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**Agricultural trade liberalization:
Assessing the consequences for developing countries**

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AGRICULTURAL TRADE LIBERALIZATION: ASSESSING THE CONSEQUENCES FOR DEVELOPING COUNTRIES

Abstract. Recent analyses suggest that the impact of agricultural trade liberalization on developing countries will be very uneven. Simulations suggest that the effects of agricultural trade liberalization will be small, overall, and are likely to be negative for a significant number of developing countries. The Doha Round focuses on tariff issues, but these countries currently have practically duty-free access to European and North American markets under preferential regimes. Multilateral liberalization will erode the benefits of these preferences, which are presently rather well utilized in the agricultural sector. The main obstacles to the exports of the poorest countries appear to be in the non-tariff area (sanitary, phytosanitary standards) which increasingly originate from the private sector and are not dealt with under the Doha framework (traceability requirements, etc.). An agreement in Doha is unlikely to solve these problems and open large markets for the poorest countries. While this is not an argument to give up multilateral liberalization, a more specific and differentiated treatment should be considered in WTO rules, and corrective measures should be implemented.

Keywords. Agricultural Trade Liberalization, WTO, Developing countries

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AGRICULTURAL TRADE LIBERALIZATION: ASSESSING THE CONSEQUENCES FOR DEVELOPING COUNTRIES

1. Introduction

Because developing countries' comparative advantage is seen to lie in agriculture, the protectionist agricultural policies in OECD countries are often alleged to prevent developing countries benefiting from world trade. Indeed, many studies have provided optimistic estimates of the effects of agricultural liberalization on developing countries, suggesting that developing countries will reap most of the benefits from trade liberalization (Hertel et al 2003; World Bank 2004).

However, the positive effects of the elimination of Northern agricultural subsidies might have been overestimated (Panagaryia, 2004). The very large gains for developing countries predicted by some models have recently been criticized on the grounds that they are largely driven by a set of particular assumptions, and that excessive country aggregation hides the contrasting fortunes of the various developing countries (Bouët et al 2004c). The fact that most modelers use the same set of data and parameters (i.e. data from the Global Analysis Trade Project) has encouraged an illusion of consensus regarding the benefits of trade liberalization.¹

In this paper, we address the impact of the Doha multilateral negotiations on developing countries. We focus on areas where we compiled original data and instruments, such as the measurement of agricultural protection and farm subsidies in developed countries, the effect of trade preferences and the modeling of Northern agricultural policies. We show that, the outcome of the Doha round is uncertain for many developing countries and that several crucial factors which will prevent some of the poorest countries from reaping benefits from the Doha Round have not been properly addressed.

2. Agricultural protectionism in developed countries

The agricultural protectionism of the Northern countries has long been denounced by developing countries. However, the results of impact studies are contradictory, and reflect some of the agenda of the affected countries. For example, the Cairns Group and the United States emphasize the effects of "fortress Europe" on poor countries, while the European Commission stresses how the EU's tariff structure allows it to import some eight times more agricultural foodstuffs from developing countries than Australia and United States combined. The Small Islands Developing States' analysis of US and EU protectionism is, on many aspects, orthogonal to the analysis made by Brazil or other Cairns group

¹ This dataset did not include the preferential access to developed countries' markets under preferential trade, and therefore led to overestimate the benefits of liberalization for developing countries. The 2005 release of a new version will solve some of the problems, and is likely to modify some earlier findings.

countries (FAO, 2004). The actual measurement of the protection of the farm sector in OECD countries remains a matter of debate.

The extent of agricultural protection. Technical difficulties have fuelled the controversy on the actual level of agricultural protection. The simple measure of duty on agricultural products yields varying figures depending on the type of average used (trade weighted or not), and whether one focuses on bound tariffs or takes into account preferential tariffs. Bound tariffs negotiated at the WTO represent commitments on maximum tariffs. However, in the case of the EU, of the 148 members of the WTO, only ten do not benefit from some form of preference. The others can export to the EU with reduced tariffs on at least certain products. The United States also has numerous preferential regimes, arising either from free trade agreements or in the framework of non-reciprocal regimes (*African Growth Opportunity Act –AGOA, Caribbean Basin Economic Recovery Act, etc.*). Moreover, every developed country grants preferences within the framework of the Generalized System of Preferences (GSP) and many under tariff quotas. It is only recently that reliable data bases have been constructed to show the totality of applied tariffs (Gallezot, 2003; Bouët et al, 2004b).

Recent measures show that obstacles to exports from developing countries are significant in Japan, where preferential systems have only a limited effect in agriculture. The protection level is also higher in the EU than in the US (Bureau and Salvatici, 2004). In the United States (sugar, milk, tobacco), and more so in Canada (milk), protection is concentrated in a few sectors. It is more widespread across products in the EU. Indirect protection through subsidies is also pernicious, as in the case of cotton in the United States, and assessing Australian protection is difficult as it is essentially non-tariff based. Table 1 provides an estimate of applied tariffs for different agricultural sectors, for groups of countries.

[INSERT TABLE 1]

Contrasting effects. Agricultural protection does not have the same effects on every developing country. The protectionist nature of the EU, for example, affects particularly South American and Asian exporters (Table 2).

[INSERT TABLE 2]

The cost of agricultural protectionism for developing countries. Agricultural protectionism in the North considerably restricts countries in the South according to assessments of the World Bank. Abolition of tariffs would see an increase in the order of 20% in agricultural exports from developing countries, a source of annual gains of several tens of billions of dollars. However, most other studies

show much lower gains. For example, agricultural protectionism in the North costs developing countries some 12 billion dollars (while the protectionism of the Southern countries costs slightly more) according to Anderson et al (2001). Other studies find gains in the order of 4 to 8 billion dollars annually (Diao et al 2004 ; Tokarick, 2003) in the framework of complete free trade, and gains of about 1 to 3.5 billion dollars in the case of a lowering by half of the agricultural tariffs in developed countries (Francois et al 2003, for example). These net estimates take into account all impacts, including possible unfavorable effects for consumers linked to price rises, and gains for producers in developing countries would be higher.

Most authors conclude that, of the various support measures used in Northern countries (tariffs, subsidies to producers, export aids) tariff protectionism is the most harmful to developing countries (Hoekman et al, 2002). While Bouët et al (2004c) share this conclusion for developing countries as a whole, they show that it is not valid for some of the poorest among them. They maintain that sub Saharan Africa suffers more from the domestic support policies of developed countries (cotton in particular) than from their tariff structure due to their preferential access to the EU and US markets. Lowering tariffs in developed countries would actually have negative effects on African countries. Bouët et al (2004c) show that a reduction in multilateral tariffs in developed countries would generate an erosion of preferences detrimental to African countries. That is, their work tempers optimism on the effects of trade liberalization for developing countries as a whole.

3. Preferences granted to developing countries

If sub Saharan Africa risks not benefiting much from lowered tariffs in a multilateral framework, it is because it benefits from preferential access to the European market under the Cotonou Agreement with African-Caribbean-Pacific countries (ACP) and to the US market under the AGOA (African Growth and Opportunity Act). Most other countries only benefit from the GSP, which has limited coverage for agricultural produce even if the EU, USA and Japan grant the Least Developed Countries a markedly more favorable regime, as in the EU EBA (Everything But Arms) initiative.

Preferential trade under attack. While these preferences offer commercial potential to developing countries, they are nonetheless much criticized. Preferences are said to be poorly utilized, in part because the rules of origin governing eligibility to these preferences are said to be so restrictive that they largely limit their benefits (Brenton, 2003). Preferences are said to be tied to restrictive or debatable conditions, subject to frequent changes, and therefore fail to provide the stable environment necessary to develop production (Panagaryia, 2003). Preferences are also said to divert trade between developing countries and to create as many losers as winners. It is even claimed that preferences have no or even a negative effect on growth and delay growth-promoting reforms (Ozden and Reihardt; 2003, Topp, 2004). Finally, preferences are also under attack in the World Trade Organization as contradicting the basic normative principle of non-discrimination. While the GSP has a legal status

within the WTO (arising from the 1979 GATT "*Enabling Clause*"), a waiver must be sought for all regional preferences which are normally incompatible with the Most Favored Nation clause.

Preferences rather well utilized. Is criticism of trade preferences for developing countries justified? Several recent studies have made exact estimates of the use of commercial preferences. OECD (2004), Candau et al (2004) and Wainio and Gibson (2003) show that, contrary to a widespread belief, commercial preferences granted to developing countries by the EU and the United States are indeed put to good use in agricultural products. Among exports from developing countries, the trade flows eligible are essentially exported under these preferences. In both the EU and the US, only a very small share (about 11%, see Tables 3 and 4) of eligible agricultural products were exported outside a preferential regime. These rare cases of eligible exports under the Most Favored Nation regime are largely explained by small trade flows and/or low MFN tariffs which means that the importer did not judge it worthwhile to meet the eligibility criteria. Studies inferring poor use of preferences might be valid in some other sectors than agriculture, but they do not match the available data for the agricultural, food and fisheries sector.

[INSERT TABLE 3]

[INSERT TABLE 4]

This does not mean that tariff preferences are likely to give rise to large trade flows. There are situations where exports from developing countries are insignificant. This is very much the case of African countries' exports to the United States, despite the granted preferences. The explanation for this is to be sought in problems of competitiveness or in poor compliance with sanitary standards or plant disease controls more so than in the side conditions of preferential agreements (OECD, 2004).

Rules of origin. Rules of origin are intended to avoid the simple transshipment of goods with little local processed value added benefiting from preferential access. Rules of origin prevent misuse of preference schemes. Arguably, they reinforce the benefit of the scheme for the preference-receiving country by creating an incentive for third countries to invest there so as to benefit from preferential market access. In the textile sector, however, over-restrictive rules prevent non-cotton producing countries from exporting apparel and garments (under preferences granted by the United States (non-cotton producing countries must work with American cotton in order to export tee-shirts within the preference regime). Rules of origin undoubtedly account for the under-utilization of preferences in the textile and clothing sector (Inama, 2003; Candau et al, 2004). Rules of origin are also an obstacle to the development of processing, particularly in fisheries (the origin is linked here to the catching regions, posing difficulties for tuna processors to supply themselves all year round in countries with limited maritime area).

In the agricultural sector, the problem is less severe. A large proportion of the exports of developing countries are primary goods not affected by the rules of origin. While the clauses on a "sufficient" degree of transformation prevent, for example, a country from refining imported sugar and dispatching it in the framework of preferential agreements such as the EBA initiative, this avoids an abuse of the philosophy of the agreement. Some small countries do experience problems justifying enough local content and being able to export processed foods. But, in most cases, other obstacles (technical standards, poor infrastructure) appear at least as restrictive as rules of origin, if we are to believe enquiries carried out among processors (Bureau et al, 2004). The main problem posed by EU rules of origin is the lack of cumulation possibilities among countries that benefit from the GSP, except within a handful of regional groupings. Allowing further cumulation (i.e. considering material used by country A and originating from country B as "local" provided that country A and B are both eligible for the EU preference) would make it easier to make use of the GSP. In the case of the EBA, cumulation with all other developing (and perhaps neighboring) countries would be necessary, because cumulation would bring little advantage if it were restricted to LDCs.

Discriminatory Clauses. Several developing countries have protested in the *WTO Trade Policy Reviews* against the "graduation" provisions of the EU and US GSP which limit preferential access for countries which are "too" competitive in one product. The idea is, for example, not to allow Argentina to supply all imports of beef under a preferential regime but to share export opportunities among a larger number of developing countries. Thus a country exporting above a certain threshold is excluded from the preference for a given product, or all products. Middle-income developing countries, in particular, criticize such provisions as an obstacle to the expression of their comparative advantage. Nonetheless, the EU graduation system is based on a formula taking account of the degree of a country's development, and is coherent with the need, evident to us, of evolving towards a special and differential treatment which is more subtle than the plain "developed/developing" dichotomy.

There are also criticisms of initiatives which grant more favorable treatment to some countries, either because they are fighting drug trafficking (EU, US) or because they are more diligent than others regarding the environment and human rights (GSP of the EU). India recently won a WTO panel dispute against the extra EU GSP preferences granted to countries fighting drug trafficking (after the preferences were granted to Pakistan, for largely political reasons). Conditionality of preferences is defensible on some grounds, and is arguably necessary to prevent preferences from being diluted by extending them to an excessively large number of countries. But the unilateralism of such conditionality paves the way for arbitrariness and political influence. As long as it is not based on "objective" and widely accepted criteria, such conditionality is not WTO-compatible, and would raise more problems than it might solve. This is the sense of the Appellate Body ruling on the dispute about the European GSP for countries fighting drugs. Whether well-suited modalities can be found to make such principle applicable without perverse consequences remains an open question.

Are preferences ineffective and would their erosion be harmless? It is difficult to evaluate the impact of preferences on growth and development. The European Commission itself expressed serious doubts on the benefits of the ACP preferential regime during the design of the Cotonou agreement. However, statistical studies showing the inutility of preferences are not particularly convincing (Ozden and Reinhardt, 2003; Stockel and Borrell, 2001). Perhaps the situation would have been much worse without preferences. Moreover, several recent studies contradict assertions of the ineffectiveness of preferences as development aid. In a very detailed study of African countries, Stevens and Kennan (2004) show that preferences "are used and work" on a global scale, and that the problems are caused more by the limitations of these preferences (inadequate coverage, restrictive conditions, rules of origin, problems of technical standards imposed on tariff issues, etc). Clearly, some trade flows would not have taken place without these preferences. This is confirmed by Wainio and Gehlhar (2004) who also show that exports fell when preferences have been eroded by the lowering of MFN tariffs. A recent statistical study conducted over a wide sample of countries even suggests that countries which benefit from the American and/or European GSP on average have experienced significant extra growth (Romalis, 2003).

There remain important questions for which precise information is lacking. This is true for the extent of the real benefits to developing countries, and more so for the sharing of these benefits. What exactly are the repercussions of the ACP agreements for various categories of the population? How are the quota rents distributed? What are the indirect effects (corruption) of import or export license allocation? It is not known precisely if this "Trade for Aid" is more effective than more direct assistance policies, the consequences, for example of the banana and sugar protocols being controversial on this point. Excessive criticism of preferential regimes seems to be made in order to avoid the defense of preferences being used as an obstacle to multilateral liberalization (Anderson 2005). By doing so, one takes the risk of depriving many developing countries of assistance which may be quite effective.

In addition, skepticism about the benefit drawn from preferences does not imply that their removal would be harmless. Various authors have argued that erosion of non-reciprocal preferences is a problem of limited magnitude at the worldwide level, focused on a handful of products and on a limited number of countries (see e.g. Subramanian, 2003; Alexandraki and Lankes, 2004). However, Bouët et al (2005) argue that the magnitude of forthcoming difficulties for poor countries has been understated. According to their estimates, 14 countries earned in 2001 tariff quota rents worth more than half a percentage point of their GDP (more than one point in 8 countries). Their calculation also shows that the "true" average preferential margin in agriculture is higher than 1 point for 47 developing countries, and higher than 2 points for 33 countries. Bouët et al stress that preferential schemes such as the EU-ACP Cotonou Agreement or the US-Caribbean Basin Initiative are of particular importance for beneficiary countries. The erosion of preferences is likely to be a major

challenge for several African and Caribbean countries, whose export specialization is in large part shaped by preferences. Sugar, bananas, textiles and clothing, and meat products play a central role, but these products are key to numerous developing countries.

Furthermore, the poor countries concerned generally have a very low adjustment capacity due to the combination of an often-deficient capital market, of the existence of many obstacles to labor mobility, of the absence of safety nets and of training capacities, etc. They might well face severe difficulties when trying to reallocate part of their production factors toward other sectors. Contraction of internal demand is often the only domestic way for them to adjust to external imbalances.

4. The impact of agricultural subsidies

Many authors believe that tariff protection in Northern countries is the problem which most handicaps Southern countries. Bouët et al (2004c) present a more ambiguous perspective. For example, with respect to sub-Saharan Africa, subsidies to US and EU producers in cotton, but also in tobacco and peanuts, have a bigger negative impact than tariffs on world prices, on exchange rates and even on general welfare.

Farm aid increasingly decoupled. Recent agricultural policy reforms have been characterized by a move of farm support towards payments which are less tied to the quantity produced. Payments coupled to production count for only marginal quantities in the EU or in the US in many sectors. However, "green box" payments (which, in WTO terms, refers to transfers to farmers which are not dependent on either current prices or the quantity produced) are now very significant. NGOs such as Oxfam argue that decoupling is only a cosmetic revamping of support which remains at the same level (Watkins, 2004).

Do these decoupled payments really have a negative impact on the Southern countries? Opinion is divided, and detailed econometric studies are very limited. Several studies make it clear that to give a sum of money, even unconditionally, to a farmer necessarily influences the amount produced (Chavas and Holt, 1990; Sumner, 2003). In reducing the risk of insolvency, even decoupled payments encourage higher production or riskier cultivation. There is necessarily an implicit anticipation that cultivated areas will be used as a reference in the next reform which drives land into cultivation. But there are few solid quantitative results on the effect of such aid on production (Adams et al, 2001). In the EU, the decoupling is only partial, and what is more the single premium remains conditional on the maintenance of the land in good agricultural condition. If one accepts the rule of thumb used by many model builders (for lack of more exact assessments) that decoupled payments have about one third of the production impact of coupled payments, the impact of some 30 billion euros of EU direct aid is far from neutral on the world market and thus on developing countries.

Developing countries and the green box. During the Doha negotiations, developing countries have attempted to call the "green box" into question. If decoupled payments could not be exempted from

the calculation of the total "Aggregate Measure of Support " used to put a ceiling on permitted aid, this would put the EU and US authorities in serious trouble vis-à-vis their farmers. They have presented the reforms towards more decoupled payment as a way to comply with WTO disciplines. However, the criteria for current green box eligibility are debatable and it is likely that the developing countries will resume the offensive on this point. The recent WTO panel finding on American cotton subsidies which recognized the validity of the arguments contesting the decoupling of aid to US cotton could encourage a more offensive stance. The same argument could also be applied to the aid which the EU classifies in the green box, even after the recent reform of June 2003.

5. Export subsidies

EU export refunds. EU resistance to renouncing export subsidies has been one of the main blocking points during the Doha agricultural negotiations. At an economic level, export subsidies are a very inefficient support instrument. Indeed, a large share of money spent by the taxpayer benefits foreign consumers (Bureau et al, 2003). However, for the EU, renouncing the possibility of subsidizing exports is the same as renouncing the maintenance of an intervention price structurally higher than world prices: European "refunds" are the keystone of the joint organizations of the market. The August 2004 agreement foresees the ending of export subsidies, although without an exact date. It is likely that this will require further adjustments in the CAP, and in particular a further decrease in intervention prices.

Beyond its symbolism, have export subsidies (essentially EU subsidies in the last few years), had a very negative impact on developing countries? Such subsidies face strong criticism from various NGOs who highlight the unfair and harsh competition in some industries: beef and poultry in West Africa, milk in Jamaica or in India. These effects are real, especially as the amounts concerned can vary considerably from one year to the next according to the quantities which must be removed from the European market to support prices. However, they are not uniform. Developing countries which are net importers of food largely abstained from condemning too openly these export subsidies during the Doha round.

A recent study by Gallezot and Bernard (2004) reviewed the amounts and destinations of European export subsidies. It shows that they vary considerably according to the product but also to the destination. According to this study, subsidies are principally aimed at countries that are dependent on imports. It is difficult, however, to assess the responsibility of these subsidies for the inability of local farmers to develop local adequate agricultural production and it is undeniable that the subsidies are unfair competition for other potential suppliers.

The end of export refunds. European subsidies have clearly limited trade in the South, depriving some countries with significant production potential from markets in nearby countries. In some sectors, such as West African beef, these subsidies frequently represent half the cargo value. Nevertheless, overall,

the NGO stress on export subsidies appears unbalanced given the global effect of refunds. The removal of subsidies would not greatly alter the situation for developing countries, except for the particular cases underlined by the NGOs. The assessments of Bouët et al (2004c) suggest that such removal will have an important effect on the world price only in the sugar and dairy product sectors. The end of refunds will hardly have any impact on those developing countries which sell their sugar higher than the world price in the framework of preferential quotas. With dairy produce, only some developing countries like Argentina have a definite comparative advantage. Subsidized exports of milk affect essentially West Africa, which historically does not have significant production potential regarding the needs of the population. In short, the removal of such subsidies is desirable to end unfair competition, but the overall positive effect on developing countries must not be overestimated.

6. The effects of Doha

The assessment of the effect of the Doha Round by Bouët et al (2004c) stands out by the fact that preferential regimes granted to developing countries are considered very carefully, markedly altering the conclusions that can be drawn from such exercises for the developing countries. In particular, this study shows that the lowering of MFN duties by Northern countries erodes the preferences granted to sub Saharan Africa. Countries such as Australia or Brazil would then replace the preferential exports of Africa, the Caribbean or the Andean countries. As the August 2004 agreement is imprecise on the technical modalities of tariff and internal support reductions, hypotheses were made on the basis of the Harbinson draft compromise although this was never accepted by Members (WTO, 2003). However, the simulations carried out should be close enough to those of the final agreement.

The reduction of internal support would have a more significant effect than other measures in the rice, cotton and, to a lesser degree, the cereal and oil crop sectors (Bouët et al, 2004c). In the sugar sector, the removal of export subsidies would have the most significant impact. In the other sectors, particularly fruit and vegetables, it is the lowering of the tariffs which is most important.

Nevertheless, apart from significant impacts on the world price of rice, milk and sugar, the price effects of the Doha round will be small. Growth in production would certainly occur for developed countries in the Cairns group and, to a smaller degree, developing countries of the same group (Brazil, Argentina and Thailand particularly). Considering the effects of erosion of preferences, it is principally the exports of the Cairns group (and to a lesser degree, China and the Asian developing countries) which would increase, to the detriment of EU exports. African countries would see no significant growth in their exports.

The welfare effects in developing countries presented in Table 5 are the combination of changes in the terms of trade, allocative efficiency, government revenues, as well as gains for agricultural producers and losses for consumers. In Mediterranean countries and sub-Saharan countries, the welfare effect of the Doha Round would be negative. Other developing countries (Asian and some South American

countries) would experience a net increase in welfare, but by a limited amount (Table 5, and Bouët et al 2004c for more details). Some of the poorest countries, or at least some countries that include the largest number of the poor, such as India, Pakistan or Bangladesh (part of "South Asia" in Table 5) experience a slight increase in welfare, mainly due to allocative efficiency gains generated by the elimination of their own domestic distortions. However, others, also among the poorest, experience welfare losses. This is the case of Sub-Saharan Africa, which includes many of the least developed countries.

[INSERT TABLE 5]

Note that the farm sector in Sub-Saharan Africa benefits from higher world prices, even though trade liberalization hurts consumers. This is not the case in South Asia, because of larger cuts in agricultural tariffs (an indication of the effects on the farm sector is given by the returns to agricultural land in Table 5. See Bouët et al 2004c for more details).

The figures for Sub-Saharan Africa and Mediterranean countries (where the significant increase in the world price of cotton has a negative effect on the textile industry) show contrasting effects of agricultural liberalization both within and between developing countries (Table 5). Recent studies focusing on the poverty impact of trade liberalization, which combine household surveys with economic models, indeed show the uneven consequences on different population groups. Welfare gains at the national level can even be compatible with a larger number of people below the poverty level (Bussolo et al, 2004; Valenzuela et al, 2005).

7. Non tariff issues and developing countries

Northern protectionism, competition distortions due to subsidies, and preferences too restrictive to be efficient are the usual reasons cited explaining the poor trade performance of developing countries. And yet, as we have seen, rigorous studies show that preferences granted to developing countries are put to quite good use (OECD, 2004; Candau et al, 2004); and that export subsidies of Northern countries have, apart from particular cases, only modest global effects on developing countries (Bouët et al, 2004c). Surveys of importers show that, in the case of African countries, customs duties are not considered major obstacles to the development of an export industry to the EU, particularly because of the ACP and EBA agreements. Nor do these surveys suggest that tariff escalation is an obstacle to the local processing of products for export (Bureau et al, 2004). Rules of origin to take advantage of preferences are cited as a problem in a minority of cases only.

How then can it be that the developing countries, particularly the poorest, have such difficulty integrating themselves into international trade? The share of developing countries in world agri-food

exports has continually decreased, from 40% to 24% in thirty years. Sub-Saharan Africa's market share has gone from 9% to less than 3%, and consists essentially of lightly processed products.

One reason is that developing countries have largely remained outside the phenomenon of intra-regional liberalization, which has increased trade within large areas of the world (EU, NAFTA). Neither African nor Asian regional integration has been very convincing and Mercosur's integration has been incomplete. Overall, developing countries continue to impose often very high tariffs among themselves, often adding non transparent import taxes and a multiplicity of bureaucratic obstacles.

Another reason for the lack of integration into the world market is because technical, sanitary and plant disease controls restrict agricultural and food exports from a large number of developing countries. These problems are particularly acute with primary products, due to measures against epidemics, contagious diseases or invasive species. For example, the EU prohibited the import of African fish and shellfish at the end of the 1990s for fear of cholera, severely handicapping one of this region's few dynamic sectors. Numerous countries that are not deemed to be free of foot and mouth disease cannot export animal products: for these, the opening of markets by an agreement within the Doha Round would be largely theoretical. The phytosanitary barriers to the importation of fruit and vegetables are very restrictive and sometimes unpredictable, and lead to penalizing retention periods (even though the EU is less extreme than Japan or Australia, see OECD, 1999).

New EU sanitary controls could have a particularly severe impact on the exports of African countries (Cerrex 2003). Several of the controls, particularly on traceability and responsibility, maximum pesticide residues and on the implementation of hygiene procedures to critical levels, could result in smaller exports from ACP countries. They could particularly affect developing country exports in the seafood and the fruits and vegetable sectors. It is these countries with very limited infrastructures, financial resources and human capital that risk being removed from the list of countries exporting to the EU.

It might be thought that sanitary and pest control problems, especially questions of microbe contamination and invasive species, would be less of a problem for processed products. These, however, do not gain easier entry to the European or American market. Indeed, standards imposed by the developed countries often concern the processing chain and not only the final quality of the product (Henson et al 2000). Food firms must observe the technical standards and Hazard Analysis at Critical Control Points procedures which pose problems of cost, infrastructure and traceability for developing countries.

It is easily understood that, with public opinion so sensitive on matters of food safety, caution encourages very restrictive measures. However, the fact is that technical conditions placed on the exports of developing countries are de facto obstacles which limit the effects of lowering customs tariffs.

An unprofitable discipline for developing countries. It is not easy to distinguish whether controls mainly shelter local producers from competition or are required to protect human, plant or animal health (OECD, 1999). The work of Fontagné and Mimouni (2001) is one of the few assessments of the economic effects of non-tariff barriers. It shows that Europe and the United States impose restrictive standards. But so do other countries which advocate lower tariffs but where it is more difficult to export. Ironically, besides Japan, it is in the Cairns group that obstacles to trade appear most widespread, notably in Latin America (Mercosur particularly), Australia and New Zealand.

When these standards are excessively restrictive, the WTO provides tools to challenge them. The SPS Agreement (on sanitary and phytosanitary standards) states that more restrictive controls than those based on international standards must have scientific justification based on risk analysis. The Agreement on Technical Barriers to Trade governs regulations dealing with subjects other than human, plant and animal health (governed by the SPS Agreement). These agreements have allowed measures to be challenged whose main motivation is the protection of local producers (Josling et al, 2004). The SPS agreement has also played an important role in prompting governments to base their controls on a more objective assessment of risks (numerous disputes have also been resolved without the necessity for a panel). Much maligned from the outset, this agreement is no longer really criticized since the appeal body established a balanced jurisprudence, leaving room for cautionary attitudes in the absence of established risk (OECD, 1999).

Nevertheless, the SPS Agreement has a limited use for developing countries, which have made only infrequent use of it to open markets. As in all recourse to the Dispute Settlement Body, there is a problem of funding. The agreement favors countries which have accumulated significant expertise in the field of scientific evaluation used in arbitration cases. On the other hand, the SPS agreement does not really consider economic aspects. Cost benefit analysis plays only a small part. There is indeed an article in the SPS agreement which alludes to taking account of economic effects, and these are considered beforehand in setting international standards (in the *Codex Alimentarius* for example). But the presence of pathogens, however small, can justify measures to reduce the very small risk (from the moment it becomes real) even if the consequences are very costly for third world country.

The increasing significance of private standards. Perhaps a more significant phenomenon is that the standards governing international (and national) trade are increasingly beyond public control, which alone is capable of being the subject of international agreements. Increasingly, private players are imposing their own standards on importers and producers from developing countries (Reardon, 2004). These requirements exceed public regulations, particularly regarding production processes, certification and traceability, three areas where the poorest countries are especially handicapped by the lack of capital, infrastructure and skilled workers. Moreover, private sector standards appear to amplify the effects of reputation, distributors in developed countries having not only to manage the risk but the media coverage of risk with public opinion. For example, in a recent survey, cases were

reported where buyers (those involved in school meals) systematically refused supplies from developing countries despite a seemingly satisfactory bill of health (frozen fish, Bureau et al, 2004). In other cases, doubts about the reliability of national certifications meant that importers preferred to process fruit and vegetables in Europe (including Central Europe, for subsequent export to Western Europe) rather than in Africa. All the more so as the new EU states, and not the developing countries, have benefited from aid to improve their infrastructures. This has relatively hampered processors who invested in African countries who themselves had to adapt their factories to the new regulations.

In short, there is a set of factors not pertaining to trade negotiation which considerably limit the integration of developing countries into the world market. Direct foreign investment is often an efficient way to meet quality, control and traceability requirements in Northern markets. But investigations show that political instability is a significant hindrance to this type of investment (Côte d'Ivoire). The same investigations (Bureau et al, 2004) show that the difficulty of dealing with often only theoretical companies, which do not deliver goods or suddenly disappear and where contracts are often subject to corruption, is an obstacle to trade development with several West African countries (often mentioned in the case of Nigeria for example).

Again, not all developing countries are affected in the same way. Agribusiness professionals in Argentina and Brazil are fully confident of their capacity to respond to all EU technical and sanitary requirements in the near future, even if those on traceability pose some problems for them (it also poses problems for other developed countries). In short, non-tariff factors seem to marginalize the poorest countries the most, and sub Saharan Africa in particular.

8. Conclusion

Recent studies have highlighted the contrasting interests of various types of developing countries faced with the perspective of liberalization in the agricultural and food sector. For most middle-income developing countries confronted with high protection in the main markets, liberalization can be a source of substantial growth in prospects and prices for a relatively high-performing export sector. For poorer countries, on the other hand, rising import prices and the erosion of preferences darken the picture considerably.

The recent growth of criticism of trade preferences doubtless responds to anxieties as to their often arbitrary and even, in some cases, harmful character. Countries excluded from the benefits of such agreements can legitimately feel wronged. The fear of seeing the defense of preferences used in the defense of protectionist interests is another reason for distrust. Finally, the argument that preferences can only be a short term policy, given the progressive reduction of multilateral tariffs and the reform of agricultural policies in developed countries, cannot be ignored. However, critiques of preferential regimes underestimate the growing difficulty of the poorest countries in the export of agricultural

produce. Their marginalization can only increase if no measures are taken in their favor. In this case, equality of treatment is not synonymous with fairness.

In this context, the North-South dichotomy appears simplistic. The concept of "special and differential treatment" symptomizes this. The eligibility for this favorable WTO treatment depends only on the self-declaration of each individual country, even if questioned by other member states. Among the 148 WTO members, more than 100 are treated as developing countries. However, the extent of their economic weakness, which special and differentiated treatment is supposed to address, varies greatly. The advantages and interests of countries such as China, Brazil or Mexico have not much in common with those of the very poor countries of Africa or South Asia.

This diversity cannot be accommodated by a single measure, and explains in large part the dissatisfaction expressed in regard to the present special and differential treatment. Better differentiating between developing countries is necessary to move forward, even if middle-income countries are opposed at the moment. In this perspective, simple reference to historical or geographical criteria is arbitrary and ill-suited. Only a more objective approach, contingent exclusively on widely accepted development criteria appears to provide the basis for a redefinition of fairness in the international trading system. The decision of the WTO Appeal Body in April 2004, regarding the legitimacy of the preferential regime offered by the EU to some developing countries committed to the struggle against drug trafficking, opens the way to such a differentiation, while subjecting it to a certain number of restrictions. It must comply with objective criteria, with a legitimate need, while ensuring no "undue difficulties" for trade with other members. This is perhaps the beginning of a multi speed system, more adapted to the diversity of situations.

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Table 1. Average tariffs applied by sector, per cent

	EU 25	USA	Asia Developed	EFTA	Cairns Developed
Paddy rice	62.9	4.6	289.9	12.3	0.0
Processed rice	138.1	4.9	314.0	11.6	0.0
Coarse grains	24.3	1.1	83.9	82.6	0.1
Wheat	0.5	2.4	69.2	134.4	1.2
Sugar	128.5	34.8	120.4	48.2	3.5
Oilseeds	0.0	4.3	62.4	38.5	0.1
Live animals	36.2	0.1	20.4	53.6	0.0
Animal products	4.3	0.6	9.9	33.7	8.3
Meat	62.8	3.2	25.2	177.6	5.9
Meat products	20.0	3.6	31.8	167.9	30.4
Dairy products	39.6	18.8	40.2	91.7	76.6
Fibers	0.0	1.6	0.2	0.0	0.0
Fruits & vegetables	17.9	2.7	17.1	31.8	1.7
Other crops	2.3	2.7	3.7	20.0	1.4
Fats	4.6	3.5	4.2	36.2	2.1
Beverage Tobacco	13.7	2.4	13.1	15.9	7.2
Food	10.1	4.2	12.6	20.8	6.8
Total agrofood	16.7	4.7	22.5	47.7	10.8

Source: MacMap_HS6, using ad valorem equivalents. The figures indicate the percentage tariff, weighted by the exports of a reference group of countries so as to account for the relative importance of each product without suffering from the well known endogeneity bias of regular trade weighted averages. See Bouët et al 2004b.

Table 2. Average applied bilateral tariffs in the agricultural sector, per cent

Tariffs applied by →	EU 25	USA	Asia developed	EFTA	Cairns developed
applied to ↓					
EU 25	-	5.8	22.2	52.0	15.7
USA	16.2	-	28.9	57.9	5.1
Asia developed	12.5	3.7	-	17.9	6.2
EFTA	7.9	3.9	11.6	-	10.6
Cairns developed	25.9	3.4	24.9	79.8	-
Mediterranean	7.3	4.0	14.1	25.7	3.7
Sub-Saharan Africa	6.7	3.0	12.0	8.9	0.7
Cairns developing	18.3	3.8	24.0	34.7	5.9
China	13.5	5.1	21.7	36.7	8.7
South Asia	14.4	1.8	33.7	21.9	1.8
Rest of the World	15.1	2.1	17.4	25.8	2.6
Average	16.7	4.7	22.5	47.7	10.8

Source: MacMap_HS6, , using ad valorem equivalents. Weighted by exports of a reference country group (see Bouët et al 2004b).

Table 3. US imports of agro-food products under various regimes, year 2002

Regime used	Imports eligible, by regime, 1000 USD	Actual import under the regime 1000 USD	Apparent rate of utilization	Effective rate of utilization	Share of actual imports
Non reciprocal regimes	[1]	[2]	[3]=[2]/[1]		[2]/(sum[2])
Total	4 136 950	3 606 911	87%		6.2%
AGOA	161 928	137 202	85%	85%	0.2%
ATPA	959 224	408 319	43%	65%	0.7%
CBERA-CBTPA	1 689 600	1 629 023	96%	99%	2.8%
GSP (regular)	2 455 655	1 415 038	58%	94%	2.4%
GSP-LDCs	83 010*	17 329	21%	87%	0.0%
RECIPROCAL PREFERENCES					
NAFTA	11 616 292	11 531 469	99%		19.8%
Other	147 179	143 836	98%		0.2%
NON PREFERENTIAL					
Duty free (under MFN)		29 046 869			49.8%
MFN (tariff >0)		14 039 056			24.1%
Total US Import		58 368 141			100%

* excluding eligibility to regular GSP. Source: computation by authors from USITC data, based on CIF imports for 2002, chapters 1 to 24 of the HS96. The effective rate of utilization is constructed as the ratio of imports under any preference to the imports eligible for a given preference. ATPA indicates the Andean Trade Preference Act. NAFTA indicates the North American Free Trade Agreement. MFN stands for Most Favored Nation.

Table 4. EU imports of agro-food products under various regimes, year 2002

Regime Used	Import eligible by regime 1000 Euros	Actual Import under regime 1000 Euros	Apparent rate of utilization	Effective rate of utilization	Share of Actual Import
	[1]	[2]	[3]=[2]/[1]		[2]/(sum[2])
Non reciprocal regimes					
Total	18 609 825	12 292 289	89%		
Cotonou (ACP)	5 926 849	5 500 091	92.8%	95%	8.3%
GSP (regular)	8 754 532	4 385 644	50.1%	86%	6.6%
GSP-Drug	1 833 684	1 714 354	93.5%	95%	2.6%
E.B.A	1 682 244	293 527	17.4%	96%	0.4%
OCT	412 516	398 673	96.6%		0.6%
RECIPROCAL PREFERENCES					
Maghreb (MGB)	1 096 733	1 046 009	95.4%		1.6%
Machrak	112 473	106 928	95.1%		0.2%
Balkan	356 428	329 575	92.5%		0.5%
PEC's	2 570 731	1 937 165	75.4%		2.9%
Economic European Area	1 973 938	1 085 880	55.1%		1.6%
Other	5 270 602	4 222 484	80.1%		6.3%
NON PREFERENTIAL					
Duty free (under MFN)		21 713 889			32.6
MFN (tariff >0)		4 200 067			6.3
Total Import EU		66 558 853			100

Source: Computations by J. Gallezot, from Taxud (Single administrative declaration) and TARIC data, based on CIF imports data for 2002, chapters 1 to 24 of the HS96. The effective rate of utilization is constructed as the ratio of imports under any preference to the imports eligible to a given reference. GSP Drug indicates the special GSP provisions for countries combating drug trafficking. OCT indicates the overseas territories. PECs indicates the countries benefiting from an association agreements. MFN stands for Most Favored Nation

Table 5. Impact of an agreement on agriculture in the Doha round (percentage changes compared to a 2005 reference)

	Changes in food and agricultural production	Agri-food Exports	Agri-food Imports	Returns to agricultural land	Changes in global welfare
EU 25	-1.57	2.7	12.8	-15.06	0.14
USA	-1.05	0.8	2.8	-0.21	0.05
Asia Developed	-2.08	11.8	9.6	-1.79	0.05
EFTA	-2.73	-3.8	3.7	1.10	-0.11
Cairns Developed	3.66	12.8	2.8	1.08	0.04
Mediterranean	0.73	8.8	-1.5	0.77	-0.16
Cairns Developing	1.25	10.4	-0.7	0.60	0.00
China	0.01	13.2	10.1	0.30	0.15
RoW	0.64	6.8	-0.7	1.15	-0.10
South Asia	-0.01	6.4	7.8	-0.10	0.17
SubSaharan Africa	0.76	4.7	-0.8	0.22	-0.03
World	-0.39	6.1	6.0	-	0.08

Source : Bouët et al 2004c.