Working group 1: Market access – opportunities and risks

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Contents

1. Introduction

Several recent studies have shown that agricultural market access is one of the most important issues on the Doha development-round agenda (e.g. Anderson, 2004; Bouët et al 2004b; Francois et al. 2002, 2003; World Bank, 2003) This paper discusses access to agricultural markets from the perspective of developing countries (DCs). An often-heard view maintains that economic development in DCs is hampered by blocked market access in OECD countries. Opening OECD markets will lead to prosperity in DCs. On the other hand, DCs have already liberalized, often under structural adjustment programmes, and should be given the flexibility to protect their rural population against the evils of the global economy. This paper challenges this view, and concludes that market access into OECD countries is indeed an important issue for some DCs but more rational trade policies by DCs themselves can make an even bigger contribution to economic development on those regions. Furthermore, further multilateral reduction of tariffs does not automatically lead to rising agricultural exports from DCs. Existing preferential schemes already provide exporters from DCs lower tariff rates, and a multilateral reduction will not further improve the access conditions. Besides, the increased prevalence of import restrictions related to sanitary and phytosanitary measures lower the potential gains from reduced tariffs and expanded quota.

The paper first provides a review of existing conventional trade barriers (tariffs and quota), but also focuses attention to new forms of impediments to market access. Food safety related standards are becoming increasingly important in international trade in food products. At the same time, public regulation assumes a relatively minor role compared to private (self-) regulation by internationally operating food chains.

Furthermore, it is argued that 'market access' should not be confined to access to industrialised countries. Integration of the rural population in DCs into a market economy is far from complete and can provide enormous opportunities for the improvement of livelihoods. At the same time, it is clear that increased food production, growing populations and rapid urban expansion lead to higher claims on natural resources for domestic and industrial use. Especially in fragile ecological areas this process can lead to a downward spiral that undermines the natural resource base and hence endangers the livelihoods of current and future generations. While market-based solutions to these challenges are not always available, greater economic

prosperity allows countries to better cope with these challenges. The concept of market access needs to be broadened beyond the narrow definition of reducing both conventional (tariffs and quota) and new (standards) barriers to international trade and needs to include access to local and national markets in developing countries. Finally, the paper argues that the multilateral agreements and the legal framework of the WTO can play a catalysing role in this process of improving -broadly defined- market access.

2. The policy landscape after the Uruguay Round

Tariff negotiations in the GATT/WTO have generally been based on tariff bindings, or schedules of concessions tabled under GATT rules that define a maximum or ceiling rate for trade restrictions. The coverage and level of these bindings is an important element of the initial conditions for the negotiations. While tariffs in the OECD (and Latin America) are generally bound, many Asian and African economy tariffs remain unbound despite more than a four-fold increase in the coverage of developing-country tariff bindings in the Uruguay Round.

With the implementation of Uruguay Round commitments, average *ad valorem* tariffs in the industrial countries generally are around 3 percent. However, there are important exceptions. One of these is textiles and clothing, where the average rate is roughly three times this overall average. The other exception is agriculture, which we discuss more thoroughly below.

As in the case of industrial tariffs, the stage for any future agriculture negotiations was also set by the Uruguay Round outcome - this time by the Uruguay Round Agreement on Agriculture (URAA). One key difference from industrial products is that essentially all agricultural tariffs are bound.

For both industrial tariffs and agricultural tariffs, the phenomenon that bound rates exceed applied rates, or 'binding overhang' (Francois and Martin, 2003) is an important element for the initial negotiations in the Doha round. The binding overhang may reduce the effectiveness of bound tariff reductions. For example, Francois et al (2003) show that, in general, for developing countries, binding overhang is large enough that reductions in the range of 50% are necessary to force any reductions at all in average applied rates for countries like Brazil.

3. What do we know about agricultural market access?

Countries protect their domestic markets in a number of ways. The resulting pattern of protection measures is often complex and faces the exporter with an non-transparent administrative burden, involving tariffs, quota, technical standards, sanitary and phytosanitary standards, import licenses, infrastructure charges, and, increasingly popular after the UR, anti-dumping duties. All these measures tend to raise the domestic price in of the imported good above its 'world' price, i.e. the price that the exporter actually receives.

Tariffs

Tariffs are the most commonly applied form of import protection, and negotiations on tariffs have a long history in the GATT and the WTO. While tariffs on industrial goods in OECD countries have been subject to negotiated reductions since the 1950s, agricultural tariffs have only been included in the multilateral agreements since the conclusion of the Uruguay Round in 1994. Agriculture is also somewhat special since the use of non-ad valorem tariffs is widespread, sometimes in conjunction with quota. In fact countries levy tariffs in a number of different ways:

- As a percentage of the value of imports (ad valorem tariffs). This is the most straightforward form of a tariff.
- As a monetary amount per unit of import such as cents per tonne (specific tariffs)
- As a combination of the two, such as 12.5 percent plus 20 cents per tonne (compound tariffs)
- Tariffs may also vary based on the time of year (seasonal tariffs). Seasonal tariffs are widespread in the EU's imports of horticultural products, which essentially open 'import windows' in exactly those periods when domestic production in the EU is low, and close the window through prohibitive tariffs when domestic production is high.
- Tariffs may also be determined by complex technical factors (such as sugar or alcohol content).

Specific tariffs are widespread in agriculture. In the USA and the EU about 44% of the agricultural tariff lines are specified in non-ad valorem terms. One advantage of

specific duties, from the importer's perspective, is their administrative simplicity, since they avoid the problem of having to value imports. However, specific tariffs tend to discriminate against low-quality goods, as they place a heavier burden on lower priced items within a given tariff-line. Since developing country imports are often of a lower quality, and lower priced, than comparable goods originating from industrialized countries, specific tariffs tend to disadvantage developing country exporters.

Contrary to ad valorem tariffs, the distortive effect of specific duties is difficult to determine. To estimate the ad valorem equivalent (AVE) of a specific tariff one needs transaction volumes as well as prices. The latter are usually difficult to obtain and typically display variations over time, in part due to exchange rate fluctuations.

Gibson et al. (2001) estimate the average of bound agricultural tariffs across 113 countries specified solely in ad valorem terms to be 58 percent, while the average AVE of non-ad valorem tariffs is 123 percent.

Tariff-rate quota

The Uruguay Round negotiations resulted in 'tariffication', which is the process of converting agricultural non-tariff barriers (NTBs). Variable import levies and import quotas were converted into bound tariffs (maximum tariffs set at established rates). Tariffication resulted in a more transparent tariff-based system of border protection that allowed for an initial set of tariff cuts.

Since the conversion of NTBs into tariffs could lead to prohibitively high tariffs, GATT members agreed to provide a minimum level of import opportunities for products previously protected by NTBs. This was accomplished by creating tariff-rate quotas (TRQs), which generally impose a relatively low tariff (in-quota) on imports up to a specified level, with imports above that level subject to a higher tariff (over-quota).

According to Gibson et al. (2001) only about 6% of the agricultural tariff lines are subject to TRQs, and 33 out of the 133 countries in their study use this instrument. However, TRQs are typically applied in 'sensitive' products, meats, dairy and cereals, and therefore are a significant factor in global trade. The effects of TRQs are difficult to ascertain, as either the in-quota tariff, the quota level or the out-of quota tariff may be binding. In addition, the process of administration and the allocation of the TRQ to

specific exporters increases the non-transparancy of this system. As with any quantitative market restriction, TRQs give rise quota rents, that may accrue to the importer, the exporter or is shared amongst them. (De Gorter, 200..)

The average over-quota tariff in Gibson et al. (2001) equals 128%, with peaks running as high as 250%. This shows that countries tend to use TRQs on products that they whish to protect from international competition. The average in-quota tariff of 63% is in line with the average agricultural tariff.

Preferences

While the negotiation in the GATT/WTO concern market access conditions on a *Most Favoured Nation* (MFN) basis, i..e non-discrimination amongst trading partners, a web of preferential agreements governs most South-North trade (GSP, ACP, EBA, AGOA etc.). These agreements typically provide preferential access, i.e. at lower than MFN rates, to industrialized markets, but often 'sensitive' agricultural products are excluded from such agreements. The existence of preferences implies a priori that multilateral reductions on an MFN basis reduce the value of these preferences, see Bouët et al. 2004b for an empirical study, and Achterbosch et al. (2004) for an analysis for Africa.

However, there are big question marks as to the utilization of preferences. Low utilisation rates may result from administrative complexity, and associated costs, information deficiencies and from complex rules of origin. Since preferential trade agreements provide member countries reductions on tariffs, rules of origin are needed in order to establish whether a give good is actually eligible for duty reductions. These rules of origin are usually extremely detailed and complex, and may contribute to the low level of preference utilisation.

Obviously, if preferences are not effectively utilized to begin with, then erosion is less of an issue. Instead, preferential regimes should be more transparent and less restrictive. For example rules of origin should be simplified (Augier et al., 2004).

The bottom-line: estimates of protection

With all the usual caveats on providing aggregate measures of trade protection, we present here estimates of applied trade protection for broad country groups. Estimated tariffs are from the MacMaps database which is a joint effort by the Centre

d'études Prospectives et d'information Internationales (CEPII) and the International Trade Centre (WTO/ITC). This database is used to convert tariffs applying to trade in products measured at a very disaggregate level (HS6) into their ad valorem equivalent. The import protection measures include ad valorem tariffs, specific tariffs, quota, tariff rate quota regimes, and anti-dumping duties. These are all converted into ad valorem equivalents. An important feature of this dataset is its inclusion of existing trade preferences, including GSP, ACP, AGOA and existing bilateral preferences. See Bouët et al (2004a) for a comprehensive documentation.

Figure 1 provides a summary view of the tariff landscape. It compares the simple average across products of ad valorem tariff equivalents levied by a country group (on their imports) to the average tariff faced (by their exporters) in this country group[1].

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[1] It is generally difficult to derive a good measure of average tariffs. One well-known problem relates to the use of trade weights. If tariffs are weighted by their corresponding trade flows, the average tends to be lowered in case very high tariffs prohibit trade to occur (the endogeneity problem). On the other hand, simple average may put too much weight on high tariffs if the corresponding trade flow is rather small. In our case, the averages are somewhat hybrid: first, the original data is aggregated from the HS-6 level using basically unweighted averages to arrive at averages per GTAP commodity (seee Bouët et al., 2004). From the GTAP commodity level, we calculate the trade-weighted averages for all products and all regions, using bilateral imports as weighting factor, and excluding intra-regional trade. This takes into account the importance of a particular trade flow between any pair of trading partners. We then proceed to calculate simple unweighted averages across products. An alternative measure would be the calculation of import duties (and quota rents) collected.
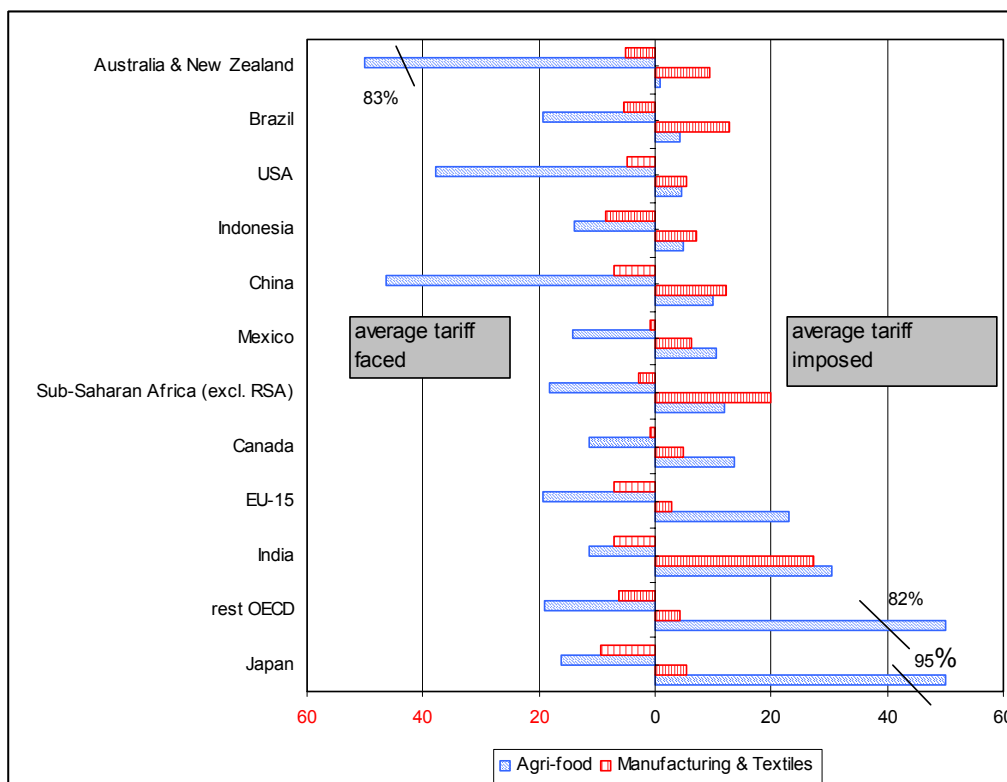
Figure 1. Average tariffs imposed and average tariffs faced by exporters

Source: GTAP database 6.3 (pre-release, June 2004), calculations LEI

On average, trade barriers on agri-food products are higher than those on manufacturing products, and this holds for all countries and country groups considered. Note that we have included tariffs on textiles and clothing in the calculations for the manufacturing products, which raises the averages in this product group. The average ad valorem tariff on industrial goods alone in OECD countries is currently reduced to about 3%. The developing countries included in the chart tend to impose higher tariffs on their manufacturing imports than on agri-food products, reflecting their tendency to protect capital-intensive activities.

In agri-food, the average tariffs levied by non-OECD countries appear to be smaller than the tariffs that their exporters have to pay, but there are exceptions to that rule. India, for example imposes higher protection on its imports of agri-food products, and Sub-Saharan Africa imposes relatively high protection on manufacturing imports while its exporters encounter low tariffs on their export destinations. This mainly reflects the preferential trade agreements with the EU.

Within the OECD countries there is some variation in the tariff profiles. Generally, the agri-food exporters Australia and New Zealand charge low tariffs on food imports. Canada protects mainly its dairy markets and this is reflected in a comparatively high average tariff. On the other hand, the average agri-food tariffs in the EU-15 are above 20%, and those for Japan are on average in excess of 90%, reflecting the extremely high protection in the rice market, ruminant meat and sugar. Since most trade occurs between OECD economies, the agricultural exporters face high tariffs on average on their export markets.

In summary, the picture emerging is that developing countries tend to protect their manufacturing more than their agriculture. However, within the group of developing countries, the picture is mixed. Some face higher tariffs than others on their export markets, reflecting existing preferential agreements. Also, the patterns of protection afforded to their domestic producers through trade barriers differ, and it is impossible to infer a priori conclusions as to the likely effects of globally lower trade barriers.

Zooming in on the Sub-Sahara Africa (SSA) region, Table 1 shows both the protection encountered by SSA exporters and the protection imposed by that region, broken down into broad commodity groups. Again, we use the AVEs derived form the MacMAps database. It appears that preferential arrangements with the EU and the USA lead to rather low trade barriers encountered by SSA exporters, except for sugar and ruminant meat in the EU. In fact, most agri-food products enter these two important markets at rather low tariffs. The preferences afforded to SSA extend to Manufactures and Textiles and clothing. On the other hand, the SSA region itself maintains high tariffs against imports from all destinations, including intra-regional trade. These facts combined point to potentially little gains from improved access to OECD markets, while the reduction of import protection of SSA's own markets could potentially increase trade flows into that region.

Even more interesting than the measurement of levels of protection is the effect of a reduction of protective measures. Table 2 provides estimates of the effects on regional export earnings (including intra-regional trade) after a halving of existing import barriers. This scenario clearly increases global trade, and all regions will see their export revenues rising. However, agricultural liberalisation contributes only a small share compared to non-agricultural liberalisation efforts. This is mainly to explained from the larger trade volumes and –values involved in manufacturing trade.

It is especially interesting to see that non-agricultural liberalisation by non-OECD countries yields the highest export revenue gains amongst the group of non-OECD countries. This is due to two mutually enforcing factors: a) developing countries have relatively high barriers against industrial goods, and b) they maintain relatively high barriers against each other's imports. These facts combined lead to a growth in South-South trade after liberalisation, and consequent rises in export revenues. An exception is Sub-Sahara Africa, as this region would even experience revenue losses from lowering manufacturing trade barriers by OECD countries on an MFN basis. Preference erosion plays a crucial role in this regard. See Achterbosch et al. (2004) for a detailed analysis of the African situation.

Table 3 illustrates the implications for South-South trade by showing the growth rates of bilateral export values following a 50% reduction in all border measures and domestic support. Generally, trade within the group of countries grows faster than their total exports, indicating a significant rise in South-South trade. Only Malawi and the Rest of SSA are exceptions, who see intra-regional trade shrinking in the Southern African region. Noteworthy is the trade performance of China, Indonesia and India, especially with regard to their trade with Brazil.

Table 1: Pattern of Sub-Sahara Africa import protection: encountered and imposed

	Trade protection encountered by Sub-Sahara Africa, %		Trade protection applied by Sub-Saharan Africa, %			
	EU	USA	EU	USA	Brazil	Sub-Sahara Africa
Rice	0	8.5	10	6	0	12
Vegetables & Fruit	1.6	0.4	18.3	20.7	3.9	25.4
Plant based fibres	0	2.9	11.2	10.5	16.9	4.9
Wheat	0	1.8	6	7.4	5	10.8
Coarse grains	0.2	0	8.3	15.5	6.1	6.3
Oilseeds	0	1.8	11.4	13.2	0	4
Dairy	4.1	6	13.9	15.5	0.5	14.2
Sugar	114.2	29	18.4	22.5	14.6	25.3
Ruminant meat	84.7	0.3	11.7	7.7	11.3	13.5
Other meat	6.1	0.3	26.8	25.1	24.9	20.3
Processed food	0.3	1.3	30	19.8	20.5	17.5
Manufactures	0	0	13.8	12	16.7	5.9
Textiles & leather	0	11.6	27	30.4	20.7	7.4

Source: GTAP database 6.3 (pre-release, June 2004), calculations LEI
Note: "EU" refers to the EU-15, Sub-Sahara Africa includes data on: Botswana, Rest of South African CU (excl. South Africa), Mozambique, Tanzania, Zambia, Zimbabwe, Rest of SADC, Madagascar, Uganda, Rest of Sub-Saharan Africa

Table 2: Improved market access and export revenues, % growth from 2001 base

	Total	Import tariffs agriculture OECD	Import tariffs agriculture non-OECD	Import tariffs non-agriculture OECD	Import tariffs non-agriculture non-OECD
OECD					
Australia/New Zealand	3.13	0.72	0.09	2.19	0.13
Canada	0.21	0.38	0.03	-0.11	-0.09
European Union 15	0.86	0.18	0.05	0.22	0.41
Japan	4.51	0.8	0.08	1.98	1.65
Mexico	2.23	0.59	0.02	1.46	0.16
Turkey	2.72	0.11	0.64	0.23	1.74
United States	2.9	0.28	0.12	1.71	0.79
rest OECD	2.99	0.69	0.05	1.69	0.56
Non-OECD					
Brazil	7.35	0.22	0.37	0.96	5.8
China	7.16	0.15	0.22	1.66	5.13
Indonesia	3.66	0.01	0.4	1.02	2.23
India	17.58	-0.02	2.29	1	14.31
Malawi	7.13	3.54	1.15	0.17	2.27
Russia	3.03	0.01	0.55	0.63	1.84
South Africa	3.13	0.03	0.46	0.15	2.49
rest SS Africa	6.25	0.11	1.88	-0.19	4.45
rest of World	4.1	0.09	0.83	0.39	2.79

Source: Model calculations LEI

Table 3: Liberalization and South-South trade, % growth of exports from 2001 base

Destination Source	Brazil	China	Indonesia	India	Malawi	South Africa	Rest SS Africa	Within group, South-South growth	Total exports growth, all destinations	Change total value of exports, all destinations, million USD
Brazil	0	7	3	15	0	17	12	9	8	5077
China	23	0	12	26	22	18	21	20	7	28321
Indonesia	17	7	0	28	25	8	41	16	4	2947
India	24	19	20	0	26	26	34	26	18	10619
Malawi	33	0	0	0	0	13	-22	-7	8	52
South Africa	7	1	6	50	16	0	-10	4	3	1317
rest SS Africa	-11	-1	8	19	5	-5	-1	2	6	4267

Source: Model calculations LEI

Note: simulation experiment involves 50% reduction of all border measures and domestic support

Our model also allows us to estimate national income effects, based on the concept of equivalent variation. The world income effects amount to 0.1% of world GDP, of which the lion's share (71%) accrues to OECD countries. For non-OECD countries as a group, non-agricultural liberalisation by OECD countries appears to be more important than agricultural trade liberalisation, but this is largely dominated by the results for China. For India, on the other hand, non-agricultural market access in non-OECD countries is expected to bring the highest gains, especially through allocative efficiency gains of realized through India's own liberalisation efforts. For some individual non-OECD countries, agricultural trade liberalisation can potentially bring significant income gains, especially for exporting regions such as Brazil.

National income effects provide a good summary measure of economy-wide gains from improved market access. Of course, the distribution within countries and between population groups is very important as well. In relation to food security, the access to food is amongst other things depending on purchasing power, which in turn will be determined by the developments of wages, non-wage incomes and the developments of food prices. Table 4 shows some indicators from model simulations.

While agricultural factor returns develop favourably compared to non-agricultural returns in the agricultural exporting countries that currently have low levels of protection, relative agricultural returns decline in highly protected markets and in SSA. This change in relative returns will tend to result in a shifting of resources away from agriculture and food production in those regions. However, food purchasing power for those households that depend mainly on labour for their incomes is increasing in most regions, as domestic food prices fall with reduced protection.

Table 4: Liberalisation and purchasing power

	Real factor returns agriculture vs non-agriculture, % (*)	Food Purchasing power of labour-dependent households, % (**)
OECD		
Australia/New Zealand	5.18	-1.08
Canada	0.72	0.06
European Union 15	-3.78	1.22
Japan	-3.60	3.12
Mexico	-1.45	1.05
Turkey	0.54	0.46
United States	-0.15	-0.34
rest of OECD	-3.29	4.97
non-OECD		
Brazil	2.90	-0.58
China	0.73	0.35
Indonesia	0.74	0.44
India	-1.26	1.01
Malawi	3.37	0.17
Russia	-1.02	1.60
South Africa	1.09	0.70
rest of Sub-Saharan Africa	-0.45	1.32
rest of World	0.23	1.19

Source: model calculations LEI
Notes: Simulations assume a multilateral 50% cut in all border protection and domestic support in all sectors (*) defined as the percent change of the real return to primary factors (labour and capital) employed in agriculture minus the percent change of those factors in non-agricultural activities. (**) Defined as the percent change in factor incomes minus the percent change of food prices.

Improved market access leads to various global and domestic responses. As import protection is lowered production in protected regions and sectors tends to decline and international prices tend to rise. In previously protected regions, more food at lower prices will become available and this should lead to increased food consumption, although price and income elasticities for food items are typically rather low in developed economies. Table 5 shows estimates of the impact of a 50% reduction in import protection on aggregate food consumption, broken down by agriculture and non-agriculture and broken down by the broad regions implementing the policy change. Obviously, the aggregate effects on food consumption are rather small overall. Improved market access to OECD markets does have a negligible effect on food consumption in Southern Africa, indicating that in this model simulation there is not a diversion of food from domestic markets to exports. To the contrary, in

this simulation we observe a decline of food exports form that region to OECD markets as a consequence of preference erosion. However, if the countries in the Southern African region were to lower there own import protection, we would observe a slight rise in food consumption, due to lower domestic prices and increased availability of foods through imports.

Table 5: Market access and change in food consumption, %

	Import tariffs agriculture OECD	Import tariffs agriculture non-OECD	Import tariffs non-agriculture OECD	Import tariffs non-agriculture non-OECD	Total
OECD					
Australia/New Zealand	-0.27	-0.04	-0.10	-0.01	-0.41
Canada	1.09	-0.07	-0.14	-0.02	0.86
European Union 15	0.83	-0.10	-0.05	0.08	0.77
Japan	1.50	0.01	0.05	0.08	1.63
Mexico	0.45	-0.03	-0.02	0.01	0.41
Turkey	-0.02	0.26	0.05	0.21	0.50
United States	0.01	-0.07	-0.08	0.01	-0.13
rest OECD	2.23	-0.07	0.06	0.18	2.40
Non-OECD					
Brazil	-0.21	0.07	0.09	-0.06	-0.11
China	-0.10	0.13	0.16	-0.09	0.11
Indonesia	-0.04	-0.02	0.18	0.03	0.15
India	0.00	0.35	0.03	-0.06	0.32
Malawi	0.69	0.02	0.02	0.11	0.85
Russia	0.06	0.65	0.11	-0.09	0.73
South Africa	-0.04	0.30	0.01	0.08	0.35
rest SS Africa	0.04	0.36	-0.07	-0.22	0.11
rest of World	-0.03	0.41	0.06	-0.10	0.35

Source: model calculations LEI
Note: Simulation experiment involves a 50% reduction the AVE of import measures relative to 2001 base levels.

4. Not just tariffs and quota: sanitary and phytosanitary requirements and private standards

The picture painted above provides only a partial view of the agricultural market access landscape. Consumers in industrialised countries demand safe food of guaranteed high quality and the food industry as well as public policy has responded to these demands through a variety of measures over the past 10 years (OECD, 2000). The objective of safe food consumption addresses agents and procedures along the

entire food chain, from production and processing to marketing and control – in short, from farm to table.

Developing countries are generally more concerned with food security (i.e. there being sufficient nutrients available for the population) than food safety for consumers.[2] However, from the developing country perspective, food safety issues have important implications for export opportunities to countries with a low risk tolerance. To reduce the intrinsic risk in the global trading of food and other agricultural products, these products are confronted with technical requirements at the multilateral, country and business level. There is reason for concern that non-tariff barriers to trade (NTBs) related to food safety may systematically and substantially impede export performance of developing countries.

In a sense, developing countries are prone to being excluded from the optimisation process regarding food safety measures: compliance with increasingly strict standards of food safety involves innovations and costs. Alternatively, in the case of non-compliance, exporters bear costs in the form of a loss of market outlet, temporarily at the least but with likely long-term consequences.

Food safety measures give rise to industrial organisation issues of market and competition structure, as producers in developing countries are forced to adjust processes in the product chain to prevent a loss of trade. Process changes are directed towards (1) compliance with multilateral and country-specific minimum safety standards in trade and (2) solving the information problem that arises when the extent to which food is safe is unobservable to buyers. It appears that adjustments in the food sector are strongly influenced by a trend towards integration of the product chain under retailer control. Safe production of safe food in developing countries appears to be unfavourable to smallholders. One reason is that decentralised supply may become an obstacle to solve information problems, one answer to which is traceability.

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[2] Nonetheless, in developing countries food-borne diseases imply a major risk, especially for young children – an issue intangibly related to the absence of basic hygiene and safe water supply.

Sanitary and phytosanitary measures

The agreement on sanitary and phytosanitary (SPS) measures under the WTO serves as the main framework for the regulation of food safety issues.[3] It governs the conditions for lawful risk reducing – but trade distorting – measures, and the settlement of disputes over these measures. SPS measures are shortly defined as "…regulations adopted by a nation to protect human, animal, or plant life and health within its territory from certain enumerated biological and toxicological risks" (Roberts *et al.*, 1999).

Each WTO member may determine a level of acceptable health risk (or safety) and impose technical requirements on imports to maintain that level. It is required that such measures be justified with scientific assessment of the risk and imposed strictly to address this risk. By agreement, countries should acknowledge that various methods for food safety assurance could produce equivalent safeguards against health risks. Barriers imposed may cause disputes to arise in the multilateral trading system, and bilateral conflicts are brought before a Dispute Settlement Body under the WTO.

Each country's assessment of human, animal and plant health risks effectively determines the access of foreign food products to the domestic market. For that reason the WTO stimulates members to exchange information on risk and harmonise measures with one of three international advisory organisations: on animal health issues, the International Organization of Epizootics (IOE), on phytosanitary matters the International Plant Protection Convention (IPPC), and on issues with direct impact on consumer health the Codex Alimentarius Commission (Codex).

Long-term goals of harmonisation and justification of food safety measures in trade under multilateral bodies should enhance the transparency of the multilateral trading system, reduce costs, and increase trade. The current reality is that global food safety regulation is one label to cover a multilateral consensus-agreement, a load of national rules and principles in the developed economy markets, and a strain for

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[3] Other relevant requirements to food trade are defined in the former GATT agreement on technical barriers to trade (TBT), now under the WTO. The TBT articles stand to the SPS requirements as food quality to food safety: the latter regulates a scientifically defined element of risk in the former. Consequently, the SPS agreement effectively is more restrictive on food trade flows than the TBT agreement which regulates issues more or less confined to labelling, nutrition requirements, packaging and the like.

developing countries. Only to keep track of these processes requires substantial financial and human resources for negotiation committee delegates, Codex contact points, laboratory research etc; the actual setting of standards and shaping of rules are definitely biased against developing countries. On grassroots level, reports from selected developing countries are that communication on technical requirements, if accurate, is often too complex and too technical to be used for guidance in ensuring compliance of exports with import requirements (see De Jager and Smelt, 2001; SADC, 2000).

Private food safety standards

Enterprises in the food sector have incorporated consumer concerns regarding health and quality into their production, marketing and distribution activities. The core of large retailers and trans-national "agribusiness" corporations has introduced various technical specifications that govern quality and safety of local and imported food products. Examples are the guidelines from EurepGAP, a European retailers convention, and British Retail Consortium. Insofar as these requirements or product standards relate to food safety, they usually do so within a broader concept of marketing differentiation and efficiency enhancement. (Reardon and Farina, 2001; Reardon *et al.*, 2001).

Private (or "voluntary") food safety standards are at least in two ways related to official government measures and legislation. Private standards (a) tend to be more stringent than officially required, so as to stay abreast of public regulation;[4] (b) may be based on government indications, as is often the case regarding the labels on food products. Market power is crucial in determining what the standard will be – and to non-complying products little or no trade is left. In sum, increased value-added of safer food, enhanced market power and reduced costs may render it rational for private agents to address the health externality involved in food consumption with private safety standards.

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[4] See, e.g., De Jager and Smelt (2001) for EU legislation on pesticide residues with effectively no impact on the Zambian export market because of the stringency of standards enforced by a large retailer.

5. Market access also means integration into globally operating chains

As the Dutch presidency of the EU in its document for the informal meeting of Ministers 5-7 September 2004 put it: "In the globalisation process, the food and agricultural industry has moved from independent producers and marketing firms to integrated and multinational supply chains."

While food safety issues need not worsen agricultural export potential in developing countries, related reorganisations of the export supply chain, mostly induced by retailer consortia in developed economy markets, are likely to have a significant impact on rural labour and producer markets. It is clear that private standards within the globally operating food chains do not work in favour of smallholders who will find it difficult to make the necessary investments to comply with those standards. Consequently, the international sourcing of food products is increasingly organised in tightly controlled vertical chains. Having access to the chain provides the ticket to export earnings for developing country farmers.

On the other hand, access to markets also comprises access to local and domestic markets in developing countries. In spite of the global integration process, it is still the case that large portions of the rural population in developing countries are not connected to markets due to a variety of institutional and infrastructural impediments. Access to national markets for inputs, such as fertilizers, pesticides and seed, as well as access to output markets and access to labour markets has an enormous potential to improve the livelihoods of the poor in developing countries.

Poor landowners can benefit either as independent producers, or as contracted producers or outgrowers. For growers with little access to land the growing activities are often part of a strategy to diversify sources of income (IFAD 2001). Especially horticulture seems to be a promising area for income earnings. Horticulture requires more handling than staple crops in order to accommodate for their more perishable quality and for often stronger quality requirements in the market. The processing, distribution and marketing of fruits and vegetables provides many low-skilled labour opportunities to the poor. Across the developing world unskilled women are favoured for these seasonal contracts, often at above-average wages.[5]

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[5] For information on the role of horticulture in poverty alleviation, see the Pro Poor Horticulture project website www.growoutofpoverty.nl.

Kuiper and van Tongeren (2004) provide another example on the linkages between world markets and the village economy. They show in a case study for just one Chinese village that trade liberalization in the wake of China's WTO accession has very significant impacts on the allocation decisions within households and between households within the village. Price changes affect the labour intensity of rice production as households switch between intensive two-season and one-season rice in response to changes in their shadow wages. Outside village employment opportunities induce a less labour intensive rice cropping. The consequent drop in demand for traction services reduces cash income for those households that do not have access to migration and thus economic growth in coastal areas affects them indirectly through the village factor market. The effects of rural-urban migration therefore go far beyond the transfer of cash to those family members that stay behind.

At the same time, it is clear that increased food production, growing populations and rapid urban expansion lead to higher claims on natural resources for domestic and industrial use. Especially in fragile ecological areas this process can lead to a downward spiral that undermines the natural resource base and hence endangers the livelihoods of current and future generations. While market-based solutions to these challenges are not always available, greater economic prosperity allows countries to better cope with these challenges.

In short, the concept of market access needs to be broadened beyond the narrow definition of reducing both conventional (tariffs and quota) and new (standards) barriers to international trade to include access to local and national markets in developing countries.

6. Conclusions

Agricultural market access in the post-Uruguay round era is characterized by a complex web of arrangements, which typically results in higher levels of applied protection than in industrial goods. This is true for both industrial countries and developing countries, and explains in part why the agricultural negotiations in the current Doha round receive much attention.

Market access to OECD agricultural markets is not only hampered by 'conventional' policy instruments such as tariffs and quota, but to an increasing degree through technical and sanitary standards. Standard-setting is not confined to

public policy: increasingly important are private standards set by internationally operating food supply chains.

Lowering tariffs and expanding quota in OECD economies alone will not lead to dramatically increased prosperity and improved food security in DCs. Trade policy changes in DCs are expected to bring higher benefits to those countries than policy changes implemented by OECD countries. In addition, complementary domestic policies in the areas of infrastructure and trade facilitation are a necessary prerequisite, as has recently been emphasized by the United Nations Economic Commission for Africa in the Economic Report von Africa 2004 (UNECA, 2004). For large parts of the rural population in DCs, 'market access' first and foremost means access to local and national markets for outputs and inputs. In terms of access to international markets, it is becoming increasingly important to integrate into internationally operating food chains. Consequently, the lowering of tariffs and expansion of quota by OECD countries that might be negotiated in the ongoing Doha round covers only a just a small fraction of the issues. One can wonder whether it covers the most relevant issues from a development perspective.

This does not make the WTO obsolete, however. To the contrary, the development of a rule-based system that governs international trade can act as a catalyst to improve the prospects for developing countries in a variety of ways. First and foremost, the legal framework of the GATT and the WTO makes international trade relations less arbitrary and gives even the smallest developing country instruments to pursue its trade interests. Second, the legal international framework provides an 'anchor' and a rationale for national policies that are better targeted at economic development. Redesign of agricultural policies in the EU during the Uruguay Round and during the ongoing Doha round provides a good example of the interplay between international negotiations and national policymaking.

References

Achterbosch, T.J., H. Ben Hammouda, P.N. Osakwe, F.W. van Tongeren (2004), *Trade liberalisation under the Doha Development Agenda: Options and consequences for Africa*, The Hague: LEI Report 6.04.09.

Anderson, K. (2004) Subsidies and Trade Barriers, Challenge Paper prepared for the Copenhagen Consensus project, presented at a roundtable in Copenhagen, 24-28 May 2004.

Augier, P.,, Gasiorek, M. and C. Lai-Tong (2004), The impact of Rules of Origin on Trade Flows, paper presented at the Economic Policy Fortieth Panel Meeting, Amsterdam, 15/16 October 2004.

Bouët, A. ,Y. Decreux, L. Fontagné , S. Jean, D. Laborde,(2004a), *Computing an exhaustive and consistent, ad-valorem equivalent measure of applied protection: a detailed description of MAcMap-HS6 methodology*, Paris: CEPII. http://www.cepii.fr/anglaisgraph/bdd/macmap/method.pdf

Bouët, A. , J Bureau, Y.Decreux, S. Jean, (2004b), Assessing the impact of multilateral agricultural liberalization: the contrasted fortunes of developing countries in the Doha Round, Paper presented at the 7th Annual Conference on Global Economic Analysis, Trade, Poverty and the Environment, Washington D.C. June 17-19, 2004. www.gtap.org

Francois, J.F. and Martin, W. (2003), Formula approaches to market access negotiations, *World Economy*: January, 1-28.

Francois,J, H. van Meijl and F. van Tongeren (2003), Trade liberalisation and developing countries under the Doha round, CEPR discussion paper DP4032.

Francois, J., H. van Meijl and F. van Tongeren (2002), Economic benefits of the Doha round for The Netherlands, Report submitted to the Ministry of Economic Affairs, Directorate-General for Foreign Economic Relations. The Hague: LEI report 6.03.02.

Gibson, P.,J. Wainio, D. Whitley and M. Bohman (2001), *Profiles of Tariffs in Global Agricultural Markets,* Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 796.

IFAD (International Fund for Agricultural Development) (2001), "Rural Poverty Report 2001", OUP, New York

De Jager, A. and A. Smelt (2001), *Review of the impacts of changes in EU pesticides legislation (directive 2000/42/EG) on fresh food exports from developing countries into the EU. Case study: The vegetable export sector in Zambia,* Draft report, October. Wageningen: DLO

Kuiper, M. and F. van Tongeren (2004), Growing together or growing apart? A village level study of the impact of the Doha round on rural China. Paper presented at the 7th Annual Conference on Global Economic Analysis, Trade, Poverty and the Environment, Washington D.C. June 17-19, 2004. www.gtap.org

OECD (2000) "Compendium of national food safety systems and activities" Report to the Ad Hoc Group on Food Safety. Paris: Organisation for Economic Co-operation and Development

Roberts, D., T.E. Josling and D. Orden (1999), *A framework for analyzing technical trade barriers in agricultural markets*, Market and Trade Economics Division, Technical Bulletin no. 1876. Washington DC: Economic Research Service, U.S. Department of Agriculture

SADC (2000) "SADC SPS and food safety issues: an agenda for action" Proceedings of the Windhoek workshop on SPS/food safety, held by the SADC Consultative Forum on SPS/Food Safety. Harare: The Southern African Development Community (SADC).

United Nations Economic Commission for Africa (2004), Economic Report on Africa 2004: Unlocking Africa's trade potential. Addis Ababa: UNECA.

World Bank (2003), Global Economic Prospects 2004: Realizing the Development Promise of the Doha Agenda, Washington D.C.: The World Bank, September.