

- I “Working Papers” del Dipartimento di Economia svolgono la funzione di divulgare tempestivamente, in forma definitiva o provvisoria, i risultati di ricerche scientifiche originali. La loro pubblicazione è soggetta all’approvazione del Comitato Scientifico.
- Per ciascuna pubblicazione vengono soddisfatti gli obblighi previsti dall’art. 1 del D.L.L. 31.8.1945, n. 660 e successive modifiche.
- Copie della presente pubblicazione possono essere richieste alla Redazione.

REDAZIONE:

Dipartimento di Economia
Università degli Studi Roma Tre
Via Silvio D'Amico, 77 - 00145 Roma
Tel. 0039-06-574114655 fax 0039-06-574114771
E-mail: dip_eco@uniroma3.it



DIPARTIMENTO DI ECONOMIA

**WTO AGRICULTURAL NEGOTIATIONS AND
DEVELOPING COUNTRIES: AN OVERVIEW**

Valeria Costantini*

Comitato Scientifico:

Mariano D'Antonio,

Pasquale De Muro,

Fabrizio De Filippis.

**Dipartimento di Economia, Università degli Studi "Roma Tre"*

WTO Agricultural Negotiations and Developing Countries: An Overview

Valeria Costantini

Department of Economics, Roma Tre University, Rome, Italy

Abstract

The aim of this paper is to give a broad overview of the main issues faced by developing countries in a context of trade liberalization as part of the multilateral agricultural trade negotiations in the WTO Doha Round. The bargaining positions of developing countries in the Doha Round are described. A comparison of empirical results on possible outcomes of a Doha Round agreement follows with a focus on impacts in terms of poverty reduction. Results are then analyzed using the main theoretical findings on trade-poverty links and the specific role of preference erosion in order to shed some light on potential failures of a trade reform in the absence of complementary policy actions.

Keywords: Agriculture, Developing Countries, Multilateral Trade Negotiations, Poverty, WTO

J.E.L.: F13; I32; Q17

Paper presented at the XV AISSEC (Italian Association for the Comparative Study of Economic Systems) International Conference, 24-25 November 2006, Naples, Italy. This work was supported by the Italian Ministry of University and Technological Research, under the Research Program of National Scientific Relevance on “The new multilateral trade negotiations within the World Trade Organisation (Doha Round): liberalisation prospects and the impact on the Italian economy”. The author is grateful to Giovanni Anania, Piero Conforti, Mariano D’Antonio, Pasquale De Muro, Fabrizio De Filippis and Luca Salvatici for comments and suggestions made on a previous version of the paper.

Contents

1. Introduction.....	9
2. The Doha Round and Agricultural Negotiations	11
2.1 <i>The role of developing countries in agricultural negotiations.....</i>	<i>11</i>
2.2 <i>Special and Differential Treatment for DCs.....</i>	<i>14</i>
2.3 <i>Main issues of agricultural negotiations affecting the Doha Round deadlock.....</i>	<i>18</i>
3. Winners and Losers in the Doha Round.....	21
4. Factors Influencing the Trade-Poverty Nexus	30
4.1 <i>Household behavior.....</i>	<i>32</i>
4.2 <i>Factor markets.....</i>	<i>34</i>
4.3 <i>The role of government.....</i>	<i>36</i>
5. The Problem of Preference Erosion for Developing Countries.....	38
5.1 <i>Theoretical aspects of preferential regimes and preference erosion.....</i>	<i>38</i>
5.2 <i>The real utilization of preferential regimes</i>	<i>41</i>
6. Concluding Remarks	45
References.....	47

1. Introduction

Impacts of trade reforms on developing countries (DCs) have become a cornerstone of the World Trade Organization (WTO) negotiations which are part of the Doha Development Agenda (DDA) launched in November 2001 at Doha. The question of rich country agricultural support and its potential impacts on rural poverty in developing countries has been one of the major concerns during the Doha Round. Poverty reduction is now widely accepted as a primary objective of the international agenda in which the Millennium Development Goals defined by the United Nations in the Millennium Declaration (UN, 2000) commit the international community to halve poverty by 2015 and promote a more open, rule-based trading system as an important means of reaching the Millennium Development Goals.

Historically, many WTO rules have evolved to reflect the perceived interests of developed countries in an era in which the participation of DCs was limited. As DCs have become more actively involved in the WTO, the challenge is to design rules that promote development that requires the active involvement of DCs in the whole negotiation process.

In contrast to the preceding General Agreement of Tariffs and Trade (GATT), all WTO agreements and disciplines, with few exceptions, apply to all members regardless of the level of development although, in many cases, transition periods and rules apply to DCs. A consequence of this so-called “Single Undertaking” and the expansion in the coverage of multilateral rules to new areas such as intellectual property rights and trade in services was that DCs were confronted with a significant implementation agenda as well as new policy constraints.

In practice, ensuring that the liberalization agreements promote development in DCs means prioritizing reforms which yield the largest benefits to poor countries. In order to assure a development path of this kind, governments must be helped to move towards good trade policies and deal effectively with the implementation constraints faced by DCs. Reform proposals should therefore be prioritized with a view to maximizing the welfare gains for all WTO members. The potential gains from liberalization in different areas are not homogeneous and depend on the structural economic features of each country (Charlton and Stiglitz, 2005). In particular, the welfare gains associated with agricultural liberalization are substantial for DCs if there are appropriate

domestic and international complementary policies which correct the market and institutional failures characterizing most DCs. The Doha Round has actually reached a deadlock due to the contrasting positions of developing and developed countries, mainly on agriculture. More generally, although the DDA reflected the obvious fact that DCs were central to the new trade liberalization agenda, three key difficulties emerged during negotiations (Collier, 2006): i) there are currently radically different aspirations among WTO members where DCs explicitly aspire to transfers from developed countries in contrast with the reciprocal characteristic of multilateral negotiations; ii) a large group of WTO members are highly marginalized from the world economy and see themselves as having no basis for bargaining mutual advantage; iii) the necessity to negotiate over all sectors (not separately) increases the difficulties that DCs face in participating in the bargaining process.

These three aspects have exacerbated the contrasting positions of the DCs who want significant domestic trade reforms to be made by developed countries and pro-development exemptions in favor of the DCs themselves. The developed countries, on the other hand, are oriented towards fully reciprocal concessions by both groups of countries.

The aim of the paper is to analyze the DCs' negotiating positions in agricultural liberalization and try to understand which factors mainly affected the failure in the negotiation process.

The rest of the paper is organized as follows. Section 2 generally describes the terms of the debate on the role of DCs in the Doha Round with a special focus on the agricultural issues that heavily influenced the current deadlock. Section 3 gives a comparison of some empirical results on possible outcomes of the Doha Round and focuses on agriculture and impacts in terms of poverty reduction for DCs. What strongly emerges from this comparison is that the positive effects in favor of DCs predicted by simulation exercises are inadequate compared with expectations. These results help us to understand why DCs are highly unsatisfied by achievements in the Doha Round. The main explanations for these limited welfare improvements are linked to market and institutional failures Section 4 and the problem of preference erosion occurring in the agricultural sector Section 5. Section 6 offers some concluding remarks.

2. The Doha Round and Agricultural Negotiations

The agricultural sector has been one of the most contentious issues in the multilateral trade negotiations that have been taking place since 1999 when the Ministerial Conference of the WTO was held in Seattle. Discussions on the agricultural sector determined the delay in the adoption of the DDA so that the new negotiation round for trade liberalization could be open to all WTO members. The dramatic events in the United States on September 11th were one of the major reasons for opening the Doha Round, launched by the 2001 Ministerial Declaration.

The Uruguay Round Agreement on Agriculture (URAA) took a major step forward by bringing the agricultural sector within the WTO multilateral trading rules but its success in opening up the sector to global competition was limited. Today, agriculture remains one of the most contentious issues and special efforts from developing-country bargaining coalitions have been made in order to achieve ambitious results in terms of improving market access in developed countries.

Although DCs have an interest in promoting all of the areas under negotiation, they have repeatedly made it clear that agriculture is the key issue that will determine whether or not they sign up to a deal for two main reasons. The first is because many DCs see potential opportunities once the large trade distortions in world agriculture markets are either eliminated or substantially reduced. The second is because many DCs, and particularly Least Developed Countries (LDCs), have deeply vulnerable people who depend on agriculture. There is a need to ensure that integration of the agricultural sectors of these countries into any emerging reform framework takes their interests into account. These concerns shape the offensive and defensive interests of DCs in these negotiations (Matthews, 2005a).¹

2.1 *The role of developing countries in agricultural negotiations*

During these long negotiations, the DCs have emerged as a significant political force. In particular, after the failure of the WTO Ministe-

¹ The requests of DCs are well reflected in one recent report published by Oxfam (2005) which affirms that for every US\$100 generated by world exports today, about 97 per cent goes to high- and middle-income countries and only 3 per cent goes to low-income countries.

rial Conference in Cancun (September 2003), it was clear to industrialized countries that the hegemony of the United States and the European Union (EU) in the negotiation process had been reduced. The leading actor on the scene was the G20, a group of heterogeneous DCs including powerful members such as Brazil, China and India which obtained a great consensus from advanced and very poor DCs (Narlikar and Tussie, 2004; Panagariya, 2002a). Since the Ministerial Cancun meeting, the G20 has criticized the farm policies and agricultural tariffs in developed countries. In the last two years, 2004 and 2005, DCs have extracted some concessions from developed countries in terms of dropping out of EU export subsidies and obtaining the promise of substantial reduction of highly protective tariffs.

Another coalition coordinated by Indonesia and Philippines, the G33, was also established on the eve of the Cancun Conference. The main concerns of G33 are that issues such as food security, rural livelihoods and rural development should become an integral part of the negotiations. During the Cancun Conference, it wanted to introduce two specific instruments for DCs, one being the possibility to use an *ad hoc* category of Special Products (SPs) only in favor of DCs and the second, a Special Safeguard Mechanism (SSM) which were both embodied in the modalities of the WTO agricultural negotiations.

A further grouping was the G90 - an alliance of African, Caribbean and Pacific countries (ACP), African Union states and LDCs - with a platform that was essentially oriented towards protection from the negative impacts of trade liberalization of particularly vulnerable economies which are largely dependent on long-standing preferences for their economic development. The G90 also required a binding and meaningful Special and Differential Treatment (SDT) in favor of poor countries in all areas of the DDA and, in general, greater efficacy of aid flows and assistance for DCs.

The consolidation of developing country coalitions appeared to deepen in the last Hong Kong Ministerial Conference with the creation of a grand coalition called the G110 which grouped together G20, G33 and G90, representing 80 per cent of humanity (Oxfam, 2005). This result goes well beyond the expectations of the developing country coalitions during the Cancun meeting to remain a stable political force in the Doha Round negotiations.

The DCs and the bargaining coalitions are divided into heterogeneous groups: subsistence agriculture (much of Africa and part of South East Asia, or the G90 and G33), export agriculture (particularly Ar-

gentina and Brazil, or the G20) and those breaking out of agriculture and becoming increasingly centered on manufacturing (from a range of coalitions).

If we consider simple data, the sector's share of global GDP for DCs is around 11 per cent whereas for developed countries, it is significantly lower (Table 1). Furthermore, the annual growth rate of agricultural value added as a share of GDP for DCs over the last ten years was twice the growth rate for developed countries. Agriculture's share of global merchandise trade is almost the same for both developed and developing countries (7%) but substantially higher for Sub-Saharan Africa (13%). Furthermore, 57 per cent of total population in DCs lives in rural areas (64% for Sub-Saharan Africa) whereas figures for advanced economies are significantly lower. These divergences show two main aspects: agriculture is still an important sector for livelihood in DCs and especially LDCs and, at the same time, rural populations in DCs on average are considerably less productive and hence poorer than those employed outside agriculture (FAO, 2005a). For this reason, improving the incomes of small-scale farmers is an essential step toward achieving poverty reduction and equality in income distribution (Polaski, 2005).

For agricultural exporters, the failure to liberalize trade in agriculture and remove subsidies has been particularly costly and this may well explain the offensive position of the G20 in negotiations. Trade-distorting measures of industrialized countries displace the agricultural exports of DCs by reducing the world prices by 3.5-5 per cent for many agricultural commodities including wheat, other grains and oilseeds (Dimaranan *et al.*, 2003). Elimination of protectionism and subsidies of the industrialized world's agriculture would therefore bring high benefits for DCs' net agricultural trade.²

For this reason, many DCs claim a substantial improvement in market access by developed countries in the Doha Round and declare that most efforts in tariff reduction during the Uruguay Round were made by DCs whereas developed countries applied lower reduction rates to their own tariffs (Finger and Winters, 2005). DCs also had to take on costly commitments embodied in the Sanitary and Phytosani-

² According to Diao *et al.* (2003), protectionism and subsidies by industrialized nations cost DCs about US\$24 billion annually in lost of agricultural and agro-industrial income. Trade-distorting measures also displace more than US\$40 billion of net agricultural exports per year from DCs.

tary Measures (SPS) and Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreements and in the Doha Round they would contemplate the opening of their markets only if developed countries commitments for further market access were significant. One of the main requests made by the DCs is the adoption of stronger SDT provisions, considering three core areas: preferential access to developed-country markets, typically without reciprocal commitments from DCs, exemptions or deferrals from some WTO rules and technical assistance to help implement WTO mandates.

Table 1 – Main Statistics for Agricultural sector, 2003 (% values)

	World	Developed Countries	Developing Countries	Sub-Saharan Africa
Agriculture value added relative to GDP	6.3	2.4	11.5	16.8
Agriculture value added relative to GDP (annual growth rate 1992-2003)	2.4	1.2	3.1	3.7
Rural population relative to total population	51	27	57	64
Economically active population in agriculture	43	6	53	60
Agricultural exports relative to total exports	7.1	7.0	7.4	13.7
Agricultural exports relative to agriculture value added	36.2	74.4	19.4	20.2

Source: FAO (2005a)

The 2001 Doha Ministerial Declaration emphasized the importance of SDT, stating that provisions for special and differential treatment were an integral part of the WTO agreements and paragraph 44 explicitly called for a review of SDT provisions with a view to “strengthening them and making them more precise, effective, and operational”.³

2.2 *Special and Differential Treatment for DCs*

The intellectual foundations of SDT was laid in the Prebisch-Singer hypothesis which argued that developing-country exports were mainly

³ For a very useful description of the dynamics in agriculture negotiations in the Doha Round, see Aggarwal (2005).

concentrated in commodities with volatile and declining terms of trade (Prebisch, 1950; Singer, 1950). That theory was based on the argument that DCs needed to foster industrial capacity to reduce import dependence and diversify the economic system, shifting factors away from the production of traditional commodities towards the industrial sector. These policies were justified by the declining terms of trade of traditional commodities in the long term, often affected by short-term price volatility. In practice, the protection of the infant industry was reached with the creation of trade barriers to reduce import flows. International specialization along the lines of static comparative advantage had excluded developing countries from the fruits of technological progress that has so enriched the industrialized world (Cuddington, 1992). At the same time, it was acknowledged that exports were important as a source of foreign exchange and that the local market might be too small for local industry to be able to capture economies of scale. Therefore, in 1968, the Generalized System of Preferences (GSP) was launched under UNCTAD auspices and called for developed countries to provide preferential access to developing-country exports on a voluntary basis.

Because GSP programs violate the GATT's Most-Favored Nation (MFN) rule, in 1979 at the conclusion of the Tokyo Round, permanent legal cover for GSP was obtained through the Decision on Differential and More Favorable Treatment, Reciprocity and Fuller Participation of Developing Countries, better known as the "Enabling Clause" which called for preferential market access for DCs and limited reciprocity in GATT negotiating rounds to levels consistent with development needs.⁴

SDT became an integral part of the URAA and was further emphasized in the DDA. Currently, SDT provisions in the WTO rules call for preferential access to developed country markets, exemptions from certain rules and promises of development assistance (Table 2).

One of the main problems during recent negotiations is how much SDT DCs should demand. If too much is requested, the chance for a satisfactory outcome to the round is reduced. If too little, the DCs may lose opportunities for *ad hoc* measures (Josling, 2005). The political

⁴ An important feature of the Enabling Clause was that SDT was to be phased out when countries reached a certain level of development. That level was never defined, however, leaving eligibility for trade preferences to the discretion of preference-granting countries.

economy problem is complicated by the fact that SDT would not bring the same benefits for all DCs but the effects are well differentiated. If the actual classification of developing country members in the WTO remains unchanged, effective liberalization in the DDA would bring scarce results for DCs themselves, reducing substantially the possibility to increase South-South trade flows (Anderson and Martin, 2005; Bouet, 2006).

Table 2 – SDT main provisions

Category	Developing country	Developed country
Concessions in tariff schedules	Smaller tariff reductions over a longer period	Take into account erosion of preferences
	Designation of special products	Reduce tariff escalation
	Longer implementation period for elimination of export subsidies	Liberalization of tropical products markets
	Smaller cuts in domestic support over a longer period	Market access for alternative products
	Higher <i>de minimis</i> for domestic support	Increased technical assistance for trade capacity
	No reduction commitments for LDCs	Duty- and quota-free access for LDCs, where possible
Differentiation in rules	Special safeguard mechanism	Decision on low-income food-deficit countries
	Special consideration for State Trading Enterprises	Export credits
		Ad hoc temporary finance for developing country imports

Source: Josling (2005)

In order to make SDT more effective in providing real compensation to losers in the liberalization process, a greater differentiation among DCs - based not only on a self-declaration system as before but on quantitative assessment of vulnerability to trade liberalization process - could be a source of compensation for those countries which would effectively face welfare losses after the Doha Round. Nonetheless, DCs are not generally favorable to a hard differentiation and such a position can be explained in two ways: on the one hand, DCs as a single group would be more powerful in the bargaining process and, on the other, more advanced countries such as Brazil, China and India would not lose the more favorable treatment permitted to DCs (Evenett and Hoekman, 2006; FAO, 2005c; Hoekman, 2005; Kleen

and Page, 2005; Matthews, 2005b).

Considering the explicit position by DCs not to concede any differentiation criteria in order to apply gradual SDT provisions on the basis of the development *status* of DCs, it is clear that the outcome of the negotiations is quite ambiguous. The question as to whether self-designation should be allowed remains on the ground whereas in recent years, the developing country *status* was not conceded to any new WTO member but only the LDC *status* was adopted. There are compelling political reasons for taking SDT provisions seriously. A degree of SDT that is satisfactory to DCs will be necessary for an agreement in the Doha Round because developing country groups such as G20, G33 and G90 are committed to meaningful SDT although DCs differ considerably on the real impact of SDT on their economic systems.

Most DCs have requested SDT with the possibility of exemption from further tariff reductions or, alternatively, a greater flexibility to set tariffs at whatever levels they deem appropriate, justifying the case using four key arguments (Matthews, 2005a):

- The case for *development tariffs* where high tariffs are necessary to provide adequate incentives for producers in DCs in order to encourage agricultural growth with its accompanying poverty alleviation and multiplier effects;
- The case for *food security tariffs* where levels of food self-sufficiency at world market prices or with low tariff bindings are insufficient to provide the level of national food security that DCs desire;
- The case for *stabilization tariffs* where tariff bindings should be sufficiently high to give DCs the ability to vary applied tariffs in order to offset most or all of price volatility arising from world market prices;
- The case for *compensatory tariffs* - high tariffs in DCs are justified as a countervailing measure as long as developed countries continue to provide significantly larger amounts of trade-distorting support.

To this end, Hoekman (2005) states that self-designation criterion is likely to survive but that specific SDT provisions could be targeted to particular circumstances that can themselves be monitored. A developing-country category itself would therefore become less attractive as the SDT provisions cover more objective subsets of countries. At the same time, Josling (2005) underlines that this solution raises

the question as to whether the multilateral trade system should encourage the proliferation of groups of countries treated differently in the rules, in a trade system based on non-discrimination.

2.3 Main issues of agricultural negotiations affecting the Doha Round deadlock

The negotiations to reach further agreement on agriculture by the Hong Kong Ministerial Conference (December 2005) took place based on the Framework to Establish Modalities in Agriculture attached to the Doha Work Program agreed by the WTO General Council on 1 August 2005 (WT/L/579), generally known as the July Framework Agreement (FA).

After the Ministerial Conference held in Hong Kong in December 2005, few noticeable results emerged from a long negotiation process and the July 2006 deadline for establishing modalities was missed leading to a Round standstill.⁵

During the past five years, the requests from DCs find general agreement on two main issues:

- Demands for a high level of ambition in disciplines in the three main pillars under negotiation – market access, export competition and domestic subsidies, including extension of duty-free and quota-free access for LDCs. Support for this request is partially moderated by the concerns of preference recipients about the impact of reduced tariffs on their preferential margins.
- A defensive interest in retaining the maximum policy space to take account of particular vulnerabilities such as food security, livelihood security and rural development concerns. These issues are all addressed in the proposal of a Development Box, next to the three existing Amber, Blue and Green boxes. Support for this demand and, more generally, for SDT is tempered by concerns expressed by the mainly Latin American agricultural exporting countries that other DCs may substantially reduce the potential South-South trade flows emerging from a deep liberalization.

After the Hong Kong Declaration, very few pro-development results in the three main negotiation areas, better known as the three pil-

⁵ For an exhaustive examination of political obstacles to a final Doha Round Agreement and possible solutions, see Collier (2006).

lars, were reached and the majority of hot issues remained open.

Specific issues of market access involving DCs regard the effects of a formula approach to tariff reduction and the existence of SP and SSM for development purposes.

An important issue for some DCs is how to reconcile a formula approach to tariff reductions with SDT where in the Uruguay Round this meant that commitments by DCs averaged two-thirds of those undertaken by developed countries (Matthews, 2005a). If this is to be repeated in the Doha Round, the question is whether this commitment should be built into the formula to be used. Application of the same formula can lead to different outcomes depending on the initial structure of tariffs. There are considerable differences between the structure of bound tariffs in both developed and developing countries as well as between developed and developing countries. The difficulty arises when DCs start with very high and uniform-bound tariffs initially. Many DCs are in this position because, in the implementation of the URAA commitments, they opted for a ceiling binding on products not previously bound on the basis of appropriate protection bounds deemed autonomously. Although SDT in the formula would mean that DCs would be treated more leniently than developed countries with the same tariff structure, the differences in the initial tariff structures could mean that, in practice, the average cuts to be undertaken by many DCs would be considerably greater than the average cuts undertaken by developed countries.⁶

The Hong Kong Declaration officially introduced two specific exemptions for DCs on the basis of SDT rules. DCs will have the flexibility to self designate an appropriate numbers of Special Products to be exempted from commitments. Criteria for the eligibility of SPs are food security, livelihood security and rural development needs in line with the position of G33 (defending the position of Net Food Importing Developing Countries, NFIDCs).

Furthermore, DCs worried that trade liberalization could leave them vulnerable to import surges or a price collapse on world markets in a situation in which they have very limited ability to protect pro-

⁶ Using a tiered approach with the explicit aim of harmonising tariffs, there will be a wide dispersion in the average tariff reduction achieved among developed countries. DCs often have tariff structures with most of the tariff lines corresponding to notified bound rates at 100% or above. Dividing tariff lines into tiers with decreasing cutting commitments corresponds to higher cuts for higher tariffs.

ducers through purely internal measures. The G33 asked for a Special Safeguard Mechanism (SSM) for DCs only, along with the concept of SPs.⁷

While the Hong Kong Declaration officially introduced an SSM for DCs in the agricultural negotiations, the modalities for such a provision – and for the great part of agricultural issues - were not established by the end of April 2006, with the consequent collapse of the Round.

Another developing country specific issue in the market access pillar is the negative effect related to tariff escalation. Tariff escalation occurs when tariffs rise along processing chains in such a way that tariffs on the processed products are higher than on the corresponding primary products. An escalating tariff structure of this type creates greater protection for the domestic processing sector, acting as a subsidy to the activity of transformation whereas it acts as a disincentive for exporting processed products for exporters. A recent contribute by Sharma (2006) denotes the positive impact of formula cuts proposed by EU, G20 and US during October 2005, in terms of reduction of tariff escalation. For eight DCs (Brazil, Egypt, India, Indonesia, Pakistan, Philippines, Sri Lanka and Turkey) and seven products (cocoa, coffee, fruits, sugar, oilseeds, grains and rice), the proposed formula cuts would reduce tariff escalation from 40 percentage points on average in the URAA to 15-21 percentage points. Whether these reductions are sufficient or not is a matter of judgment, depending on the desired degree of tariff escalation. Furthermore, it is necessary to consider the real impact of tariff escalation in accounting for the role of preferential agreements. Chevassus-Lozza and Gallezot (2003) note that countries benefiting from a preference with the European Union (ACP in particular) face quite homogeneous tariff rates for all agro-food chains whereas Clark and Bruce (2006) show a similar regularity for the US tariffs (e.g., with the other members of NAFTA).

The limited political efforts made by WTO members to solve this problem have only achieved the result that “[t]ariff escalation will be addressed through a formula to be agreed” (paragraph 36 of the FA)

⁷ The flexibility argued by DCs both on price and volume for the SSM is perfectly in line with the specific features of the existing Special Safeguard (SSG) available for all countries. Valdés and Foster (2005) have argued that price triggers should be better because volume triggers require up-to-date reliable information, which may be difficult to provide in DCs. A volume trigger could also be caused by a shortfall in domestic production rather than a change in external circumstances.

and paragraph 17 of the Hong Kong Declaration only adds that “there is full agreement on the need for this to be done and a genuine recognition of the particular importance of this for commodities exporters”.

Probably the most apparently incisive decision provided by the Hong Kong Declaration is the decision no. 36 (Annex F of the Declaration) where duty- and quota-free market access will be provided by 2008 for all LDCs for at least 97 per cent of products. The proposal is much less generous than the original Doha mandate of full duty- and quota-free access. The exemption of 3 per cent corresponds to some 300-400 tariff lines in developed countries, allowing them to continue to protect the very sensitive products produced more competitively by LDC exporters (Oxfam, 2005).

With regard to the third pillar, few DCs have entitlements to provide trade-distorting domestic support beyond *de minimis* levels. Their interest in this pillar of the negotiations is therefore offensive. The G20 has made the most detailed proposal for reductions in aggregate measure of support (AMS) and in overall trade-distorting domestic support among the developing country groups. The FA recognizes the existence of a SDT in domestic support, partly adopting the proposal from the G20 where DCs with no AMS entitlements should be exempted from any reduction requirement in their *de minimis* level (currently twice than the levels allowed for developed countries). The FA states that DCs that allocate almost all *de minimis* programs for subsistence and resource-poor farmers will be exempt from any reductions in *de minimis* levels.

3. Winners and Losers in the Doha Round

The bargaining positions of DCs are often directly linked to a political economy process. In any case, if we look at the empirical results provided by a large body of literature, the requests addressed by DCs seem to be coherent with the forecasted economic effects of the Round.

Several assessments of the effect of a potential agricultural agreement in the Doha Round have been produced in recent years, mainly analyzing simulations with Computable General Equilibrium (CGE) models, with special attention paid to the consequences of the DDA on DCs.

Very broadly, the welfare effects of trade liberalization are domi-

nated by two factors: i) the change in allocative efficiency and ii) the change in terms of trade.

Gains from allocative efficiency are realized when market distortions are removed, permitting the economy to reallocate its resources to the most productive use. By eliminating import tariffs, consumption surplus is increased and productive factors are allocated to more efficient utilizations. These gains are obtained regardless of what trade partners are carrying out. These benefits accrue largely to the liberalizing region itself. This is the main explanation for the unequal distribution of welfare gains in agriculture where the larger benefits go in favor of developed countries such as the EU, the US and Japan where agricultural domestic supports are very high. The terms of trade effect comes from changes in a country's export prices relative to its import prices. According to the results of simulation exercises, agricultural market prices should be higher after the liberalization process and terms of trade for exporting DCs should be more favorable. This is the main explanation for the relatively high proportion of welfare gains going in favor of large exporting DCs which are the core members of the G20, characterized by an offensive position in the negotiations which moves in the direction of a full liberalization of developed country markets. At the same time, consumers in DCs could lose due to increasing market prices for agricultural products and the net effect of a wide-ranging agricultural reform depends on the composition of a country's exports and imports of different commodities and the price sensitivity of those commodities to liberalization.

Another important feature to be addressed in the analysis of the welfare effects of liberalization is the agricultural trade balance across countries. There is a division between temperate products (program crops and livestock), where DCs are largely net importers and developed countries net exporters, and tropical products for which DCs are largely net exporters. Program crops are those which would experience the largest price increases because they are the most subsidized in developed countries. Therefore, in many simulations, most DCs would face increasing prices for their agricultural imports. It is not surprising that many DCs are worse off as a result of the terms of trade effects after agricultural trade reforms.

Considering the specific perspective of LDCs, three special conditions should be more closely considered. First, in recent decades, the constant decreasing trends of agricultural products on world markets caused by protection and output and export subsidies by the developed

countries have oriented the consumption path of LDCs towards large imports of agricultural products. As importers, LDCs have access to these low prices. Once the subsidies and protection are eliminated, the world prices rise and harm importers. For many LDCs who are large importers of agricultural products, these losses can be substantial (Panagariya, 2005).

Secondly, under preferential regimes such as the Everything But Arms (EBA) initiative of the EU, LDCs have quota- and duty-free access to the EU market (with the exception of few products). This means that they can sell their exports at the internal EU price that is kept artificially high to protect EU producers. With some exceptions, the EU internal price is far more lucrative than the price that could be obtained in a condition of free trade. With the ending of export subsidies and a decrease in tariffs and production-enhancing subsidies, world agricultural prices are likely to go up. Higher prices and better access to agricultural markets in developed countries should benefit DCs, whose comparative advantages often lie in agriculture. However, not all DCs are net exporters of agricultural products and not all net food-importing DCs have the capacity to increase production. The food-import bill could therefore increase thus enhancing the vulnerability of the economic system. This is particularly likely for DCs that export agricultural products under specific preference agreements. After the trade liberalization process, the productivity structure of these countries would no longer be competitive, losing market quotas and increasing food imports. These economies are often characterized by high specialization in products with preferential treatments and the reduction of this preferential treatment would not be compensated by a shift to other more efficient productions.

Thirdly, in the presence of persistent unemployment, trade liberalization may simply move workers from low productivity protected sectors into unemployment. This lowers the country's national income and increases poverty (Polaski, 2006). High unemployment rates, weak safety nets and poor risk markets are all features of DCs that have to be taken into account in a comprehensive analysis of welfare effects related to trade liberalization. Historical evidence, not only simulations, suggests that without complementary policies, trade alone is unlikely to promote the absorption of agricultural labor force into more productive sectors (Polaski, 2005).

After a brief description of the main results from CGE models with specific attention to poverty reduction effects, we will try to highlight

some general issues on trade and poverty (par. 4) and preference erosion (par. 5) which could help to explain the small welfare effects commonly found in the simulation exercises of a Doha Agreement scenario.

The most recent results from simulation of alternative liberalization scenarios in this negotiation round are described in Anderson et al. (2005a; 2005b), Bouët et al. (2005b), Bouët (2006), Francois et al. (2005b), Hertel and Winters (2006), Polaski (2006) and a useful comparison of trade impacts on poverty reduction is described in Ackerman (2005). All these experiments reflect the effects of a trade reform scenario using benchmark data from 2001, updated with the key events occurred recently, namely the accession of China to the WTO, the phase out of the worldwide bilateral quota scheme for textiles and clothing and the 2004 enlargement of the EU to 25 members as well as the implementation of European reforms that were part of the so-called Agenda 2000 plan.

Following Anderson et al. (2005a), in a full liberalization scenario, welfare gains in favor of DCs would be 45 per cent of total gains, a percentage well above their share of global GDP. Their welfare would increase by 1.2 per cent, compared with an increase of just 0.7 per cent for all countries (Table 3). DCs would reap substantial efficiency gains from reforming their own protection, in many cases higher than developed countries' tariffs structure. This higher share is partly because they have relatively high tariffs themselves and would therefore reap substantial efficiency gains from reforming their own markets and partly because their exports are more concentrated in those products whose tariffs in developed-country markets are consistently higher. Results in Francois et al. (2005b) are partially different where liberalization of domestic and export subsidies by the rich nations – the EU and US in particular – would produce larger efficiency gains in these countries. Moreover, these reforms would raise the world price of food. Because some developing nations are net food exporters and some other are net food importers, a narrow focus on rich-nation agricultural liberalization would show mixed effects on DCs. Some of the biggest developing country agro-food exporters – Argentina and Brazil – will face substantial gains in terms of increasing agricultural exports (and this is also confirmed in the analysis by Winters, 2005) but at the same time consumers in almost all DCs could be negatively affected by very uneven impacts in terms of food security and nutrition. In this case, all the considerations about possible negative impacts of

trade reforms on poverty must be accounted for, especially in terms of distributional impacts.

Comparing the available studies, a common result emerged where it seems that for DCs most gains from trade liberalization are due to textiles and clothing and other manufacturers whereas agricultural liberalization would even produce welfare losses for DCs if a realistic Doha Round scenario were set (Bouët et al., 2005b). In particular, most of the welfare losses in an agricultural trade reform scenario would affect vulnerable economies as some ACP, Mediterranean and Sub-Saharan African countries where preference erosion would produce significant negative effects. This particular result is closely related to the more accurate modeling of preferential trade agreements in Bouët et al. (2005b), confirming that where the effective rate of utilization of preferential regimes are quite high, negative effects in terms of preference erosion are more likely.

Bouët (2006) presents simulations where imperfect competition and product differentiation in industry and services bring negative impacts for countries specializing in the primary sector after trade liberalization. Therefore, agricultural specialization has a cost even for export oriented countries such as Argentina, Australia, Brazil or New Zealand because trade reform gives agricultural countries incentives to reallocate productive factors in the primary sector, thus reducing positive effects related to economies of scale and varieties.

The simulation exercise provided by Polaski (2006) represents one of the most recent models, including a Doha scenario accounting for Hong Kong Declaration. One specific aspect of this model is the representation of the labor market which is divided into three types: agricultural labor, urban unskilled labor and urban skilled labor. In urban unskilled labor, there is unemployment whereas wages in the agricultural labor market are lower than urban unskilled wages. The rural and urban unskilled labor markets are linked by migration. Depending on the scenario, the gains to DCs are about 2 to 6 per cent less if labor forces are modeled separately rather than as a single, unskilled labor group.

Apart from specific consideration about different assumptions in the modeling procedures, two common results can be drawn by this comparison: i) agriculture is not always the main source of welfare gains, as Bouët (2006) and Polaski (2006) clearly show; ii) the overall effects linked to the agricultural sector would be followed by a decreasing welfare level especially for vulnerable economies with non-

competitive farm households which correspond perfectly to the poorest individuals. Such common results should be taken into account during the negotiation process in order to assure adequate compensation for such welfare losses.

Following Hertel and Ivanic (2006), if substantial tariff cuts were adopted by DCs, global trade reform would bring large welfare gains for DCs, thus enhancing South-South trade flows. Domestic reforms implemented by DCs would be positive for two reasons: the first effect would be to enlarge demand markets whereas the second one would be to reduce inefficiencies in production (Fabiosa et al., 2005). As underlined in Ackerman (2005), if we look at a “Doha scenario”, DCs would gain less than in a full liberalization scenario. Considering that in analyzed simulations the main difference in the two scenarios depends on reduced trade reforms applied by DCs, the role of preferential agreement and SDT emerges as a major cause of reduced welfare gains for DCs themselves. On the contrary, Polaski (2006) states that few losses arise from the erosion of preferences that DCs currently benefit from rich countries. A more fundamental problem is the structure of the agricultural sector in many DCs, often characterized by low productivity and small-scale subsistence farming markets.

These contrasting results are perfectly in line with contrasting positions between developed and developing countries where developed countries claim for a full reciprocal trade liberalization while many DCs claim for stronger SDT provisions. Deeper differentiation in the implementation of SDT could be a possible solution, especially in relation to the higher commitments for relatively advanced DCs such as Brazil, China and India which could be the major engine for the development of South-South trade flows, opening their markets to LDC exports.

In this sense, an effective reform of SDT seems to be necessary. SDT accorded to fast growing economies such as Brazil, China and India substantially reduced the possibility of South-South trade flows. In particular, looking at results in Bouët et al. (2005b), the average simulated tariffs faced by Sub-Saharan Africa on agricultural exports only decrease by 2.2 percentage points. In contrast, the cut amounts to 4.6 percentage points for relatively advanced members of the G20.

Table 3 – Welfare impacts in recent simulations of Doha Round negotiations

Authors	Assumptions for the agricultural sector	Scenarios	Welfare effects	
	<i>gains in 2015 compared to baseline calculated as the annual gains as % of base GDP</i>		World	DCs
Anderson <i>et al.</i> (2005a)	Products as imperfect substitutes	Agriculture ¹	0.44	0.76
	Factor markets with perfect competition	Global ¹	0.7	1.2
	Labor and capital mobile between sectors	Global with productivity change ²	1.1	2.2
	Full employment	Doha scenario with productivity change ³	0.3	0.39
	All preferential agreement are taken into account			
Francois <i>et al.</i> (2005b)	Products as imperfect substitutes	Agriculture ⁴	0.1	0.35
	Factor markets with perfect competition	Global ⁴	0.5	1.06
	Labor and capital mobile between sectors			
	Full employment			
Bouët <i>et al.</i> (2005b)	Products as imperfect substitutes	Agriculture ⁵	0.08	-0.03 ⁶
	Capital market perfectly mobile	Global	0.33	0.8
and Bouët (2006)	Dual labor market with totally elastic supply of unskilled labour for modern sector			
	Labor imperfectly mobile between agricultural activities and other sectors			
	All preferential agreement are taken into account			
Polaski (2006a)	Labor market distinguished in three types: agricultural labor, urban unskilled labor, urban skilled labor, with unemployment in urban unskilled labor. Agricultural wages lower than urban unskilled wages.	Global ¹	0.53	1.2
		Agriculture	0.02	-0.009
		Doha ⁷		
		Doha scenario ⁷	0.19	0.42
		Hong Kong scenario ⁸	0.14	0.3

Notes:

¹ Full liberalization scenario implemented globally.² Sector-specific labor productivity is allowed to respond to changes in sectoral openness.³ Doha scenario is based on possible negotiation outcome of the Doha Round considering realistic tariff cuts and exemption for DCs as SDT provisions, and exemptions for developed countries as sensitive products and the green box.⁴ Partial liberalization scenario implemented globally, where all trade protection instruments are reduced globally by 50%, as is domestic support for agriculture in the OECD.

⁵ Partial liberalization scenario is only based on an agricultural agreement following on from last negotiation outcomes as the modalities described in the FA.

⁶ This figure depends strictly on negative results for Mediterranean and Sub-Saharan African countries which would face consistent losses caused by preference erosion.

⁷ Doha scenario, entails an ambitious expansion of market access for manufactured goods (50% reductions in applied tariffs by developed countries and 33% by developing countries) and a less ambitious expansion of market access for agricultural products (36% reduction in applied tariffs by developed countries and 24% by developing countries)

⁸ Hong Kong scenario entails a 36% reduction in applied tariffs by developed countries and 24% by developing countries in both agricultural and manufacturing sector.

This last result could explain the G20 requirements for hard liberalization on one side and the contemporary request for SDT for DCs in order to protect the poorer partners of the G20 and the other large coalition (G90) comprising LDCs and NFIDCs. The position of the G20 could be interpreted as highly ambiguous, when the requirement of a SDT which is not differentiated for DCs would substantially reduce the South-South trade flows. This position corresponds to a specific political will where less advanced economies would agree on the negotiation agenda of the G20, increasing the bargaining power of DCs as a whole, whereas differentiation criteria would inevitably reduce the cohesion within and between developing country coalitions.

In the valuation of the potential gains for DCs linked to increasing South-South trade flows, it must be remembered that industrialized economies constitute 75 per cent of the world's GDP and 77 per cent of total import flows, meaning that access to Northern markets remains critical for DCs (Polaski, 2006). Moreover, South-South trade is actually increasing without any intervention from the WTO and, during the 1990s, it grew at nearly double the rate of global trade. Therefore, there could be a strong case for a strategic position assumed by developed countries when claiming for welfare gains from South-South trade means an augmented market access for export flows coming from rich countries and directed to DCs (Oxfam, 2005).

The simulations previously described allow a strength analysis on poverty reduction linked to multilateral trade reforms. Following Anderson et al. (2005b), under a full merchandise trade liberalization scenario, extreme poverty in DCs (those earning less than \$1/day) drop by 32 million in 2015 compared with the baseline level of 622 million, a reduction of 5 per cent. The majority of the poor by 2015

are projected to be in Sub-Saharan Africa where the reduction is estimated to be 6 per cent. The approach of the authors has been to take the change in the average per capita consumption of the poor, apply estimated income-to-poverty elasticity and assess the impacts on the poverty headcount ratio by calculating the change in the real wage of unskilled workers and deflating it by the food/clothing consumer price index which is more relevant for the poor than the total price index. The real wages grow and the assumption is that the change in unskilled wages is fully passed onto households. Furthermore, the closure of the model has been made considering that losses in tariff revenues would be replaced by increasing direct household taxation which mainly affects skilled workers and high-income households in the DCs.

Under the Doha scenario, the poverty impacts are more modest. The SDT for DCs and the exemptions in favor of rich countries such as the sensitive products and domestic support under the green box would substantially reduced the welfare gains of a trade liberalization reform, especially in the agricultural sector. The number of poor living on \$1/day or less would fall by 2.5 million for the core Doha Scenario (of which 0.5 million are in Sub-Saharan Africa). If only agriculture were addressed in a scenario of liberalization, global poverty alleviation would be less than full liberalization and almost zero for Sub-Saharan Africa.

Such analysis seems to be quite unambiguous without making specific considerations on real factor mobility (in particular the unskilled labor force). The liberalization process in agriculture would bring up market prices, especially for cash crops and exported commodities in general. As described in Section 4, the capacity to use such increasing demand markets and increasing goods prices are generally available for efficient farms which do not correspond to poor farm households. Scarce market infrastructures typically occur in DCs, especially for crops sold in the local markets where international prices affect only imported goods. For low-skilled farm workers, increasing market prices would only correspond to increasing wages if there was a natural unemployment rate and the rural population was employed in the exporting sector.

The explicit assumptions made for these simulations only take into account welfare poverty in terms of pure income per capita for people living under the poverty line. These assumptions are far from the measurement and assessment of real poverty conditions where in-

vestment poverty matters as well (Reardon and Vosti, 1995) and the definition of welfare is very narrow if we consider only an increasing GDP per capita as a result. Focusing on a more general dimension of poverty as lack of access to resources, the situation changes due to the consideration that even the investment of gains from trade is important.

As we have seen, two specific aspects concerning DCs are often emphasized. One is the role of market structure and market failures, particularly related to labor market and rural poor behavior, and the other, the effects of preferential regimes and preference erosion.

4. Factors Influencing the Trade-Poverty Nexus

Openness and trade liberalization have been a major component of conventional economic policy advice in recent decades. There is wide acceptance that, in the long run, open economies fare better in aggregate than closed ones and that relatively open policies contribute to long-run development. The general tendency of the empirical evidence on dynamic effects – both from cross-section and case studies – is in the direction of positive correlation between trade openness and economic growth (Dollar and Kraay, 2004; Frankel and Romer, 1999; Greenaway *et al.*, 2002). Many contributors stress, however, that in the short run, trade liberalization produces negative impacts on certain actors and that even in the long run, successful open regimes may leave some behind in poverty. In some cases, an open economy is more exposed to shocks that generate uncertainty and undermine policy measures designed to alleviate poverty and redistribute income. To be fully effective, trade liberalization needs to be part of a package of measures promoting greater use of the market, more stable and less arbitrary policy intervention, stronger competition and macroeconomic stability (Rodríguez and Rodrik, 2001; Rodrik, 1998).

Considering that the described CGE models adopted for Doha scenario simulation are mainly static, the main static effects will be described below with specific attention to market and institutional failures and households' behavior which are difficult to model in a general equilibrium context but which are crucial when describing the effective impacts on poverty reduction.

As underlined by Winters (2002, 2004, 2005), three groups of variables are useful when exploring the effects of trade policy on poverty:

households' behavior, factor markets and the role (and size) of government. All these issues can have both positive and negative impacts in terms of poverty reduction and considering them all together leads to non-univocal solutions.

First of all, a general important aspect of any analysis of poverty is the definition and measurement of the phenomenon itself. The majority of analyses - which quantify the impacts on poverty from trade liberalization process aggregating (or comparing) different countries - adopts an absolute consumption metric. This entails that poverty is held to have fallen if fewer people fall below a fixed threshold in terms of their purchasing power over goods and services.⁸

On the contrary, poverty is a multi-dimensional phenomenon: there are many reasons why people are poor and even within broadly defined groups, there are huge differences in the circumstances of individual households. Thus, the effects of many shocks will differ among poor people depending on the poverty 'profile', or consumption, production and employment activities of the poor which can be very heterogeneous in the same country (Winters, 2002).

Following Ravallion (2003), the differences among alternative poverty measures are very important in the quantification of impacts on trade liberalization and most of the simulations on WTO negotiations account for a pure consumption measurement as the income per capita and an absolute poverty line as the number of people living with less than \$1 a day. If we consider the alternative development theories widely diffused in the recent literature such as the human development paradigm (UNDP, various years) and the capability approach (Sen, 1979, 1985, 1999), it is clear that different poverty (or lack of entitlements) measures give different results.

Trade liberalization reforms, and, more generally, the globalization process have great importance in terms of both intra-country and inter-country inequality effects. Although many scholars analyze the empirical evidence of increasing or reducing intra-country inequality, less attention has been paid to the potential negative effects of rising global inequality. Following Griffin (2003), this second aspect has been described as "asymmetric globalization" and considers two specific aspects of global economic integration which are extremely harmful to poor countries. The first is the restriction on the movement

⁸ In most of the cases, this choice is constrained by the fact that modelling general impacts of trade policies in a global context is a quite difficult task.

of low-skilled labor that has been applied *de facto* in many rich countries in recent decades. Freer movement of labor would be advantageous for DCs and would allow greater efficiency in resource allocation, raise income and improve the distribution of world income. In this sense, advanced economies may reduce these negative effects implementing the “mode 4” commitments of GATS, therefore favoring the temporary migrant labor from DCs to developed countries (Oxfam, 2005). The second important issue in inter-country inequality is the continuing discrimination against products which are of particular importance to low income countries (i.e., tropical products, cotton, textiles and clothing) where the process of trade liberalization has generally occurred more slowly than in other products.⁹ The status of WTO negotiations clearly reflects that even a deep agricultural reform implemented by advanced economies, without adequate progress in other “hot” topics, would not lead to hard welfare improvement for poor economies.

As we have seen, market and institutional failures are the first explanation for low welfare gains in favor of DCs. In particular, household behavior, factor markets (labor market, above all) and the role of government have been considered.

4.1 Household behavior

The effect of a single price change on household welfare is proportional to its net supply position in that goods are expressed at current prices as a proportion of total expenditure. In practical terms, in order to quantify the exact poverty effects, we must know the price changes implied by shocks and poor households’ net supply positions. Responsiveness to price shocks is particularly important when considering the vulnerability aspects of poverty.¹⁰ Policies which reduce households’ ability to cope with negative shocks might induce households to displace income from investment activities (with long term positive ef-

⁹ For an exhaustive literature review on the trade-poverty linkages and the wide range of different approaches to analyze both the micro and macro effects on poverty related to a trade reform, see Hertel and Reimer (2005).

¹⁰ Trade liberalization will typically affect both the means and variances of a household’s sources of income, and could affect vulnerability in four ways: changes in mean incomes; changes in the portfolio of activities undertaken by households; changes in the variability of existing income sources; and poverty traps (Winters, 2004).

fects) to immediate consumption. The ability to switch between activities is an important aspect of adjusting to potentially impoverishing shocks. If labor market conditions are not favorable to immediate employment alternatives, trade shocks that produce, for example, higher price volatility could be a source of decreasing income per capita for households dependent on liberalized goods thus increasing uncertainty and risk aversion.

In addition, it is important to note that for small-open economies, the price of goods that are traded internationally will be largely determined by the world price, hence the prices of such goods will not change further as the market equilibrates and all the adjustment will be in internationally traded quantities. At the other extreme, if goods are only traded locally – because of transportation difficulties or other infrastructures deficiencies – the trading domain is very small and the price is likely to sustain only part of the adjustment.

In particular, agricultural liberalization is mainly considered effective for poverty alleviation because it produces demand spillovers that are heavily concentrated on relatively employment intensive and localized activities from which poor people gain the larger part of their income. This particular result is true for countries (households) where there are possibilities to specialize in the production of goods experiencing increasing prices due to trade liberalization (Anderson *et al.*, 2005b). For vulnerable economies (i.e., countries benefiting from preferential agreements), the real capacity of such specialization is not so obvious because most of the economic resources have been invested in the production of goods benefiting from the preferential access to rich countries markets.

Moreover, in some cases, farmer (peasant household) behavior is the opposite of a specialization in cash (tradable) crops, even if cash crops undergo a price increase and appear to become the most remunerative choice. This paradoxical behavior has been explained with the presence of market failures in DCs.

In particular, the case for a non-Pareto optimal has been partly analyzed by Newbery and Stiglitz (1984) where the authors have demonstrated that lack of a complete set of risk markets for agricultural production in the case of trade openness would lead to adverse welfare effects both for consumers and producers.

An alternative explanation is the observation that poor people simply cannot afford the risks of being entrepreneurial and therefore switch from subsistence to cash crops. This situation is very familiar

when investment poverty occurs (Reardon and Vosti, 1995) and poor farmers do not have adequate means to start with cash crops.¹¹ Furthermore, the inability of poor farmers to deal with the risks involved in producing cash crops (because, for example, a price decrease would push them below subsistence) might explain the unwillingness to pursue higher returns created by trade.

In the same venue, de Janvry *et al.* (1991) observe that further market failures could explain this behavior. In a fashionable definition, the authors highlight that in some cases market failures are not commodity specific but household specific where “general markets exist but they selectively fail for particular households, making the corresponding commodity a non-tradable for that household” (pp. 1401). There are many conditions – opportunity cost of time involved in selling (search costs) and buying (recruitment costs), risks associated with uncertain prices, lack of infrastructures and information - that are conducive to more advantages for the peasant household to be self-sufficient rather than a net buyer or seller on the market. The greater the price elasticity of demand of a household that tends to be a net seller, the more likely it is to stay self-sufficient as supply fluctuates. Considering that trade liberalization could be accompanied by increasing price volatility (with rising risks and uncertainties), farmers’ behavior could lead to a reduction in cash crop supply rather than an expected increase. Price instability in the agricultural sector is not a common issue for all the cash crops but the question of the persistence of low prices is certainly a major concern for agricultural producers (Valdès and Foster, 2005).

4.2 *Factor markets*

Considering the factor markets, price changes affect the incentives to produce particular goods and the technologies they use. The simplest analysis of these incentives has been provided by the Stolper-Samuelson Theorem which states that – under certain conditions – an increase in the price of the good that is unskilled labor-intensive in production will increase the unskilled real wage and decrease that of

¹¹ In many cases, cash crops are produced by large farmers, with adequate transmission channels to deliver goods to international markets. On the contrary, poor farmers are usually confined to local markets and lack of infrastructures can be a significant trade barrier.

skilled workers. In agricultural liberalization, DCs should have comparative advantages in the production of agricultural goods - typically an unskilled labor-intensive sector. As farmers increase production, jobs are created either on the farm or in related activities such as trading, transporting food, and equipment manufacturing. Increased profits from agriculture encourage farmers to convert available land into agriculture and further increase development in this sector. Farming attracts additional investment and increases economic growth. An improved climate for investment leads to advances in technology which serve to increase productivity.

All these positive spillover effects are not a necessary outcome of a multilateral trade reform but other conditions are important such as labor market characteristics and the real impacts on unskilled labor force. The market failures often affecting agricultural sector in DCs are the conditions influencing the final results (FAO, 2005a).

Considering the labor market, an increase in the demand for unskilled labor will not increase wage if unskilled labor is available in perfectly elastic supply. The wage will then be fixed exogenously and the adjustment will only take place in terms of employment. Supposing that the formal wage to unskilled labor is no more than the subsistence wage, this transfer will have very little effect in terms of poverty reduction (Winters *et al.*, 2004).¹²

More generally, if wages are pushed up from poverty line to higher levels or the expanding sectors offer above poverty-line wages, then headcount poverty will fall. If, on the other hand, wages do not cross critical thresholds, recorded poverty could be unaffected, despite changes in welfare (Ravallion, 2003).

Moreover, international capital mobility tends to increase the effects, positive or negative, of trade liberalization. An inflow into a sector that has gained from liberalization is likely to boost wages and/or employment which will increase the welfare benefits and the poverty alleviation benefits of trade liberalization. If trade reform increases the demand for labor-intensive products, it boosts the demand for labor, pushing up employment and wages. However, if the poor are mostly in completely unskilled families and it is semi-skilled labor that receives the improvement, poverty will be unaffected (Stiglitz, 2000). In

¹² More generally, this will be the case because the formal sector can draw effectively infinite amounts of labour out of the informal sector or subsistence agriculture at the subsistence wage (Lewis, 1954).

many cases, the fear is that technological advance provided by capital investments hurts the poor by reducing the demand for unskilled labor. If trade liberalization is accompanied by skill-biased technical change which can mean that skilled labor may benefit compared with unskilled labor, or similarly, if the unskilled are employed primarily in non-traded sectors while exports draw mainly on semi-skilled workers, then trade liberalization will have adverse effects on unskilled labor, with no results in terms of poverty reduction (Polaski, 2006).

Finally, the role of infrastructures – as transport costs and the existence of local markets – is critical for ensuring that low-income countries are able to benefit from trade opportunities. Rural population often suffers from constraints in credit, marketing, insurance and other infrastructure (road, power, irrigation), meaning that trade reforms will only be effective if domestic policies and governance change.¹³ Many countries remain largely without the appropriate institutional frameworks and systems to manage their trade policy and trade costs severely limit the competitiveness of developing-country firms in export markets. Transport costs are often the single most important cost component for exporters. In addition, the fragmentation of markets and remoteness of many farming communities, combined with numerous informal fees, lead to high transaction costs, lack of basic post-harvest marketing infrastructure and a pervasive degradation of natural resources. To improve competitiveness and extend the benefits of trade to the poorer segments of the population, trade liberalization should be followed up with other domestic and international policy measures.

4.3 *The role of government*

The role of institutions and government expenditures in a trade reform scenario can be analyzed from two different perspectives.

The first one is that a trade reform could have a great impact on government revenues due to reducing tariff rates. The early stages of trade liberalization involve converting quantitative restrictions and regulations into tariffs and reducing high tariff rates. If the latter is accompanied by a reduction in the scope of tariff exceptions and exemptions, this stage is likely to increase tariff revenue rather than reduce

¹³ For a useful overview of many aspects concerning trade-rural poverty linkages, see Bardhan (2006) and Nissanke and Thorbecke (2006).

it.¹⁴ Apart from this specific situation, trade liberalization will reduce tariff rates so far that government revenue falls. A reduction of government revenues will induce policy makers to curtail expenditure on social and other poverty-alleviating policies and/or to levy new taxes, reducing the income of the poor. The reduction of safety nets and the lack of investments for better market infrastructures, institutions, sanitation and education for rural people, would predictably worsen the negative effects of trade reforms on poor people in terms of food insecurity and increasing poverty and vulnerability (FAO, 2005a).

The second one is that the role of government could substantially change in a more open economy. To this end, Rodrik (1998) has underlined that there is a positive association between trade exposure and the scope of government, contrary to the widely diffused presumption that the effectiveness of government intervention is lower in economies that are highly integrated with the world economy. The main explanation focuses on the role of external risk where societies seem to receive an expanded government intervention as a form of social insurance for increasing exposure to external shocks. Following on from this first result, Rodrik has added a number of ancillary hypotheses: 1) increasing external risk must lead to greater volatility in domestic income and consumption; 2) a larger share in GDP of government purchases of goods and services must reduce income volatility; 3) the risk-mitigating role of government spending should be displayed most prominently in social security and welfare spending; 4) causality nexus should run from exposure to external risk to government spending.

If we consider the main concern about reducing revenues from duties and tariffs with a trade liberalization process, the consequent reduction in government budget and the contemporary increase of exposure to external shocks and risk, these two simultaneous conditions could lead to welfare reduction for particularly vulnerable countries.

All these market and institutional failures should not be included in a CGE model and results from simulations could be biased especially in the evaluation of poverty reduction impacts of multilateral trade liberalization. As suggested by Hertel and Reimer (2005), probably the best way to address such difficulties is to link and compare the re-

¹⁴ This first stage corresponded for many DCs with access to the WTO and the implementation of the Uruguay Round Agreements with the so-called tariffication process.

sults from CGE models with results from micro-models applied to specific countries/products.

5. The Problem of Preference Erosion for Developing Countries

The comparative results from simulation exercises concerning the Doha Round potential agreements have revealed that, in many cases, the effective welfare improvement for selected groups of DCs is reduced by market and institutional failures and the households' behavior is not always coherent with the opportunities related to a more open international market. In this context, the question of preference erosion plays an important role where some specific vulnerable economies could face a welfare decrease after the trade reform.

In order to understand the real impact of preference erosion, a brief description of preferential regimes and their effective utilization rate could help to trace the terms of the problem.

5.1 *Theoretical aspects of preferential regimes and preference erosion*

The Enabling Clause of 1979 provided the legal cover for exemptions to the MFN rule allowing reciprocal preferential agreements and unilateral preferences granted to DCs. The rationale for grants of preferential access to developed country markets emerged as one of the factors included in SDT provisions, partly reflecting the development thinking based on import-substitution policies for domestic support to the infant industries.

There are two alternative provisions for trade preferences exclusively in favor of DCs in the GATT/WTO system. First, developed countries can give DCs one-way trade preferences, on the basis of the GSP which is explicitly designed to promote exports from DCs. Secondly, under the Enabling Clause, DCs can exchange virtually any trade preferences among DCs themselves. Under the Enabling Clause, preferences need not lead to a full free trade area; partial preferences across a subset of goods are permitted. All preferential trade areas among DCs – as the MERCOSUR, or the ASEAN Free Trade Area (AFTA) - were formed under this provision (Panagariya, 2000).

In addition to the GSP, high-income countries maintain a variety of

schemes granting preferences either under preferential regimes linked to economic development criteria - as the specific regimes offered to LDCs by EU under the Everything But Arms (EBA) initiative - or on a geographical basis – such as the EU Lomé/Cotonou agreements with ACP countries, or the US Africa Growth Opportunity Act (AGOA), and the Caribbean Basin Initiative (CBI) – which are of considerable importance to some DCs (OECD, 2005; Panagariya, 2002b).

This extensive range of preferences could alter the empirical assessments of their effects, a task further complicated by the difficulty of identifying the specific impact of preferences as opposed to other factors.

First, OECD preference programs explicitly differentiate between DCs (by region, level of development and export capacity) and impose significant “conditionality” in the determination of the eligibility and product coverage, including rules of origins and non-trade requirements. This conditionality represents a barrier for DCs who encounter considerable difficulties in the coverage of all criteria to reach the OECD markets. This is one of the requests of DCs in the Doha Round in order to simplify rules of origin and grant a wider (real) access to OECD markets at preferential rates.

Secondly, trade preferences granted by developed countries are voluntary. They are not WTO obligations. Donor countries determine eligibility criteria, product coverage, the size of preference margins and the duration of the preference. Developed-country governments have rarely granted deep preferences in sectors where DCs had the largest export potential. Indeed, preferences tend to be the most limited for products protected by tariff peaks (Hoekman, 2005).¹⁵

To this end, Francois *et al.* (2005a) estimated that the threshold level for preference margin in terms of tariff difference (preferential margin as difference between MFN and preferential tariff) to be convenient is about 4-4.5%, otherwise, the transaction costs for satisfying the rules of origin and other administrative constraints are larger than the benefits from the preferential trade regime. Thus, preferential tariff must be 4-4.5 percentage points lower than third country tariffs for traders to request preferences. This threshold level means that in many cases preference margins are not utilized because they are not eco-

¹⁵ Preferences are often limited by design. Market share or value thresholds limit the extent to which recipients can export on preferential terms.

nomically convenient.¹⁶

The resulting uncertainty can only have a negative impact on incentives to invest in export sectors, reducing the convenience of preferential agreements. A relatively small number of mostly middle-income countries are the main beneficiaries of GSP programs (excluding LDCs preferential treatment) and have the capacity to exploit the opportunities offered by meeting the administrative requirements (Hoekman *et al.*, 2005a, 2005b).¹⁷

However, some small countries have benefited significantly from preferential access to markets where high tariffs, subsidies, or other policies are used to drive domestic price of the product to levels well above the world market price (World Bank, 2004).¹⁸ Therefore, the potential reduction of MFN tariffs and domestic subsidies implemented by developed countries could reduce preferential margins for DCs and lead to negative effects caused by preference erosion.

The assessment of real impacts of this phenomenon should account for a number of conditionalities which are necessary to understand the bulk of the problem of preference erosion, the real negative impacts and the potential policy responses:

- Preferences can only have an impact if there is a non-zero tariff in the importing market;
- There are general equilibrium effects to consider, especially the impact of changes in policies in other countries, both those that do and those that do not grant preferences: such changes may affect demand and supply and thus world prices of the product concerned (Anania, 1989; Stern and Deardorff, 2006);
- There must be a high utilization rate of the preferential regimes, in

¹⁶ The European Union excludes from GSP eligibility certain products from large countries, regardless of their per capita income. Examples include Brazil, China, India, and Indonesia. In this case a sort of differentiation among countries is practically applied. Moreover, the EU has a safeguard clause allowing preferences to be suspended if imports cause or threaten to cause serious difficulties to a Community producer.

¹⁷ In 2001, 10 of the 130 eligible countries accounted for 77 per cent of US imports under GSP provisions (India, Indonesia and Thailand alone account for 44% of the 10).

¹⁸ The share of LDCs in total imports of the United States and the EU has not increased significantly in recent years. In the case of the EBA Initiative, for example, this may reflect that the products that matter most to a number of LDCs, bananas, rice, sugar, will be liberalized only in 2006 (bananas) or 2009 (rice and sugar).

order to have a robust negative impact in terms of preference erosion;

- To the extent there is market power on the part of either importers/distributors or the transport and logistics sector, the benefits of preferential tariff reductions will be captured at least in part by intermediaries with market power rather than the exporters (Hoekman *et al.*, 2005b);
- For preferences to have value, the beneficiary countries need to have an export capacity in the products for which preferential access is granted.

More generally, the magnitude of costs and benefits for granting and beneficiary countries depends on underlying supply and demand responsiveness to price changes as well as the degree of substitution between preferential and non-preferential suppliers. On net, trade preference therefore involves a mix of benefits for preferential exporters, costs imposed on third-country exporters and potential losses for importer as well (Panagariya, 2000).

5.2 *The real utilization of preferential regimes*

Several recent studies have made estimates of the use of commercial preferences, granted by the EU and the US especially, showing that, contrary to widespread belief, commercial preferences granted to DCs have high utilization rates (OECD, 2005). In both the EU and the US, only a very small share (about 11%) of eligible agricultural products were exported outside a preferential regime,¹⁹ and among exports from DCs the trade flows eligible are essentially exported under these preferences (Bureau *et al.*, 2005a, 2005b, 2006).

Nonetheless, the utilization rates of preferences are different for different countries and products and the impacts related to a MFN tariff reduction in terms of reduction of preference margin are not therefore univocal and their effective quantification depends on a number of factors (Low *et al.*, 2005).

The utilization rate of preferential regimes is a key factor to consider when assessing the erosion of preference margins. If the utilization rate is not so high, the case of economic losses due to preference

¹⁹ These rare cases of eligible exports under the MFN regime are largely explained by small trade flows and/or low MFN tariffs, meaning that the importer did not consider meeting the eligibility criteria worthwhile.

erosion is smaller. The exact estimation of the utilization rate of preferential regimes is strictly dependent on the measurement of the effective preference granted to beneficiary countries. As a first approximation, the value of the preference for the preference receiving country is often measured by the preference margin which is measured as the difference in percentage points between MFN and preferential tariff rate for each tariff line. Considering this simple indicator, the comparison of the preferences received by LDCs and all DCs shows that the bulk of preferences accrue to non-LDCs, reflecting the small share of LDCs on total developing country exports.

The preference margin has a number of limitations as a measure of the value of a preference. One is that it ignores the question whether the advantage given to the preference receiving country effectively helps the latter to export to the preference giving country. Similarly, preferences given in sectors where the receiving country is very inefficient may not be sufficient to trigger exports. In addition, tariff rate quotas may significantly limit the actual preference margin since preferences are limited to a certain quantity of exports whereas the calculation of the preference margin or preference erosion refers to the beneficiary country's overall exports.

More generally, one factor explaining attenuated utilization is limited supply response capacity in the beneficiary countries. Other factors are intrinsic to the preference schemes themselves, including product exclusions where export potential exists, country exclusions on a variety of economic and non-economic grounds, restrictive rules of origin and administrative costs incurred in gaining access to the schemes.

Furthermore, actual gains from preferences enjoyed by exporters may be lessened if monopsonistic distributors are operating in the importing market, or if third parties not receiving preferences strategically cut their prices. Finally, the net effects on export volumes under preferential regimes are highly differentiated, depending on the possible entrance of new exporters on the granting-country markets when MFN tariffs were reduced. In this case, other exporting countries will become more efficient and countries that previously benefited from preference margins will lose their market share.²⁰

²⁰ A number of alternative measures of preference margin have been proposed (Bureau *et al.*, 2006; Hoekman and Prowse, 2005; Low *et al.*, 2005):

5.3 Dealing with preference erosion: potential policy responses

Given the great uncertainty about the real utilization of preferential schemes and the difficulties in the assessment of negative impacts in terms of preference erosion, there is great concern about this issue at international level, especially among DCs. From the comparison of the most recent global simulations of trade reform scenarios, there emerge as a general result that only a limited number of small sized economies could be significantly affected by preference erosion as ACP and Mediterranean countries and the Sub-Saharan African region (Anderson and Martin, 2005; Anderson et al., 2005b; Bouët *et al.*, 2005b; Brenton and Ikezuki, 2005; Bureau *et al.*, 2005b; Hertel and Winters, 2005; 2006). Nonetheless, a significant effort from DCs was employed during the negotiation process to find a feasible solution to this problem and, more importantly, to include specific provisions in the official agricultural negotiation that acknowledge the problem with the requirement of *ad hoc* corrective measures. The most likely explanation is that the countries affected by preference erosion correspond to the poorest and most vulnerable economies in a trade reform context where the DDA states that all WTO members should benefit from the multilateral trade system.

At international level, two different approaches have been proposed to reduce the negative impacts of preference erosion: the first one

-
- Potential coverage: the ratio between products covered by a scheme and the dutiable imports originating in beneficiary countries.
 - Apparent rate of utilization: the ratio between imports that actually receive preferential treatment and those that are in principle covered.
 - Actual rate of utilization: the ratio between the volume of imports of the good eligible to the GSP scheme and the volume of imports eligible to the GSP scheme, including those imported under the MFN regime.
 - Utility: the ratio of the value of imports that get preferences to all dutiable imports from the exporter (the lower this number, the less generous the preference scheme).
 - Trade-weighted value of the preference margin: the preference margin per unit of imports multiplied by the bilateral import value. A second adjustment has been suggested by Low *et al.* (2005) in order to account for the erosion of preferences due to the existence of other exporters benefiting from the same preferential scheme. A “competition-adjusted preference margin” is calculated as the percentage point difference between the weighted average tariff rate applied to the rest of the world and the preferential rate applied to the beneficiary country, where weights are represented by trade shares in the preference granting markets.

completely within the WTO rules and the second one claiming for the intervention of external organizations.

The first approach mainly consists of different measures (Hoekman and Primo Braga, 2005; Hoekman and Prowse, 2005; Matthews, 2005b):

- In implementing their tariff reduction commitments, developed countries should maintain the nominal margins of preferences and other terms and conditions of preferential arrangements they accord to their developing trading partners;
- Enhancing existing preference programs by widening access - by harmonizing preferential regimes around liberal rules of origin and reducing compliance costs - or extending their coverage, leveraging utilization rates and increasing their effectiveness (permanent and comprehensive schemes with no product exclusions);
- The domestic investment environment in beneficiary countries must be improved so that producers and investors can exploit the opportunities that arise from trade preferences to develop competitive business that will survive once those preferences are eroded;
- DCs need to diversify into a broader range of exports and not become dependent on the preferential access granted for a narrow range of products;
- Beneficiaries should ensure preferences are integrated as one element of a strategy for broad-based export expansion;
- Implementation of new preferential trade regimes by non-OECD importers. Some DCs as Brazil, China and India may constitute large import markets for LDCs;
- Differentiation of DCs in the concession of preference regimes in order to facilitate more vulnerable economies.

Solutions adopted within the trading system may impose significant opportunity costs from the perspective of global efficiency if they result in additional discrimination and substantially reduce the overall level of ambition of MFN reforms in the Doha Round.

The second approach is focused on the role of development assistance financed both by existing mechanisms for international adjustments or *ad hoc* aid-for-trade initiatives (Hoekman and Prowse, 2005; Hoekman *et al.*, 2005a; Page, 2005). Possible aid-based solutions for preference erosion include:

- Relying on existing financial mechanisms for adjustment financing such as the IMF's Trade Integration Mechanism, or integrating

trade-related investments and technical assistance into the broader Poverty Reduction Strategy Papers made by the World Bank in order to transfer responsibility as much as possible to countries effectively involved;²¹

- Establishing new stand-alone, grant-based compensation funds;
- Addressing the preference erosion as part of an aid-for-trade effort.

This last proposal finds its justification in the fact that, as shown by the simulations on trade liberalization scenarios, only a limited number of countries could be significantly affected by preference erosion. Therefore, measures to help mitigate the problem could be targeted closely on the country at risk. An appropriate response might be for the OECD countries to convert the implicit “preference transfers” (the value of current preferences) into equivalent development assistance. Aid transfers have the advantage of not distorting trade flows and being able to target the countries concerned.

The only official response to the problem of preference erosion that emerged during the agricultural negotiations is the recognition of the issue as a main concern for poor countries in the FA of July 2004 where paragraph 44 states that: “The importance of long-standing preferences is fully recognized. The issue of preference erosion will be addressed.” Even in the Hong Kong Declaration, preference erosion is declared as an important issue for development of poor countries but nothing more has been established. Only paragraph 48 highlights the importance of contributing to reducing the supply side constraints affecting LDC markets, affirming that the WTO members “continue to attach high priority to the effective implementation of the Integrated Framework [...] as a viable instrument for LDCs’ trade development, building on its principles of country ownership and partnership.” Thus, it is hardly surprising that the Doha Round is deadlocked if almost all the development-oriented issues remained undefined.

6. Concluding Remarks

This paper has surveyed theoretical and empirical issues concerning the impacts of multilateral trade liberalization on DCs with par-

²¹ The effectiveness of the mechanism could be reduced by restrictive terms if the country concerned by preference erosion is not able to satisfy IMF criteria, structural adjustments and so on. This is the case for many LDCs.

ticular emphasis on the agricultural sector.

The results obtained to date in the Doha negotiations are not ambitious trade reforms and there are no large positive impacts in favor of DCs, thus explaining the negotiation failure. Furthermore, the empirical investigations on potential impacts of Doha agreements have emphasized the existence of heterogeneous results for different groups of DCs. Welfare improvements and poverty reduction are not a common result for poor economies where some of the most vulnerable countries could face losses in a multilateral trade liberalization scenario. When comparing empirical results from global simulations with theoretical analysis of trade and poverty relationships and the more specific issue of preference erosion, it would seem that poor countries will only gain from agricultural trade reform if additional policy measures are adopted. One important issue is clearly the need to increase trends in South-South trade flows. Increasing market access for goods exported by poorer DCs, even in dynamic economies such as Brazil, China and India, would provide significant welfare gains for poorest exporting economies. Other additional measures should be settled in order to compensate welfare losses due to preference erosion. Many alternative solutions have been proposed by developed and developing countries as well as academicians and international experts. Whatever solution is adopted, it must have positive long-term effects and help the poorest countries to reduce their sources of underdevelopment such as high income inequality, market failures and lack of infrastructures.

As a concluding remark, a true development round has to go well beyond agriculture. Despite the common view that agriculture is the dominant development issue, DCs clearly have interests in other areas. The agenda must include agriculture because successful agricultural reform will have a large development impact, but at the same time, DCs should also be pushing for progressive market access reform in manufactured goods, especially the elimination of tariff peaks on labor-intensive goods, and for significant progress in unskilled labor mobility.

References

- [1] ACKERMAN, F., 2005, The Shrinking Gains from Trade: A Critical Assessment of Doha Round Projections, *Global Development and Environment Institute Working Paper* n. 05-01, Tufts University, USA.
- [2] AGGARWAL, R., 2005, Dynamics of Agriculture negotiations in the World Trade Organization, *Journal of World Trade* Vol. 39 (4), pp. 741-761.
- [3] ANANIA, G., 1989, Welfare Implications of a Preferential Tariff Reduction for Agricultural Exports from Less Developed Countries vs. a Generalized Tariff Reduction, *Agricultural Economics* Vol. 3 (1), pp. 23-89.
- [4] ANANIA, G., BUREAU, J-C., 2005, The negotiations on agriculture in the Doha Development Agenda Round: current status and future prospects, *European Review of Agricultural Economics*, Vol. 32 (4), pp. 539-550.
- [5] ANDERSON, K., MARTIN, W., 2005, Agricultural Trade Reform and the Doha Development Agenda, *The World Economy*, Vol. 28 (9), pp. 1301-1327.
- [6] ANDERSON, K., MARTIN, W., VAN DER MENSBRUGGHE, D., 2005A, Market and Welfare Implications of Doha Reform Scenarios, in Anderson, K., Martin, W. (eds.), *Agricultural Trade Reform and the Doha Development Agenda*, New York, Palgrave Macmillan.
- [7] ANDERSON, K., MARTIN, W., VAN DER MENSBRUGGHE, D., 2005b, Global Impact of the Doha Scenarios on Poverty, in Hertel, T.W., Winters, L.A. (eds.), *Putting Development Back into the Doha Agenda: Poverty Impacts of a WTO Agreement*, Washington DC, The World Bank.
- [8] BARDHAN, P., 2006, Globalization and Rural Poverty, *World Development*, forthcoming.
- [9] BOUËT, A., 2006, What can the Poor Expect from Trade Liberalization? Opening the "Black Box" of Trade Modelling, *MTID Discussion Paper* n. 93, IFPRI, Washington DC.
- [10] BOUËT, A., BUREAU, J-C., DECREUX, Y., 2005a, Multilateral agricultural trade liberalization: The contrasting fortunes of developing countries in the Doha Round, *IIS Discussion Paper* n. 60, Department of Economics, Trinity College, Dublin.
- [11] BOUËT, A., BUREAU, J-C., DECREUX, Y., S., JEAN, 2005b, Multilateral Agricultural Trade Liberalisation: The Contrasting Fortunes of Developing Countries in the Doha Round, *The World Economy*, Vol. 28 (9), pp. 1329-1354.
- [12] BRENTON, P., IKEZUKI, T., 2005, The Impact of Agricultural Trade Preferences, with Particular Attention to the LDCs, in Aksoy, A., Beghin, J., (eds.), *Global Agricultural Trade and the Developing Countries*, Washington DC, The World Bank.
- [13] BUREAU, J-C., JEAN, S., MATTHEWS, A., 2005a, *Special and Differential Treatment and Agriculture*, presented at the OECD Global Forum on Trade, Bridgetown, Barbados, June 2005.
- [14] BUREAU, J-C., JEAN, S., MATTHEWS, A., 2005b, The consequences of agricultural trade liberalization for developing countries: distinguishing between benefits and false hopes, *IIS Discussion Paper* n. 73, Department of Economics, Trinity College, Dublin.
- [15] BUREAU, J-C., CHAKIR, R., GALLETOT, J., 2006, The Utilization of Trade Preferences for Developing Countries in the Food Sector, *TradeAG Working Paper* n. 1.

-
- [16] CHARLTON, A.H., STIGLITZ, J.E., 2005, A Development-friendly prioritisation of Doha Round Proposals, *The World Economy*, Vol. 28 (3), pp. 293-311.
- [17] CHEVASSUS-LOZZA, E., GALLEZOT, J., 2003, *Preferential Agreement-Tariff Escalation: What Are the Consequences of the Multilateral Negotiations for the Access of developing Countries to the European Market*, contributed paper presented at the International Conference "Agricultural policy reform and the WTO: where are we heading?", Capri, Italy, June 23-26 2006.
- [18] CLARK, D.P., BRUCE, D., 2006, On the Incidence of US Tariffs, *The World Economy*, Vol. 29 (2), pp. 123-135.
- [19] COLLIER, P., 2006, Why the WTO is Deadlocked: And What Can Be Done About It, *The World Economy*, Vol. 29 (10), pp. 1423-1449.
- [20] CUDDINGTON, J.T., 1992, Long-Run Trends in 26 Primary Commodity Prices: A Disaggregated Look at the Prebisch-Singer Hypothesis, *Journal of Development Economics*, Vol. 39 (2), pp. 207-227.
- [21] DE JANVRY, A., FAFCHAMPS, M., SADOULET, E., 1991, Peasant Household Behaviour With Missing Markets: Some Paradoxes Explained, *The Economic Journal*, Vol. 101 (409), pp. 1400-1417.
- [22] DIAO, X., DIAZ-BONILLA, E., ROBINSON, S., 2003, How Much Does it Hurt? The Impact of Agricultural Trade Policies on Developing Countries, *International Food Policy Research Institute* (August).
- [23] DIMARANAN, B., HERTEL, T., KEENEY, R., 2003, OECD Domestic Support and Developing Countries, *UNU/WIDER Discussion Paper* n. 32, Helsinki, Finland.
- [24] DOLLAR, D., KRAY, A., 2004, Trade, growth, and poverty, *The Economic Journal* Vol. 114 (493), pp. 22-49.
- [25] EVENETT, S.J., HOECKMAN, B.M., (eds.), 2006, *Economic Development and Multilateral Trade Cooperation*, Washington DC, Palgrave Macmillan for The World Bank
- [26] FABIOSA, J., ET AL., 2005, The Doha Round of the World Trade Organization and Agricultural Markets Liberalization: Impacts on Developing Economies, *Review of Agricultural Economics*, Vol. 27 (3), pp. 317-335.
- [27] FAO, 2005a, The State of Food and Agriculture. Agricultural Trade and Poverty: Can Trade Work for the Poor?, *FAO Agriculture Series* n. 36, Rome, Italy.
- [28] FAO, 2005b, Agricultural preferences: issues for negotiation, *FAO Trade Policy Technical Notes*, n. 7, Rome, Italy.
- [29] FAO, 2005c, Special and Differential treatment in Agriculture, *FAO Trade Policy Technical Notes*, n. 10, Rome, Italy.
- [30] FINGER, J.M., WINTERS, L.A., 2005, Reciprocity in the WTO, ch. 7 in Hoekman, B., Matoo, A., English, P., (eds.), *Development, Trade and the WTO: A Handbook*, Washington DC, The World Bank.
- [31] FRANCOIS, J., HOEKMAN B., MANCHIN, M., 2005a, Preference Erosion and Multilateral Trade Liberalization, *IIS Discussion Paper* n. 87, Department of Economics, Trinity College, Dublin.
- [32] FRANCOIS, J., VAN MEIJL, H., VAN TONGEREN, F., 2005b, Trade liberalization in the Doha Development Round, *Economic Policy*, Vol. 20 (42), pp. 349-391.
- [33] FRANKEL, J.A., ROMER, D., 1999, Does Trade Cause Growth?, *The American Economic Review* Vol. 89 (3), pp. 379-399.
- [34] GREENAWAY, D., MORGAN W., WRIGHT P., 2002, Trade liberalisation and growth in developing countries, *Journal of Development Economics*, Vol. 67, pp.

229-244.

[35] GRIFFIN, K., 2003, Economic Globalization and Institutions of Global Governance, *Development and Change*, Vol. 34 (5), pp. 789-807.

[36] HERTEL, T.W., IVANIC, M., 2006, Making the Doha Development Agenda More Poverty-friendly: The Role of South-South Trade, *Review of Agricultural Economics*, Vol. 28 (3), pp. 354-361.

[37] HERTEL, T.W., REIMER, J.J., 2005, Predicting the Poverty Impacts of Trade Reform, *Journal of International Trade and Economic Development*, Vol. 14 (4), pp. 377-405.

[38] HERTEL, T.W., WINTERS, L.A., (eds.), 2006, *Poverty and the WTO. Impacts of the Doha Development Agenda*, Washington DC, Palgrave Macmillan for The World Bank.

[39] HERTEL, T.W., WINTERS, L.A., 2005, Estimating the Poverty Impacts of a Prospective Doha Development Agenda, *The World Economy*, Vol. 28 (8), pp. 1057-1071.

[40] HOEKMAN, B., 2005, More Favorable Treatment of Developing Countries: Ways Forward, ch. 17 in Newfarmer, R. (ed.), *Trade, Doha, and Development: A Window into the Issues*, Washington DC, The World Bank.

[41] HOEKMAN, B., PRIMO BRAGA, C.A., 2005, *Special and Differential Treatment and the Doha Development Agenda: Beyond Tariff Preferences*, presented at the OECD Global Forum on Trade, Bridgetown, Barbados, June 2005.

[42] HOEKMAN, B., PROWSE, S., 2005, Economic Policy Responses to Preference Erosion: From Trade as Aid to Aid for Trade, *World Bank Policy Research Working Paper* n. 3721, Washington DC, The World Bank.

[43] HOEKMAN, B., MARTIN, W., PRIMO BRAGA, C.A., 2005a, Preference Erosion: The Terms of the Debate, ch. 28 in Newfarmer, R. (ed.), *Trade, Doha, and Development: A Window into the Issues*, Washington DC, The World Bank.

[44] HOEKMAN, B. MATOO A., ENGLISH, P. (eds.), 2005b, *Development, Trade and the WTO: A Handbook* Washington DC, The World Bank.

[45] JOSLING, T., 2005, Special and Differential Treatment for Developing Countries, in Anderson, K., Martin, W. (eds.), *Agricultural Trade Reform and the Doha Development Agenda*, New York, Palgrave Macmillan.

[46] KLEEN, P., PAGE, S., 2005, Special and Differential Treatment of Developing Countries in the World Trade Organization, *Global Development Studies* n. 2, Overseas Development Institute (Odi), Great Britain, and EGDI Secretariat Ministry for Foreign Affairs, Sweden.

[47] LEWIS, W.A., 1954, Economic Development with Unlimited Supplies of Labour, Manchester School, reprinted in Agarwala, A., Singh, S., (eds.) *The Economics of Underdevelopment*, Oxford University Press, Delhi, 1975.

[48] LOW, P., PIERMARTINI, R., RICHTERING, J., 2005, Multilateral Solutions to the Erosion of Non-Reciprocal Preferences in NAMA, *WTO Working Paper ERSD* n. 05, Economic Research and Statistics Division, Geneva, WTO.

[49] MATTHEWS, A., 2005a, The road from Doha to Hong Kong in the WTO agricultural negotiations: a developing country perspective, *European Review of Agricultural Economics*, Vol. 32 (4), pp. 561-574.

[50] MATTHEWS, A., 2005b, Special and differential Treatment in the Wto Agricultural negotiations, *IIIS Discussion Paper* n. 61, Department of Economics, Trinity College, Dublin.

-
- [51] NARLIKAR, A., TUSSIE, D., 2004, The G20 at the Cancun Ministerial: Developing Countries and their Evolving Coalitions in the WTO, *The World Economy* Vol. 27 (7), pp. 947-966.
- [52] NEWBERY, D.M.G., STIGLITZ, J.E., 1984, Pareto Inferior Trade, *Review of Economic Studies*, Vol. 51, pp. 1-12.
- [53] NEWFARMER, R. (ed.), 2005, *Trade, Doha, and Development: A Window into the Issues*, Washington DC, The World Bank.
- [54] NISSANKE, M., THORBECKE, E., 2006, Channels and Policy Debate in the Globalization-Inequality-Poverty Nexus, *World Development*, forthcoming.
- [55] OECD, 2005, *Preferential Trading Arrangements in the Agriculture and Food Markets. The Case of the European Union and the United States*, Paris, OECD.
- [56] OXFAM, 2005, What happened in Hong Kong? Initial analysis of the WTO Ministerial, December 2005, *Oxfam Briefing Paper* n. 85, Brussels, Oxfam International.
- [57] PAGE, S., 2005, A Preference Erosion Compensation Fund: A new proposal to protect countries from the negative effects of trade liberalization, *Overseas Development Institute Opinions* n. 35, Great Britain.
- [58] PANAGARIYA, A., 2000, Preferential Trade Liberalization: The Traditional Theory and New Developments, *Journal of Economic Literature*, Vol. 38 (2), pp. 287-331.
- [59] PANAGARIYA, A., 2002a, Developing Countries at Doha: A Political Economy Analysis, *The World Economy*, Vol. 25 (9), pp. 1205-33.
- [60] PANAGARIYA, A., 2002b, EU Preferential Trade Arrangements and Developing Countries, *The World Economy*, Vol. 25 (10), pp. 1415-32.
- [61] PANAGARIYA, A., 2005, Agricultural Liberalisation and the Least Developed Countries: Six Fallacies, *The World Economy*, Vol. 28 (9), pp. 1277-99.
- [62] POLASKI, S., 2005, Agricultural Negotiations at the WTO: First, Do Not Harm, *Policy Outlook* June 2005, Carnegie Endowment for International Peace, Washington DC, USA.
- [63] POLASKI, S., 2006a, *Winners and Losers: Impact of the Doha Round on Developing Countries*, Carnegie Endowment for International Peace, Washington DC, USA.
- [64] POLASKI, S., 2006b, The Future of the WTO, *Policy Outlook* September 2006, Carnegie Endowment for International Peace, Washington DC, USA.
- [65] PREBISCH, R., 1950, The Economic Development of Latin America and its Principal Problems, reprinted in *Economic Bulletin for Latin America*, Vol. 7, No. 1, 1962, 1-22.
- [66] RAVALLION, M., 2003, The Debate on Globalization, Poverty and Inequality: Why Measurement Matters, *Working Paper Development Research Group* n. 3038, Washington DC, The World Bank.
- [67] RAVALLION, M., 2006, Looking Beyond Averages in the Trade and Poverty Debate, *World Development*, forthcoming.
- [68] REARDON, T., VOSTI S.A., 1995, Links Between Rural Poverty and the Environment in Developing Countries: Asset Categories and Investment Poverty, *World Development*, Vol. 23 (9), pp. 1495-1506.
- [69] RODRÍGUEZ, F., RODRIK, D., 2001, Trade policy and economic growth: a skeptic's guide to the cross-national evidence, in Bernanke B.S., Rogoff, K. (eds.), *NBER Macroeconomics Annual 2000*, pp. 261-325.

-
- [70] RODRIK, D., 1998, Why Do More Open Economies Have Bigger Governments?, *Journal of Political Economy*, Vol. 106 (5), pp. 997-1032.
- [71] SEN, A.K., 1979, Personal Utilities and public judgments: or what's wrong with the welfare economics, *The Economic Journal* Vol. 89 (335), pp. 537-558.
- [72] SEN, A.K., 1985, *Commodities and Capabilities*, Amsterdam, North Holland.
- [73] SEN, A.K., 1999, *Development as Freedom*, New York, Random House.
- [74] SHARMA, R., 2006, *The Doha Round Agricultural Tariff-Cutting Formulae and Tariff Escalation*, presented at the Workshop on WTO rules for Agriculture Compatible with Development, FAO, Rome, 2-3 February 2006.
- [75] SINGER, H.W., 1950, U.S. Foreign Investment in Underdeveloped Areas: The Distribution of Gains Between Investing and Borrowing Countries, *American Economic Review, Papers and Proceedings*, Vol. 40 (2), pp. 473-485.
- [76] STERN, R.M., DEARDORFF, A.V., 2006, Globalization's Bystanders: Does Trade Liberalization Hurt Countries That Do Not Participate?, *World Development*, forthcoming.
- [77] STIGLITZ, J. E., 2000, Capital Market Liberalization, Economic Growth, and Instability, *World Development*, Vol. 28 (6), pp. 1075-1086.
- [78] UNITED NATIONS (UN), 2000, *United Nations Millennium Declaration*, Resolution adopted by the General Assembly, 18 September 2000, New York.
- [79] UNDP, *Human Development Report 1990-2004*, United Nations Development Programme, Oxford University Press.
- [80] VALDÉS, A., FOSTER, W., 2005, *The new SSM: a price floor mechanism for developing countries*, Geneva: International Centre for Trade and Sustainable Development.
- [81] WINTERS, A., 2005, The European agricultural trade policies and poverty, *European Review of Agricultural Economics*, Vol. 32 (3), pp. 319-346.
- [82] WINTERS, A., 2004, Trade liberalisation and economic performance: an overview, *The Economic Journal*, Vol. 114 (493), pp. 4-21.
- [83] WINTERS, A., 2002, Trade Liberalisation and Poverty: What are the Links?, *The World Economy*, Vol. 25 (9), pp. 1339-1367.
- [84] WINTERS, L.A., MCCULLOCH, N., MCKAY, A., 2004, Trade Liberalization and Poverty: The Evidence So Far, *Journal of Economic Literature*, Vol. 42 (1), pp. 72-115.
- [85] WORLD BANK, 2004, *Global Economic Prospects 2004. Realizing the Development Promise of the Doha Agenda*, Washington DC, The World Bank.