe	148	1.4	1.6	1.9
Russian Federation	107	-	1.6	1.7
Africa	140	3.1	2.2	2.3
South Africa	30	0.7	0.6	0.5
Middle East	244	4.1	3.0	4.3
Asia	1,620	21.8	26.0	26.4
Japan	417	8.5	8.8	7.6
China	326	1.8	3.0	4.0
6 East Asian traders	603	7.8	10.3	10.4
<i>Memorandum item:</i>				
NAFTA (3)	1,107	16.5	17.1	19.5
MERCOSUR (4)	89	1.4	1.4	1.4
ASEAN (10)	405	4.2	6.4	6.8

Source (A1 + A2): WTO, International Trade Statistics 2003, available at http://www.wto.org/english/res_e/statis_e/its2003_e/its03_bysubject_e.htm#sector

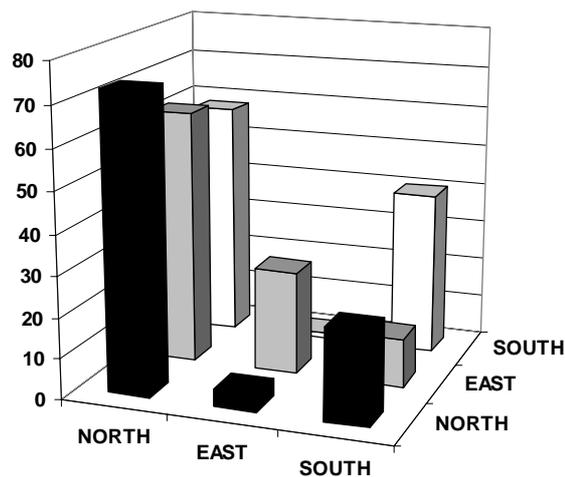


Figure A1: Network of world merchandise trade, 2002 (in percent of world trade)

North = North America, Western Europe, Japan, New Zealand;

East = Central and Eastern Europe, Baltic States, Russian Federation;

South = Latin America, Africa, Middle East, Other Asia.