



WTO rules for agriculture compatible with development





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edited by

Jamie Morrison

and

Alexander Sarris

TRADE AND MARKETS DIVISION

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS

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Jamie Morrison and Alexander Sarris



Preface

The papers in this volume were originally presented at a workshop on WTO Rules for Agriculture Compatible with Development, held at FAO Headquarters in Rome on 2 - 3 February 2006. Edited for publication, they reflect comments made by participants during the workshop.

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Introduction

Jamie Morrison and Alexander Sarris

The task of the World Trade Organization (WTO) is to establish and monitor rules for the orderly conduct of international trade. Given the accelerating pattern of globalization, as reflected in the growing volumes and values of international transactions in goods and services, and the growing participation in international markets by all countries, the importance of establishing rules for these transactions that are agreeable to all countries is paramount. Therefore, it was of considerable concern that the WTO Doha Round negotiations were suspended during the summer of 2006 after a period of intense discussion and bargaining following the onset of the Round in 2001.

Many explanations have been written as to why the Doha Round WTO negotiations were suspended in 2006, and all of them contain the word “agriculture”. This is a fair assessment, as agriculture is the sector where the most contentious debates and negotiations took place. It harbours the bulk of current protectionism in goods, and is also a sector that holds considerable prospects for trade and development of many developing countries (DCs). It must be recalled that agriculture was the largest sector for which there were no internationally agreed trade rules until relatively recently, with the conclusion of the Uruguay Round (UR) in 1994. In fact, one of the major accomplishments of the UR was to prescribe internationally agreed rules for agricultural trade. The negotiations under the UR resulted in a number of major agreements related to the agricultural sector; the UR Agreement on Agriculture itself (URAA); the concessions and commitments that Members were to undertake on the three key pillars of the URAA, namely market access, domestic support and export subsidies; the Agreement on Sanitary and Phytosanitary Measures; and the Ministerial Decision concerning Least-Developed Countries and Net Food-Importing Developing Countries (the so-called Marrakesh decision for LDCs and NFIDCs).

While the URAA was a major accomplishment in terms of bringing some discipline to the rules concerning agricultural trade, it has been generally acknowledged that not much real trade liberalization took place in the agriculture sector as a consequence. Reaching the URAA involved intense negotiations between the major developed trading countries and regions in agricultural products, namely the United States (US) and the European Union (EU), both of which have had long established and highly protectionist agricultural trade policies, and both of which had resisted

agricultural trade liberalization before the UR. However, this meant that, apart from easier terms for implementation of the URAA, the interests of DCs, and especially the LDCs were relegated to a secondary status. In particular, very little has happened since 1994 as a follow-up to the Marrakesh decision for LDCs and NFIDCs, which was one of the few concrete outcomes of the UR that concerned the poorest among developing countries, albeit lacking in specific commitments.

In the Doha Round, the developing countries were determined not to allow this to happen again. Their insistence led to the new Doha Round being termed a “Development Round” on its launch in 2001. However, this dimension was largely sidelined during the long period of negotiations between that time and the suspension in mid 2006. The inattention to development issues may have been one of the contributing factors that led to the suspension of the negotiations. For most DCs, naming the round a “Development Round”, implied moving the discussions from being just about free trade to also including concerns of fair trade. In other words, the negotiations were expected to address trade issues related to the needs of poor countries and small farmers. After all, Article 20 of the URAA committed members to more than the continuation of the reform process of the UR. In that article, WTO members mentioned explicitly the commitment to establishing “a fair and market-oriented agricultural trading system” and taking into account the experience of the UR. Furthermore, in the preamble to the URAA, WTO members agreed that “the reform programme should be made in an equitable way among all Members, having regard to non-trade concerns, including food security and the need to protect the environment, having regard to the agreement that special and differential treatment for developing countries is an integral element of the negotiations, and taking into account the possible negative effects of the implementation of the reform programme on least-developed and net food-importing developing countries”.

Despite the many discussions concerning the desirability of incorporating development dimensions in the Doha Round negotiations, there has been a dearth of discussion concerning how these issues could be specifically incorporated in a multilateral trade agreement. The greatest supporters of concluding the Doha Trade Round under the current approach, which focuses on reduction commitments around the three pillars of the negotiations, have used sophisticated models to point out how much would be gained by fully liberalizing agricultural trade. However, many countries are not convinced. This is in large part because the majority of DCs, and especially the poorest, smallest and most vulnerable among them, have seen almost no gains from policy developments following the URAA. Worse, they have seen their agricultural trade shares of total world trade decrease, their agricultural imports increase and their agricultural trade balances decline. These are the countries that expect agricultural sector gains, not losses, given their relative endowments and export opportunities. Past experience has not encouraged them to support further trade liberalization without a clear package of rules that put in place the required complementary and compensatory policies and adequate safeguards to greater market opening.

Despite the suspension of the Doha Round negotiations, the issues relevant to agricultural and overall development as well as to poverty reduction will not go

away. In fact the suspension of the negotiations may offer an opportunity that could be seized. It provides a breathing space and an opportunity for DCs to prepare to be more equal partners, both from a strategic and analytical standpoint by developing concise, transparent and evidence based proposals that relate to their specific issues and development concerns, rather than leave a few countries to decide the fate of the negotiations and the structure of any eventual agreement.

The purpose of this book is to make a contribution towards understanding how WTO trade rules relevant to agriculture can be structured in a manner compatible with the development and poverty alleviation objectives of developing countries. Specifically the book tries to assess and advance the knowledge concerning the issue of which among the various rules and proposals debated to date in the Doha Round are most appropriate for development of agriculture and food security of the DCs and the LDCs, and also to explore how some of these or other possible rules can be structured so as to be more conducive to development.

The papers in this volume were presented and debated during a two day workshop held at the headquarters of the Food and Agriculture Organization (FAO) of the United Nations in Rome on 2-3 February 2006. The papers, which were revised by the authors according to the comments received in intense and constructive discussions during the workshop, are organized to address first more general issues, and then more specific issues judged to be important for structuring development friendly WTO rules. The final part of the volume comprises four papers addressing agricultural trade concerns of specific regional groups of DCs.

The first paper by Morrison and Sarris takes as its starting point the contradiction apparent in many debates on trade policy between on the one hand, the evidence that is used to support arguments that greater openness to international agricultural trade will be beneficial, and on the other hand the fact that many developing countries are seeking the flexibility to continue to protect some agricultural products. In attempting to resolve this apparent contradiction, the paper reviews the literature on the contribution that agriculture can make to wider economic growth and development and the types of policy interventions that are likely to be required at different stages of agricultural development to allow the sector to fulfill its role. A key argument developed is that in order for the predicted benefits from trade liberalization to occur, reallocations of resources to activities in which they are used more efficiently are required, but that these reallocations will not necessarily happen where market failures are pervasive without some form of government intervention. By investigating the case of cereal markets in Sub Saharan Africa (SSA), the paper discusses the extent to which some level of border protection may be required as a component of such interventions.

Morrissey, in his paper, argues that the current classification of member countries within the WTO does not adequately discriminate between countries at different stages of development and that countries need to be given greater flexibility to adopt appropriate trade policies rather than be constrained to using those compatible with WTO rules. The paper proposes four categories of developing countries, three based on their stage of development (agriculture based low income countries;

mineral rich low income countries; and middle income countries) and a fourth category of Small Island Economies, which although mainly middle income, have limited capacity for food production. The paper argues that a “food first” strategy that ensures that a country can meet its food needs is particularly relevant in the case of agriculture based low income countries. It suggests that this category of countries needs to be able to protect local food production against increased competition from lower cost exporters, but that this is contrary to the approach to negotiating new trade rules. The paper makes a number of suggestions as to how trade rules can be better formulated to recognize the different needs of different categories of developing countries, including one of requiring greater levels of compliance the more developed a country, in terms of the speed and degree of implementation.

Matthews, while also addressing the issue of differentiation in the WTO with respect to special and differential treatment (SDT), reaches a different set of conclusions than Morrissey. Noting that developing countries have resisted efforts to introduce differentiation due to a perceived interest in being grouped together as a bargaining force in the negotiations, the paper suggests that “elements of de facto differentiation are already appearing in the agriculture negotiations and that it would be more effective to build on these elements than to attempt to construct an all-embracing typology to make distinctions between developing countries”. It lists three possible approaches to differentiation based on modalities: (a) formal rule based thresholds, such as the provision in the subsidies code that countries with a per capita income less than US\$1000 are entitled to use export subsidies; (b) voluntary declarations of intent on the part of specific countries to abstain from availing of general SDT provisions, examples of which would be the declaration by some developing countries, not corresponding to any income or other group, that they would not use the TRIPS/drugs import provisions or countries opting not to use the Special Safeguard Mechanism (SSM); and (c) implicit differentiation, for example, where the provision that input subsidies generally available to low income or resource poor producers are exempt from Aggregate Measure of Support (AMS) reduction commitments - because countries will have different proportions of such producers, this provision effectively has a differentiating impact.

Nash examines the interface between a WTO agreement on agriculture and reforms supported by the World Bank and IMF. The paper starts from the premise that developing countries will benefit from reduced levels of protection. It contends that the World Bank has generally advised countries to reduce agricultural trade barriers to enhance sectoral competitiveness, promote better integration into the global trading system and an outward-oriented development strategy, and to improve the welfare of consumers, especially the poor. While suggesting that in general, explicit policy barriers to exports should be removed as a high priority, and that behind-the-border measures including investments, capacity building, and institutional reforms need to be made in order to encourage agricultural export development, especially of non-traditional products, it also acknowledges that a more controversial question is how to advise governments with respect to protection of domestic producers against competition from imports. The paper

lists a number of reasons why high import barriers in the name of food security or to support an import-substitution agricultural development strategy is an inappropriate long-run policy. The key argument relates to the impact of potentially higher food prices. Whilst acknowledging that higher food prices can benefit the rural poor as labourers, it suggests that a protectionist policy will reduce potential growth in employment opportunities in other sectors so that the overall result is uncertain. The paper also touches on the issues of Aid for Trade and behind the border policies, suggesting that this is where the focus of much of the Washington Institutions' work in support of trade has been.

The second part of the book comprises a series of papers examining more specific issues falling under each of the three pillars of the agricultural negotiations.

The paper by Sharma examines the extent to which the degree of existing tariff escalation between bound tariffs on pairs of primary and their associated processed products would be affected as a result of the application of three tariff reduction formulae that have been proposed during the Doha Round negotiations. The author finds that all three formulae would reduce the degree of tariff escalation on a set of selected product pairs, but would not result in its elimination. In seeking to provide information that would assist negotiators in reaching agreement on modalities for reducing tariff escalation over and above that achieved by the tariff reduction formulae, the paper examines the effectiveness of the Harbinson approach which introduced a multiplier factor whereby the tariff on the processed product would be further reduced to decrease the degree of escalation. Whilst finding that the approach may be effective for some product pairs, the paper reveals that the negotiation of a single factor would be problematic. The author suggests that to move forward, a defined list of primary and processed product pairs is required and then a threshold for the degree of escalation could be negotiated.

Ford, Koroma, Yanoma and Khaira argue in their paper for a more comprehensive approach to the concept of Special Products than that currently envisaged in the WTO negotiations. They suggest that a narrow focus on providing flexibility in the implementation of tariff reduction commitments will not necessarily allay the concerns of developing countries who will be affected in different ways by further global trade liberalization. Taking this approach as a basis, the paper develops a conceptual approach to the identification of special products which matches national policy objectives with indicators of special products. It lists nine indicators under the generic categories of food security, livelihood security and rural development. Using a new methodology of combining these indicators, the paper reports on its application to four developing countries to suggest indicative lists of Special Products for each country. The paper concludes by suggesting that on the basis of the results from these four countries, the possibility exists that developing countries could specify a relatively low proportion of their tariff lines (less than 15 percent) without compromising their food security, livelihoods security and rural development objectives.

In order to assess the extent to which developing countries receive preferential treatment from the EU, Conforti, Ford, Hallam, Rapsomanikis and Salvatici use

a mercantilist trade restrictiveness index (MTRI). They demonstrate that although LDCs face a relatively low level of protection across all sectors, even before the implementation of the EU's Everything but Arms (EBA) initiative, many developing countries are highly constrained in their trade with the EU. These DCs include some of the more competitive developing countries such as Brazil and Argentina, but also the ACP non - LDC group. In agricultural trade, LDCs do not appear to be provided a high degree of preference by the EU, as they seem to face higher MTRI indices than other more developed countries such as Chile and Canada. Taking the issue of ACP non - LDC countries further, the paper investigates in more detail trade in sugar, a product where these countries face high protection at the margin. By using a global partial equilibrium model for the sugar market and a gravity model to replicate LDCs bilateral trade with the EU, to simulate EU sugar market reform proposals, they suggest that trade will be diverted from countries currently enjoying preferential access, particularly higher cost ACP countries exporting within the sugar protocol, and will be displaced by more efficient LDC producers.

The paper by Baffes examines possible implications of further multilateral agreements on cotton sector reforms given the WTO panel ruling on the cotton dispute between Brazil and the US. It argues that the fact that Step 2 payments and export credit guarantees have been ruled illegal means that further reductions in the export competition pillar are likely to be superfluous. Additionally, given that tariffs do not play a major role in cotton sector support, agreements under the market access pillar are likely to have minimal effect. Under the domestic support pillar, and given that the US must reduce support by about 40 percent to be in compliance with the panel ruling, additional cuts should generate significant reductions in US support to cotton producers. It is suggested that the new US farm bill will be instrumental in determining the actual outcome

De Gorter first reviews the current use of domestic support by key developed countries. He then assesses the extent to which proposals that have been tabled during the current round of negotiations will result in reduced use of such support. In making the assessment, the paper addresses a number of key issues, such as the trade distortiveness of Green and Blue box payments, and difficulties with the measurement of trade distorting support. On the basis of the assessment, it is concluded that with the exception of a proposal by the G-20, there would be negligible impact on the use of trade distorting support if currently circulating proposals were adopted. The EU would not be required to make any policy adjustment, given the conversion of most support into Green box payments and the significant water that is a current component of the measure of support. Similarly, the ceiling on support allowable to the US would not result in any significant reduction in currently applied levels. The paper concludes by suggesting a number of options for better restricting the use of trade distorting support.

The paper by Jales uses data drawn from notifications to the WTO and on qualitative analysis of support programmes. It examines the potential implications of current proposals within the July 2004 Framework Agreement and the December 2005 Hong Kong Ministerial declaration, for developing countries' use of domestic

support. The paper begins by providing a profile of the use of domestic support by 50 developing countries, 42 of which have notified support since 2000 and 8 which have not, but which are deemed to be important users. The paper finds that Green box support is the dominant component (67 percent of total support) and that 5 countries account for 90 percent of its use. This is followed by support under Article 6.2 and the *de minimis* category in order of importance. The paper concludes that with the exception of a very few cases, the ability of developing countries to continue to use current levels of domestic support will not be affected and that DCs will benefit to a far greater extent from ensuring that effective disciplines are agreed under the domestic support pillar to reduce support in developed countries than from trying to extract greater flexibility for themselves.

The paper by Rutten provides a review of the range of activities undertaken by a sample of developing country state trading enterprises (STEs). It argues that the evidence that such activities create trade distortions is minimal and that there is a significant risk that in attempting to over constrain some of these activities, the ability of STEs to provide other key services will be undermined. The paper demonstrates the heterogeneous nature of STEs in developing countries. It argues that in only a few commodities, notably rice, do developing country STEs play any significant role in world trade. However, even for a commodity such as rice, mechanisms for ensuring price, income and supply stability are seen as critical in a number of these economies. Although not arguing that reforms are not needed, the paper suggests that appropriate prescriptions for developed country STEs may not be the same as those for developing country STEs.

In his paper, Konandreas first reviews trends in the provision of food aid by five main donors, and then reviews the principles and agreements under which food aid is disbursed. Against this background, the paper then considers negotiations on food aid rules under the WTO, explaining the evolution of proposals during the Doha round of negotiations and the significant differences that still remain between a number of negotiating parties on certain issues. The paper then provides some potential compromise solutions. For example, it suggests that eliminating non emergency in-kind food aid, despite its desirability is probably not attainable. Rather, it suggests that the focus should be on effective mechanisms to target such food aid so that potential negative effects are minimized.

The final part of the book includes four papers which discuss experience of, and outstanding issues faced by, each of Africa, Near East, China and Latin America countries (LAC).

Osakwe discusses three key reasons why African countries may be concerned about further trade reforms, namely, reductions in contributions to government revenues from trade taxes (which constitute more than 20 percent of public revenues in more than half of SSA countries); potential impacts on macroeconomic volatility and the implications of this for poverty reduction efforts; and the costs of adjustment in the context of rigid labour markets and limited safety nets. Against these concerns, the paper examines why trade negotiations in agriculture are important for Africa in shaping the types of policies that can be used to promote productivity

increases. This is because, with a high proportion of the workforce engaged in agriculture, the role of the sector is important in economic development. It is acknowledged that while agricultural exporters are likely to gain from multilateral agricultural trade liberalization, importers could lose. This distinction is important given that only 9 out of 53 countries in Africa were net food exporters during 2000-2004. The paper reviews various studies on the impact of both the UR and potential Doha agreements, concluding that the balance of gains and losses across countries will be mixed. The paper calls for greater coherence between donors' aid and trade policies and for according greater prominence to the agriculture sector in trade related capacity building. In explaining what African countries need from the current negotiations, the paper recognizes the significant heterogeneity across the continent. Despite this, the paper points out that Africa has developed common positions on a number of issues in the WTO negotiations, as elaborated in various recent declarations.

Elamin builds on an explanation of the key similarities and differences characterizing the different countries of the Near East region. It then counter poses a number of the components of the URAA against these characteristics as a way of assessing the impact of the implementation of that agreement. On the basis of this assessment, the paper raises a number of the key concerns of Near East countries in the context of the WTO negotiations, notably the issue of food imports in light of both long-term increases of food import bills and of short-term fluctuations in volumes and values; access to developed country markets, particularly the difficulties faced by tariff escalation, the EU entry price system, and the erosion of trade preferences. In concluding, the paper recognizes the importance of further engagement in the multilateral negotiations.

The paper by Ke provides a summary of developments that have taken place in Chinese agricultural and trade policy as a result of the accession to the WTO, most notably in terms of significant reductions in tariff levels. It then considers how these changes have impacted upon trade volumes, first in aggregate, where imports have increased significantly in most land based crops, and then on a commodity by commodity basis, where trends in production and trade patterns are provided for all major commodities. On the basis of the review, the paper raises two major concerns: food security (generally discussed in terms of grain production) and farmers' incomes, arguing that the impact of accession has varied greatly by commodity and therefore by producing region. The coastal regions have gained far more than the western regions. A key challenge for China remains how to manage imports that are needed for food availability reasons in a way that minimizes the disruptive effects that these increased trade flows can have on domestic producers. These issues are considered in the context of each of the three pillars of the URAA.

The paper by Foster and Valdes also begins by stressing the heterogeneity across Latin America countries (LAC), particularly in respect of their net agricultural and net food trade status. Following an assessment of past trade policy reforms, in which it is pointed out that large parts of the small farm sectors of the countries were negatively impacted (or at least did not realize benefits), the paper attempts

to determine whether there is a bias intrinsic in trade policy in favour or against the agriculture sector, concluding that while there tends to be a bias in favour of livestock and processed products, for crops the picture is mixed. The third part of the paper considers the impact of multilateral trade agreements, reviewing standard model results and emphasizing different sources of gains and losses, and potential changes in international prices. While reflecting on the importance of the WTO negotiations for the region, the paper also discusses the increasing emphasis on agro-food standards as barriers to trade and the increasing use of compensation and safety nets as trade policy is reformed.

While it is uncertain when the Doha Round WTO negotiations will resume let alone be concluded, it is the belief and hope of the editors that the papers in this volume bring forth and analyse issues related to WTO rules in the context of development that will be relevant and useful to all, and especially to developing countries, in their consideration of their positions *vis-à-vis* the WTO negotiations, as well as in developing their individual agricultural trade policies.

Part 1

Trade and development in the context of the WTO negotiations

Determining the appropriate level of import protection consistent with agriculture led development in the advancement of poverty reduction and improved food security

Jamie Morrison and Alexander Sarris

1. Introduction

Developing countries are currently under immense pressure to reduce their trade barriers to the entry of agricultural products. Recently, this pressure has been most visible in the context of the WTO negotiations, with some developed countries (e.g. the United States of America) pushing hard for greater access to developing countries' agricultural markets. But the sources of such pressures are observed more broadly, to the extent that trade policy in poorer developing countries is often driven in large part by a "consensus" that greater openness would be beneficial to these countries, irrespective of the trade policies of their trade partners or their own stage of agricultural development (and hence international competitiveness).

Proponents of more liberal trade policies argue that with greater openness to trade, countries' economic sectors would be exposed to greater competitive pressures, promoting efficiency gains as resources freed up from sectors that contract in the face of increased competition (i.e. from lower priced imports) are redeployed or invested in expanding sectors where they would receive a higher return. This case has been strengthened by an array of global trade simulation modelling approaches, many of which have generated substantial empirical evidence in support of this contention.¹

¹ Even in studies where liberalization is estimated not to generate significant gains, or even where it is found to result in losses, the fact that these losses are small as a proportion of existing levels of indicators has been used to make the case for a more liberal trade policy. Arndt (2006) for example, finding that welfare changes as a result of trade liberalization in Mozambique are likely to be negative but small, argues that the implications of trade liberalization are therefore small and that "presuming that a more liberal trading regime will positively influence growth, an opportunity exists to put in place such a regime without imposing significant adjustment costs".

However, debates within the WTO (and also in the formulation of regional and bilateral trade agreements) are increasingly reflecting concerns that some countries may be opening their agriculture sectors to international competition too extensively and too quickly and that this will hinder rather than enhance their growth prospects, and in turn their ability to meet poverty reduction and food security targets. The acceptance that countries should have recourse to provisions such as Special Products (SP) and a Special Safeguard Mechanism (SSM) is an acknowledgement that countries will not fully liberalize their agricultural trade policies. However, within these debates arguments continue as to whether the motivations of those seeking these provisions are purely political and that the provisions will be abused as instruments of a mercantilist policy stance, or whether poorer countries' economic growth potential could be enhanced by some level of protection for key agricultural commodities.

The negotiations in favour of Special Product provisions certainly appear to be at odds with contemporary CGE model results which tend to suggest that such provisions will reduce potential welfare gains both in the countries making use of these provisions and in their trading partners². It is this seeming contradiction that generates the rationale for the arguments developed in this paper.

This paper draws upon evidence from a recent set of FAO case studies of experiences of trade and policy reforms and upon insights from an increasingly recognized strand of the contemporary agricultural development literature that questions the orthodox prescription of greater liberalization more generally (i.e. domestic market and trade reform). This literature suggests that investments required to allow shifts of resources out of traditional agricultural activities into higher value alternative activities (whether within or outside the agricultural sector) are not likely to occur where market failures are pervasive without some form of state intervention; a contention that appears to be borne out by the lack of responsiveness to changes in price incentives that have resulted from reforms in poor developing countries.

The paper then argues that the appropriate agricultural trade policy at early stages of development, for countries with an important agricultural sector, may entail some moderate levels of import protection, and that in countries where applied tariffs are already low, further liberalization could well be inappropriate. A case in point is in the predominantly cereal based rural economies of east and southern Africa³ where reform of trade and domestic policy over the past two to three decades has not resulted in substantive structural economic change (see for example, Thomas and Morrison, 2006).

Model based analyses that have been used to bolster the case for further trade liberalization are often overoptimistic in their assumptions as to the ability for resources

² See for example, Anderson *et al.* (2006).

³ Whilst it is recognised that many of the countries in this region are LDCs and therefore not directly affected in terms of their commitments within WTO to further reduce their bound tariff levels, these countries are affected indirectly via the commitments made by their trading partners (including those in numerous RTAs) and by the wider debates on the potential gains from trade liberalization, which are reflected in their trade policy reform decisions (including those related to loan conditionalities).

to be invested in “higher return” activities, and the use of their results in arguing for further agricultural trade liberalization in poorer economies could be misleading. In addition to the limited attention given to the pervasiveness of market failures that are preventing the resource reallocation in poor economies that is necessary to realise estimated gains,⁴ in many such models, generally for reasons of tractability and/or insufficient data, the products and countries of interest are often highly aggregated,⁵ making it difficult to determine what the appropriate reform would be for a given country, let alone a particular agricultural subsector within that country.

However, whilst it is relatively easy to criticise simulation model based results, alternative substantive evidence on the role of trade policy and/or the effect of trade policy reform in such circumstances is sparse (see for example, FAO 2003; Thomas, 2006). This paper does not, therefore, question the long-term objective of a more liberal agricultural trading system, where trade barriers would play a minimal role in offsetting or reducing the risks associated with appropriate levels of private sector investment in agriculture. This is because in the long run, markets (input, credit, output including adequate risk management instruments) are expected to function adequately, thus not necessitating government interventions. It does, however, attempt to shed light on whether, in the absence of such well functioning markets, and perhaps in conjunction with other targeted state interventions, a less than liberal trade policy regime has a role to play in countries with underdeveloped agriculture sectors, much as it did in now more advanced economies when they were at earlier stages of development. In doing so, the paper raises questions about the limited attention paid in the trade literature to the role of import competing food staples *vis-à-vis* agricultural exportables as avenues for agriculture-led growth.

The paper is structured as follows. In Section 2, based on a review of recent evidence, several arguments are provided as to why further liberalization of agricultural trade policy in some developing countries might be questioned as an appropriate policy reform, describing the limited structural change that has occurred in many poorer countries facing apparently improved macroeconomic and trade policy contexts. In Section 3, the theoretical arguments for and against agricultural protection under a variety of structural assumptions are reviewed. Building on insights from the preceding sections which suggest that a more liberal trade policy in the expectation of export led growth may not provide the necessary stimulus to broader economic growth and development, Section 4 develops the case for an increased focus, both in trade debates, and in related research, upon trade policy as it affects import competing food staples in poorer agriculture based economies *vis-à-vis* increased export opportunities for traditional and non traditional exports.

⁴ The use of global trade policy simulation models to inform debates on the appropriateness of greater openness is increasingly being questioned from a number of angles (see for example FAO, 2005) including the fact that the models assume a) that markets function competitively and b) that within highly aggregated regions, producers have access to similar technologies, consumers have identical preferences, there are no differences in trade and tariff profiles, and that relative prices reflect these.

⁵ Debates with respect to food staples are further complicated by the facts that producers are often net consumers and decisions regarding their joint production/consumption decisions are not well reflected in SAM/CGE models.

In Section 5, using the cereal market in East and Southern Africa as a case study example, changes in productivity levels in import competing cereal crops are examined as to how these changes might be related to changes in agriculture and trade policy. Lessons are drawn from a growing strand of the contemporary literature on agriculture's role in economic development and on the role of the state in enhancing agricultural productivity. The question is posed as to whether, if a greater role for public sector intervention is accepted, this should extend to the use of a more protectionist trade policy.

Section 6 then discusses various issues concerning the identification of appropriate trade policies in the presence of widespread market failures, which contribute to high transaction costs including marketing and transport costs and transaction risks. Although acknowledging that whether or not border protection is a necessary component part of such intervention remains unresolved, the paper draws on recent theoretical and empirical analyses, and on the specific case of cereal markets in Africa, in suggesting that a moderate, and perhaps variable, level of protection for importable foods in combination with export promotion policies maybe appropriate components of the agricultural policy mix for some developing countries with large agricultural sectors. However, such policy mixes must be tested against specific country contexts if they are to be implemented. Section 7 concludes by suggesting the areas where further analysis is needed to better address the issues raised in the paper.

2. Why question further liberalization of developing country agricultural trade policies?

Evidence from recent studies on the impact of trade policy reforms on agricultural productivity growth and on associated reductions in levels of poverty and food insecurity suggest that greater openness to international markets has had limited positive effects (Thomas and Morrison, 2006). A number of possible explanations are considered.

2.1 Limited structural change following improved incentives for the production of tradables

In many contemporary developing countries, the taxation of agriculture (whether direct through export taxes, or perhaps inadvertently through misaligned exchange rates) had been a common feature in the past. In many developing countries, the 1960s and 1970s were periods of anti-agricultural bias. Analyses by Krueger, Schiff and Valdes (1991) demonstrate that the aggregate result of direct intervention over all selected products was to tax agriculture in all regions. Further, the negative impact of indirect protection (for example, overvaluation of the exchange rate) was even greater than direct taxation in all regions. Total net taxation of agriculture was greater than 25 percent of the value of production in all regions, and exceeded 50 percent in the SSA countries. As a result, domestic prices of imported food in the studied countries were significantly higher than prices at countries' borders, whereas domestic prices for key export items were held below international levels.

However, the extent and sources of distortions in developing countries' agriculture have changed significantly since the early 1980s as unilateral reforms implemented during the 1980s and 1990s in many developing countries reduced this quantifiable anti-agricultural bias in domestic policy, particularly that associated with indirect taxation. Given fiscal constraints on the use of subsidies, trade policy is now the primary tool used to support agriculture in developing countries, but, partly as a result of the adjustment programmes, the scope for using this form of support has decreased. As a result, domestic producers have become more exposed to world market conditions and it would follow that incentives for tradables as opposed to non tradables would have become more favourable.

Given the major change in the overall direction of agricultural total protection/taxation since the 1980s, it is interesting to examine the degree to which structures of agricultural economies have changed with greater openness. Theory, and the rationale for liberalization and structural adjustment, is that opening local markets to trade will cause a shift from the production of nontradables to the production of tradables as prices adjust. Given that liberalization and structural adjustment policies have been implemented over the last twenty years, this is a long enough time period over which one would expect to see substantial changes in production patterns.

Tables 1 and 2 make an attempt to explore this for agricultural commodity dependent LDCs in Africa (defined as those with a share of agricultural products in total merchandise exports larger than 30 percent in the late 1990s). The tables show the shares of exportables and importables in the value of total agricultural production. The exportables and importables include all products which cumulatively accounted for 90 percent of total agricultural exports and imports respectively in the period 2000-02.

Although the policy regimes in the commodity dependent countries have changed significantly over the past two decades (see Thomas, 2006, for case study experiences), in general, the structure of importables, exportables and non tradables (calculated as a residual) has remained relatively constant in the majority of countries.⁶ Of the individual African countries reported, in only five cases did the values of importables as a percentage of the total value of production increase by more than three percentage points and in only three cases did the value of exportables as a percentage of the total value of agricultural production increase. Similarly in only a handful of countries (four in the case of importables and three in the case of exportables) did the relevant shares decrease.

⁶ There have been exceptions to the general stickiness of these activities, for example Côte d'Ivoire has seen a significant shift towards both importables and exportables, but Malawi has seen a fall in the share value of production of both importables and exportables.

TABLE 1

Value of importables as a percentage of total value of agricultural production in commodity dependent economies (changes of more than 3 percentage points are indicated by + or - in last column)

	1980-82	1989-91	2001-03	Change 1980/2 - 2001/03
Benin	18.7	13	12	-
Burkina Faso	10	7	11	=
Burundi	29	25	21	-
Chad	11	9	12	=
Comoros	16	12	11	-
Côte d'Ivoire	29	37	44	+
Ethiopia	20	20	26	+
Gambia	6	7	8	=
Guinea-Bissau	27	33	24	=
Kenya	56	59	56	=
Malawi	52	50	35	-
Mali	36	33	35	=
Rwanda	19	19	21	=
Sao Tome and Principe	3	5	2	=
Sudan	16	30	23	+
Swaziland	85	82	88	=
Tanzania, United Rep of	19	24	20	=
Togo	9	15	16	+
Uganda	5	6	10	+

Source. Authors' calculations.

TABLE 2

Value of exportables as a percentage of total value of agricultural production in commodity dependent economies (changes of more than 3 percentage points are indicated by + or - in last column)

	1980-82	1989-91	2001-03	Change 1980/2 - 2001/03
Benin	1	2	4	=
Burkina Faso	21	22	23	=
Burundi	10	10	9	=
Chad	22	26	21	=
Comoros	12	15	22	+
Côte d'Ivoire	40	43	46	+
Ethiopia	20	20	20	=
Gambia	39	32	27	-
Guinea-Bissau	2	9	21	+
Kenya	28	28	28	=
Malawi	26	30	18	-
Mali	38	28	27	-
Rwanda	4	6	3	=
Sao Tome and Principe	48	30	17	-
Sudan	27	18	24	=
Swaziland	70	71	74	=
Tanzania, United Rep of	12	9	10	=
Togo	11	12	12	=
Uganda	5	7	8	=

Source. Authors' calculations.

One explanation that may be provided for this limited structural change is that incentives have been counter to the development of the tradables sector. However, evidence does not bear this out. Thomas and Morrison (2006) provide trends in agricultural terms of trade in 15 case study countries. For many of the reported countries there has been an upward (or at least not decreasing) trend in the agricultural terms of trade and there appeared to be “a positive, if not strong, correlation between changes in the agricultural terms of trade and the growth rate of the value of production of the agricultural sector (in constant local currency units), although this correlation appears much weaker in the last decade or so, raising questions about the determinants of agricultural output”.

To a large extent, this positive movement in the face of declining primary commodity prices over the period is explained by favourable exchange rate movements as previously overvalued exchange rates were devalued (or allowed to depreciate). These “corrections” tended to occur in the 1980s and early 1990s and domestic agricultural prices often increased as a result.

On a country by country basis, the pattern of price trends is mixed in terms of whether prices have moved in favour of, or against importables or exportables. If maize is taken as an example of an import competing crop in most countries, it is notable that in half of the sample countries of the FAO study (Thomas, 2006), real domestic maize prices have risen and in the remainder they have fallen (although in most cases to a relatively limited extent). By contrast, a higher proportion of coffee and cotton producers (exportables) have seen a reduction in their real domestic prices, with cotton in particular seeing relatively significant real domestic price falls.

Looking at price trends on an individual country basis, in Cameroon domestic prices of both importable and exportable agricultural products fell until the CFA franc devaluation of the mid 1990s which provided a boost to tradable prices. In Kenya, the overall trend has been of flat or declining tradable good prices, but with export crop prices declining more significantly than import competing crops. In Malawi, reforms in the early 1990s provided upward pressure on rice and to a lesser extent, maize prices. Prices of exportable crops have continued to trend downwards. In Tanzania, a similar pattern is observed. In Uganda, real domestic prices have been relatively stable since the wide fluctuations of the early 1980s, but with the price of exportable crops remaining higher than imported crops relative to the 1980 base.

It is thus difficult to argue that in general, the changes in price incentives for production of tradables (as reflected in border prices) have been overly negative in recent decades. Therefore, it is all the more puzzling why there have not been larger structural changes within the agricultural sectors of poorer developing countries.

2.2 The importance of a country's stage of development

A key component in explaining this appears to be the stage of agricultural development within a country. In the more advanced developing countries, often having relatively commercialized agricultural sectors, arguments for more protectionist agricultural trade policy regimes are generally made on the basis of national food security concerns (as defined by the level of food self-sufficiency),

the need to maintain agricultural producers' incomes, and the provision of public goods. By contrast, in poorer developing countries, where the agricultural sectors are less developed, but potentially more important in terms of the contribution to the development and economic growth that underpins household level food security, the arguments are different.

The distinction between different types of country is important. It is often argued by some governments in the context of the current Doha Round of negotiations that it is imperative that policy flexibility is maintained for some categories of countries to allow them to support their agricultural sectors until they are at a level where i) they are in a better position to compete with more competitive, or subsidized, imports, and ii) the central role of agriculture in the economic development of these countries has been played out to a sufficient extent during the process of successful economic development.

Countries that have already developed have tended to go through a sequence of interventions in their agriculture sectors, initially taxing agriculture (as a sole source of revenues), then supporting the process of commercialization (mainly for food security objectives, but with positive knock-on effects on growth) and finally considering, or purporting to, reform of these policies. During the phase of protection, instances of induced innovation have been observed, with productivity growth rates exceeding those achieved in more liberal environments, where such investments would be less likely.

However, on the basis of lessons from countries that are now more developed, it has been argued by Dorward *et al.* (2004) that many of the contemporary poorer countries have by-passed a critical stage of support and protection to their agriculture sectors. Many of these countries are now left with relatively liberal trade policies, but weakly developed agriculture sectors, the development of which policy makers are now less able to support in the longer term and which, by virtue of low levels of applied border protection are now more susceptible to short term external shocks.⁷

This literature on agriculture's role in poverty reduction and enhanced food security has questioned the orthodox approach towards greater emphasis on markets to guide resource allocation, and of a reduced role for the state (see below for more detail). However, whilst this literature has stressed the importance of state support at critical stages of agricultural development in the provision of agricultural inputs and credit and the importance of stable output markets, in terms of its policy prescriptions it has tended to focus on enhancing access to inputs and credit, and where it has addressed the issue of stable output markets, has concentrated on mechanisms for reducing transaction costs and risks to allow coordinated investment required to develop stable output market opportunities. To date, this literature has been relatively quiet on the trade policy regime that may be complementary to this more nuanced approach to state intervention.⁸

⁷ An ongoing FAO project is investigating the incidence of import surges in a number of developing countries. For details of the project visit http://www.fao.org/es/esc/en/20953/22218/highlight_108226en.html.

⁸ An exception is Poulton *et al.* (2005) who in a paper on cereal price stabilization suggest a relatively minimal role for border protection, not least due to the difficulties of policing informal cross border trade in cereals.

This seeming lack of attention does not however imply that a liberal trade policy stance promoted by the orthodox view is most appropriate, nor even that if the supply side constraints can be addressed that a liberal trade policy will best deliver the potential gains. Rather, given the complexity of the linkages between trade policy and agricultural productivity and, in turn, reduced poverty and food insecurity (see FAO, 2003), the absence of alternative appropriate policy prescriptions to a more liberal trade policy stance is more the result of the fact that such prescriptions have been difficult to formulate in a way that is useful to context specific developing country situations. In essence, the trade literature has not kept up with emerging non orthodox views on public sector agricultural intervention.

That the issue of appropriate trade policy at different levels of development needs to be addressed further is suggested by the fact that current protection levels by sector seem to be related to the stage of economic development. Tables 3, 4 and 5 give a snapshot of the most recent (circa 2001) data on the pattern of protection in agricultural, processed food, and non-agricultural non-food products, by developing and developed countries as represented by the ad-valorem tariff equivalent. The major observation from these tables is that concerning agricultural products, the developing countries exhibit lower protection than developed countries. Concerning processed foods, both developed and developing countries appear to have substantial but similar levels of protection, while for non-agriculture non-food products, protection in developing countries is generally higher than that of developed countries. LDCs in particular appear to have rather moderate levels of protection for both agricultural as well as non-agricultural products.

TABLE 3
Average ad-valorem tariff equivalent in 2001 of imports of all agricultural products by country in column from exporting country in row

	United States of America	Brazil	EU25	China-India	R-OECD	LDCs	ODCs	RoW
United States of America	0.0	5.9	5.1	62.2	36.3	7.3	8.9	11.1
Brazil	5.6	0.0	3.5	95.8	99.3	8.5	9.8	29.7
EU25	1.8	7.3	0.9	22.1	16.3	9.5	12.8	16.3
China-India	1.1	8.7	12.7	20.0	86.8	11.8	6.8	7.9
R-OECD	0.2	5.5	3.2	20.3	32.1	8.2	5.5	11.2
LDCS	2.5	10.1	3.0	26.7	32.3	8.7	6.3	5.9
ODCS	1.4	1.5	12.3	53.4	20.1	10.3	9.1	16.7
Row	6.3	10.3	2.9	14.6	10.0	3.0	16.3	4.5

Source. FAO based on GTAP database version 6 Dec. 2004) In the tables ODCs refers to other developing countries, except Brazil, China, India and the LDCs.

TABLE 4

Average ad-valorem tariff equivalent in 2001 of imports of all processed food products by country in column from exporting country in row

	United States of America	Brazil	EU25	China-India	R-OECD	LDCs	ODCs	RoW
United States of America	0.0	14.7	16.4	22.2	23.7	19.6	20.4	21.8
Brazil	8.9	0.0	34.4	37.2	21.3	19.1	9.1	25.5
EU25	3.8	16.4	1.3	30.7	27.6	25.6	16.5	19.7
China-India	2.6	12.2	19.9	18.3	23.7	23.3	10.3	19.1
R-OECD	2.3	16.5	14.2	20.4	35.2	20.3	14.0	21.9
LDCS	2.4	9.5	13.4	20.8	5.2	13.6	12.7	7.8
ODCS	3.9	3.1	18.6	44.8	18.7	26.6	12.8	26.2
Row	2.5	5.8	9.8	17.0	9.0	15.2	21.6	6.3

Source. FAO based on GTAP database version 6 Dec. 2004).

TABLE 5

Average ad-valorem tariff equivalent in 2001 of imports of non-food secondary and non-agricultural primary products by country in column from exporting country in row

	United States of America	Brazil	EU25	China-India	R-OECD	LDCs	ODCs	RoW
United States of America	0.0	9.9	1.9	12.3	1.1	12.2	5.0	3.7
Brazil	2.1	0.0	1.4	9.4	6.6	21.3	6.2	3.3
EU25	1.9	11.9	0.2	17.4	3.0	14.1	7.5	4.5
China-India	3.8	11.5	3.6	19.4	5.0	19.5	6.3	12.0
R-OECD	0.7	12.9	2.3	14.1	3.9	17.2	6.1	4.3
LDCS	3.2	0.3	0.3	4.5	2.6	6.9	2.7	3.9
ODCS	2.8	6.9	1.6	13.7	2.3	15.2	4.0	3.9
Row	2.1	6.1	0.9	8.1	2.1	14.0	7.1	1.5

Source. FAO based on GTAP database version 6 Dec. 2004).

If the historical pattern of agricultural protection, as exhibited by the cross sectional evidence of the tables suggests that agriculture is first unprotected or even taxed at early stages of development, then goes through a cycle of protection and support during the period when the country achieves middle income, and finally it is liberalized, then attempts in WTO to bind current levels of protection and support may prevent some developing countries and LDCs from the flexibility needed to pass through the middle income phase of their development.

3. Theoretical insights

Before the role of trade policy in agricultural development is discussed in more depth, and given the empirical observations above, it may be helpful to briefly review the role of agriculture in economic development. Can agriculture be a leading sector to induce faster growth, and under what conditions? These questions are very important for development strategy, and the choices of policy makers. What do the theoretical and empirical literature have to say on these issues? The literature has been reviewed by several authors. The exposition here starts from the review in Sarris (2001), and tries to advance it by considering more recent literature.

3.1 Agriculture and economic growth: agriculture as a source of surplus

On the relationship between agricultural and overall growth, Stern (1994) has presented a summary of the empirical evidence concerning correlations between agricultural and non-agricultural or overall growth. The historical pattern supports the view that in the course of development the share of agriculture in both output, as well as in total employment, falls. This is the outcome of an initial disparity between labour productivities in the agriculture and the non-agricultural “the modern” sectors, that leads resources, especially labour, to move out of agriculture. Simultaneously the capital intensity in both sectors rises. This suggests that policies to promote the equalization of labour productivities in the two sectors are likely to increase efficiency.

Early development writers such as Rosenstein-Rodan (1943), Lewis (1954), Hirschman (1958), Jorgenson (1961), Fei and Ranis (1961) regarded agriculture only as a reservoir and source of abundant labour and transferable product and financial surplus. By contrast Kuznets (1968) pointed out that in a successful development strategy, technological progress must support both industrialization and agricultural productivity. The basis of this view is the observation that the stylized shift of employment away from agriculture and towards industry is the consequence of technological changes in both agriculture and industry. The revolution in agricultural productivity, according to Kuznets, is an indispensable base of modern economic growth. A similar view was expounded by Kalecki (1960, 1971), who based his position on the idea that balanced growth in both wage goods and capital goods forms the basis of sustainable long run growth. Since agriculture is the main sector producing food, the key wage good in a developing economy, agricultural development is essential for a successful industrialization strategy for developing countries.

Development thinking and practice in the 1960s and 1970s tended to neglect agriculture as a leading sector, with its emphasis on import substitution industrialization and export promotion. This thinking was aided by the literature concerning the terms of trade of agriculture. There is extensive literature on the pattern of the terms of trade for agriculture in the course of development which can be summarized as the “price bias”, and the rate of taxation on agriculture which can be considered as a policy instrument. Under the assumption that agricultural

production would not suffer, given the inelasticity of aggregate agricultural supply with respect to price, and the further assumption that industrial investment gives higher rates of return, the idea was to “force” savings, food, and labour out of agriculture through explicit and implicit taxation in order to finance industrial growth.

Such thinking provided the intellectual basis for policies that were applied in many countries in sub-Saharan Africa and other regions in the 1960s and 1970s, that explicitly and implicitly taxed agriculture. The results were disastrous for growth, leading to the adoption of structural adjustment programs that aimed at reversing such policies. Sah and Stiglitz (1984, 1987) have provided a framework for thinking about the agricultural terms of trade in its relation to the overall “investible surplus” of the economy, defined as the difference between the total production and consumption of the non-agricultural product. The logic of their argument is fairly straightforward. Assuming that agricultural or industrial labourers do not produce much saving for investment, and that foreign savings are constrained, the major sources of domestic savings are private profits from non-agricultural production and public tax revenues from exports or imports. Since the major part of non-agricultural production cost is labour, and since wages in a developing country seem to respond to the cost of food, non-agricultural profits can be raised by keeping the price of food and hence wages down. Also if most exports are agricultural, while imports are non-agricultural, the government can increase public revenue by taxing exports and/or imports. Both of these policies imply a reduction in the terms of trade for agriculture.

In their later work, Sah and Stiglitz (1987) showed that suppressing the terms of trade of agriculture below the levels dictated by international prices increases the domestic investible surplus of the economy. In other words, the agricultural sector must be taxed, or equivalently the non-agricultural sector must be subsidized *vis-à-vis* world prices, in order to raise the level of aggregate domestic investment. There is a critical level of the domestic agricultural terms of trade, which is below the international terms of trade, and which maximizes the total level of domestic surplus. Furthermore, the suppression of the internal terms of trade does not have to immiserize urban workers.

In all of the above literature the basic assumption is that the major source of domestic savings is non-agricultural profits. This is basically a functional view of savings and income distribution. Translated to personal income distribution this view assumes that the recipients of agricultural incomes are subsistence farmers with little savings for investment, and that recipients of non-agricultural profits are different from the recipients of agricultural and wage incomes. This, however, neglects the possibility that the bulk of income recipients in developing countries have joint income from agriculture and non-agriculture, and that rural agricultural producers have the potential to generate considerable investible savings. In any case, the source of savings and investments is an issue that must be dealt with in the design of a development strategy.

3.2 Agriculture and economic growth: agriculture as the leading sector

It was only in the late 1970s and early 1980s that the role of agriculture as a leading sector was re-emphasized in the development literature by authors such as Mellor (1976) and Adelman (1984). These authors emphasized the importance of agricultural growth in generating demand for locally produced non-tradable products, and thereby stimulating overall production and growth.

Timmer (1988) has observed that research relating to the different views about agriculture in the course of development, suggest three sharply different paths for appropriate policies toward agriculture if the goal is to speed up overall growth.

The first path, grows out of a view that markets, if left alone, will function properly, and that economic decision makers are rational and respond efficiently to economic signals. As the long run tendency is for a decline in the proportions of agricultural output and labour, the best way to speed up growth is to accelerate this natural tendency. Rapid technical change and declining relative prices for agricultural products (arising out of a faster growth of supply compared to demand) in a world of little government interference will accomplish this.

The second path associated with Mellor and Johnston (1984), is the “interrelated rural development strategy”. This strategy advocates a unimodal, broad based, pattern of economic development that improves incomes, nutrition, and income distribution, while promoting overall growth. Agricultural growth not only satisfies the criterion of growing food for the poor smallholders to meet nutritional requirements, but also promotes a favourable employment-oriented demand structure. Mellor and Johnston advocate considerable government intervention to promote extension and research aimed primarily at rural smallholders.

The third approach to agricultural development realizes the important links of agriculture and the macroeconomy, as well as the importance of market signals and incentives, elements that are relatively underemphasized in the second strategy. It calls for government policy intervention into domestic markets, but uses markets and the private sector as vehicles for these interventions. This approach can be termed the “price and marketing policy” approach, and recognizes widespread market failures in agriculture, as well as government failures in implementation of policies. The dilemma is how to cope with segmented and/or poorly functioning or absent rural labour, land, and credit markets, the pervasive lack or imperfect nature of information, and the absence of many important markets, notably those for risk.

All three approaches recognize the importance of government investments in infrastructure and agricultural research. However, the approaches differ in their emphasis among these government interventions. The free-market approach would put greater emphasis as well as budget share on research, the rural development strategy on human capital investments, while the price and marketing approach on rural infrastructure to lower marketing costs. As Timmer properly concludes, the issue is not one versus the other, as all three elements should be part of a successful agricultural growth strategy. The real issue is one of where scarce resources should be invested, and with what priority at different stages of development.

3.3 The relationship between agriculture and non agriculture sectors in economic growth

The real issue from a growth perspective, however, is how to accelerate growth. The role of agriculture must be examined in such a context if some guidelines for strategy and policy are to be derived. Unfortunately, however, there is very little research focusing on this problem. On the relationship between agricultural and non-agricultural growth a major exception is the paper by Adelman (1984) that advocated an Agriculture-Demand-Led-Industrialization (ADLI) strategy for middle income developing countries. This strategy that resembles in some ways the “interrelated rural development” strategy of Mellor and Johnston (1984) basically consists of building a domestic mass-consumption market by improving the productivity of agriculture and letting farmers share in the fruits of improved productivity. The demand linkages generated by farmers, especially the small low income ones, are stronger with domestic industries and other non-tradables, and domestic low capital intensity non-agricultural sectors. The strategy advocates higher shares of investment going to agriculture, in response to higher rates of return there. Thus, investment allocations are made functions of the relative rates of return, and the ADLI strategy is based on the observation that investment returns are higher in agriculture than in non-agriculture at some stages of development.

Recently, in relation to the revival of discussion about growth rates, and in the context of the “endogenous growth literature”, there has been a small number of papers dealing with agricultural growth, the terms of trade, and overall economic growth. An early paper by Thirlwall (1986), provided a simple two sector framework, that related the internal terms of trade for agriculture to the equilibrium growth rates of the two sectors (agriculture and industry), which in the steady state are assumed equal, and hence equal to the overall growth rate of the economy. Thirlwall showed with his model that the basic constraint on growth is technical change in agriculture, and that the steady state rate of agricultural growth is independent of the terms of trade. Technical progress in agriculture assuming no discovery of new land, which affects the growth rate in the same way as does technical progress will relax the constraint on industrial growth, and it is only this that will do so. In other words, technical progress in industry only affects the internal terms of trade, but not the long run equilibrium growth rate of the economy.

International trade in Thirlwall’s model acts to provide, through exports, an additional source of demand for industrial output, in addition to the domestic demand that comes from agricultural growth. Thus the rate of growth of demand for industrial output becomes a weighted average of the rates of growth of domestic and export demand. As export demand comes to dominate domestic demand for industrial output, the rate of growth of industry becomes externally constrained at a rate that is independent of the rate of growth of demand coming from the agricultural sector, and this is a turning point in the country’s history. Thus the model that Thirlwall analyses points out that “...in the course of development we expect a healthy agricultural sector to be the driving force behind industrial growth in the early stages, superseded by export growth in the later stages. In this sense the

model reinforces the belated recognition of agriculture's importance in the early stages of development, and lends support to export led growth theory in the later stages."

Another theoretical work that examines the role of agriculture in the course of development is that of Taylor (1991). Taylor utilizes a structuralist model of an economy that incorporates "stylized facts" about economic behaviour, rather than functions that derive from optimizing behaviour of agents. His model includes two major sectors, one that is largely quantity adjusting under non-full employment in the short run and another that is price adjusting. Taylor shows that the way in which an agriculture first strategy affects long run growth depends on whether the movement in the internal terms of trade make agriculture's income fall or rise. In the latter case growth is enhanced, while in the former it is not.

The above models and theories demonstrate that the degree of openness, especially in the presence of economies of scale, is a key factor in understanding the role of agricultural productivity growth in speeding up overall growth. They also point out that since demand factors are crucial in determining whether agricultural productivity growth is helpful for overall growth, the distribution of income and gains from growth is a key factor in this issue. They finally also make the point that the composition of demand among tradables and non-tradables seems to be an important element of the agriculture-first theories. To-date, however, there has been no theory or framework integrating all of the above elements. The models also do not consider the issue of how agricultural productivity growth is to be achieved and how it is to be financed.

3.4 Do policies matter in the pace of agricultural growth?

The empirical work of Mundlak, Cavallo and Domenech (1989) and Coeymans and Mundlak (1993) is the most serious attempt to relate macroeconomic and other policies to the internal terms of trade and growth. The empirical model that they employ is a non-full employment small economy model that assumes investment functions related to sectoral profitabilities. The overall savings-investment balance in their models comes from the external sector, which is assumed to be able to provide enough "savings" to finance the investments that are desired domestically. In this sense their models are "structuralist" according to Taylor's (1991) terminology, as the two most important macroeconomic "closure rules", namely the one governing the labour market and the one that concerns the savings-investment balance are clearly non-neoclassical. A major innovation of their models is the endogeneity of the technological adaptation in agriculture. This is modelled by varying parameters of a Cobb-Douglas production function, where the parameters are made functions of various other exogenous and policy variables.

The authors find that agricultural taxation and macroeconomic policies influenced considerably the pace of agricultural and overall economic growth in Argentina and Chile. They also show that the degree to which macroeconomic policies affect agricultural and overall growth depends on the extent of "tradability" of the sectors, namely the shares of products produced by various sectors that are tradable.

Taxation of agriculture, both direct and indirect has slowed down the adoption of better technologies in production, and hence slowed down growth. They also find that government investment influences positively private investment, as one would expect, but the financing of investment makes a difference, as deficit financing via domestic borrowing crowds out private investments.

Sarris (2001) develops a simple two sector agriculture tradable nonagriculture (semitradable) endogenous growth model to explore the policy trade-offs between agriculture and non-agriculture, in which he summarizes policies toward the two sectors by an aggregate taxation rate. Growth comes about by total factor productivity increases, induced by public investment that must be financed by taxation of the two sectors. He finds that to maximize overall growth there is a negative relationship between agriculture and non-agriculture taxation. He also finds that at low degrees of trade openness agricultural taxation should be high and higher than non-agricultural taxation to maximize growth. However, as the degree of trade exposure increases this conclusion is reversed, and maximum growth is achieved through higher taxation of non-agriculture relative to agriculture.

3.5 What role for trade policy?

The standard theoretical arguments for free trade based on the first and second welfare theorems, have been extended by applying the principle of targeting as the basis for interventions in the presence of a variety of distortions. The principle of targeting states that when markets operate imperfectly, the first best solution to achieving a Pareto efficient equilibrium is to combine free trade with an appropriate tax or subsidy that directly offsets the source of market failure.⁹ This principle, however, depends on a variety of assumptions that may not hold in practice. Buffie (2001) has reviewed these assumptions and has indicated a variety of circumstances under which a free trade policy is suboptimal from a welfare point of view. First, the presence of administrative costs may not allow the financing of the direct tax-cum-subsidy policies implied by the targeting principle, and may imply that a tariff policy is preferable in correcting a production externality. The presence of underinvestment and underemployment, problems of greatest concern to low income countries, also weaken the case for free trade, depending on the particular structure of the labour markets.

Buffie also discusses extensively the issue of simultaneous import protection in combination with export promotion, a general policy approach that seems to have produced positive results in the late industrializing economies of East and South-East Asia. He shows theoretically, as well as empirically through simulations, that such policies can indeed produce more favourable growth results, compared to free trade.

Buffie has not cast his analysis in terms of agriculture versus non-agriculture, but rather in terms of exportable, importable or import competing, and non-tradable sectors. However, for many low income countries and especially commodity dependent ones, this distinction is closely related to an agriculture non-agriculture

⁹ For an early review of this literature see Corden's (1974) classic book.

distinction, and to an exportable/import competing distinction within agriculture, as low income countries often rely considerably on agricultural exports for foreign exchange, while also producing substantial amounts of import competing agricultural products, such as basic foods, in which they have seen their imports rise considerably in recent years. It must be realized that agricultural export promotion for many agriculture dependent economies may run up against the low inelasticity of world demand for agricultural exportables produced by low income countries.

The above review leads us to the following considerations concerning conceptualization of LDC economies.¹⁰ Consider an archetypal low income developing country that depends on agriculture for the bulk of its merchandise exports. In this country, agriculture also constitutes a large share of the economy. The bulk of agricultural production, apart from exportable products, consists of either basic foods, or non-tradable agricultural products. The non-agricultural sector produces semi tradable products, in the sense that they are imperfectly or non-competitive with imports. The economy imports non-competitive intermediate and capital goods, used for both production as well as investments.¹¹ The sources of public income are a value added tax on tradable goods, a tariff on imports and a subsidy on exports. Non-tradable good production is assumed to fall outside the purview of the government as the bulk of it is produced by small firms that operate informally. The labour market is dualistic, with the wages in the semitradable non-agricultural sector adjusting to preserve real incomes of workers, while the wages in the rest of the economy adjust in response to market forces. Investment is subject to adjustment costs.

Under these structural assumptions, and under further assumptions concerning underinvestment and underemployment, Buffie shows that the optimal trade policies for aggregate growth involve a moderate level of protection of importables (of the order of 10-25 percent under some reasonable empirical assumptions), some degree of export subsidization, and an escalated pattern of import protection with tariffs on intermediates and investment goods lower than tariffs on imported consumer goods. These results also hold under assumptions that are meant to emphasize poverty reduction in addition to growth. Buffie obtains his results not having differentiated between agriculture and non-agriculture, and assumes that the bulk of the imported consumer goods are manufactured ones. While this seems appropriate for many developing countries, it appears that many low income countries currently are experiencing a substantial growth in their imports of basic foods, and hence the basic food sector must be considered as one of the competing importable sectors in the above model. Whether the results of Buffie's analysis will extend to this case is not clear, but his model provides a reasonable basis on which to build an analysis of trade policy in agricultural products.

¹⁰ The discussion is based on the type of model exposed by Buffie (2001) with extensions as appropriate.

¹¹ One could extend the exportables, import competing and non-tradable categorization to non-agricultural products as well, as Buffie does, without changing the bulk of the arguments below.

4. Why does the trade debate need to better recognize the importance of food staples *vis-à-vis* traditional and non traditional exports?

The above theoretical analysis has highlighted the fact that appropriate trade policy for the agricultural sector is likely to depend, and must take account of, the extent to which the agricultural sector produces exportable products, import substituting basic food, and non-tradables. Advice to developing countries on trade policy has tended to focus on promoting opportunities for increased exports to international markets be they traditional or non traditional, whilst playing down the potential role that trade policy could play in enhanced competitiveness of import substitutes and in supporting the development of market opportunities in domestic and regional markets.¹²

But if poorer countries have found it difficult to stimulate agriculture led growth through the promotion of more favourable conditions for the production of exportables, is there a case for a greater focus on policies conducive to growth based on the production of import competing commodities? In this section, three related arguments are briefly reviewed: i) where do the real market opportunities for poorer developing countries' agriculture lie? ii) what is the historical experience with agricultural transformation in terms of output mix? iii) are the potential multiplier effects greater with an expansion of import competing agricultural products than with export crop expansion?

4.1 Real market opportunities

One argument for a greater focus on the role of import competing crops is that the market conditions and opportunities for domestically or regionally produced staples are potentially more favourable to poorer developing countries than are the opportunities for expanding exports to the global market.

Many poorer countries are not yet at the stage where domestic markets for high value products are growing. In India, 50 percent of the value of agricultural production is now high value, but in Africa it is only 5 percent.¹³ Hazell (2006) cites an IFPRI analysis which projects that in Sub-Saharan Africa (SSA) "even with a regional annual growth rate of 6 percent per year for non-traditional exports, per capita agricultural real income would grow by only 0.2 to 0.3 percent per year more than in a baseline scenario. Because of the small initial value of these exports, even rapid growth would not translate into significant economic leverage within the next 10 to 15 years".

By contrast, the current value of Africa's domestic demand for food staples is about US\$50 billion per year, and, as table 6 illustrates, this figure is projected to almost double by 2015, a US\$50 billion increase in market opportunity by 2015 (Hazell, 2006). Only part of this output is currently sold (the rest is consumed on

¹² For example, the focus of trade diagnostic studies under the Integrated Framework is almost exclusively on export expansion, and on promoting the private sector's role in this, as an avenue for agriculture led growth.

¹³ An interesting question for research is at what level of per capita income more rapid growth in higher value production occurs.

farm), but it still represents a large and growing market. Diao and Hazell (2004) further argue that “Africa currently imports 25 percent of grain products such as maize, rice, and wheat, and that domestic production could potentially displace some of these imports”. There is in principle, therefore, very large scope for expansion of cereals production by small farmers in Sub Saharan Africa merely by import substitution.

TABLE 6
The relative size of different markets for Sub Saharan Africa agricultural products (US\$ billion)

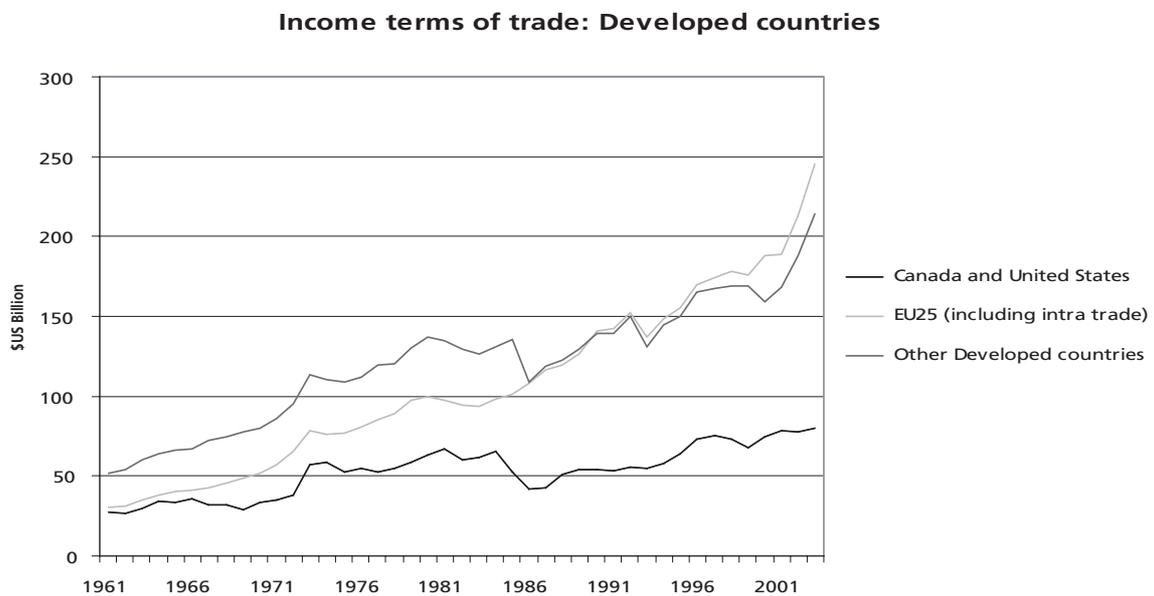
	East Africa	Southern Africa	West Africa	Total SSA
Traditional exports to non-Africa	2.2	2.4	4.0	8.6
Non-Traditional exports to non-Africa	1.3	2.8	2.0	6.1
Other exports to non Africa	0.5	0.7	0.7	1.2
Intra African trade	0.4	1.1	0.4	1.9
Domestic market for staples incl. self consumption)	17.6	12.1	20.1	49.7

Source. Diao and Hazell, 2004.

Additionally, OECD agricultural and trade policy is not likely to change in the near future and even if it did, it is difficult to see how poorer countries could take advantage of improvements in world commodity prices or increased market access to developed countries, given the limited response to improved output price incentives observed following unilateral liberalization in these countries during the past two to three decades. Indeed, if supply responses were not forthcoming, increased world market prices for food staples as a result of the reduction in OECD support could detrimentally affect these countries’ food security status.

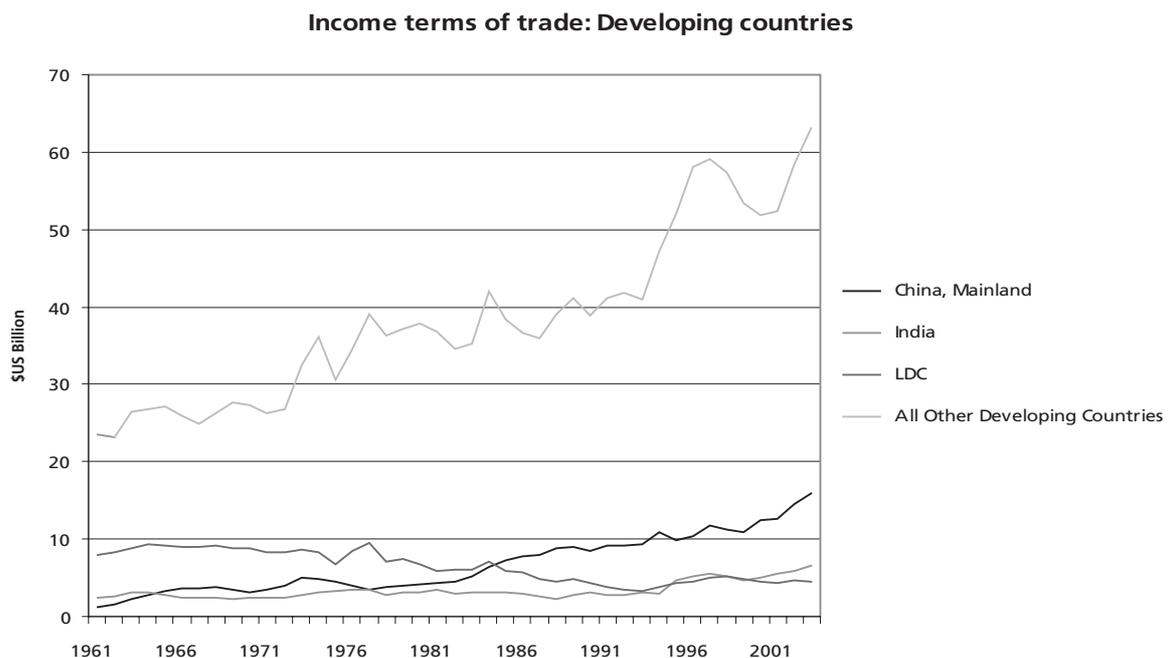
Figures 1 and 2 illustrate the differing patterns of income terms of trade of agricultural products among developed and developing countries. The figures indicate the values of agricultural exports deflated by a price index of manufactured imports, and suggest that while the developed countries and the more advanced developing countries have managed to expand the purchasing power of their agricultural exports, LDCs have fallen behind, largely due to lagging agricultural export productivity growth and this raises serious issues about their prospects in agriculture in a more liberalized trade regime.

FIGURE 1
Agricultural income terms of trade of developed countries



Source. Authors' calculations

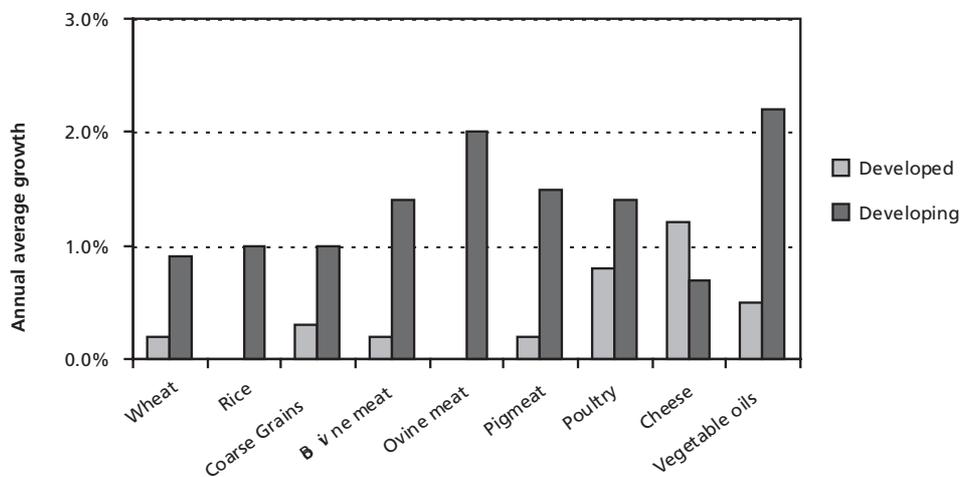
FIGURE 2
Agricultural income terms of trade of developing countries



Source. Authors' calculations

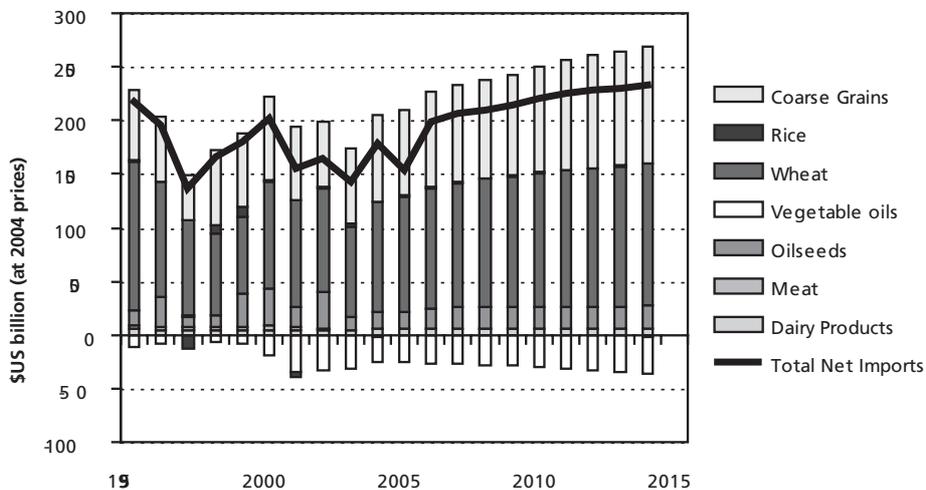
Figures 3,4 and 5 highlight the projected growth rates of demand in a variety of agricultural products over the period 2005-14, by developed and developing countries, and indicate that developing countries are becoming growing markets for food imports. In particular, LDC basic foods imports are growing at a very fast rate, raising issues about the ability of many of these countries to pay for increased food imports, in light of stagnating economies and low agricultural and non-agricultural growth.

FIGURE 3
Projected annual growth rates in food demand by developed and developing countries 2001-14



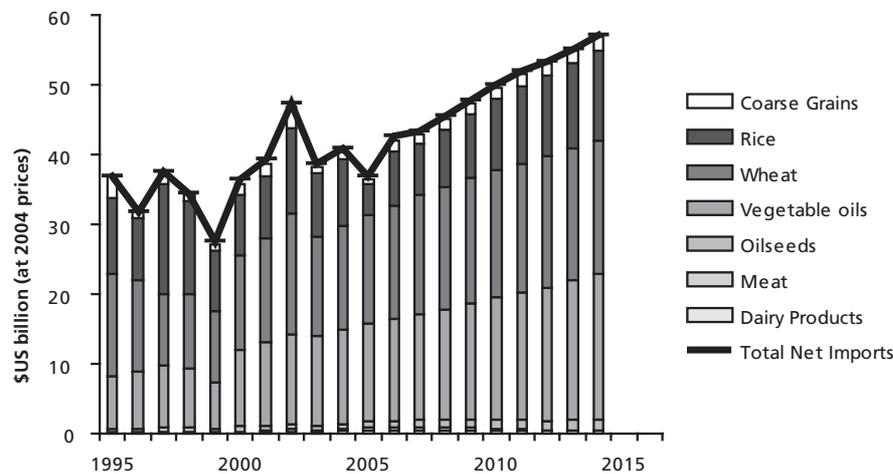
Source. FAO projections

FIGURE 4
The increasing dependence of developing countries on food imports



Source. FAO projections

FIGURE 5
Net imports of basic foods are projected to grow over 6 % annually in LDCs



Source: FAO projections

4.2 Historical evidence on agricultural transformation

A more fundamental argument for a greater focus on food staples relates to the process of agricultural transformation and its role in growth and poverty reduction at early stages of development. In terms of MDG 1, there is a need to focus on countries that are falling short of targets. FAO's *The State of Food Insecurity in the World (2005)* highlights a number of Asian and SSA countries in this group.

Given that many of these countries are still at an early stage of agricultural commercialization and that most episodes of rapid poverty reduction e.g. in India's Green Revolution can be linked back to growth in food staples in these early stages of agricultural transformation (e.g. Smith and Urey, 2002), there is a strong rationale for focusing on the phase of transformation from a traditional to modernized agriculture, and not on the transformation from a modernized to globalized agriculture, where a more outward oriented policy stance may well be appropriate as international trade becomes more important.

In general, the agricultural output mix changes as a country develops, from predominantly staples to a mix of staples and exports, and then to predominantly exports (see for example the case study of Chile in Thomas, 2006), although there are exceptions for countries with large domestic markets. A key reason for this is that poor farmers will only diversify into, and then specialize in the production of, export crops when they can first be certain of remunerative market access for any increases in their surplus staples production generated by increases in productivity, and subsequently, can afford to purchase rather than produce their staple consumption requirements as they diversify into non staples production.

In assessing supply response, the interest is not only in understanding the response of the sector in aggregate, but also how this response differs between

producer categories. Dixon *et al.* (2001) consider the importance of the existing dominant farming systems on strategies followed by farm households following reform. They list five broad strategies: the intensification of existing production patterns; farm diversification of production and processing; expanded farm or herd size; increased off farm income both agricultural and non agricultural); and complete exit from agriculture. The authors contend that although producers will often combine a subset of these strategies, the current farming system (notably its productive potential) is a key determinant of the preferred strategy. For example, in irrigated farming systems intensification has been observed to be a very important strategy for enhancing livelihood standards relative to leaving agriculture altogether for some other income generating activity. This is contrasted with pastoral systems where exit is often seen to have the greatest potential for improving livelihoods. This example also raises the issue of the ease with which individual producers or households can diversify into alternative agricultural commodities or non-agricultural activities.

The ability to successfully increase agricultural production is examined in Dorward and Morrison (2001) who review a series of success stories of agricultural output improvements in the 1990s. They identify three main strategies for agricultural led growth: extensive exporters, where production growth has been mainly through area expansion, intensive exporters, where the source of growth has been yield increases, and cereal based intensification, which may or may not invoke increased levels of international trade and can include increased productivity in non tradables.

4.3 Demand side: generating potentially greater multipliers from cereal based intensification

In contrast to export commodities, where improved market conditions generally imply increased producer prices and incomes, basic food commodities, such as cereals, are on the whole, imported by poor developing countries. There is also a greater degree of conflict between price increases faced by consumers and those received by producers because of the importance of the commodities in the consumption baskets of poor households in these countries. However, for this reason, cereal based intensification can generate significant potential multipliers (see, for example, Haggblade and Hazell, 1989).

Whilst urban households are expected to be net food consumers, the same is true of many rural households, including, especially poorer, agricultural households. For key food crops, a typical rural African population may include segments of population affected in different ways by a price change. Poulton *et al.* (2005) identify a number of categories of household:

- poor consumers whose income is not directly dependent on agricultural activities;
- net deficit producers who need to cover consumption needs from the market in the run up to harvest and whose consumption and production decisions will be affected by food staple prices;

- net deficit sellers, who may need to sell staples production for cash immediately post harvest even though they have insufficient food production to satisfy their consumption needs and which include some of the poorest;
- surplus producers whose biggest problem is a price reduction in surplus years.

The fact that the impacts on different types of net consumers will differ from those on different types of net producers has not been universally recognized in the literature, which often generalizes across predominantly rural economies. For example, Anderson (2002) states that “if international food price rises are transmitted domestically, the vast majority of poor would benefit directly - because they are in farm households and are net sellers of food ...even poor landless labourers would benefit via a rise in the demand for their unskilled labour”.

Certainly the statement may be true if the majority of the poor were in farm households which were surplus producers of food, and if the real incomes of labourers increased sufficiently to offset the price increase, but it is not clear how often this is the case.

A study by Jayne *et al.* (2000) for example, addresses the question as to whether Kenyan farmers really want higher maize prices. They conclude that “dealing with the agriculture sector as if farmers are an homogenous group with similar characteristics is misleading”. They reach this conclusion on the empirical fact that maize accounts for only 14 percent of household income on average (including consumption out of own production) and doesn't exceed 25 percent even in maize bread basket areas. Small-scale farmers obtain 25 to 75 percent of their income from non farm sources. They calculate that most maize (74 percent) marketed comes from 10 percent of smallholder farms this figure increases to 83 percent if large farmers are included in the top 10 percent.

However, although small-scale farmers may obtain a relatively small proportion of their income from sales of their own crops, this only tells part of the story as to how increases in food staple productivity can drive rural incomes. A recent research project by Imperial College/IFPRI see Dorward, Fan *et al.* (2004) explains how linkages in rural economies are strongly influenced by levels of resource use, and surpluses from staple crop production. Increased farm incomes and demand for rural labour as a result of increases in productivity are key drivers of wider growth in rural incomes.

The arguments introduced in this section suggest that in many poorer countries, the domestic market for food crops which is primarily supplied by smallholders may offer a significant prospect for agriculture led growth. Issues for research related to the identification of appropriate trade policy, and taken up in the following sections, centre on:

- how incentives to improved levels of productivity might be provided without damaging the food security status of net consumers;
- whether and how small-scale producers need to be protected from exposure to greater openness to low cost (subsidized) imports whilst improvements in productivity are being achieved;
- how much multipliers might fall as a function of greater openness (essentially greater penetration of tradable products). The extent to which openness reduces the ToT for poor farmers and can weaken local demand for non tradables;

- the potential role of regional markets, as a substitute for the larger domestic internal markets often found pre-requisite to growth in Asian economies.

5. Determinants of, and constraints to, productivity growth in food staple crops in SSA - is current trade policy one of them?

It has been argued that domestic cereal markets offer a growth opportunity for countries at earlier stages of development, but that to capture and make the most of potential multiplier effects, improved productivity levels in staple food crops are critical to allowing smallholders to move from a traditional semi-subsistence agriculture to a more commercialized cereal based agriculture, and then to their diversification out of low return staple production.

However, a review of trends in cereal production in a sample of East African countries concludes that with a few exceptions, increases in production have occurred primarily as a result of area expansion. Drawing on case study examples, (Thomas, 2006) potential reasons for the disappointing trends in yield levels are discussed below. These are then counter posed against current trade policy regimes in the region to highlight potential dangers in generalizing about the desired direction of policy reform.

5.1 Trends in cereal production and productivities

Examination of trends in production, areas and yields of major staple cereals in selected East and Southern African countries during the last 4 decades shows that for the main cereal, maize, there have been significant increases in areas planted, most notably in the past 20 years, in all countries except Zambia. However, the trends for maize yields appear more differentiated. Yields have increased most consistently in Tanzania. In Uganda and in Mozambique, there is evidence of post conflict recoveries in maize productivity, but in Malawi and Zambia yields have fluctuated much more widely, and in Malawi in particular, yield increases over the period appear limited.

The areas planted to rice have also increased consistently in the selected countries, albeit from relatively lower bases. In Tanzania, significant increases were observed until the early 2000s whereafter area planted fell significantly. Rice yields, although erratic, appear to have risen most significantly in Malawi, followed by Tanzania. In Mozambique and Uganda, increases in rice yields have been limited, increasing only marginally over extended periods. In sum, although the picture is mixed across the countries, growth in cereal production has been primarily area driven.

Such observations are symptomatic of the difficulties that these countries have faced in generating productivity increases in food staples from already low levels. Productivity increases (both land and labour) at the rate required to stimulate agriculture led growth, have simply not been forthcoming.

5.2 Limited productivity increases - a role for state intervention?

A series of case studies undertaken by FAO (Thomas, 2006) provide some insights into the determinants of domestic price incentives in selected maize and rice producing countries. Figures 6 and 7 depict a decomposition of changes in domestic prices into changes in international prices, exchange rates and other policy and institutional changes proxied by the residual, during various episodes of reform.

In early stages of reform during the mid to late 1980s, significant reductions in the international maize price were offset by devaluations/depreciations of the exchange rates in the selected countries. An exception was Malawi where domestic market liberalization preceded significant devaluations and where the domestic price fell during this period. During the 1990s, the international maize price did not fall significantly, and domestic prices were affected to a more limited degree by changes in exchange rates. During this period, the influence of domestic policy and institutional changes (residual) appeared to be more important in determining domestic price changes.

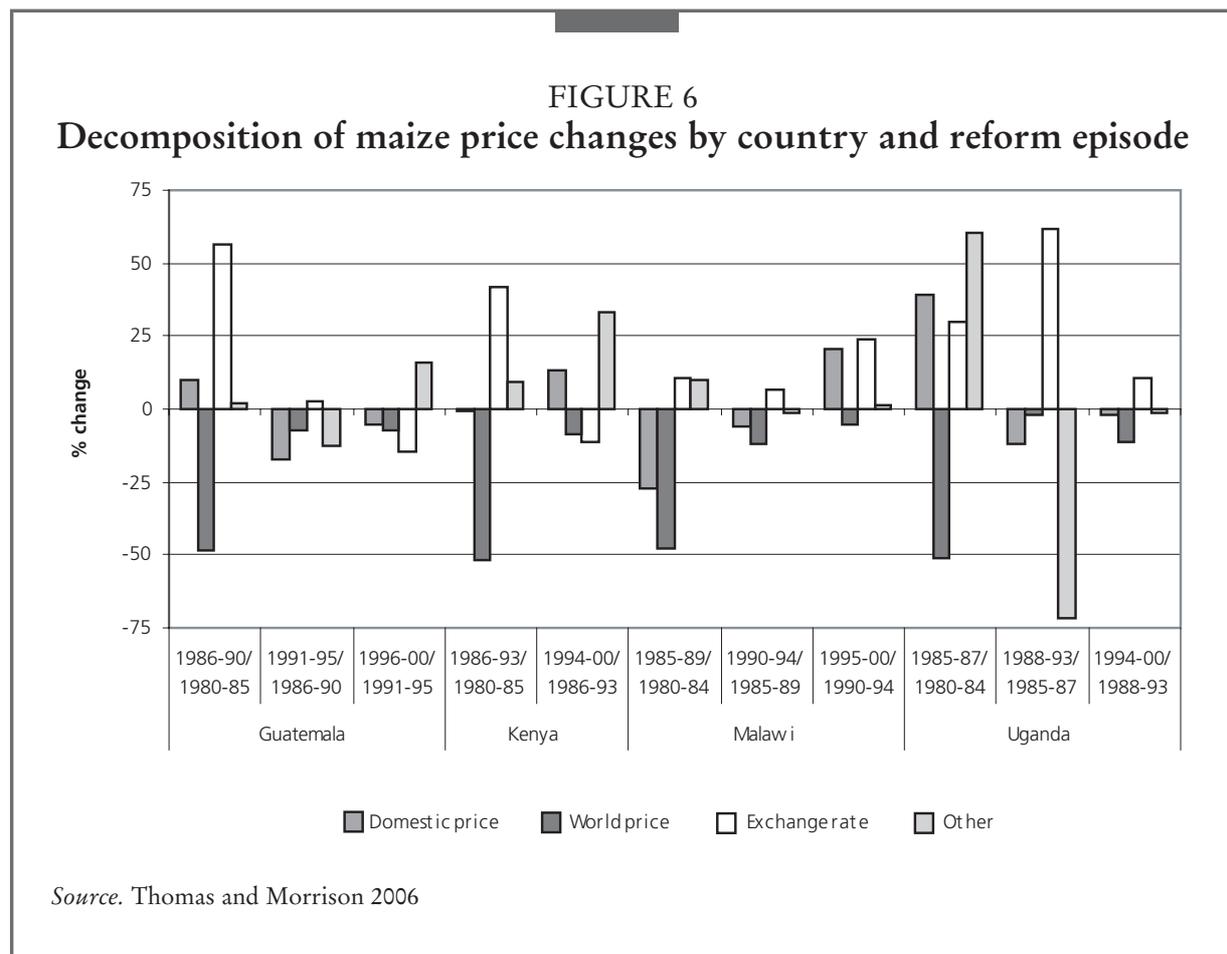
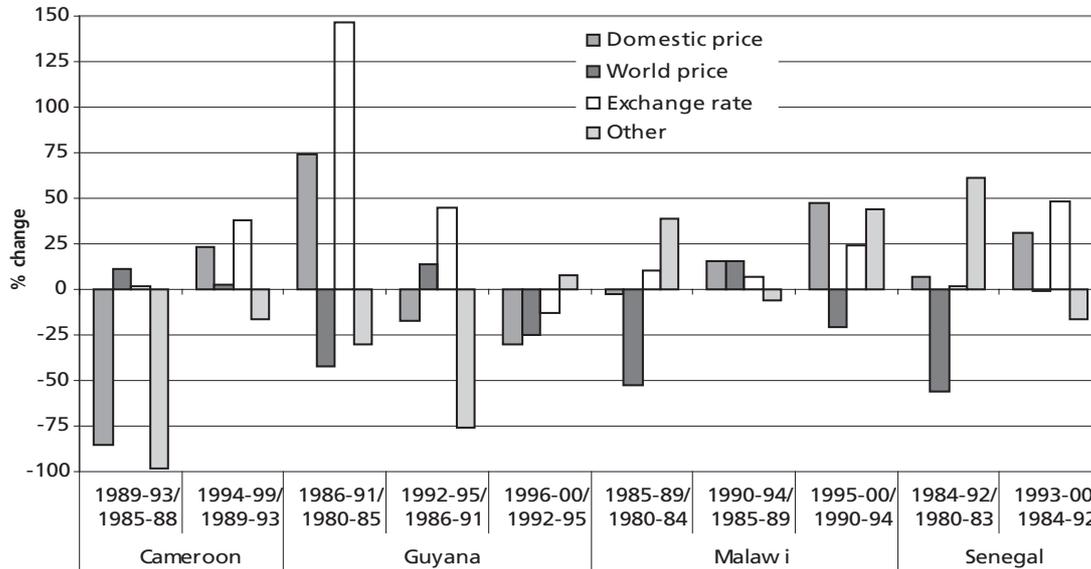


FIGURE 7
Rice price decomposition by country and reform episode



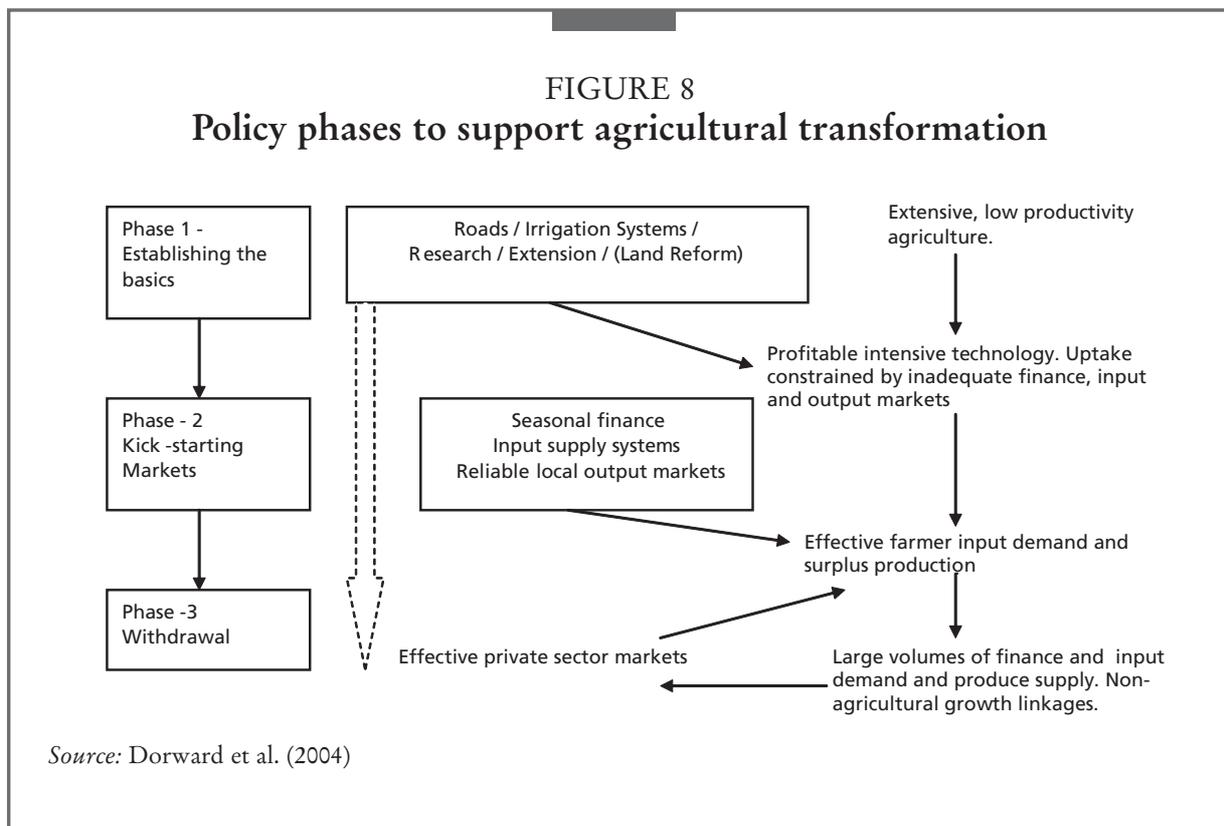
Source: Thomas (2006)

By contrast, with the exception of Guyana in the early stages of reform, and in Senegal and Cameroon in the mid 1990s (when there was a significant devaluation of the CFA franc), the exchange rate played a more limited role in determining domestic rice prices, and a combination of world price movements and domestic policy and institutional changes were more important in driving domestic prices. For example, in Cameroon changes in other policies had a significant depressing effect on domestic rice prices.

The observation of the apparent importance of exchange rate and other policies as compared to international price movements, in influencing the price of domestic food crops is significant and compatible with earlier analyses of the importance of exchange rates in determining agricultural terms of trade (Krueger, Schiff and Valdes, 1991).

The relative importance of factors other than international prices is reflected when relating these findings back to the discussion on production changes. In Malawi, the improvements in domestic prices for rice and maize over the reform periods did not appear to translate into significant production growth. In Tanzania, exchange rate movements helped to lift domestic prices in the 1990s, which appeared to benefit rice and maize production. In Uganda, productivity levels in maize production fell in the early- to mid-1980s, despite the significant increase in the domestic maize price, but recovered in the late reform and post-reform periods when price movements were less favourable.

Such case study observations suggest that increases in domestic prices alone have not been sufficient to generate increased productivity levels. An explanation can be found in recent research that has demonstrated that countries that have achieved sustained agricultural growth have been observed to go through phases of agricultural modernization and growth and that in these different phases, significantly different policy interventions have been found to be most effective (Dorward, Kydd *et al.*, 2004). In the first phase (see Figure 8), the basic conditions (improved infrastructure, research and extension) for a transformation from a situation of low intensity, semi-subsistence agriculture are put in place. However, for the sector to move to the situation of surplus generation, an intermediate phase is required in which the process of transformation is “kick-started”. In this phase, a series of government interventions aimed, for example, at reducing risks to producers seeking to invest in improved technologies, or enabling access to seasonal credit and to input and output markets on more favourable terms, are required. Without such interventions, necessary investments in agricultural activities will not be made by producers or by the private sector, given the high incidence of market failure and associated high transaction costs and risks, even though price incentives may appear favourable.



For many developing countries, their ability to progress through phase 2 has been significantly limited as donors, informed by the Washington Consensus on Agriculture (see FAO 2003, chapter 6), have effectively reduced the prospects of

development by insisting on a minimal role for the state just when state intervention is required to facilitate the sector's development.

There is ample evidence to suggest that the state needs to play a significant role in stimulating the transformation of agriculture. Dorward and Morrison (2001) provide a review of the series of state interventions made in countries that have been successful in generating agricultural growth in the recent past. Fan *et al.* (2004) provide empirical evidence of the high returns to specific investments at critical stages in Indian agriculture's transformation. The successful agricultural transformation in India was demonstrated to be based on state support to credit, inputs and irrigation infrastructure, which were necessary because initial conditions were characterized by widespread market failures.

It is however important to recognize that once the agriculture sector has developed sufficiently and the resulting higher level of market activity has led to more stable supply and demand conditions, which in turn have resulted in a reduction of the risks and transaction costs that were previously preventing investment, this type of state intervention becomes obsolete. At this stage, the withdrawal of government agricultural support that were critical at the early stages can be argued for. However, as Imber *et al.* (2003) comment, most temporary policies tend to become permanent as lobbies grow in power, making the removal of support problematic. Indeed, the fact that many redundant and increasingly damaging policy interventions have been maintained in many developed countries is one of the reasons used in support of current arguments for further liberalization and a reduced role for the state.

5.3 What role for trade policy?

On the basis of research findings such as those reported above and from observations of case studies on the impact of reform, it could be argued that the introduction of more liberal policies associated with rapid state withdrawal have been introduced at too early a stage in the process of agricultural commercialization in many poorer economies. A key question for research is whether this extends to the introduction of a more liberal trade policy stance.

The main entry points for state intervention in the sector relate to the ability and/or willingness of actors (not just producers, but traders and processors) in the sector to invest in more productive technologies. In terms of trade policy we isolate two components¹⁴ for further discussion:

- (i) the way in which trade policy can affect relative production incentives for which an improved understanding of the way in which price levels and stability affect investment decisions of producers is required, and
- (ii) the way in which trade policy can affect incentives facing actors further up the marketing chain (i.e. where competition with imported commodity actually occurs) and for which an improved appreciation of the marketing chain is required.

¹⁴ Although input market and credit constraints are recognized as being critically important determinants, they are only indirectly related to trade policy through prices and investment decisions.

Renumerative, stable prices

Increases in productivity have been constrained by limited investment of household resources (including labour) in improved technologies, and while a major determinant of limited investments is household credit constraints, to a large extent the limited investments are directly related to price expectations.

Simplifying from the research reported in Dorward *et al.* (2004) it can be hypothesized that because households differ in terms of their net production/consumption status, for productivity enhancing investment decisions, the “average” price level is not necessarily the key decision variable, but that greater price stability is.

Cereal markets in African countries tend to be susceptible to wide variation in prices resulting from, for example, low market volumes and limited price transmission. Fluctuations in production due to climatic factors and significant divergences between import and export parity prices can cause these large swings in prices. The risks of low returns in some years will reduce levels of investment in agriculture and therefore the scope for production expansion. However, the risks of high prices, by affecting consumption decisions, can also reduce the willingness and ability of poor households to devote resources to on farm investment in shortage years as explained below.

In Tanzania for example, the average CIF price of Maize in Dar es Salaam in 2005 was approximately \$154/tonne. This compared to a wholesale price of \$162/tonne for locally produced maize. In rural production areas, given significant transport and transaction costs, the gap between import and export parity can be significant. Interestingly, for rice, the comparable numbers for prices in Dar es Salaam are \$186/tonne for the average unit import price as opposed to \$551/tonne wholesale price for locally produced rice. The potential for import penetration is therefore much greater in the case of rice (Nyange and Morrison, 2006).

The potential impacts of these wide price variations for investment decisions are several fold, depending on the characteristics of the producing household. In shortfall years, deficit producers will be faced not only with the prospect of having to buy more food grains, but having to purchase at a higher price. Poor households with limited assets will need to reduce levels of investment in the following crop (e.g. reduce fertilizer purchases) due to seasonal credit constraints as they need the cash for consumption. In advance of a poor harvest, they may also reduce their own labour allocation to food staple production, switching their labour to off farm activities to generate cash or payments in kind even if returns to their labour are lower. This increased labour supply will also suppress local wages, impacting negatively on other participants in the agricultural labour market.

By contrast, better off farmers with greater access to assets and/or seasonal credit may increase production following a price increase. However, if prices are depressed in surplus years this reduces profitability and less investment is made in the following year’s harvest.

The pattern of investment decisions described above is reflected in a household modelling study by Dorward (summarized in Dorward *et al.*, 2004) which shows differential supply response by different representative households engaged in maize

production in Malawi. Asset “rich” households respond positively to an increase in price, as do, to a lesser extent, other households that have means of covering consumption requirements through borrowing and/or remittances. By contrast, poor male and poor female headed households reduce their production of maize as the maize price increases. Indeed, maize prices do not need to increase significantly before they are obliged to stop producing maize on their own plots and fully engage their labour in other, often lower productivity activities. In contrast, as prices fall, the response of poorer households is less muted than for other households.

A result of the differential responses is that production increases (and more especially productivity increases) are relatively inelastic on average. Complicating issues further is the fact that due to the pervasive nature of market failures, domestic markets are not generally accessible to all producers on the same terms. Often, there is differential access to output, input or credit markets for small as compared to large producers.¹⁵ This poses difficulties for analysts in that farm gate prices used are generally averages. Investigation into the spatial distribution (regional and by farmer type) of price as well as its temporal distribution would contribute to improved analysis of trade policy implications.

A narrower band of import and export parity prices may be conducive to increased investments in staple foods. A key question, therefore, is the extent to which trade policy can play a role in reducing the band within which prices fluctuate. In principle a variable border levy can play such a role, just as it has in some developed market economies, notably the European Union. However, such variable tariffs have been deemed inappropriate in WTO, thus raising the issue of whether WTO is unnecessarily limiting the flexibility needed by SSA countries to manage domestic basic food price variations.

*Coordinated investment*¹⁶

A related issue concerns the investment decisions of actors in the supply chain other than producers of the primary commodity, which will impinge upon the market opportunities of small-scale producers. For example, the decision of a local trader to expand his catchment area to more remote areas will be contingent upon the risks that he perceives to be associated both with his ability to procure product at reasonable cost net of transaction/transport costs and to sell this product at a secure remunerative price. The decision related to procurement will be a function of the volume of trade in the market with low traded volumes acting as a disincentive. Decisions related to sale will reflect threats perceived from competition, including competition from imported grain. Without the investment of such private sector actors, on-farm investment in potential catchment areas will be negatively affected as the producer will be faced with less secure outlets. In the past, the state played

¹⁵ Examples range from dualistic marketing systems, for example the Zimbabwean cattle markets where commercial producers sell to the state marketing body and smallholders sell to local communal auctions (see Perry *et al.*, 2003), to the more subtle differences in contractual arrangements between farmers and traders, with better connected farmers achieving more secure and high value contracts.

¹⁶ This term is coined in Kydd *et al.* (2001) to which the reader is referred for further discussion.

a significant role in providing secure outlets for small-scale producers including more remote producers or producers in higher risk environments (for example ADMARC's activities in Malawi). It is not clear that this gap has been filled by the private sector following state withdrawal.

In terms of investment decisions related to perceived risks at the point of sale, in particular as they relate to imported product, an appreciation of the structure of the supply chain is important. Again, these differ widely both across countries and across product chains within countries. A recent study for FAO illustrates this point by comparing the supply chains for maize and rice in Tanzania (see Nyange and Morrison 2006) In the rice marketing chain, rice is milled early, providing the opportunity for farmers to sell paddy direct to traders or to have their rice milled and sell to interregional traders. Rice is generally imported in a semi processed form. Inter-regional traders are engaged in the trade of both raw and semi processed rice but do not import rice. Importation is at the wholesaler/broker level and, in both semi processed and processed forms, directly at the retail (supermarket) level.

By contrast, maize is milled much later in the chain and due to the similarity of local and imported wholesale prices of maize in Dar es Salaam, competition with imports tends to be with unprocessed grain at broker/wholesaler level. These agents will source from interregional traders or importers. In Dar es Salaam, an increased amount of maize is being delivered to millers and the maize flour is then sold into the retail market.

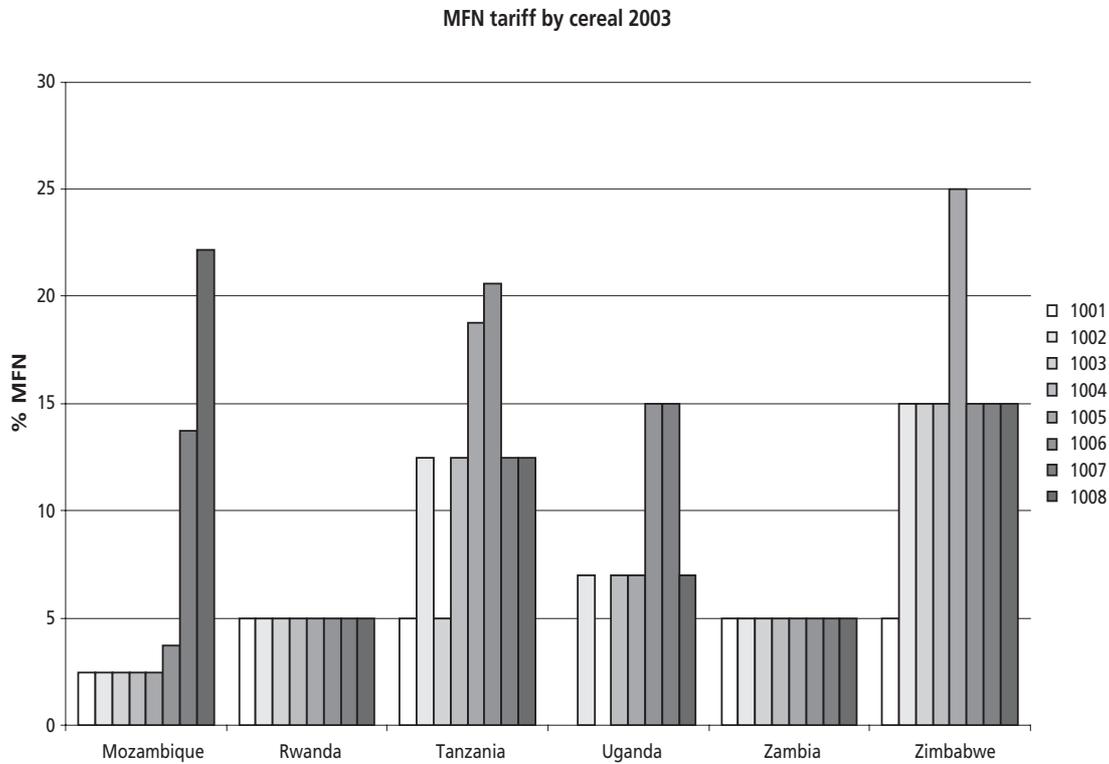
The point here is that an appropriate trade policy regime needs to reflect such differences if it is to be configured to maximize the opportunities for investment in technologies conducive to productivity improvements in locally produced crops. This does not, of course, imply the use of prohibitive tariffs, a stance that would anyway be infeasible for governments with growing urban population where increasing urban migration means that low food prices for urban consumers are becoming an increasing priority, but it may mean providing some level of protection against import competition at various points in the chain.

5.4 Current trade policies differ widely across countries, crops and level of processing

Figure 9 illustrates the MFN applied tariff¹⁷ rates for the eight categories of cereals in the HS 4 classification in six SSA countries as reported for 2003. From the figure, it is apparent that there is substantial variability both between countries and between crops within countries. Rwanda and Zambia both applied low tariffs with no distinction by crop. The Zimbabwean maize tariff was high relative to other crops, despite a high import parity price given the land-locked nature of the country. Tariff levels in Mozambique and Tanzania were much less uniform. Tanzania is a net exporter with a comparative advantage in maize production in normal years, so the fact that the tariff that it imposed on maize is high relative to other crops is perhaps rather surprising.

¹⁷ Data on actually applied tariff levels reflecting preferential tariff levels are more patchy, but show similar levels of variation across commodities and countries.

FIGURE 9
MFN applied tariff rates in 2003 for key cereals in the HS4 tariff group



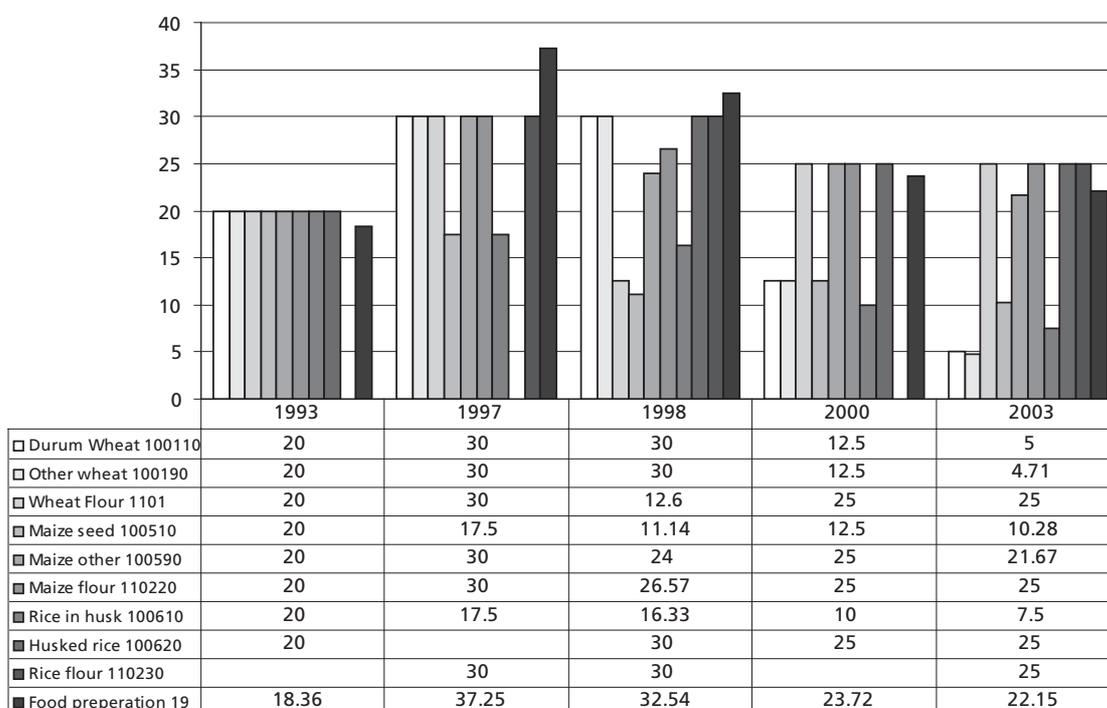
Key: 1001 - Wheat; 1002 - Rye; 1003 - Barley; 1004 - Oats; 1005 - Maize; 1006 - Rice; 1007 - Sorghum; 1008 - Buckwheat, millet

Source: Authors using data compilation from WITS/TRAINS

Applied tariff structures have been rapidly changing in some of these countries. Figure 10 depicts the applied tariff rates in Tanzania for wheat, maize and rice at different levels of processing in five years during the period 1993 and 2003. The picture is one of change from a relatively uniform to much more differentiated tariff structure. Taking wheat as an example, the figure compares the tariffs imposed on wheat, wheat flour and, although not an ideal proxy for higher levels of processing, on food preparations. In 1993, the same 20 percent tariff was used for wheat and wheat flour, but the tariff was lower for food preparations. In 1997, all wheat related tariffs increased, with food preparations increasing proportionately more. The following year, the tariff on wheat flour was reduced to 12.6 percent (a de-escalation), but in 2000 there was a reversal with the tariff on wheat decreased to 12.5 percent, and on wheat flour increased to 25 percent. 2003 saw further tariff escalation.

FIGURE 10
Changing tariff profiles for cereals in Tanzania

Changing tariff profiles for cereals in Tanzania: grains, flour and processed



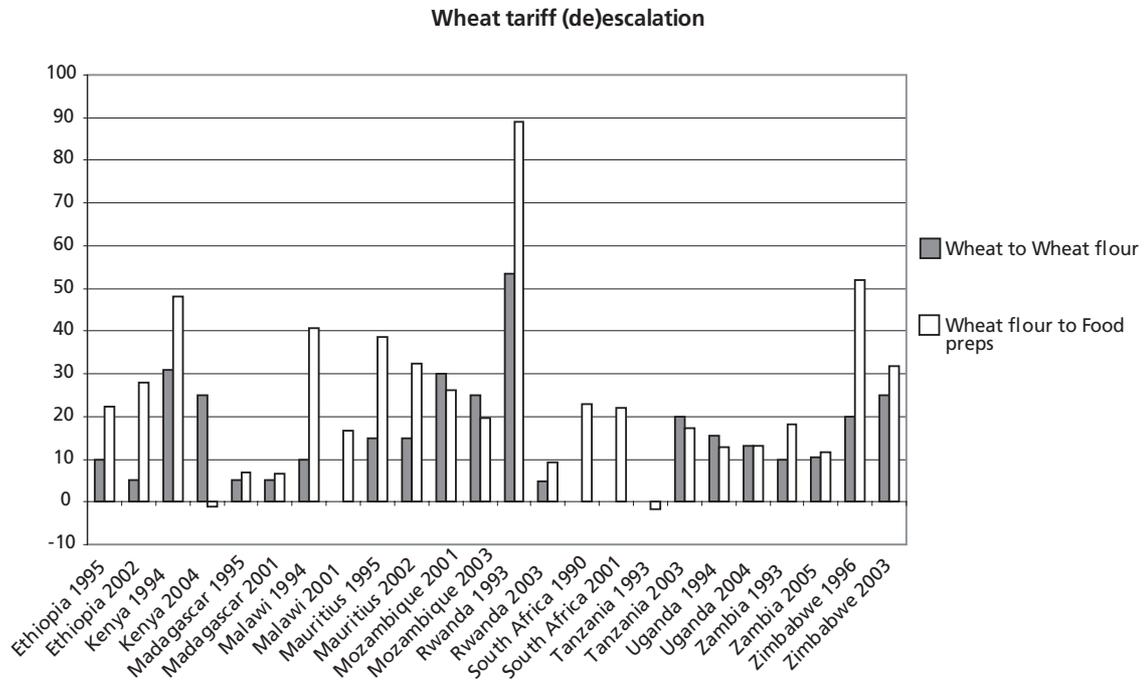
Source: Authors' compilation using data from WITS/TRAINS

The pattern of tariff differentiation by stage in the processing chain is also very mixed across countries. Figures 11 to 13 compare the extent of tariff escalation or de-escalation in the mid 1990s with the most recently reported levels for the three main crops in 12 SSA countries.

Wheat

In all countries (except Zimbabwe) there has been a significant reduction in the gap between tariffs on wheat and wheat flour. In some countries, falling to zero level of escalation. A similar pattern is observed in food preparations. Tariff structures for wheat are therefore becoming more uniform along the chain within countries.

FIGURE 11
Wheat tariff (de) escalation in selected SSA countries (Percentage point differences between tariff levels at different levels of processing)

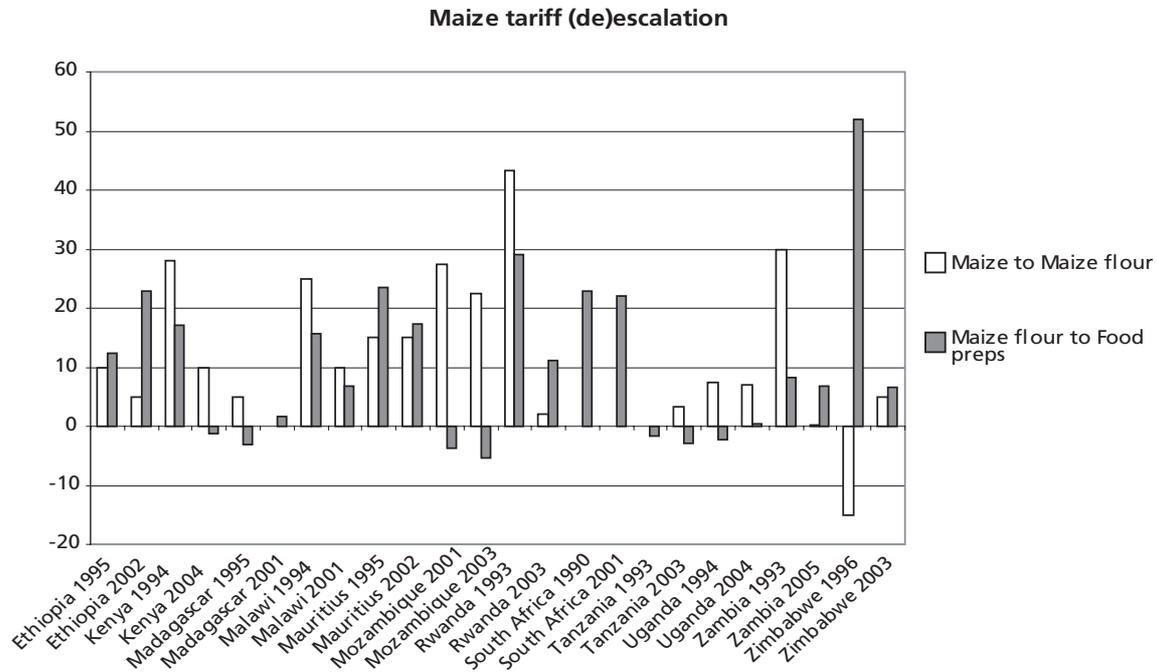


Source: Authors' computation from data from WITS/TRAINS

Maize

A similar pattern of reduction in levels of escalation along the chain is observed for tariffs on maize and maize flour. However, the tariff differentials between maize flour and food preparations (a loose proxy for maize processing) have been reduced and in some cases has resulted in a de-escalation i.e. relatively higher protection for maize flour than for food preparations.

FIGURE 12
Maize tariff (de) escalation in selected SSA countries (Percentage point differences between tariff levels at different levels of processing)



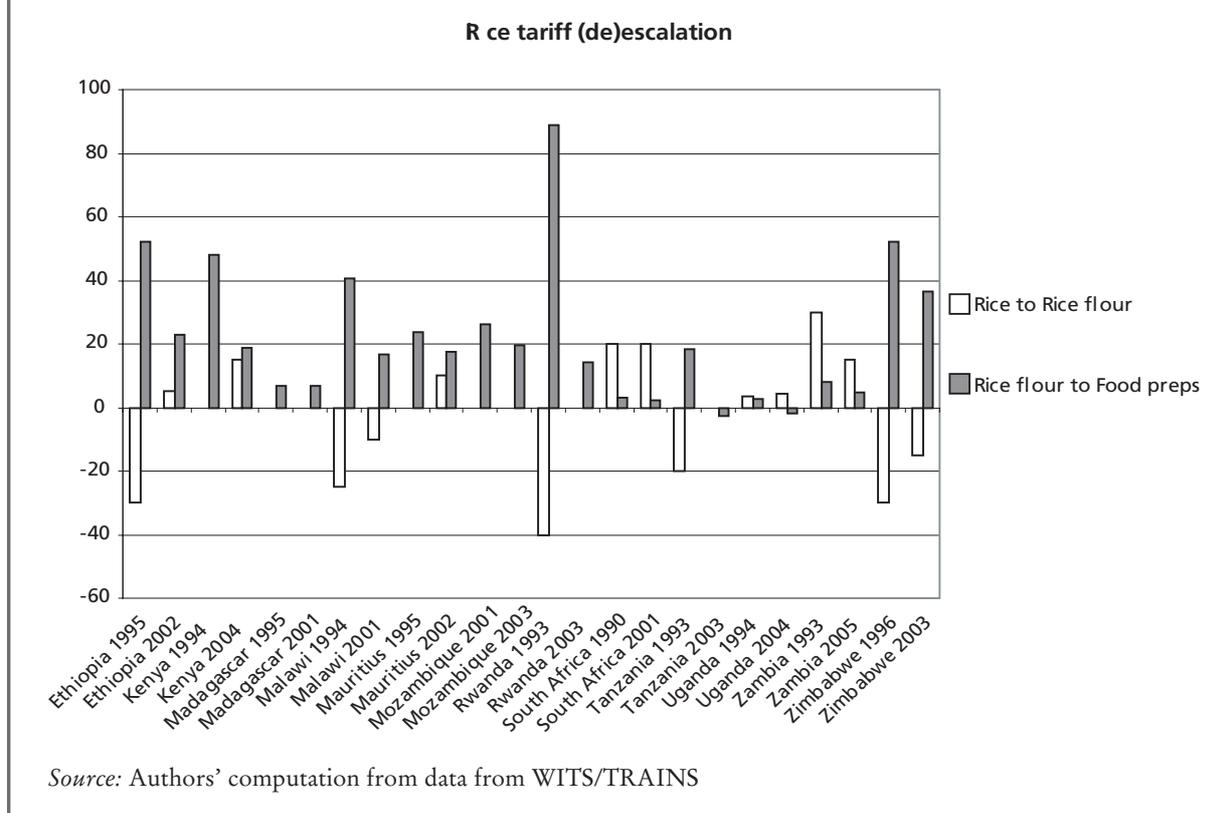
Source: Authors' computation from data from WITS/TRAINS

Rice

In the mid 1990s there was significant de-escalation between rice and rice flour tariffs, with the rice tariff significantly greater than the rice flour tariff in five of the countries and with a zero differential in four others. Since then, most countries have either implemented an escalation in their tariff structure, or at least removed a substantial part of the de-escalation. Whilst the difference between the tariff on rice flour and tariffs on food preparations was significant a decade ago, this gap has been substantially reduced since.

These differences in tariff structures also have significant implications for debates regarding regional trade arrangements, in light of the theoretical argument that it maybe appropriate to admit some degree of tariff escalation in the course of development.

FIGURE 13
Rice tariff (de) escalation in selected SSA countries (Percentage point differences between tariff levels at different levels of processing)



6. What level of import protection is consistent with import competing cereal based intensification?

Given the diversity of tariff structures across countries, it is unlikely, despite the varying agricultural situations, that these are the most appropriate configurations from a welfare maximising point of view. Although proponents of further liberalization may propose an easy solution in terms of achieving more uniform and lower level tariff structures, this would be unlikely to yield the most appropriate trade policy regime, given the arguments and evidence set out in the paper. The challenge remains one of how to formulate the most appropriate trade policy to stimulate cereal productivity increases.

Reducing fluctuations in rural food staples prices, and improving the investment climate for actors at various stages of the supply chain have been identified as two of the key, interrelated, factors critical to generating improvements in productivity levels in food staples and which could be influenced by trade policy.

An examination of tariff levels within and between countries suggests however that:

- (a) these conditions are not necessarily reflected in decisions related to the setting of tariff levels since these decisions are after all driven by a range of motivations related to interest groups, conditionalities and revenue raising in addition to price incentives,¹⁸
- (b) that in arguing for reductions in tariff levels, proponents of more liberal regimes may be paying less than sufficient attention to these conditions.

Whilst recognising that economic arguments may play a limited role in the setting of tariff levels, it is important in arguing for policy reform on the basis of economic principles to better reflect the economic realities intrinsic in rural areas with widespread market failures and associated high levels of transaction costs and margins along the supply chain.

Whilst in the assumed absence of market imperfections, a more liberal trade policy stance can be argued for with some conviction, the question remains as to whether this holds where market failures are widespread.

There is evidence that liberalization may have worked in favour of some cash crops, which were often taxed under previous regimes, and in which the risks facing investors could be reduced by interlinking imperfect input and output markets (e.g. cocoa in Ghana and tobacco in Uganda¹⁹). However, the scope for development of risk reducing non market institutions to overcome such imperfections is more limited with staple food crops in the absence of direct state support, the withdrawal of which has often removed some critical elements needed for the transformation of the cereal/food sub sectors.

In such circumstances, border protection has potentially important roles to play in:

- (i) assisting in the provision of more stable and remunerative investment environments for import competing commodity sectors in which the country does not hold a comparative advantage and which may be expected to contract in the face of greater competition, but which maybe critical to the development of agricultural and wider rural growth. Providing a better investment environment could promote levels of investment in productivity enhancing technologies, generating surpluses and in turn allowing the diversification of resources into more “competitive” sectors. This is a *prima facie* case for special product provisions while such improvements in productivity are being achieved.
- (ii) preventing short term disruption to domestic sectors which may be otherwise competitive, but which by virtue of susceptibility to risk and limited access to risk management instruments, could suffer from exposure to low cost, often subsidized, imports and associated price instability. This provides a case for Special Safeguard provisions.

¹⁸ For many poorer countries, tariffs are still a relatively effective instrument both to support prices and to generate public revenue.

¹⁹ However, this success may equally be attributed to significant exchange rate devaluations - see FAO case studies in Thomas (2006).

In the case of staple food production in SSA, producers in rural areas may be argued by some to be well “insulated” from competition from world markets, with or without tariff protection, due to the wide gaps between import and export parity prices in producing areas (akin to natural protection). However, critical to stimulating greater volumes in rural markets is the reduction of factors contributing to such margins, through for example, improvements in rural infrastructure. But such improvements also allow greater penetration of competitive imports against which local producers may be unable to compete. As transport costs fall, some level of border protection may be required while investments in local production are made to allow associated reductions in transaction costs and risks.

The argument also neglects the fact that urban markets source both from local markets and imports. This can affect decisions of actors higher up the chain in terms of their sourcing of domestic *vis-à-vis* imported commodity and hence their willingness to invest in strengthening domestic markets, and in doing so, reducing risks of investments for producers.

It is, therefore, important to realize and assess the role that trade policy could potentially play in strengthening market opportunities. Large domestic internal markets have often been found to be a pre-requisite to agriculture based growth in Asian economies, since they facilitated the shifting of the commodity from surplus to deficit areas, helping to ensure effective demand was maintained even in times of surplus and therefore assisting in stabilising prices. In many of today’s poorer developing countries, domestic markets are relatively small and cannot fulfil this critical role. Here there is a potential role for regional markets with common external tariffs but no restrictions to internal trade, as a substitute for the lack of a large domestic market.

But is a regional market an option? Poulton *et al.* (2005) suggest that there are limits (due to e.g. high transport costs, covariance in harvest, etc.) to what freer regional trade in staples can do in terms of price stabilization, although importantly, they note that such markets could help to control inter seasonal fluctuations. Additionally, it would require a coordinated regional policy for interregional trade and would need to be compatible with various regional trade agreements. On the plus side, protection against imports from neighbouring countries is problematic in context of widespread informal trade, so a regional market with no formal barriers to trade across these borders could help to overcome this. The role of regional integration in such markets remains understudied.

We conclude therefore by suggesting that a more nuanced approach to determining appropriate trade policy in poorer developing countries is required which better reflects the many interrelated market imperfections that impinge upon investment decisions. In the final section of this paper, we make suggestions as to how economic analysis might better inform such an approach.

7. How can analytical research better reflect the economic realities facing small-scale producers in poorer developing countries?

Given the dominance of CGE modelling results in recent years in supporting the drive for greater liberalization, it is appropriate to ask how well context specific factors impinging upon investment incentives in particular, are reflected in these models. A simple answer is that they are not, and indeed, as noted in Anderson *et al.* (2006), whilst the use of global trade models can set the overall stage for determining the impacts of multilateral trade reforms, they are not by design particularly well suited to determining within country responses due to the lack of systematic data at the household level that would be required to estimate how their consumption and production decisions are affected.

The majority of models are comparative static in nature and as such abstract from the impact of trade reform on investment and productivity. As Hertel and Winters (2006) suggest, these models simply reveal the redistributive impacts of trade policy through changes in relative commodity prices and factor incomes. However, as has been suggested, at an early stage of development, a reallocation of resources between sectors is unlikely to happen quite so readily given the widespread market imperfections, unless there is some form of government intervention to overcome these.

We caution therefore against the use of results from global trade simulation models to “calculate” reductions in poverty levels and/or changes in welfare as a result of global trade reforms. Hertel and Winters (2006) provides a number of examples of country level case study applications of analytical approaches which illustrate ways in which researchers are attempting to reflect the fact that agricultural markets do not function competitively into their analyses, and which provide a rationale for greater focus on household/village/rural economy models as a complement to models used to estimate aggregate changes across multiple countries and sectors.

Such micro based models could help to illuminate the impact of policy reform in the face of high margins, imperfect price formation mechanisms, high incidence of transaction costs and risks associated with investment, and the joint production and consumption decisions of poor households and therefore help to better reflect the mobility of resources between activities, in order to work towards determining what role import protection can play.

A number of examples from Hertel and Winters (2006) capture components of these issues. For example, Nicita (2006) demonstrates the importance of price pass-through from the international price to prices faced by producers in different regions of Mexico as a function of their distance from the port of entry. He finds negligible impacts on more remote producers and that impacts on rural prices and therefore in terms of the indicators of interest, are only possible if levels of transmission are improved. In simulating the effect of improved transmission however, he deals at a very aggregate level, insufficient to reflect differing marketing structures and/or household level responses, thus not adequately reflecting the ability of households to shift resources between sectors.

Similarly, Arndt (2006) attempts to account for high marketing margins, finding

that the marketing wedge tends to exaggerate the impact of changes in export prices on local prices of exportables and dampen the effect of changes in import prices on local prices of importables. He argues that imperfect competition can sever market linkages, but again does not consider the potential role that a less than liberal trade policy could play in overcoming such imperfections.

An interesting application by Kuiper and van Tongeren (2006) attempts to reflect the non separability of household consumption and production decisions in China, which they argue are not well adapted in many village level models. Whilst recognizing that households will react differently to a similar price change, in terms of their supply responsiveness and hence surplus to the market, it is not clear that the researchers account for the impact on seasonal cash flows and therefore on seasonal investment decisions.

In conclusion, although analytical approaches are being adapted in an attempt to better model the potential response to trade policy reforms, these applications are relatively limited in number, and although casting some doubt on the ability of poor rural economics to gain from further liberalization given the widespread nature of market imperfections, have had a limited impact on the trade debate to date, premised as they are on the fact that greater liberalization will have positive impacts if only the imperfections can be removed.

In summary, this paper has argued that there is still an important analytical and empirical agenda in analysing appropriate agricultural trade policies at different stages of agricultural development, and for developing countries with different structural features. It is most likely that in terms of both accelerated growth, as well as poverty reduction, a variety of trade policies for agriculture will be appropriate. Some similarities and generalizations may be made by future research concerning appropriate trade policies, under specific structural assumptions. However, the larger challenge is to explore such policies in a manner that can inform as well as help policy makers who are concerned with accelerated development as well as the various constraints that WTO agreements maybe imposing on their flexibility to respond to changing external circumstances.

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What types of WTO-compatible trade policies are appropriate for different stages of development?

Oliver Morrissey

1. Introduction: setting out some issues

Although the “Doha Round” has been advocated as a development round through the Doha Development Agenda (DDA), so far it has failed to deliver. Negotiations on most issues, and especially in the area of agriculture, were painfully slow in the run-up to the Hong Kong Ministerial in December 2005 and the result of that meeting was little more than a commitment to continue negotiations. Many factors have contributed to the failure to achieve the aspirations of the DDA, and arguably the most important has been the continuing conflicts in negotiations on agriculture between developed countries, especially the European Union and the United States of America, and between developed and the larger developing countries (the latter encapsulated by the G20 grouping). The DDA negotiations are beset by two general problems - accommodating the divergent interests of numerous different countries, and the attempt to cover a very wide range of trade and trade-related issues in a single undertaking. These general problems are exacerbated by the fact that countries that are like-minded on one issue may conflict on a separate issue, so there are few solid coalitions across all issues. Among developed countries, the greatest differences are apparent in agriculture - they share reconcilable, if not similar, positions on most other major issues, e.g. services, non-agricultural market access (NAMA), trade rules. The divergence of interests is even greater among developing countries, notably in agriculture but also in NAMA and services.¹

Although the WTO makes a distinction between least developed countries (LDCs) and developing countries, the distinction is somewhat arbitrary and not entirely adequate especially as not all low income countries (LICs) are classed as

¹ For a broader discussion of trade and developing countries in the context of the WTO, see Stiglitz and Charlton, (2005).

LDCs. Distinguishing countries by features of agricultural development in the context of how this identifies the stage of economic development, addressing a number of issues such as factor endowments and the relative size and potential of agriculture, peasant versus commercial modes of production, food self-sufficiency and export potential would appear more appropriate. The various concepts of stages of (agricultural) development and the implications for an appropriate development strategy are discussed in detail in Section 2.

The implications of stages of development for agriculture strategies are discussed in Section 3, which considers what a “food first strategy” may look like for countries at different stages of development. The argument is not that all LICs should adopt a food first strategy, but that the development needs of the domestic food production sector have been relatively neglected, in the WTO and in the agriculture policies of most LICs. Section 4 considers whether such a strategy would be WTO-compatible under current rules and how existing WTO rules limit the development strategies available to developing countries. A specific issue considered is that LDCs are granted greater scope for policy discretion than developing countries within the WTO, implying that LICs at a given “stage of development” are treated differently to LDCs that may be at the same stage. The core point made here is that the WTO distinction between LDCs and developing countries is insufficient - greater gradation is required to reflect the needs of certain LICs.

Section 5 concludes by bringing the various strands of the argument together to suggest some adjustments to WTO practices to reflect divergent development needs. WTO rules should recognize the diversity of country needs and development strategies, in particular that development policy should not be subservient to WTO rules in poor countries. For example, rules should not prohibit a country from adopting a “food first” strategy if that would be appropriate (but the country should specify its strategy). The WTO should also be enabled to fulfil a role as an “institutional advocate” for poor countries. Some of these suggestions may appear radical, but sometimes it is helpful to think outside the box.

2. Stages of development and agriculture policies

There is no single generally agreed classification of stages of development. In many respects, the most useful general classification is by level of income - low, lower middle, upper middle and high - and the low and middle income distinction underpins the classification of developing countries here. Agriculture tends to be much more important in poorer countries: agricultural value added was 25 percent of GDP in low income countries in 2003, compared to 11 percent in middle income and about two per cent in high income (World Bank, 2005, p. 261). There are a number of regional patterns that hold in general (World Bank, 2005, p. 255). Sub-Saharan Africa (SSA) is low income, the exceptions being Botswana, Cape Verde, Gabon, Mauritius, Namibia, Seychelles, South Africa and Swaziland (from 47 countries). South Asia is also low income (except Maldives and Sri Lanka from eight countries). Latin America and Caribbean is middle income (only Haiti and

Nicaragua are LICs), as is the Middle East and North Africa (except Yemen). East Asia and Pacific is the most mixed region - of 24 countries, nine are LICs: Cambodia, Democratic People's Republic of Korea, Lao People's Democratic Republic, Mongolia, Myanmar, Papua New Guinea, Solomon Islands, Timor-Leste and Vietnam. A final observation, of relevance later, is that almost all small island developing economies are middle income (exceptions are Haiti, not purely an island, and Solomon Islands).

The particular notion of stages of development focused on is that relating to the structure of the economy, given relative factor endowments, and specifically the relative importance and potential of agriculture. In a standard view, countries at low levels of development start from a position of having a large, non-commercial (peasant) agriculture sector, that accounts for the greatest share of economic activity (output, employment and exports). Balanced growth would be achieved if the agriculture sector becomes increasingly commercialized and competitive while the manufacturing sector grows. Initially, manufacturing may be based on agriculture, through processing and agri-business, but ultimately manufacturing and the economy will become diversified, and agriculture accounts for a diminishing share of the economy as growth continues. Thirlwall (1986) demonstrates the importance of agriculture-led growth in early stages of development, until the non-agriculture sector (manufacturing) is sufficiently developed to fuel export-led growth. Although this may be a reasonably accurate broad-brush picture, and is consistent with the LDC-developing country dichotomy prevalent in the WTO, it is too simplistic. Rather than starting from the historical perspective that underlines most notions of stages of development, it maybe more appropriate to characterize the current stage of developing countries according to three criteria - endowments, commercialization and potential of agriculture.

In economics it is convenient to classify countries according to relative factor endowments of land/resources, labour and capital. At the highest level of generalization, less developed countries are relatively land abundant, developing countries are relatively labour abundant and developed countries are relatively capital abundant. Further distinctions are useful, such as between skilled and unskilled labour - less developed countries have relatively unskilled labour, developing countries have more skilled labour (supporting labour-intensive manufacturing) and developed countries are relatively abundant in high-skilled labour (which, combined with capital, supports high technology sectors). Another distinction is particularly useful, namely of agricultural land and mineral resource endowments - countries could be resource endowed but have limited potential for agriculture. Although economists focus on relative endowments, absolute endowments are relevant at both extremes. The United States, for example, is absolutely well endowed with resources and all factors. Very small economies (especially island economies) are hampered by having very small absolute endowments (e.g. there may be no opportunities for scale economies and no comparative advantage in any productive activity).

Given the relative size of the agriculture sector, the mode of production is an important determinant of a country's stage of development. In poorer countries,

agriculture is largely uncommercial - the mode of production is predominantly peasant, interpreted here to mean characterized by incomplete and missing formal input markets and failures in the price mechanisms, with prevalent informal markets (for credit, labour and/or land). There is likely to be a commercial sub-sector within agriculture, for (some of) the production of cash crops, but peasant smallholder production dominates, especially for food. Two important implications are that non-price factors are more important than prices in affecting supply decisions, and that institutional reforms are required before investment and strategies to promote commercialization and growth of agriculture. In middle-income countries (MICs), the predominant mode of production is commercial, even if a peasant sector persists.

These features combine to identify the potential of agriculture. In MICs, agriculture should be largely commercial with functioning input and output markets and price mechanisms. This is the case, for example, in most South East Asian and Latin American countries - data usually exist to assess the potential of agriculture (e.g. in which foods can the country compete with imports, and which crops are export competitive). In particular, it is generally known for which foods the country is capable of self-sufficiency and in which export crops it is competitive. The situation is more complicated in LICs as the underdevelopment of agriculture implies that it is difficult to assess potential, i.e. agriculture has not yet reached the stage where comparative advantage can be identified. This is most important for food crops, especially insofar as they face competition from subsidized imports; the export potential of cash crops is usually known even if not fully realized. Because inherent market failures have not been addressed and peasant production remains dominant, the economic potential of agriculture is under-realized.

Two different types of LIC are considered here - although each type may be at a similar income level, they are different stages in the sense that the development trajectories differ given path dependence - but MICs are treated as being at the same stage of development. Thus three stages (and a separate fourth category of small island economy) are considered:

Agriculture-based low income countries (AgLICs): countries that have a large agriculture sector that is predominantly peasant, typically exporting tropical cash crops but importing food. As outlined below, the sector is likely to be subject to market failures that undermine efficiency and provide a case for government intervention (whether this should include protection is considered in the next section). If such countries are currently net food importers, an important question is whether an effective development strategy could significantly increase food production.

Mineral-rich low income countries (MLICs): the important feature of these countries is that they are endowed with mineral resources (or a specific resource) that offer the potential to earn export revenue and support growth. Resource endowments do not guarantee growth and mineral economies tend to have below average growth rates (Auty and Kiiski, 2001). The resources may not be especially valuable and/or subject to declining world prices (e.g. copper in Zambia) or if they are may be misused (Auty, 1994). Countries that used valuable resources sensibly

would develop to become MICs and offer a trajectory for MLICs (e.g. Botswana in the case of diamonds). More generally, and if the resource is not especially valuable, the economy needs to diversify away from dependence and use the rents while it can, but many countries fail to do this (Hamilton, 2001).

Middle income countries (MICs): although in almost all cases, agriculture is not a large sector in the economy (typically less than 10 percent of GDP), it is often an important sector and those MICs that are the major agriculture exporters (mostly in Latin America and East Asia) tend to be competitive. In the context of the WTO, these are the countries arguing most strongly for enhanced market access and are positioned to gain from a less distorted global market. However, within the category of MICs as defined by the World Bank there are a number of food deficit countries defined as low income by the FAO (e.g. Egypt, Honduras, Morocco, Sri Lanka) and some net food importing countries such as Botswana (Stiglitz and Charlton, 2005, p. 226). In regard to their policies on agriculture, these countries may have trade concerns more like LICs than other MICs.

Small island economies (SIEs): although most are middle income, they are a special case in terms of agriculture because they have limited capacity for self-sufficiency in food but often benefit from preferences in specific exports, usually sugar and/or bananas. A specific case is those African, Caribbean and Pacific (ACP) countries that have benefited from trade preferences with the European Union (EU), especially for sugar (the Sugar Protocol). EU preferences for ACP sugar and bananas have been challenged under the WTO and the EU is required to reform its regimes. This erosion of preferences will impose costs on beneficiary ACP countries as the affected products are typically a major export. Even Mauritius, a relatively diversified economy with significant garment exports, stands to suffer high adjustment costs when the EU reforms the Sugar Regime as it is the single largest beneficiary of the Sugar Protocol (Milner, Morgan and Zgovu, 2004).

Given its seasonal nature, the effect of climatic variations on yields and susceptibility to natural shocks, agriculture is generally more risky than other productive activities. Even in developed countries where the sector is fully commercialized it is susceptible to market failures, especially regarding insurance and this provides a general case for supporting agriculture. In developing countries, especially LICs, market failures are a more severe constraint on agriculture. There are several reasons why markets may fail to allocate resources efficiently, hence why there is a case for state intervention to support agriculture. Markets can fail because they are incomplete and/or because information is imperfect, but public action can overcome these failures (Stiglitz, 1986). Three types of market failure relevant to agriculture - property rights, information and coordination are considered.

First, property rights, which define the control over assets and the rights of ownership or use of land, are often incomplete: rights cannot always be assigned to individuals or enforcement cannot be assured. For example, farmers who own their land and can pass it down to their children will have a greater incentive to invest in and maintain the land. In many developing countries, property rights are ill-defined or absent: legal systems are weak, land is often owned communally or by landlords

so tenants have limited rights and land markets are very limited. An institutional reform that establishes property rights, such as a legally enforced land market or secure tenancy, overcomes a market failure and encourages more efficient allocation of resources. Reform of land markets is a major challenge to agricultural policy in many if not most developing countries, especially in the food crop sector (often dominated by smallholder tenants).

Second, information imperfections increase transaction costs, especially in discouraging investment. For example, producers may not be aware of the most appropriate technologies or may not have information on market opportunities. For individual small producers it may be too costly to acquire such information but public support, such as extension services for adoption of new technologies or marketing information, could increase the information flow and encourage efficiency. In Tanzania, limited access to information on market opportunities has been a problem for small farmers (Isinika, Ashimogo and Mlangwa, 2005). There may be related justifications for subsidies for technologies, inputs (especially provision of credit, where imperfect information is a serious problem) and even marketing, if only to avail of potential scale economies. As a specific example, although the role of markets was recognized and the focus was on smallholder farming, State intervention played a major and effective role in the Green Revolution in Asia and contributed to increased yields and production, achieving food self-sufficiency in many countries (Djurfeldt, 2005). Morrison and Sarris (2006) argue the case for state intervention to encourage the reallocation of resources into higher value-added activities.

Third, there may be an economy-wide coordination problem: for any particular activity to be successful (e.g. for individual farmers to invest), other activities must be present (completeness of markets) and sufficient information about them must be available, such as regarding inputs and marketing. An obvious example is that producers need a good transport and distribution system to get goods to market at the right time, but they also need access to inputs, such as seed, fertilizers and credit, on a timely and reliable basis (and at reasonable prices). Government intervention to provide missing markets and coordination would help to overcome coordination failures and encourage investment (Ray, 1998). To do this effectively it is important that the government has a coherent policy or strategy for agriculture, and the administrative capacity and financial means to implement this strategy.

To become a vibrant and productive sector, agriculture requires a period of sustained institutional reform and investment to commercialize, and the State has a crucial role to play in leading this transformation (Byers, 2003). Protection may be warranted during this period, an issue discussed in the next section, and exemption from full compliance with WTO rules is probably necessary - a properly motivated development strategy should not be subservient to multilateral trade rules. A desire for food self-sufficiency is often the driving force behind major episodes of agricultural transformation, such as in Japan, the Republic of Korea and Taiwan (Jirström, 2005) and even the EU, so it is not inappropriate to consider such a strategy for developing countries.

The problem facing most LICs today, especially those in Africa, is that they have not yet achieved the agriculture transformation: they have not experienced a sustained phase of agriculture-led growth, manufacturing is insufficiently developed to support export-led growth and agricultural exports are not a viable basis for export-led growth. These countries need the opportunity to implement a properly formulated agriculture-led growth strategy, and trade policy may form a (limited) part of this strategy (for a discussion of this see Morrison and Sarris, 2006).

3. Implications of a “food first” policy

It is not the aim here to detail an agricultural development strategy that emphasizes food production, although it can be argued that most LICs, for whatever reason, have paid too much attention to export crops relative to domestic food crop sectors. Agriculture and trade policies have tended to focus on promoting export crops but have often neglected, if not even discriminated against, food crop sectors. Many of the factors to be addressed have been identified above. Major institutional reforms are important and policy-makers should learn from the mistakes of adjustment policies in agriculture since the 1980s; typically, these reforms introduced too much market liberalization too quickly. For example, many SSA countries liberalized the agriculture sector as part of adjustment programmes - removing controls on prices, removing input subsidies and privatising state marketing boards. While the initial impact was often favourable, with increases in food yields in many countries, this was rarely sustained; often, rising fertilizer prices encouraged reduced use contributing to declining yields of food crops (Holmén, 2005). Establishing property rights in land ownership or use is necessary, although markets in land are only one option (Feder and Feeny, 1993). Improving input markets is essential and experience suggests this should be supported by input subsidies (which should be temporary). For example, there are many cases where removing subsidies reduced fertilizer use (for Ethiopia, Abrar, Morrissey and Rayner, 2004) and the increase in input prices reduced profits and discouraged production (for Tanzania, Isinika, Ashimogo and Mlangwa, 2005). Although the experience with subsidized formal credit has been disappointing, there is a need for subsidising large scale investment in agriculture. Although informal credit markets perform a role, they are based on unequal power relations that retard agricultural transformation and subsidized formal credit can break the stranglehold of informal monopoly lenders (Byers, 2003). There is considerable evidence of the important role the State can play, including subsidies to promote adoption of new technologies (Djurfeldt, 2005; Jirström, 2005), although the essential role is one of coordination to address market failures. We take it as given that the strategy should be carefully designed and based on in-depth analysis of the agriculture sector, and limit attention to how it relates to trade and the WTO.

A simple definition of a food first strategy is one that ensures that the country can meet its food needs, which does not mean that it must produce its food needs. Morrissey (2002) considers the relationship between imports of food and food security and identifies two polar views. One approach is to argue that it is

unimportant that a country be able to grow the food it needs, all that is necessary is that a country is able to acquire the food it needs, i.e., to export goods to earn enough to pay for food imports. This can be defined as self-reliance (it can meet food needs, either by production or importing, from its own resources). At the other extreme, countries may aim to be self-sufficient so that they meet their food needs fully from domestic production. This will certainly imply supporting farmers and will normally require protection against imports (unless domestic producers are efficient, in which case the country has an inherent capacity for self-sufficiency). Not all countries can expect to be self-sufficient in food - some countries simply do not have the land endowments required (e.g. SIEs, and perhaps some predominantly arid or mountainous countries) or, if they do, may benefit more using the land for other purposes, such as cash crops for export. In fact, countries with small land endowments may not even be able to be self-reliant, if they have very limited export opportunities and high food needs relative to local production. Morrissey (2002) suggests four cases that can be related to the four stages identified above:

Countries with efficient agricultural producers that are well endowed with land are likely to be not only self-sufficient in aggregate but will probably be net food exporters. Food security will not be an issue, but they will be concerned with open access to foreign markets for their competitive exports. Typically, they retain tariffs on agricultural imports and may even offer some domestic or export support. Under the Doha Round, such developing countries are expected to reduce tariffs and support, albeit by less than developed countries.

Most AgLICs have the potential to be self-sufficient (in aggregate), although realizing this will require improvements in domestic food production and some substitution away from cash crops (the same argument applies to many food-deficit MICs). These are the countries for which the issues of the food first strategy are most relevant, and are considered in the next section. Given endowments, domestic producers are capable of meeting local food needs at least in normal years. In good years they could export food, or stock food as insurance against a bad year. These countries would be especially concerned about export support as subsidized imports represent unfair (below competitive world prices) competition that undercuts and discourages domestic producers, constraining the ability of the country to achieve self-sufficiency.

Most MLICs will not be self-sufficient, but will have export earnings that allow them to meet food import needs (some MICs, such as Botswana, fall into this category). These countries can be termed potentially self-reliant. They are exposed to risk as they are export dependent on primary commodities so export earnings are volatile and in some years they may have difficulty meeting food import needs. Therefore, it is preferable that export earnings are from a diversified, especially manufacturing, portfolio. As minerals are raw material inputs for importing countries, tariffs tend to be (very) low so market access negotiations do not have major implications. As food-deficit countries, subsidized imports are a benefit.

Many SIEs and some LICs are incapable of being self-sufficient and may often find it difficult to be self-reliant, although they tend to benefit from subsidized

imports. As most SIEs are MICs they have the capability to be self-reliant, although this is often stretched (e.g. tourism is often a major export earner but this increases the demand for food imports). Some LICs could be classified as chronically food deficient and dependent on aid - these are extreme cases not covered by the analysis in this paper.

It is only the first two types that would be concerned about subsidized imports competing with local production, and for them it would be appropriate to levy a tariff equivalent to the export subsidy (to bring the import price up to the competitive world price). This would be preferable, on efficiency and cost grounds, to direct subsidies to local farmers, and could be done in a manner compatible with the WTO rules as described below. A more general argument for tariff protection could be based on a variant of the infant industry argument - given the particular constraints faced by a peasant-based agriculture system, especially if the sector has historically been discriminated against or, at least, subject to under-investment, and the need for major institutional reform, the transformation will take time. This could justify tariffs, although should not be used to justify an increase in prevailing tariffs. Higher import prices offer an incentive to domestic producers by increasing the price (return) on food relative to export crops. Evidence from Tanzania suggests that such changes in relative prices increased food crop production at the expense of cash crops (McKay, Morrissey and Vaillant, 1999).

Given their endowments, the export potential of AgLICs (and MLICs) will continue to lie in commodities. Given the problems with dependence on exports of a few unprocessed commodities, and the difficulty of diversifying into manufactured exports, two viable options arise both of which could be pursued: increasing value-added processing in agriculture and/or where arable land is available, increasing food production for the domestic market. The former strategy is constrained by tariff escalation and practices of multinationals that dominate commodity markets (Morrissey, 2005). Focusing on the latter strategy, especially given the potential to increase trade between LICs and production for the local market, successful agriculture sector reforms confer widespread benefits: yields and production increase, farm incomes and profit margins increase, and prices (especially of foods) can be reduced. As long as the agriculture strategy achieves increases in productivity, and ideally also of quality, producers will become more efficient and have a greater ability to compete with imports. There is also scope to extend the strategy to agro-processing of foods. If African producers become more competitive in regional and domestic markets, they will be more competitive in global markets. As Morrissey (2005) argues, this is not an argument for import substitution per se (substituting for imports is not the main objective), but import displacement will result from increasing the productivity of local producers. Such a "food first" strategy can have a number of benefits:

First, supporting food production encourages local and regional market integration. In many LICs, especially in Africa, emphasis on cash crop export production has encouraged transport networks linking rural areas direct to ports but neglecting internal connections. Initially, investment in transport, distribution and marketing

will be necessary to improve networks and linkages between rural areas, and between producing and consuming (typically rural and urban) areas. Over time there should be dynamic spillovers: integrated markets encourage investment, improved networks assist marketing and access to inputs, farm incomes rise and this fuels demand for non-farm services, etc.

Second, given the inherent problems with dependence on cash crop exports, substituting into food crops may be a more stable and profitable activity in the long run. Provided other elements of the strategy reduce the non-price constraints on producers, farmers will be enabled to make the best crop choices and production will have a more efficient mix of cash and food crops.

Third, quality standards for exports to developed country markets tend to be higher than justified by genuine health concerns and are often changed suddenly, imposing risks and high costs on exporters (Mold, 2005). It may be easier and less risky to produce for local or regional markets.

Fourth, greater emphasis on food production for local markets reduces the need for domestic farmers to contract as suppliers to multinationals and encourages greater independence. While some producers will continue to find it profitable to link into global commodity chains, they have a potential to diversify their markets.

Fifth, the strategy can be designed to address the specific needs of small-scale, peasant farming without neglecting the needs of more commercial, large-scale producers. In principle, investment and improvements in transport, market integration and input supply markets benefits all producers.

4. Development, trade policy and WTO rules

In principle, international trade should provide benefits to poor countries through exploiting their comparative advantage. For example, MLICs can export minerals or AgLICs can export commodities to earn the foreign exchange to pay for the imports required (food, intermediate inputs, consumption goods), such as in support of a self-reliance strategy. The inability of the countries to produce imported goods efficiently need not be a constraint if export revenues are sufficient - trade encourages an efficient allocation of resources to produce those goods where one has a comparative advantage and imports expand the consumption possibilities. In the textbook case, this increases welfare since consumers have access to a greater variety of cheaper goods and production is more efficient. Unfortunately, the textbook case rarely prevails in the real world. Two problems are particularly serious - constrained export earning potential and distorted global markets. The stated aim of the WTO is to reduce distortions in the global market. This, however, does not address the export predicament of LICs.

Morrissey (2002) emphasizes that poor developing countries face a number of risks associated with exports. The most important is volatile and generally declining terms of trade for the commodities on which they are dependent for export earnings. World prices of the primary commodities they export have tended to fall relative to the price of the manufactures they import over the past few decades (UNCTAD, 1999).

Primary commodity prices are determined in markets and affected by factors beyond the influence of poor countries (individually and, to a large extent, collectively), hence developing countries tend to be price takers. Furthermore, commodities tend to be subject to very volatile world prices and this volatility is not predictable - neither the direction nor magnitude of annual changes can be reliably forecast (Newbold, Pfaffenzeller and Rayner, 2005). This acts as a disincentive to investment, especially in agriculture, and is a major source of economic volatility. Export earnings and/or producer prices can change significantly and suddenly, with adverse implications for the whole economy. Related to this are supply side risks: in addition to exogenous price shocks, yields are affected by variability in rainfall, natural shocks, disease and plagues of insects. Agricultural production is more vulnerable to risks than either mining or manufacturing. Increasingly integrated global markets for agricultural commodities dominated by large, typically multinational, companies create a new type of risk. Global buyers are increasingly important, for example the supermarkets that control purchasing and multinationals that control the distribution chain between production and final sale (Reardon, 2002). The risk arises because small producers, and even some large producers in small countries, are the weakest link in the chain. Given all of these risks, and the tendency for individual countries to depend on a narrow range of commodities for export, the export revenue of poor developing countries is very insecure.

The problems faced by LICs are compounded by the so-called “fallacy of composition” - not only do LICs have export dependency on a narrow range of primary commodities but they tend to depend on the same commodities. In particular, they compete with each other in tropical cash crops such as cocoa, tea and coffee. If they are all encouraged to increase production to increase exports, as they were advised by the World Bank under adjustment programmes, global supply increases and prices fall. The rapid increase in coffee exports by Vietnam since the mid-90s contributed to the steep decline on world prices. It appears to be the case for SSA countries in the 1990s that export volumes increased but earnings fell. Furthermore, most LIC exports of primary commodities benefit from trade preferences: ACP countries and more recently LDCs can export most products to the EU tariff-free. As multilateral liberalization erodes these preferences, competition increases and world prices may fall further. These factors combine to undermine the potential of primary commodity exports to act as an engine of growth for LICs. Whilst it is easy to argue that these countries should diversify their exports, in most cases when they do so it is into other primary commodities, creating fallacy of composition effects, as diversifying into manufactures is at best very difficult and at worst almost impossible given the cost competitiveness of existing producers, especially China (and perhaps in the future India). Trade has not obviously worked for LICs, one reason for suggesting a food first strategy as an alternative to, or necessary precursor of, export-led growth.

Although most LICs have liberalized trade policy in recent decades and most reform has been unilateral rather than due to the WTO, in particular reducing protection against imports, this has not resulted in significant economic benefits

even if the overall impact has been mildly positive (see Ackah and Morrissey, 2005). One reason is that trade costs are high in LICs, especially in SSA and in SIEs. Transport costs are higher in SSA than other parts of the world and are a major burden on trade, increasing protection of import-competing sectors and imposing an effective tax on exports, hence constraining the response of imports and exports to trade policy reform (Milner, Morrissey and Rudaheeranwa, 2000). Another reason is that export supply response is severely constrained given the dependence of these countries on primary commodity exports with volatile world prices. Farmers in LICs do respond to changes in prices, especially in relative prices to the extent that they can substitute between crops, and non-price factors (especially access to inputs such as fertilizer, credit and land, and to infrastructure and marketing) are more important than prices in determining how much production is marketed (Abrar, Morrissey and Rayner, 2004). For countries dependent on agricultural exports, this combined with the range of issues discussed above, limits their ability to increase production in response to improved price incentives following trade liberalization (McKay, Morrissey and Vaillant, 1997). The result is that export-led growth has not proved to be a particularly effective strategy for LICs.

Although the Agreement on Agriculture (AoA) appeared to address the needs of developing countries, especially given the aims of the DDA, little of benefit to developing countries has been implemented. The aim was that developed countries would implement significant reductions in export and domestic support offered to their domestic sector, so developing countries would get greater market access for their exports. Although the AoA has encouraged a switch from subsidies that distort production towards subsidies based on environmental or non-production criteria (Matthews, 2002), levels of support remain very high in most developed countries and export subsidies have barely been reduced even ten years after signing the AoA. At the Hong Kong Ministerial, developed countries did little more than agree to eliminate export support by 2013; even this concession was extracted reluctantly. Some reforms and reductions in domestic support have begun, but often minor changes are used to reclassify measures as non-trade-distorting. To date, most developed countries have proved unwilling or unable to actually give up trade-distorting support for agriculture and many, especially the EU, are seeking to exempt many products from full liberalization obligations.

While this recalcitrance on the part of some developed countries has been detrimental to the interests of MICs, one should not exaggerate the relevance for LICs. In general, LICs do not export the commodities affected by domestic and export support in developed countries. The two major exceptions are cotton and sugar, both of which have been in effect treated separately within the WTO and the schemes ruled illegal, and they are very different cases. Large US subsidies for cotton reduce world prices and disadvantage LIC producers, especially in West Africa; eliminating subsidies would benefit some LICs. The EU Sugar Protocol provides preferential access (guaranteed prices and quotas) to ACP producers, disadvantaging non-ACP producers. The EU reforms, while reducing the benefit to EU producers, would impose a cost on ACP countries, many of which are LICs, and benefit other producers (mostly MICs). The

major commodities most affected by domestic support are temperate foods - grains (especially rice and wheat), meat and dairy products - and the basic effect of reducing support is to increase world prices. Whilst individual LICs may export some of these products, in general LICs are net importers of staple foods and therefore, *ceteris paribus*, would face higher food prices. Whether this provides an incentive to domestic producers depends on country circumstances. Although LICs do export foods, such as tropical fruits, green vegetables, fish and shellfish and beverage crops (cocoa, coffee, tea), these are not generally affected by domestic support and are not major foods for domestic consumption.

In principle, WTO rules do allow flexibility for developing countries to pursue development-oriented agriculture policies - they have lesser obligations and more time to meet WTO commitments, subsidies are permitted and they are granted special and differential treatment (SDT). However, the scope for flexibility is often ill-defined and imprecise and the complexity of rules and concessions restricts the actual policy discretion available. While developing countries have some concessions and greater flexibility than developed countries, the major concessions and SDT apply only to LDCs. However, as WTO texts sometimes refer to LDCs and sometimes to developing countries, it is not exactly clear what is being offered to whom (this lack of clarity is also evident in many commentaries, such as Stiglitz and Charlton, 2005, pp: 88-89). The DDA included negotiations on expanding the scope of SDT, although no agreement has yet been reached on what this will mean and many issues are under negotiation (ICTSD, 2005). Two distinct types of issue arise - whether SDT provisions are a right that must be granted or a recommendation that should be granted, and the extent of the actual provisions. In respect of the latter, there is difficulty in achieving agreement on the criteria for establishing which or how many special products (SPs) are eligible for "more flexible treatment" and on whether Special Safeguard Mechanisms (SSMs) to protect developing countries from import surges can also be used to address the effects of declines in world prices. Similarly, while the adverse effects of preference erosion are recognized, there is no agreement on how to address these. On a positive note, the lack of any clear agreements beyond the principle that developing countries, and especially poorer countries, are entitled to flexibility in commitments and SDT allows greater scope to suggest principles that could be applied.

There are two particular problems with the WTO rules in respect of special treatment for developing countries. The first is that the greatest concessions and exemptions are available only to LDCs, a category that does not encompass all LICs, and gradation is limited - in effect, to LDCs, developing and developed, although SIEs are to some extent recognized as a special category. Developing countries would like greater latitude to apply subsidies for development purposes, in particular to meet the needs of large peasant farming sectors, an issue addressed in negotiations on the "Development Box" or "food security box" (see Matthews, 2002). The second, and perhaps more important, is that the mechanisms to enforce compliance with WTO rules is weak, especially in respect of defending the interests of LICs against developed countries. For example, in principle if the EU dumps

subsidized food on an LIC market, the LIC could impose a countervailing tariff now that the Peace Clause has expired, but to do so would have to undertake a costly anti-dumping investigation. Alternatively, the LIC could challenge the EU subsidy under the WTO Dispute Settlement Mechanism (DSM). However, this is costly, slow and not very effective - even if the finding is against the EU, the LIC cannot realistically retaliate and the WTO is ineffective in imposing compliance by the EU. This is a general problem with the WTO, especially the DSM, but is most limiting on small countries, especially if poor, against big countries, especially if rich. This issue is addressed further in Section 5.

To better reflect the development interests of poor countries, the WTO needs to be able to provide for greater flexibility and discretion across developing countries in respect of SDT and pursuing domestic development policies, and needs to be able to support small poor countries within the WTO. As a sector, agriculture highlights the importance of non-economic factors - in considering the circumstances under which developing countries should be allowed greater flexibility, recourse can be made to development, food security and livelihood needs. Subsidies can be justified as meeting social and environmental objectives. The issue is identifying subsidies that are not trade-distorting but meet these non-economic objectives, and this has been a sticking point in the negotiations. One implication, however, is that the principle of supporting agriculture (on rural development, livelihood and food security grounds, which encompass a multitude of possible concerns) is recognized. As the details of how this can be facilitated and allowed are not clarified, there is scope for suggestions. It is important to recognize one constraint beyond the WTO remit: while rich countries can afford to provide subsidies to farmers, poor countries cannot afford to do so (at least not out of their own resources). WTO commitments are not and never have been the reason why developing countries remove or do not have subsidies for agriculture (the WTO rules allow this); the reason is typically that the World Bank and IMF, leading other aid donors in tow, have advocated the removal of subsidies and/or not allowed aid to be used to finance subsidies. This position is changing, and donor support is essential as for LICs, aid financing will be necessary to implement any effective agricultural development strategy. Development policy since the 1950s has emphasized the central importance of agriculture; the fact the agricultural development has yet to be achieved in many developing countries is not a reason for neglecting agriculture, although it does suggest that previous policies were often inappropriate.

5. Conclusions: criteria for development in the WTO

In principle, the WTO does allow developing countries, especially LDCs, flexibility in the choice of trade policy. The current approach could be depicted as one in which any WTO agreement sets the trade rules and identifies allowable exceptions and exemptions for developing countries. Members then choose the trade policy compatible with these rules given the flexibility allowed them by their circumstances. There are two principal criticisms of how this approach operates in practice. The first is that there is insufficient

recognition of stages of development - the dichotomy between LDCs and developing countries is inadequate. This is addressed under differential compliance below, the basic suggestion being to expand the classes of countries identified.

The second major criticism is that domestic policies are made to some extent subservient to (WTO) trade rules. This is reflected in the title of this paper - "what types of WTO-compatible trade policies are appropriate" - which implies that the policies be made compatible with the WTO, rather than the WTO be sufficiently flexible to be compatible with the policies. Currently too much emphasis is placed on WTO flexibility proscribing policy options rather than policy needs prescribing WTO flexibility. A tenet of the argument in this paper is that WTO rules should not overly restrict the ability of governments to implement agriculture policies and development strategies. Governments should be cautioned of the difficulties and disadvantages of using trade protection to further development objectives, but this does not mean that governments should be denied such policy options. Morrissey (2004) supports the retention of trade barriers in agriculture for two reasons. First, it cannot be assumed that the world price is a fair competitive market price: even excluding cases where developed country policies distort the world market, in many markets there are a few large firms with market power. Second, domestic producers face structural constraints that limit their current ability to compete with imports. As developing country governments have limited resources, their efforts should be directed to eliminating the structural constraints. During this phase of the development process, trade barriers may be justified to protect domestic producers from "unfair" global competition. However, it is reasonable to expect governments to make the case for such protection, and in doing so to demonstrate the senses in which import competition is unfair and what specific strategies they have in place to support domestic producers.

Three suggestions for ways in which the WTO could function to support the flexibility of countries at different stages of development, i.e., with different trade policy needs, are offered. The first is differentiating compliance for different classes of countries. The general principle is that a commitment is agreed within the WTO, such as reducing tariffs or non-tariff measures or eliminating subsidies, but there is differentiation between classes of countries according to the speed with, and degree to, which they implement the commitment. The second is the mechanism of granting flexibility to individual countries within this differentiated compliance, adding to the principle that countries can seek exemptions from full compliance with the rules with the requirement that they present the case for the exemption. The third is to propose that the WTO has the capacity to act as an advocate for poor countries, such as in trade disputes with developed countries.

On differential compliance for classes of countries, it is suggested that the LDC category be abandoned, and a more coherent distinction between LICs, MICs, SIEs and then developed countries used. This four-way classification captures the essential stages of development differences discussed above. Further distinctions within these groups are possible, between AgLICs and MLICs for example, but the important issue is to allow greater flexibility to LICs and SIEs. The LIC category is important as not all

LICs are classed as LDCs, but those LICs that are not are more similar to LDCs than to other (richer) developing countries. In terms of stages of development, and especially agriculture and trade, Ghana and Kenya for example (both LICs) are essentially similar to Uganda and Tanzania (both LDCs) but very different from MICs. Similarly, although most SIEs are middle income, in terms of economic structure they are unlike MICs and, again, their trade and agriculture needs are different.

Some commentators do not see a benefit in adopting new “typologies” of countries for SDT. Matthews (2006) argues that it would be more constructive to build on the elements of *de facto* differentiation that are emerging in negotiations, such as for SPs and SSMs, rather than trying to construct a general typology of countries to differentiate entitlement to SDT. However, he is primarily concerned about SDT relating to preferences and concessions, rather than the more general concern with allowing flexible policy discretion, especially regarding interventions to promote the development of domestic food production. Furthermore, the proposal in this paper does not really increase the number of categories already recognized - LICs replace LDCs, and SIEs are explicitly recognized.

Making the case for exemptions and exceptions. All countries seek exemptions from WTO commitments for specific products that are considered to be of particular interest. For developing countries the term used is “Special Products” which are eligible for more flexible treatment. For developed countries, the term “Sensitive Products” is used to designate those on which they wish to restrict market access. Conveniently, the acronym SPs covers both and these provide a good example of the practice suggested here for seeking specific exemptions. The proposal is simply that a country be required to make the case for any exemption or exception beyond what it is “entitled” to under differential compliance, e.g., specific products where tariffs or subsidies should be maintained or specific rules that should not be applied. The detail with which the case should be made should be differentiated by class of country.

For example, LICs and SIEs would only need to make the case for SPs at a relatively aggregate product definition (such as cattle, chicken, rice, etc. or at the 3-4 digit level) supported by evidence that there is a strategy to support domestic producers and exemption would be provided for a limited period (say seven years) after which it could be reviewed. More detail would be expected of MICs, perhaps distinguishing lower and upper middle income countries, say at the 5-6 digit product level. They would need to justify protection for the domestic sector and the period would be limited to five years. Developed countries would face the toughest requirements, being expected to defend exemptions at the 8 digit level and being expected to reduce tariffs or support to the committed level within five years.

Although it may appear administratively burdensome, especially for developed countries, this approach offers advantages. Developing countries would be required to formulate a strategy for developing the domestic sector and clarify how trade restrictions relate to the sector development policy. The burden on developed countries, and to a proportionate extent on MICs, would discourage them from seeking too many exemptions (e.g. the EU would be less inclined to argue that they should be able to class eight per cent of tariff lines as SPs, if they had to justify

each case at the 8-digit level). The approach of requiring governments to explain and justify why they seek exemptions or SPs would promote coherent policy and facilitate monitoring (e.g. the case for SPs and exemptions could be considered in any Trade Policy Review). The broad approach could be extended to other aspects of compliance, such as requiring countries to explain why they are being so slow in meeting commitments (e.g. developed countries eliminating export support and trade-distorting domestic support).

As to WTO acting as an Advocate for Weak Countries, most developing countries, especially countries that are economically small, do not have true equality of access to the WTO. For example, poor countries are disadvantaged by the WTO approach to seeking remedy, where if they win a dispute they are entitled to punish the defendant by applying tariffs. Small countries, especially if poor, are unlikely to actually be able to punish a large country, especially developed countries. In effect, for LICs and SIEs, and also many MICs (except to the extent they act together), bringing and winning a dispute is, at best, a Pyrrhic victory - they have no recourse to a mechanism to ensure compliance by the "guilty party". Morrissey (2004) suggests establishing a facility by which the WTO can bring cases on behalf of poor countries collectively, using the example of anti-dumping (e.g. if a WTO investigation established that EU policies implied that some food exports were effectively dumped, any importing country could be entitled to levy a countervailing duty). A related problem is that weak countries are less able to represent the economic interests of their producers than are the governments of large, and especially rich, countries. Shaffer (2003) shows how companies in the US and EU have forged effective partnerships, getting trade representatives to "lobby" for their interests through the WTO. The abuse of anti-dumping by the US and EU is a good example of this. The basic point is that SDT will always be constrained in practice by the fact that developing countries, and especially LICs and SIEs, are less influential within the WTO than large countries, especially large developed countries. As this is rather inevitable, the WTO should have some power to represent the development interests of weak countries collectively. This advocacy role could be implemented in granting exemptions - the WTO, for example, could provide a list of SPs for LICs.

Changes need to be made to the way in which the WTO functions to ensure that countries at different stages of development can have the types of trade policies appropriate to their development strategy while remaining WTO-compliant. However, the changes need not be great, and require little more than adapting the principles of flexibility and SDT within the WTO. A more refined gradation of countries is required, and in particular the low income distinction is more relevant to development needs than the least developed country classification. The mechanism through which countries request and are granted exemptions or exceptions to commitments should be tightened up; the additional administrative burden this may place on developing countries would be offset by the benefits. The WTO should be enabled to act as an advocate for poor and small countries as the way the WTO operates, such as the dispute settlement mechanism, disadvantages weak countries. Poor countries do have special needs, these are recognized within the WTO, but more should be done to ensure that legitimate development interests can take priority over trade rules.

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Shallow versus deep Special and Differential Treatment (SDT) and the issue of differentiation in the WTO among groups of developing countries

Alan Matthews

1. Introduction

Special and differential treatment (SDT) was part of the Uruguay Round Agreement on Agriculture (URAA) in 1994 but the substantive understanding of the term has grown since then. The preamble to that Agreement committed developed country Members, in implementing their commitments on market access, to “*take fully into account the particular needs and conditions of developing country Members by providing for a greater improvement of opportunities and terms of access for agricultural products of particular interest to these Members, including the fullest liberalization of trade in tropical agricultural products as agreed at the Mid-Term Review, and for products of particular importance to the diversification of production from the growing of illicit narcotic crops.*” It also noted that commitments under the reform programme should “[*have*] regard to the agreement that special and differential treatment for developing countries is an integral element of the negotiations, and [*take*] into account the possible negative effects of the implementation of the reform programme on least-developed and net food-importing developing countries”. These general precepts give little guidance as to the purpose or objective of SDT in the agricultural sector.

Developing countries have argued that the balance of advantages in the URAA was very tilted towards the developed countries. When new negotiations started, a rebalancing of commitments was one of their main objectives. At the very beginning of the agriculture negotiations mandated by Article 20 of the URAA, in June 2000, a group of developing countries presented a proposal for a Development Box

which set out their broad objectives and concerns with respect to the negotiations, including the need to provide adequate flexibility for these countries to adopt measures to enhance domestic food production and protect the livelihoods of the rural poor and small farmers (WTO G/AG/NG/W/13). Underlying these proposals was the belief that indiscriminate trade liberalization in agriculture negatively affects food security in developing countries and undermines the livelihoods of the rural poor, thus increasing poverty and inequality in the developing world.

These concerns were reflected in Paragraph 13 (Agriculture) of the Doha Ministerial Declaration which stated that “*special and differential treatment for developing countries shall be an integral part of all elements of the negotiations [...] so as to be operationally effective and to enable developing countries to effectively take account of their development needs, including food security and rural development.*” SDT was seen not just as something required to ease the integration of developing countries into the trading system (by providing longer transition periods to cope with weaker adjustment capacities, for example), but in addition as something (possibly more permanent) which should be built into the rules themselves to enable developing countries to achieve their food security and rural development objectives. The General Council Decision on 1 August 2004 (the July Framework Agreement, or FA) was even more explicit that special treatment of developing countries is justified in order to address their food security, rural development, poverty reduction and livelihood concerns.

1.1 The demand for differentiation

This broadening of the role for SDT in the agriculture agreement was accompanied by a growing demand to differentiate the special treatment accorded to developing countries, especially after the failure of the Cancún Ministerial (Paugam and Novel, 2005). In the Agreement on Agriculture (AoA), commitments are differentiated on the same basis as in other WTO Agreements - between developed, developing and least developed countries. However, the AoA did introduce a further category of Net Food-Importing Developing Countries (NFIDCs).¹ Although this is the only group to be defined on the basis of a specific food availability indicator, being a net food importer is poorly correlated with indicators of food security status (Diaz-Bonilla, Thomas and Robinson, 2002). The 23 NFIDCs are a diverse group with only three Low-Income countries, eleven Lower-Middle Income countries, eight Upper-Middle Income countries and one High Income country as classified by the World Bank (Kasteng, Karlsson and Lindberg, 2004). Too much should not be read into the NFIDC grouping as the commitments made in terms of technical and food aid assistance and the treatment of export credits are largely of a best-endeavour variety.

Differentiation for the purposes of special treatment has been raised in general terms in the discussions on SDT in the Committee on Trade and Development.²

¹ It is also worth noting that China was denied the full entitlement to developing country SDT on its accession to the WTO in that its domestic support *de minimis* was limited to 8.5 percent of its value of agricultural output rather than the agreed 10 percent otherwise available to developing countries.

² See, for example, European Communities (2002).

However, the US-EU proposal in August 2003 was the first explicit proposal for differentiation between the developing countries in the agricultural negotiations. It said that substantial improvements in market access should be given to developing countries “most in need” but made no attempt to define this group. *“Negotiations should therefore provide increased access opportunities for all and in particular for the developing countries most in need and take account of the importance of existing and future preferential access for developing countries”*. It went on to state that *“Having regard to their development and food security needs, developing countries shall benefit from special and differential treatment, including lower tariff reductions and longer implementation periods”*. On the other hand, the EU/US proposal also argued that *“as far as S&D treatment for developing countries is concerned, the rules and disciplines will need to be adjusted for significant net food exporting countries.”* [emphasis added].

This proposal was reiterated in US trade negotiator Robert Zoellick’s January 2004 letter to his WTO colleagues after Cancún. This letter argued that *“as we design flexibilities for countries or even types of countries or regions with special problems, we will be stymied if every provision automatically applies to some 100 or more countries -- including some that are highly competitive in a sector”*. Specifically with reference to the agriculture negotiations, Zoellick proposed that the use of special products in agriculture should be restricted to *“..certain developing countries that are concerned about harming rural development and subsistence farmers”* while calling for *“substantial openings in markets of developed and developing countries, especially those that are competitive in sectors of agriculture and with stronger economies”* [emphasis added].

The Lamy-Fischler letter to WTO Members in May 2004 setting out the EU’s response to the Cancún failure echoed the same theme but in a more generous spirit. *“More generally, we have all accepted the principle of ‘less than full reciprocity’, but it needs to be made more operational. This means that developing countries should undertake commitments in line with their importance in world trade.... Therefore, on agriculture and NAMA, we propose that the least developed countries and other weak or vulnerable developing countries in a similar situation - essentially the G90 - should not have to open their markets beyond their existing commitments, and should be able to benefit from increased market access offered by both developed and advanced developing countries”* [emphasis added].

The new EU Trade Commissioner, Peter Mandelson, reiterated the EU approach to the poorer developing countries in a speech in January 2006. *“In my view, a policy of differentiation between developing countries is now realistic, necessary and will help development. It will enable developing countries themselves to calibrate what they can contribute to the Round according to their means. And it will generate South-South trade with the strongest shoulders carrying the heavier burden. So we have to break the politically correct fallacy that developing countries are all alike and have the same interests. The G20 and the G90 do not have identical interests and capacities in trade. Some are major economic players and exporters on the world stage: others need all the help we can give them”* (Mandelson, 2006).

Greater differentiation in the AoA?

Paugam and Novel (2005) identify three main arguments for greater differentiation. One is the “one size does not fit all” argument that differentiation would help to improve the efficiency of SDT provisions. In other words, the circumstances where general WTO rules conflict with or place a burden on underlying development objectives will be limited to countries with particular characteristics. The differentiation of rules should thus be limited to the group of countries likely to be adversely affected. Although they do not explicitly state this, the assumption being made is that more far-reaching, deeper, SDT is likely to be agreed where the benefits are more targeted, and thus the direct costs to those agreeing are less. In the case of agriculture, if the purpose of SDT is to improve a country’s ability to meet its food security, rural development and sustainable livelihoods goals, then it should be limited to those countries facing food insecurity and poor agricultural performance.

A second argument is that trade policy may be a second best development instrument for countries with very weak institutions and resource base to tackle their development objectives. The threat of food insecurity to producers in the face of a sudden drop in world prices or an import surge provides a good example. While a first best solution might be to use market-based risk management mechanisms or insurance schemes or social safety nets to offset the income risk, these may simply be out of reach for very poor countries with many resource-poor farmers. The ability to implement safeguard tariffs may then be the only realistic option to provide relief in these circumstances.

A third argument is that targeting of SDT will reduce the negative externalities for others and the systemic or indirect costs of agreeing exemptions from general trade rules. Where SDT concessions are restricted to the poorer developing countries, because their share of world trade is low, the trade impacts will also be low.³ Some observers fear that extensive SDT could prove a particular hindrance to the growth of South-South trade.

Developing countries have to date resisted all efforts, both more generally within the WTO and specifically within the agriculture negotiations, to introduce differentiation. They perceive an interest in being grouped together as a bargaining force in the negotiations and that differentiation would undermine their influence, even though the existence of a variety of developing country groupings indicates that they do not all speak with one voice (FAO, 2005). There is no mention of differentiation in the July Framework or in the Hong Kong Ministerial Declaration (HK Declaration) in December 2005, although there are references to commitments to address specific problems faced by sub-sets of countries, such as “recently acceded members”, “economies where cotton has vital importance”, and the trade-related issues identified in Paragraph 35 of the Doha Work Programme for the fuller integration of small, vulnerable economies into the multilateral trading system.

³ However, even a small overall trade impact may have large consequences for a neighbouring small country as the country where access does not increase could be its major market or because it is excluded from the benefits of enhanced preferential access to higher-income markets where a competitor gains such access.

However, the HK Declaration explicitly rules out in this latter connection the creation of a new sub-category of members.

This does not mean that greater developing country differentiation for the purposes of agricultural disciplines is off the agenda. Greater differentiation is relevant in negotiating any of the individual modalities of the agriculture agreement. This paper explores the status of the individual negotiations to investigate the way in which greater differentiation might be implemented. This immediately raises the issue of what criteria to apply. Paugam and Novel (2005) classify eligibility criteria into country-based approaches, agreement-specific or rule-based approaches, and a hybrid negotiated approach to differentiation. Country-based approaches refer to eligibility criteria based on geographic or broad socio-economic criteria. Agreement-specific approaches attempt to classify countries according to the particular SDT objectives in that agreement. In the case of the agriculture agreement, this would relate to indicators of food security or rural development need.

Thus, in Section 2 the arguments why food security or rural development concerns might justify SDT are first discussed. Section 3 surveys the literature which has attempted to define groups of developing countries based on these agreement-specific criteria. Section 4 examines where greater differentiation might have a specific function in the individual modalities of the agricultural negotiations, taking into account what the July 2004 FA and the HK Declaration has to say on SDT. A possible way forward is proposed in the concluding Section 5. The paper argues that elements of *de facto* differentiation are already appearing in the agriculture negotiations and that it would be more effective to build on these elements rather than attempt to construct an all-embracing typology to make distinctions between developing countries at this stage.

2. The justification for Special and Differential Treatment in the Agreement on Agriculture

At the outset, it is necessary to confront one argument which bedevils discussion of SDT in agriculture. SDT measures cover preferential access to developed country markets (market-opening), permanent exemptions from agreed commitments in the spirit of non-reciprocity to provide greater policy space for developing countries (flexibility), longer transitional periods to implementing commitments and promises of development assistance (capacity-building). While SDT in market-opening and capacity-building is now widely accepted, the need for greater flexibility in WTO rules (to allow greater policy autonomy or policy space in the formulation of agricultural trade and support policies) is more strongly contested, with many observers questioning whether greater flexibility would actually contribute to the desired goals of increased food security and rural development.⁴

⁴ Reflecting this sceptical view, the European Communities (2002) notes that “All SDT proposals should be evaluated against the following basic criterion: will this aid the economic development of developing countries and their fuller integration of developing countries into the trading system, as opposed to creating what has been described as permanent exclusion or second tier Membership of the system?”

Arguments which may justify specific flexibilities with respect to disciplines on agricultural protection and support in developing countries include the following.

The trade liberalization damages food security argument

Opinion is divided on whether further liberalization of trade and agricultural policies within and between WTO Members will help to achieve food security in Africa and Asia, where hunger and poverty are the most severe. Critics allege that the market-based model that advocates the liberalization of international trade is not appropriate to developing countries. They argue that further liberalization of trade and agricultural policies (by developing countries) will not help, and more likely will hinder, food security. Critics believe that the liberalization of agriculture has benefited only the larger, more export-oriented farmers, has led to the concentration of farms and has marginalized small farmers and created unemployment and poverty. This argument echoes the distrust of the pro-trade argument more generally. Proponents of this argument reject the fundamental tenet of the WTO that allowing countries to take advantage of trade is a good thing. SDT then becomes a rationale to enable developing countries to avoid making any commitments.

The different role of agriculture argument.

The agricultural sector in developing countries has particular characteristics which may justify exemptions from general WTO disciplines. This includes its importance as a source of employment, contribution to GDP and foreign exchange. In itself, the relative size of a sector is not a persuasive argument to exclude it from WTO disciplines. More persuasive is the idea that there may be important spillovers or externalities from growth of agricultural output in developing countries. Agriculture-led growth strategies appear to have larger dynamic multipliers for the rest of the economy than other alternatives in poor developing countries (Delgado, Hopkins and Kelly, 1998). Agricultural growth also tends to have greater impacts on the reduction of poverty (Lipton and Ravallion, 1995) and other references in Diaz-Bonilla, Thomas and Robinson (2002). Mellor (2000) argues that there has been a tendency to generalize that economic growth reduces poverty, when in fact it is the direct and indirect effects of agricultural growth that account for virtually all of the poverty decline. Agriculture may have a particular role to play as a safety-net in developing countries for people who are unable to find alternative employment opportunities. Hence the importance of maintaining the viability of the sector, given the difficulties developing countries would face in providing alternative sources of employment for the rural poor if the size of their domestic agricultural sector were to shrink (Green and Priyadarshi, 2001). Hayami (2005) has recently drawn attention to the particular dilemma of rapidly-industrialising developing countries where comparative advantage is moving against the agricultural sector and where farm incomes may be growing but not as rapidly as incomes in the non-farm sector. Countries in this situation, moving into middle-income status, may want to find ways to reduce this income gap by transferring income to farmers to avoid social and political unrest, though Hayami underlines that our knowledge of how best to

resolve the conflict between supporting farm incomes on the one hand and ensuring the supply of low-cost food to urban workers remains very deficient.

The weakness of agriculture argument.

Here the emphasis is put on the weak market orientation, the lack of infrastructure and thus the difficulties developing country agriculture has in competing, and the consequent need to modernize the sector. For some commentators, the implication is that agricultural production needs significant support through a combination of price support, input subsidies and border protection in order to provide the production incentives required (Pearce and Morrison, 2001). Other commentators draw a different conclusion from the same diagnosis of weak agricultural structures. They argue that the underlying causes of these shortcomings need to be addressed if the potential benefits of trade liberalization are to be realized. The role of SDT is to give developing countries some breathing space to address the inadequacies in their domestic economies, which is an argument for longer transition periods, not for exemptions (Roberts, Buetre and Jotzo, 2002).

The food security argument.

The need to take account of the development needs of developing countries, including food security and rural development, was reaffirmed in the Doha Declaration (para. 13). This justification overlaps with the previous one insofar as increased domestic production, at least of particular food crops, is seen as enhancing food security. At the heart of this argument is the belief that staple food self-sufficiency is a necessary condition for food security. There is plenty of evidence that this belief is widely shared among developing countries, although analysts have pointed out that national food self-sufficiency in itself is not a guarantee of food security (Gulati, 2000).

The vulnerability argument.

Developing countries, and especially low-income farmers in these countries, are more vulnerable to the adjustment pressures caused by open trade policies. Given that the biggest source of price variability arises from domestic causes, the availability of trade plays an important role in price stabilization. However, this does not diminish the argument that the world market can also be a source of instability. Such pressures are of two kinds: (a) the transmission of the low points of fluctuations in world market prices into domestic markets, putting additional pressure on low-income farmers, and (b) the possibility of import surges. Add to this the more limited capacity of both private farmers and public institutions in developing countries to adapt to and mitigate the consequences of such instability. Both arguments may justify the maintenance of border protection measures to limit the transmission of world market variability into the markets of developing but not developed countries.

The asymmetry of support argument.

This is a powerful rhetorical argument in favour of differential treatment of developing countries in the current round of negotiations. For historical reasons, developed countries have given much higher levels of support to their farming sectors. The AoA institutionalized this imbalance by permitting developed countries to continue to provide support, while preventing those countries (mainly developing countries) who did not provide support in the past, or were not able to, from doing so in the future. As noted by the Friends of the Development Box: “Present WTO rules legitimize inequitable agricultural trade”.⁵ The presence of distorted world markets in which high levels of subsidies and protection to agriculture in most developed countries depress and destabilize world prices can be seen as a justification for the protection of domestic agriculture in developing countries.

In summary, the purported objective of the Development Box proposal is to reduce rural poverty and food insecurity and to promote, or at least not constrain, the policy autonomy of developing countries in pursuit of these goals. As in the general SDT debate, there is a tension between those who argue for increased flexibility for developing countries on one or more of the above grounds, and those who argue that the danger to development is not the WTO disciplines but the flexibility to avoid them. Sharma (2002a) points out: “Especially in the circle of trade negotiators and policy makers, there is a tendency to associate *less* binding commitments with *positive* experience, in which case a *negative* experience would be where the rules and commitments restricted actions” (italics in original). For other observers, the great benefit of the AoA is indeed that it locks in policy reform. Preserving resources and employment in traditional structures of farming can slow the process of adjustment to more productive activities and reduce economic growth.

Rather than attempt to resolve these arguments this paper starts from the acceptance in the 2004 FA and the 2005 HK Declaration that SDT provisions are an integral part of the WTO Agreements. Accepting that developing countries have gained the right to special treatment, in the remainder of the paper the focus is on how this special treatment might be differentiated in the context of any future agricultural agreement.

3. Designing criteria for SDT differentiation

By surveying a number of suggested approaches in the literature, ranging from the use of simple per capita income measures to more complex statistical techniques, this section, looks briefly at ways in which greater differentiation might be introduced into the commitments undertaken in the agriculture agreement. Using the suggested classification outcome from one comprehensive study conducted by the Swedish Board of Agriculture (Kasteng, Karlsson and Lindberg, 2004), the political economy barriers to going further down this road in a new agreement are explained.

⁵ Press statement by “Friends of the Development Box”. Doha, 10 November 2001.

Using per capita income to rank countries is an obvious way to differentiate countries according to their ability to take on additional commitments. One approach has been suggested by the International Food & Agricultural Trade Policy Council which has proposed a three-fold distinction based in a modified way on the distinctions drawn by the World Bank and the IMF based on per capita income (IPC, 2004). But while the World Bank distinguishes between low income, lower middle income and upper middle income developing countries, the IPC proposes to distinguish between least developed countries, lower middle income and upper middle income countries. The LDC grouping would be based on the UN definition (which includes institutional constraints as well as per capita income) but, in addition, would include all countries with a per capita income less than US\$900 (the World Bank uses a threshold of US\$765 per capita to distinguish between low income and lower middle income countries). It also suggests a flexible mechanism whereby countries facing particular constraints, such as small island states, land-locked countries or vulnerable economies, could apply for classification into the next lower category if their per capita income does not take into account unique vulnerabilities. It then argues that the degree of S&D treatment should be differentiated over these three groups, rather than two as at present. For example, with respect to market access, it suggests that upper middle income countries should accept the same tariff reductions as developed countries but with a longer implementation period, the lower middle income countries might be offered both lower reduction commitments and a longer implementation period, while LDCs would not be required to make reduction commitments.

In a study for the Swedish Board of Agriculture, Kasteng, Karlsson and Lindberg, (2004) take this classification as their starting point to develop a typology of developing countries but separate out two further groups of developing countries. The first is a group of high income advanced developing countries, generally with low dependence on agriculture, which in their view “*might be given the same conditions as the developed countries in the field of agriculture*”. The second is a group of significant net food exporting countries, as suggested in the EU/US proposal presented before the Cancún Ministerial. Using a classification developed by the WTO Committee on Agriculture of significant exporters which are countries representing more than five percent of the total global export of a certain product or product group, they identify nine developing countries which fall into this category. However, as four of these countries fall into the food insecure group as defined by Diaz-Bonilla, Thomas and Robinson, and a fifth is Hong Kong which overall is a significant net food importer (it is included in this group because its share of world exports of poultry meat exceeds the five percent threshold), this leaves just four countries which they classify as net agricultural exporters: Argentina, Brazil, China and Thailand. The overall system of differentiation proposed by the Kasteng *et al* study is shown in Table 1.

TABLE 1
Differentiation between developing countries: Swedish Board of Agriculture proposals

	Low income Countries	Middle-Income Countries	High-income Countries
Food insecure countries, including LDCs	<p>Angola, Azerbaijan, Bangladesh, Benin, Bhutan, Burkina Faso, Burundi, Cambodia, Cameroon, Central African Republic, Chad, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Equatorial Guinea, Ethiopia, Gambia, Georgia, Ghana, Guinea, Guinea Bissau, Haiti, India, Kenya, Lao People's Democratic Republic, Lesotho, Madagascar, Malawi, Mali, Mauritania, Mongolia, Mozambique, Myanmar, Nepal, Nicaragua, Niger, Pakistan, Papua New Guinea, Rwanda, Samoa, Sao Tome & Principe, Senegal, Sierra Leone, Solomon Islands, Sudan, Tajikistan, Togo, Uganda, United Republic of Tanzania, Vietnam, Yemen, Zambia, Zimbabwe</p>	<p>Albania, Armenia, Bolivia, Botswana, Cape Verde, Cuba, Djibouti, Dominican Republic, El Salvador, Grenada, Guatemala, Honduras, Iraq, Maldives, Namibia, Peru, Philippines, Seychelles, Sri Lanka, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & the Grenadines, Vanuatu</p>	
Developing countries with special need for rural development	<p>Indonesia, Kyrgyzstan, Moldavia, Nigeria, Uzbekistan</p>	<p>Algeria, Belize, Bosnia & Herzegovina, Chile, Colombia, Costa Rica, Dominica, Ecuador, Egypt, Fiji, Gabon, Guyana, Jamaica, Jordan, Kazakhstan, Lebanon, Macedonia (FYR), Malaysia, Morocco, Mauritius, Mexico, Panama, Paraguay, Qatar, Romania, Saudi Arabia, Serbia & Montenegro, Suriname, Swaziland, Tonga, Trinidad & Tobago, Tunisia, Turkey, Uruguay, Venezuela</p>	

Significant net-agricultural exporting countries	Argentina, Brazil, China, Thailand
Advanced developing Countries	Antigua & Barbuda, Bahamas, Bahrain, Barbados, Brunei, Hong Kong, Israel, Kuwait, Macao, Oman, Singapore, South Korea, Taiwan, United Arab Emirates
Developed countries, including observer countries	Belarus, <u>Bulgaria</u> , <u>Croatia</u> , <u>Czech Republic</u> , <u>Estonia</u> , <u>Hungary</u> , <u>Latvia</u> , <u>Lithuania</u> , <u>Poland</u> , Russia, <u>Slovak Republic</u> , <u>South Africa</u> , Ukraine, Andorra, <u>Australia</u> , <u>Austria</u> , <u>Belgium</u> , <u>Canada</u> , <u>Cyprus</u> , <u>Denmark</u> , <u>Finland</u> , <u>France</u> , <u>Germany</u> , <u>Greece</u> , <u>Iceland</u> , <u>Ireland</u> , <u>Italy</u> , <u>Japan</u> , <u>Liechtenstein</u> , <u>Luxembourg</u> , <u>Malta</u> , <u>Netherlands</u> , <u>New Zealand</u> , <u>Norway</u> , <u>Portugal</u> , <u>Slovenia</u> , <u>Spain</u> , <u>Sweden</u> , <u>Switzerland</u> , <u>United Kingdom</u> , <u>United States of America</u> .

Notes: Countries in bold: LDC (Least Developed Countries) category. Countries in italics: *NFIDC* (net food-importing developing countries) category. Countries underlined: WTO Developed Countries category. WTO members not included due to lack of data: Bahrain, Cyprus, Liechtenstein, Macao, Oman, Qatar, Singapore, Taiwan. WTO observers not included due to lack of data: Andorra, Bahamas, **Bhutan**, Bosnia & Herzegovina, **Equatorial Guinea**, Holy See (Vatican), Iraq, **Samoa**, **Sao Tome and Principe**, Serbia & Montenegro, Tonga.

Source: Kasteng, Karlsson and Lindberg, 2004.

The table illustrates the nature of the deal which has to be made if greater differentiation is to become a reality in the agriculture agreement. Essentially a group of advanced developing countries and a smaller group of significant net agricultural exporting developing countries would be asked to forgo taking advantage of SDT measures to which they might otherwise be entitled under an eventual Agreement. To persuade them to do this, the developed countries would have to make clear that this would lead to deeper SDT measures being offered to a wider group of low- and middle-income developing countries than just the LDCs that are defined to suffer from food insecurity.

Alternative approaches focus more directly on the food security objectives of SDT in the agriculture agreement and seek to explicitly distinguish between food insecure, food neutral and food secure countries. Food security is here being defined at the national level, but there is no consensus on how to do this. Ruffer, Jones and Akroyd (2002) examine the classification of countries on the basis of five plausible criteria to define a food insecure country. They find that only seven countries (of which only four were WTO members) meet all criteria for food insecure countries where data exists! This indicates that the classification question is not an innocent technical question but is likely to prove highly controversial.

Also starting from the concept of national food insecurity, Stevens and Kennan (2003) link calorie supply, agricultural dependence, export market share and vulnerability to identify countries with the greatest potential need to support their domestic agricultural sector (and, hence, not to be restricted in the use of subsidies) and those most vulnerable to world market changes that would follow significant OECD liberalization (and hence in need of adjustment support).

Diaz-Bonilla, Thomas and Robinson (2000) use various methods of cluster analysis for 167 countries to identify groups of countries categorized according to five measures of food security: food production per capita, the ratio of total exports to food imports, calories per capita, protein per capita, and the share of the non-agricultural population. Their results identify 12 clusters of countries according to their similarities in their food security profiles. On the basis of the identified clusters, countries are placed in one of the following three categories: (1) food secure; (2) food neutral, and (3) food insecure. Their classification of food insecure countries covers almost all LDCs, with the exceptions of Cape Verde, Maldives and Myanmar. However, their system of differentiation also includes in the food insecure group many countries not covered by the Marrakesh Decision which distinguishes LDCs and the NFDCs.

However, there appears to be little likelihood that a general system of differentiation based on further distinctions in per capita income or other country-level criteria would be agreed in the Doha Round. Nor is it likely that there would be agreement to create new categories of food insecure and food secure countries. Instead, we argue that further differentiation, if agreed, is likely to be related much more to very specific aspects of the rules and very likely in an ad hoc manner. Three possible approaches to differentiation which already exist either in the Agriculture Agreement or other WTO Agreements are explored: formal rule based thresholds (an example would be the provision in the subsidies code that countries with a per capita income less than US\$1000 are entitled to use export subsidies); voluntary declarations of intent on the part of specific countries to abstain from availing of general SDT provisions (an example would be the declaration by some developing countries, not corresponding to any income or other group, that they would not use the TRIPS/drugs import provisions) or what might be called *implicit differentiation* (an example in the agriculture agreement is the provision that input subsidies generally available to low income or resource poor producers are exempt from AMS reduction commitments; because countries will have different proportions of such producers, this provision effectively has a differentiated impact).

4. Applying greater differentiation in the Agriculture Agreement

4.1 Market access

By common consent, the market access pillar has been proving the most difficult to negotiate. The July 2004 FA set out a number of agreed principles to guide the negotiations. These were: a high level of ambition in the overall outcome; that highest tariffs would be reduced the most; that a tiered approach would be used;

that special treatment would apply to sensitive products; and that SDT would apply to developing countries. The SDT provisions under this pillar in the FA are summarized in Table 2. The HK Declaration agreed that there would be four bands for structuring tariff cuts, but there was no agreement on how these principles would be made operational. The report of the Chairman of the Agriculture negotiating group (hereafter referred to as the Chairman's text) simply sets out the range of positions which have been put forward by members to date.

TABLE 2
SDT provisions relating to market access in the July 2004 FA

Paragraphs 27 and 29	Members also agreed that special and differential treatment for developing Members would be an integral part of all elements in the [market access] negotiations.... Each Member (other than LDCs) will make a contribution. Operationally effective special and differential provisions for developing country Members will be an integral part of all elements.
Paragraph 39	Having regard to their rural development, food security and/or livelihood security needs, special and differential treatment for developing countries will be an integral part of all elements of the negotiation, including the tariff reduction formula, the number and treatment of sensitive products, expansion of tariff rate quotas, and implementation period.
Paragraph 40	Proportionality will be achieved by requiring lesser tariff reduction commitments or tariff quota expansion commitments from developing country Members.
Paragraph 41	Developing country Members will have the flexibility to designate an appropriate number of products as Special Products, based on criteria of food security, livelihood security and rural development needs. These products will be eligible for more flexible treatment. The criteria and treatment of these products will be further specified during the negotiation phase and will recognize the fundamental importance of Special Products to developing countries.
Paragraph 42	A Special Safeguard Mechanism (SSM) will be established for use by developing country Members.
Paragraph 43	Full implementation of the long-standing commitment to achieve the fullest liberalization of trade in tropical agricultural products and for products of particular importance to the diversification of production from the growing of illicit narcotic crops is overdue and will be addressed effectively in the market access negotiations.

4.2 Tariff reduction formulae and policy space

As noted, many developing countries want to retain the maximum amount of policy space to pursue domestic food and agricultural policy objectives. Leaving aside the LDCs where there is already agreement that they will not be asked to make tariff reduction commitments, an important issue for other developing countries is how to reconcile a harmonising formula approach to tariff reductions with special and differential treatment. SDT in the Uruguay Round (UR) meant that commitments by developing countries averaged two-thirds of those undertaken by developed countries. If this is to be repeated in the Doha Round, the question is whether this commitment is built into the formula to be used or into the objective to be achieved.

There is huge variation in initial tariff structures across countries, with many developing countries which opted for ceiling bindings having much higher bound rates than developed countries. Application of a differentiated formula could even lead to the perverse outcome whereby poorer developing countries are asked to make proportionately greater reductions given the initial structure of their tariffs.⁶

Because of the rather arbitrary way in which the average cuts required of developing countries will be distributed under any of the formulae publicly proposed to date⁷, the scope for applying greater rule-based differentiation is not clear. One way to get around this conundrum would be for each country to place its tariff into four tiers, where the reduction coefficient is decided for each tier but the thresholds are flexible and determined in such a way that the overall reduction (including taking sensitive products into account) meets the average target established for the country group with which a country is associated. This would allow the average target to be differentiated according to a country's food security status if appropriate eligibility criteria were agreed.

4.3 Sensitive Products

The outcomes are further complicated by the provision in the FA (paragraph 39) that developing countries will benefit from special and differential treatment (SDT) in the designation and treatment of sensitive products. The debate on sensitive products is linked to the degree of flexibility included in the tariff reduction formula. To ensure a significant degree of market opening, the FA accepted that tariff rate quotas (TRQs) would have to be increased to compensate for a lower tariff reduction. However, there was disagreement about whether the tariff reduction/TRQ expansion combination should be related to the main formula for tariff reduction or not. The HK Declaration simply notes "the need to agree on treatment of sensitive products, taking into account all the elements involved."

The Chairman's text (footnote 15) notes that a group of members have proposed that the principles of sensitive products generally and for TRQs specifically should be different for developing countries. Another group has proposed an entitlement for developing countries of at least 50 percent more than the maximum number of lines used by any developed Member. This group has also proposed that products relating to long-standing preferences should be designated as sensitive and that any TRQ expansion should not be "at the detriment of existing ACP quotas", but other members argue that tropical and diversification products should not at all be designated as sensitive products. This is likely to be a crunch point in the negotiations, with developed countries unlikely to agree to a significantly larger number of sensitive product exceptions if these will be used by the more competitive agricultural exporters. Some form of voluntary adherence by these countries to a

⁶ See Matthews, 2005, for further discussion. Examples of differing tariff structures for individual countries are given in Jales *et al.*, 2005.

⁷ Footnote 13 of the Chairman's text provides an illustrative table that portrays the extent of the divergences in the members' proposals to date.

lower limit, to be later incorporated into their specific schedules of concessions on an ad hoc basis, could be the way forward in this area.

4.4 Special Products

In addition to being able to designate sensitive products, the FA foresees (paragraph 41) that “Developing country Members will have the flexibility to designate an appropriate number of products as Special Products, based on criteria of food security, livelihood security and rural development needs. These products will be eligible for more flexible treatment.” This guarantees that developing countries will have access to this flexibility in a revised agreement on agriculture and it clarifies that the basic criteria that should guide the designation of SPs will be food and livelihood security, and rural development needs. On the other hand, the text establishes limits to the possible scope of SPs, for instance, by requiring that only an appropriate number of products can be so designated. How this number should be determined is left to further negotiation, as is the treatment of SPs. The HK Declaration merely clarified that the choice of SPs would be self-designation by developing country members.

From the point of view of greater differentiation, the key issue is whether all developing countries should have the same potential access to SPs, regardless of how defined or how treated. Two criteria to limit the number have been proposed: a certain number of tariff lines, or imports accounting for a certain proportion of the value of imports. The latter would allow a country to choose between a small number of products accounting for a sizeable share of imports, or a larger number of less significant products in import value terms. Ruffer (2003) suggests varying these numbers by the level of per capita income. Alternatively, the criteria for choosing special products could be made more generous for more food insecure countries. Note that even holding the same threshold for all countries would imply some differentiation in effect, to the extent that smaller countries are more likely to be food insecure. Small countries with undiversified production may only need a small number of SPs to provide significant protection to their domestic agriculture; a larger country with a more diversified agriculture may need a larger number of SPs.

4.5 Special Safeguard Mechanism

Developing countries have worried that trade liberalization could leave them vulnerable to import surges or a price collapse on world markets, in a situation where they have very limited ability to protect producers through purely internal measures. The HK Declaration states that “Developing country Members will also have the right to have recourse to a Special Safeguard Mechanism based on import quantity and price triggers, with precise arrangements to be further defined”.

The G33, an alliance of developing countries formed to promote the need for an SSM and SPs, has argued that the SSM should be available for all agricultural products. On the other hand, many developed countries (and some developing countries) have argued for restricted product coverage and more limited triggers and remedies. These disagreements in relation to product eligibility revolve around

a number of issues: whether to limit SSM use to a specific number of tariff lines or allow access by all tariff lines; whether to use multilaterally agreed, development-related criteria or to allow self-designation; and whether access to the SSM should be related either to the depth of the tariff cuts and/or the final level of the bound tariff. Developed countries suggest that the SSM should apply only to staple food products or products necessary for food security that are produced in the developing country concerned, and to products that already have low tariffs, in order to facilitate the overall liberalization process.⁸

Greater differentiation could apply to various elements of the SSM. Food-insecure countries could be allowed to designate a greater number of eligible products, or could be allowed easier triggers, or could be allowed to apply stronger remedies, or for a longer duration. The most likely element for differentiation concerns the number of eligible products. All products might be deemed eligible for food-insecure countries, while more advanced developing countries might be restricted to a limited number. The general discussion on the criteria for differentiation in the previous section remain relevant here.

4.6 Domestic support

Few developing countries have entitlements to provide trade-distorting domestic support beyond *de minimis* levels. The FA (paragraph 6) recognizes that “Special and differential treatment remains an integral component of domestic support. Modalities to be developed will include longer implementation periods and lower reduction coefficients for all types of trade-distorting domestic support and continued access to the provisions under Article 6.2.” It also states (Paragraph 11) that “*Reductions in de minimis will be negotiated taking into account the principle of special and differential treatment. Developing countries that allocate almost all de minimis programmes for subsistence and resource-poor farmers will be exempt*”. Crucially, this goes beyond the exemptions in Article 6.2 in allowing coupled direct payment programmes if a country has the budget resources and sees a need for these. The HK Declaration adds that “Developing country Members with no AMS commitments will be exempt from reductions in *de minimis* and the overall cut in trade-distorting domestic support”.

To the extent that countries without an AMS commitment span the full range of food security and income categories among developing countries, this last provision implies that developed countries no longer seek greater differentiation with respect to this particular discipline. For those (on the whole, among the more advanced) developing countries with an AMS commitment, presumably the provisions of the FA will continue to apply. If these countries allocate almost all *de minimis* programmes for subsistence and resource-poor farmers, their *de minimis* payments will also be exempt from reductions. FAO (2005) acknowledges that defining these terms is problematic, both conceptually and in terms of data availability. It suggests that countries with more than a specified proportion of their population (say 50 percent) working in agriculture

⁸ The 2003 US-EU joint proposal stated that a special agricultural safeguard (SSM) shall be established for use by developing countries as regards import-sensitive tariff lines.

and with a certain proportion of the population with income below a certain level would automatically qualify for exemption under this heading. The approach of seeking differentiation at the level of the very specific rule seems also to work in this context.

4.7 Export competition

Because few developing countries are entitled to use export subsidies, they have few defensive interests in this pillar (see Table 3 for a list of relevant SDT provisions in the Framework Agreement). The HK Declaration provides that developing country Members will continue to benefit from the provisions of Article 9.4 of the Agreement on Agriculture for five years after the end-date for elimination of all forms of export subsidies.

TABLE 3
SDT provisions relating to export competition in the July Framework

Export competition	
Paragraph 22	Developing country Members will benefit from longer implementation periods for the phasing out of all forms of export subsidies.
Paragraph 23	Developing countries will continue to benefit from special and differential treatment under the provisions of Article 9.4 of the Agreement on Agriculture for a reasonable period, to be negotiated, after the phasing out of all forms of export subsidies and implementation of all disciplines identified above are completed.
Paragraph 24	Members will ensure that the disciplines on export credits, export credit guarantees or insurance programmes to be agreed will make appropriate provision for differential treatment in favour of least-developed and net food-importing developing countries as provided for in paragraph 4 of the Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least- Developed and Net Food-Importing Developing Countries.
Paragraph 25	STEs in developing country Members which enjoy special privileges to preserve domestic consumer price stability and to ensure food security will receive special consideration for maintaining monopoly status.
Paragraph 26	In exceptional circumstances, which cannot be adequately covered by food aid, commercial export credits or preferential international financing facilities, ad hoc temporary financing arrangements relating to exports to developing countries may be agreed by Members.

Other developing countries are concerned that the disciplines on export competition measures, including export credits and food aid, could have negative implications for meeting humanitarian and development needs. The HK Declaration states that such disciplines will provide for differential treatment in favour of the least developed and net food importing countries, without compromising the objective of eliminating their trade-distorting effects. It refers to the Marrakesh Decision in favour of these countries to maintain food aid levels, but without acknowledging the structural flaws in the Decision that have prevented its implementation.

Some developing countries also have interests in the State Trading Enterprises (STE) debate. Although state marketing boards are now much less prevalent in developing countries than used to be the case, disciplines on the financing of STEs, and on the use of monopoly export powers, will affect some countries. Kenya has proposed that developing country STEs be exempt from disciplines because of the role they play in development. The FA proposes that “STE in developing country Members which enjoy special privileges to preserve domestic consumer price stability and to ensure food security will receive special consideration for maintaining monopoly status”. Given this qualification on the bodies eligible for special treatment, differentiation does not appear to be an issue in this area either.

4.8 Differentiation in market-opening SDT

Differentiation in market-opening can be viewed from two perspectives: from the point of view of the preference donor, and the point of view of the preference recipient. In the HK Declaration, developed country Members, and developing country Members declaring themselves in a position to do so, have agreed to implement duty-free and quota-free market access, with some qualifications, for products originating from LDCs by 2008 or earlier if the implementation period of a new agreement begins before then. The inclusion of some developing countries as preference donors is an example of voluntary differentiation at work.

Under the 1979 Enabling Clause, preferential market access can be offered to developing countries, and least developed countries (LDCs) can receive even more favourable treatment. The question is whether further differentiation in these eligible categories is sought or desirable. For example, the EU has proposed that duty-free and quota-free access be offered to all low income countries, and not just the LDCs. Very little attention or analysis has been given to this potentially radical proposal, giving the impression that the EU is not very serious about it. What seems relevant in this instance, however, is that preference schemes are autonomous decisions by the donor and are not bound in WTO. Even the new scheme for LDCs agreed in the HK Declaration refers to providing duty-free access on a lasting basis, rather than as a formal bound commitment. The Appellate Body decision on the EU GSP case allows donors to discriminate in their preference schemes between different categories of developing countries, provided objective and transparent criteria are used. Thus differentiation in special treatment for developing countries has not become an issue in the market-opening negotiations in the Doha Round.

5. Conclusions

This paper explores how greater differentiation of special treatment for developing countries might be applied within the agreement on agriculture under negotiation in the Doha Round. Greater differentiation has been proposed by the developed countries as a way of limiting the cost to them of SDT, but there are attractions if it encouraged the offer of more operationally effective SDT by the developed (and possibly, more advanced developing) countries and because it would limit the collateral damage of deeper SDT if fewer countries were able to avail of it.

SDT in the agriculture agreement is increasingly justified in the context of its contribution to promoting food security, poverty alleviation and rural development. This suggests that any attempt to differentiate further between developing countries should seek to do so on the basis of food security and agricultural performance data. One immediate issue is that indicators of food security are not necessarily relevant to judging rural development needs. Even focusing on a single criterion, such as food security, does not make the selection of countries easier, as studies have shown that a country's food security standing is greatly influenced by the particular indicator used to measure this status. Naturally, WTO member countries armed with the information on how well they will do from the negotiations beforehand will have every incentive to select an index which shows their case in a favourable light.

This review of the state of the negotiations has shown that the debate on differentiation in the agricultural negotiations is really about a very narrow set of issues, entirely in the market access pillar. Differentiation has not been sought in the export competition pillar. Differentiation has been agreed on an implicit basis in the domestic support pillar. Differentiation with respect to market-opening and preferences remains the prerogative of the preference donor. It is only with respect to a limited number of issues in the market access pillar - the number of sensitive and special products, and the coverage of the SSM, where the issue remains alive. The paper has suggested a number of approaches which would permit *de facto* differentiation in these areas without creating new categories of members in the WTO. Rule-specific thresholds or solutions may be found, voluntary declarations by some more advanced developing country members which are later incorporated in their schedules of concession may be pursued, or the rules themselves can be defined in such a way that they imply implicit differentiation.

What remains is to create the political conditions in which these issues can be resolved. The more advanced developing countries need to be shown what are the gains that might be achieved (in terms of greater SDT concessions for other developing countries) if they were to agree to restrict their use of these concessions. The way to do this is for the developed countries to outline the more ambitious SDT offers they are prepared to make to recognize developing countries' concerns on food security and rural development. In return, the more advanced developing countries could agree that they would not seek to make use of these greater flexibilities. A more ambitious SDT offer should recognize that many low-income countries (and not just LDCs) are food-insecure (perhaps embracing the EU offer to give the G-90 countries the round "for free", and that even food-neutral developing countries will have rural development goals which could justify rule exemptions. Such an offer could help build the momentum for the more vulnerable developing countries to break ranks and to put pressure on the more advanced developing countries to reach a deal. Without the framework for a more generous SDT package on the table, it is hard to see what incentive there is for the more advanced developing countries to forego the benefits of SDT to which they are entitled under the FA and the HK Declaration.

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WTO Agreement limits as a development instrument: synergies and complementarities of WTO rules for agriculture with reform programmes sponsored by the World Bank and IMF

John Nash

1. Introduction

A discussion of the limits of WTO agreements as development instruments should in no way be taken to imply any criticism of the WTO as an institution, nor of the agreements under its purview, since the WTO was not designed to be a development agency per se. This point is underscored by the necessity of calling the current negotiations a “development round” to emphasize the shift in objective. Of course, whether the negotiations can deliver on this objective remains in question, and will in the end depend on decisions in both the developing and industrialized countries.

The paper starts from the premise that trade is in general good for development, and that it is in the interest of developing countries that barriers to trade in both industrialized and developing countries be reduced, particularly those that obstruct agricultural trade. This follows from the evidence that the gains to poor countries from a sweeping liberalization are (1) significant; (2) predominantly from agricultural liberalization; and (3) a result of liberalization both in industrialized countries and in important measure from liberalization in the developing countries themselves (see Anderson and Martin, 2005, chapter 1).

The real questions, then, are two. First, how effective the WTO has been - or can be - in reducing these barriers; and, second, how its rules and activities interact with those of the World Bank, which has development as its central objective,

and to a lesser extent with those of the IMF. This paper examines each of these questions in turn. The discussion of the first question comprises sections on the evolution of developed country and developing country agricultural trade policy. The second question is sub-divided into sections on (a) how the International Financial Institutions (IFIs) may or may not have influenced trade policy (general and agricultural trade policy are considered in separate sections), (b) the role of aid for trade, and (c) the involvement of the World Bank in some specific issues being addressed in the Doha negotiations.

2. How effective is the WTO in reducing agricultural trade barriers?

2.1 Industrialized countries

With respect to explicit policies that distort agricultural trade - the “three pillars” of market access barriers, domestic support, and export competition - the effectiveness of the Uruguay Round Agreement on Agriculture (URAA) has been analyzed in some detail, and the point duly noted that because of its many loopholes, distortionary policies have been reduced less than many had originally expected. Nonetheless, over time the cumulative effect has been significant for developed countries. Josling (2006) includes a good survey of this and concludes that the framework of the URAA appeared to be “permissive,” and to require few major changes, but over time “the noose has tightened somewhat.” The URAA brought agriculture under the purview of the WTO, and made considerable progress in increasing the transparency of import barriers by transforming some of the non-tariff barriers to tariffs. True protection is still partially obscured by the plethora of tariff rate quotas (TRQs) and specific tariffs, but the situation is much improved relative to pre-URAA. Market access overall has undoubtedly improved also, but not nearly as much as would be suggested by the tariff reduction commitment of 36 percent. Total support has been reduced hardly at all - the OECD’s Producer Support Equivalent (PSE) has fallen from US\$241 billion in 1986-88 to US\$238 billion in 2001-2003 - but its composition has changed a bit, as the fraction of PSE administered as decoupled support has increased from 8.5 percent to 11.5 percent over this period (Anderson and Martin, 2005, figure 1.2).

Still, there remains a lot of “water” or “binding overhang” in all three pillars. With respect to export competition, the ceiling commitments on global export subsidies fell from US\$20 billion in 1986-88 to US\$13.4 billion in 2000. Actual subsidy values were constrained by these ceilings in the mid-1990s, but by 2000, were far lower than the ceiling (actual subsidies in 2000 were only about US\$3.2 billion), due largely to the significant reduction in the EU’s utilization of this instrument (Josling, 2006. Table 3).

With respect to tariffs, Jean, Laborde & Martin (2005, Table 4.2) report that developed countries have an average bound agricultural tariff level of 27 percent, compared to an average MFN level of 22 percent and an applied tariff (taking into account reduced tariffs due to preferential access agreements) of 14 percent, while the analogous figures for developing countries are 48, 28, and 21 percent. But the

levels in developed countries are much more variable across commodities because of very high tariff peaks for sensitive products. As a result of this structure, only tariff cuts that are fairly steep - and, more importantly, with very few exceptions - are likely to have a significant impact in increasing market access. Anderson and Martin find that if even as few as 2 percent of tariff lines are exempt from deep cuts (as “sensitive” or “special” products), benefits would largely be lost.

Likewise, the ceilings on domestic support are now binding in only a few countries (Table 1).

TABLE 1
Current Aggregate Measurement of Support as share of ceiling, selected countries (percent)

	United States	European Union	Japan	Canada	Norway	Argentina	Korea Rep.	Mexico	Switzerland
1995	26.9	63.6	73.1	15.0	70.7	143.8	95.1	4.8	83.3
1996	26.5	66.8	71.8	12.3	78.8	99.9	93.4	3.2	73.8
1997	29.0	67.8	70.9	10.8	81.7	99.9	95.5	11.5	71.9
1998	50.2	65.1	17.8	16.9	87.8	99.4	80.1	13.8	71.0
1999	84.7	68.9	18.1	-	90.4	99.6	82.8	-	-

Source: Josling, 2006.

Consequently, even very deep cuts of the agreed ceiling will result in actual reductions in only a few countries (Table 2).

TABLE 2
Reductions in actual domestic support required to meet a 75 percent cut requirement (percent)

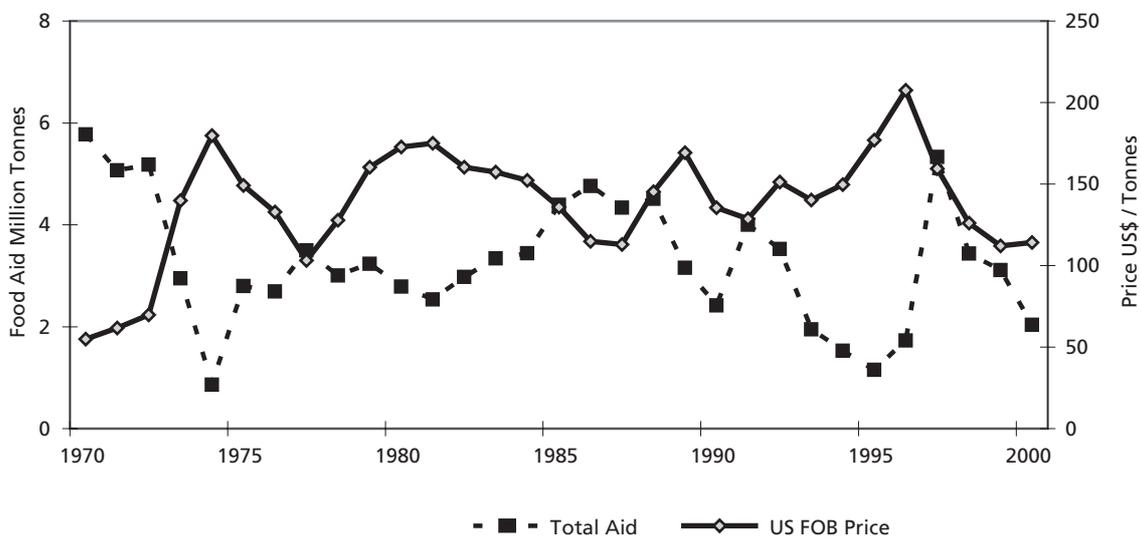
Reduction from current	
Norway	18.4
EU	15.9
Australia	10.4
United States of America	28.1

Source: Jensen and Zobbe, 2005.

Finally, judging from the pattern of food aid supplies and world prices, it appears that the URAA provisions on food aid disciplines have not been especially effective. Food aid has been most abundant when world markets are suffering from gluts, not shortages (Figure 1).

With respect to industrialized country agricultural trade policy, then, the overall picture that emerges is of significant, but not enormous, reforms since the early to mid-1990s. The presence of so much water in the use of all of the instruments disciplined under the URAA makes it hard to conclude that the WTO agreement

FIGURE 1
Food aid and wheat prices



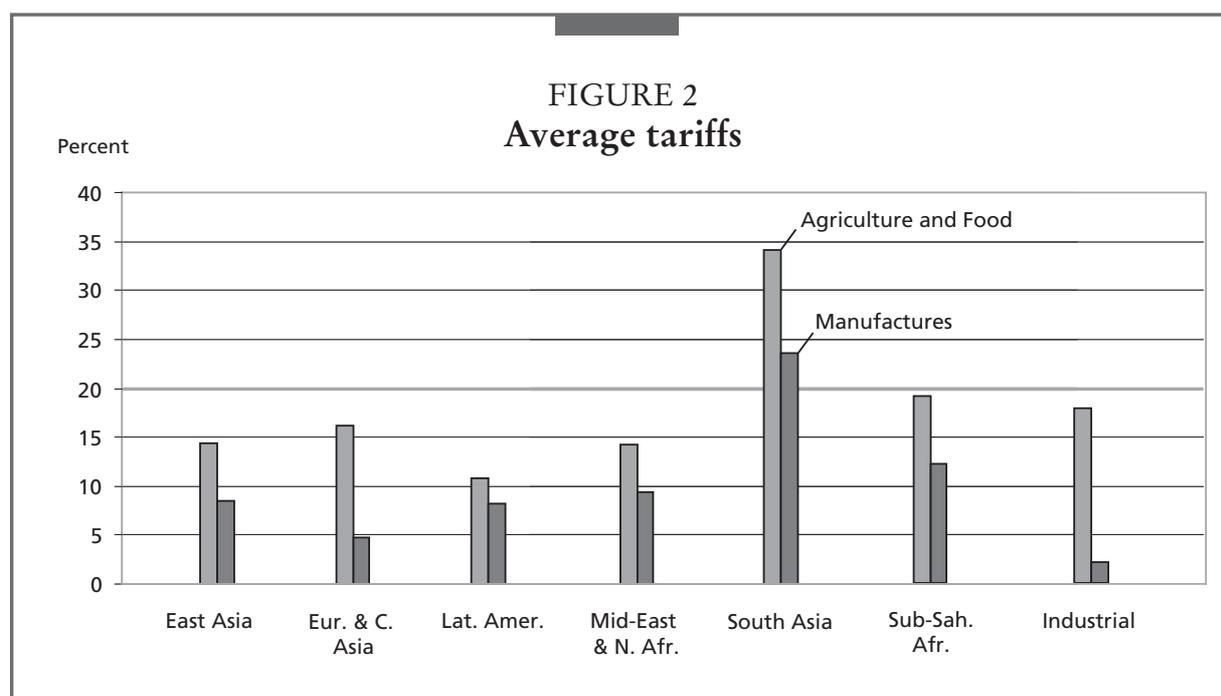
Source: USDA and World Bank

was the only driver of these changes. But most observers would probably conclude that it was an important factor in the minds of policy-makers when they were considering reforms for whatever reason.

2.2 Developing countries

The developing countries are a different story. The work of Krueger, Schiff and Valdès (1988) found that in the 1960s and 1970s, the trade and macroeconomic policies of many developing countries created a strong bias against agricultural production, in some cases by explicit taxation, but more commonly through high protection of the manufacturing sector and overvaluation of the exchange rate. Operations of state trading organizations in many agricultural products increased the inefficiency of the system and the bias against producers (Bautista and Valdès, 1993). Trade policy in developing countries has clearly evolved over the last two decades in a direction that has reduced the barriers to trade in general and consequently reduced the previous anti-agricultural bias. By the early 2000s, tariffs in most developing regions had fallen by 40 to 70 percent, relative to their levels in the 1980s (Orden and Diaz-Bonilla, 2005). Real effective exchange rates also showed substantial devaluation, due to the reduction in trade barriers and macroeconomic reforms -15-20 percent in Latin America, around 40 percent in Asia, and 45- 55 percent in Africa (Cashin, Céspedes and Sahay, 2002). Some even argue that the anti-agricultural bias has been eliminated or reversed on average across developing countries (Jensen, Robinson, and Tarp, 2002). Certainly, any bias in the tariff regime seems to have been eliminated, with agricultural tariffs now higher than

manufactures in all regions (Figure 2). Dimaranan, Hertel and Martin (2006) find that the average tariff on agriculture and food imports in developing countries is about 11 percent, compared to 7 percent for manufactured products. Conclusive evidence on the question of whether the overall bias has been reversed will require in-depth analysis of a larger sample than has been examined in existing studies.



One question relevant to the current paper, however, is to what extent this reduction in trade barriers can be attributed to commitments in the URAA. And the answer appears to be “very little” in most developing countries. First, developing countries were not required to bind tariffs at levels approximating their existing levels of protection. As a result, many countries have bound levels that are relatively uniform, but far above levels actually applied. And after the initial binding period, the effectiveness of the URAA in reducing barriers in developing countries was especially limited by the ability of these countries to appeal to “special and differential treatment” (S&DT) to avoid undertaking even the rather modest actions required of the industrialized countries. They were in principle supposed to make “average cuts” in their tariffs of 20 percent over 10 years, but both the high initial binding levels from which the cuts were made and the illusory nature of the “average cuts” requirement meant that the reductions had little effect on applied tariffs. And the least developed countries were exempt from any reduction at all (in tariffs, domestic support, or export subsidies) under Article 15 of the URAA.

It is worth noting that China is a recent and very important exception to the conclusion that WTO commitments have generally not been responsible for the decisions of developing countries to liberalize their trade regimes. Ianchovichina and Martin (2004) find that, among the many other important changes that China agreed to undertake, its average tariff will fall from 12 percent to 6.8 percent by the end of the implementation period of its agreement. While it seems quite possible that China might have decided to undertake substantial unilateral reform whether or not it joined the WTO club, it in fact did so during the 15 year process of accession. But of course the reason China is the exception to the rule is that it was not initially a WTO member, so did not automatically have recourse to the S&DT exemptions.

To summarize the discussion to this point, the WTO commitments have had some, albeit less than one might have hoped, effect on OECD policies distorting agricultural trade and in this respect have benefited developing countries. But the effect on developing country policy is much less. The bound tariffs of developing countries are generally so high, and so far above applied rates, that they can act neither as a force for reducing applied rates, nor indeed as any significant constraint on raising applied rates in the future. Thus, even their ability to act as a signal of a relatively stable trade regime is quite limited.

3. The role of the IFI's

What then is the role of the World Bank and other IFIs in the global trade system? Clearly the World Bank has no formal channels of input into trade policy making of developed countries, nor is a party to the Doha negotiations. But there is a clear international mandate for the WTO, World Bank, and IMF to cooperate and follow coherent policies,¹ and there are at least three distinct ways in which Bank/Fund programmes might potentially complement or supplement WTO-related agreements. One is by affecting trade barriers in developing countries. A second is through their impact on policies, institutions, or investments that are complementary to the trade reforms in these countries. The third is by (indirectly) influencing the course of the negotiations in the Doha round.

3.1 IFI agreements and developing country trade policy

Clearly, many developing countries did undertake fundamental reforms of their trade regimes in the last two decades. If - as argued above - they did not do so in fulfilment of WTO commitments, why did they do it? Probably the single greatest

¹ From the Hong Kong Ministerial Declaration: "We welcome the Director-General's actions to strengthen the WTO's cooperation with the IMF and the World Bank in the context of the WTO's Marrakesh mandate on Coherence, and invite him to continue to work closely with the General Council in this area. We value the General Council meetings that are held with the participation of the heads of the IMF and the World Bank to advance our Coherence mandate. We agree to continue building on that experience and expand the debate on international trade and development policymaking and inter-agency cooperation with the participation of relevant UN agencies. In that regard, we note the discussions taking place in the Working Group on Trade, Debt and Finance on, *inter alia*, the issue of Coherence, and look forward to any possible recommendations it may make on steps that might be taken within the mandate and competence of the WTO on this issue."

influence in this trend was a desire to emulate the success of the “Asian Tigers” based on an outward-oriented growth model. The stage had been set for this intellectual transformation by the manifest failure of the inward-looking import substitution model to generate growth, while it clearly did generate macroeconomic imbalances.

The trend was strongly supported by the international financial institutions, although the role of the Bank and the Fund in this process of liberalization has often been exaggerated. Without going into an extensive discussion of the political economy of trade reform, suffice it to say that most of the major reform programmes were led from within the government, not imposed from outside. It is safe to say, however, that many governments were not exactly monolithic in their support for liberalization. Support often came from ministries of planning or finance, and was often opposed - or not actively endorsed - by sectoral ministries. In these cases, support from the IFIs - intellectual and financial - may have been influential in tipping the balance in favour of the reformist factions.

It is worth pausing here to clear up one misunderstanding that has sometimes arisen in discussions of Bank structural adjustment programmes or Fund programmes. Some have complained that there is an inconsistency or incoherence between the country’s WTO agreement and conditions in lending operations that have called for reduction of applied tariffs.² Of course, WTO obligations relate to bound tariffs, which are only ceilings, above which the country commits not to raise applied levels. Thus, a government’s reduction of its applied tariff levels (or institution of a formal ceiling below the rate bound under the WTO) does not contravene its commitments under the WTO.

One can identify three phases in the Bank’s overall support for developing countries’ efforts to liberalize their trade regimes. During the 1980s and early 1990s, the agenda focused mainly on policy issues, particularly reducing the anti-export bias created by both explicit barriers to exports and more importantly by barriers to imports. The intellectual underpinnings for this were provided not only by a number of academic pieces of the time, but also by some large case studies undertaken by Bank researchers, including (in addition to those mentioned above) the studies reported in Krueger (1978), Balassa (1982), Choksi and Papageorgiou (1986), and Papageorgiou *et al* (1991). The Bank’s 1987 World Development Report (Industrialization and

² This may be the foundation for one proposal in the Ministerial text that was tabled before the Hong Kong Ministerial by the LDCs: *Decision on Measures in Favour of Least-Developed Countries*: It is reaffirmed that least-developed country Members will only be required to undertake commitments and concessions to the extent consistent with their individual development, financial or trade needs, or their administrative and institutional capacities. Within the context of coherence arrangements with other international institutions, the General Council urges donors, multilateral agencies and international financial institutions to coordinate their work to ensure that LDCs are not subjected to conditionalities on loans, grants and official development assistance that are inconsistent with their rights and obligations under the WTO Agreements.” The issue is also raised rather obliquely in the WTO Director General’s most recent report on coherence (WTO, 2006), which is devoted primarily (67 out of 68 paragraphs) to other forms of cooperation, but which contains the following: “The WTO Secretariat and the staff of the IMF and the World Bank also consult, as necessary, on issues of possible inconsistency between measures under discussion with a common Member and that Member’s obligations under the WTO Agreement or, in the case of the Fund, under its Articles of Agreement. Staff take care to ensure that cooperation neither encroaches on institutional mandates nor leads to cross-conditionality or extra conditions on WTO Members.”

Foreign Trade) was devoted to this issue. In the second phase - roughly the last half of the 1990s following the conclusion of the Uruguay Round - the trade reform agenda lost some momentum, both in developing countries and in the World Bank, although incremental progress continued. In a third phase - beginning roughly around the collapse of the 1999 WTO Ministerial meeting in Seattle - the Bank renewed its commitment to supporting trade, but focused more than before on advocacy for the developing countries in the multilateral negotiations and on “behind-the-border” constraints to trade in the Bank’s client countries themselves.

In this recent period unilateral reforms have continued - although not as dramatically as in phase 1 - with 30 countries lowering their average (MFN) tariffs by 3.5 percent or more. These include well known reformers such as Chile, China, the Dominican Republic, India, and Pakistan; several countries in Africa and Eastern Europe; and some countries in the Middle East and Northern Africa Region that still have some of the highest average tariffs in the world - Egypt, Morocco, and Tunisia. But many of these have been carried out with minimal explicit involvement of the World Bank through trade adjustment lending, although in many cases with technical support from the Bank (see table 3). Trade policy backtracking has been minimal, limited mainly to a few small-island economies, and, very notably, Nigeria and Argentina.

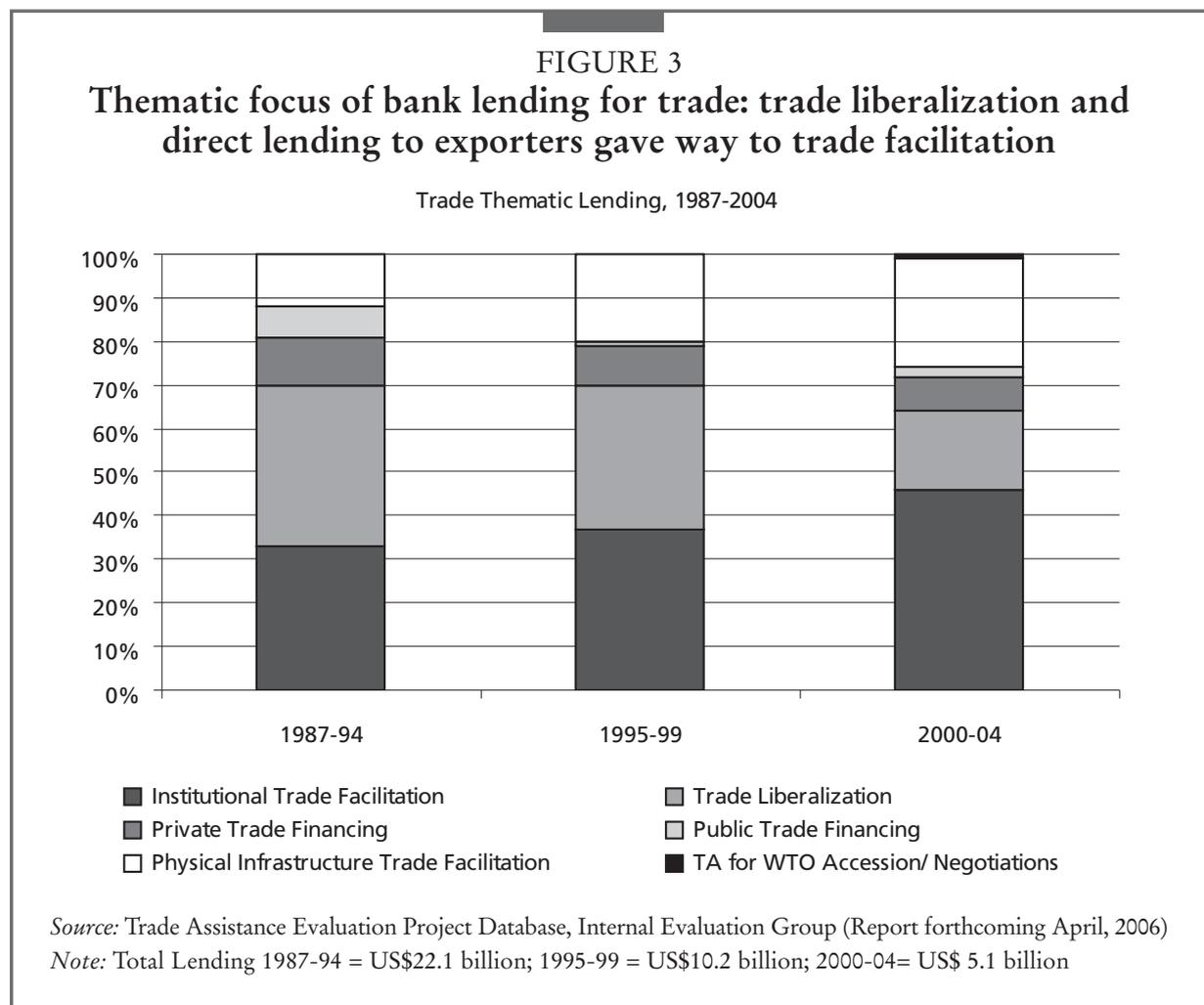


TABLE 3
Countries with significant recent trade policy reform programmes

Country	Average Tariff Rate*	Bank Dialogue
Sub-Saharan Africa		
Nigeria	37.2	Reform reversal in 2000. DTIS possible in FY05.
Zimbabwe	32.8	
Burundi	29.5	IF - DTIS FY04. Reforms ongoing since 2001.
Sudan	22.7	Applied to IF
Equatorial Guinea	22.0	Applied to IF
Gabon	20.3	
Chad	20.0	IF-DTIS ongoing to be completed in FY05
Kenya	19.9	ESW -DTIS starting to be completed in FY05
Mauritius	19.9	Reforms carried out in 2000.
Madagascar	19.2	IF-DTIS in FY03. Tariff reform ongoing supported by PRSC
Angola	19.0	IF-DTIS planned to start in FY05. Reforms carried out in 2000.
Central African Republic	19.0	Applied to IF
Cameroon	18.0	
Congo, Republic of	18.0	
Middle East and North Africa		
Syria	35.0	
Tunisia	31.6	Reforms carried out in 2000-2004
Morocco	31.5	Reforms carried out in 2000-2002
Iran	27.6	
Algeria	23.7	
Egypt	22.0	Reforms carried out in 2002
South Asia		
India	29.0	Tariff reform in January 2004 (simple average fell to 22.2%)
Bangladesh	24.0	Tariff reform planned -- to be supported by PRSC

Does not include small island economies such as Antigua, Bahamas, Cape Verde, Comoros, Maldives and Seychelles.

The three phases of the Bank's engagement in trade are reflected in the figures for lending (Fig. 3). Support for trade policy reform (liberalization) shrank from close to 40 percent of the trade portfolio in the period 1987- 94 to less than 20 percent in the latest period. Its share was displaced by lending to finance trade facilitation infrastructure and institutional capacity building.

4. Agricultural trade policy reform

Reducing the anti-export agricultural trade bias. One of the key findings of the studies by Krueger, Schiff and Valdès was that even in countries in which agriculture as a whole was taxed, import substitute crops (predominantly food crops) were usually protected. This was often combined with other kinds of preferential support for production of those crops. These import substitution policies stem partly from some of the same considerations on which manufacturing import substitution policies were based. But in addition, agricultural protectionism is often grounded in concerns regarding food security (which are translated into self-sufficiency targets), and by the recognition that global markets in these products are heavily distorted by huge subsidies to farmers in industrialized countries.

More recently, there has been an emerging and still incomplete recognition that the kinds of considerations that might have been a legitimate basis for strategies targeting national food production in the past - foreign exchange shortages that might choke off food imports, for example - have largely lost their validity. Valdès and Foster conclude that in recent years, "With a few exceptions, in Latin America the goal of attaining a target level of food self-sufficiency is no longer an influential consideration. Arguments over grain reserves or food security stocks have almost disappeared from informed policy debate." In other regions, this is probably less true, and certainly in the Doha negotiations, the notion that food security is strengthened by protecting domestic food crop growers has not only survived, but is now enshrined in the linkage of food security and special products.

Be that as it may, agricultural protectionism in developing countries has declined, as average agricultural tariffs in developing countries have been reduced from around 30 percent in 1990 to less than 20 percent in 2000. But agricultural tariffs remain on average much higher than those on manufactured goods (Fig. 2), and are on average even more escalated than those of industrialized countries (Table 4). This creates an anti-export bias within agriculture, and reduces productivity growth and competitiveness of the sector overall.

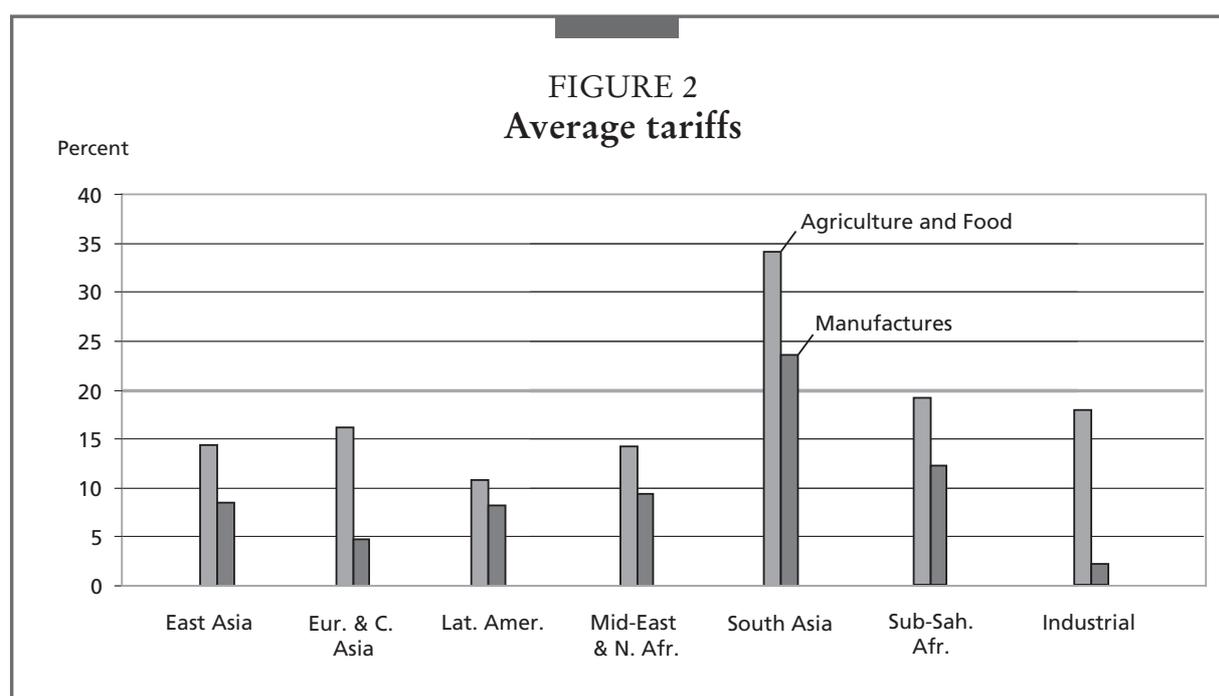


TABLE 4
Tariff rate escalation in agriculture

	Raw	Intermediate	Final	Average	Percentage of lines covered
QUAD	6.3	9.6	15.2	11.2	85.5
Canada	1.6	4.0	7.5	4.7	71.8
Japan	4.6	10.2	16.0	10.9	84.8
US	6.0	7.6	13.1	10.3	99.5
EU	13.2	16.6	24.3	19.0	85.9
Large Middle Income Countries*	15.0	15.2	23.2	18.0	99.6
Other Middle Income Countries*	19.2	21.0	31.5	24.8	88.9
Lower Income Countries*	24.6	32.6	51.1	38.6	96.7

Source: Global Economic Prospects and the Developing Countries 2003, World Bank, using data from WTO Integrated Database

The World Bank has generally advised reduction of agricultural trade barriers for the usual reasons - to enhance sectoral competitiveness, promote better integration into the global trading system and an outward-oriented development strategy, and improve the welfare of consumers, especially the poor.³ “Outward orientation” does not imply a policy bias in favour of production destined for export markets in developed countries. Production for domestic markets (especially in large economies) and for South-South trade may be important sources of incomes for many farmers.

³ Much of what follows in the next three paragraphs is based on World Bank (2004).

Apart from the fact that this selling to domestic markets or to neighbouring countries has lower transportation and transactions costs than, say, horticultural production for international supermarket chains, it also has lower requirements in terms of quality and standards. So these markets may be more suitable for producers that cannot meet exacting requirements of global markets. Outward orientation does require, however, that anti-export bias in the trade regime be minimized, so any remaining explicit policy barriers to exports should be removed as a high priority, with exceptions restricted to cases where exporters cannot be brought into the tax net in more efficient ways and are not already being implicitly taxed at high rates (e.g. via protection of the country's import-competing sectors). A number of "behind-the-border" measures - including investments, capacity building, and institutional reforms - are also needed in most developing countries to encourage agricultural export development, especially of non-traditional products.

A more controversial question is how to advise governments with respect to protection of domestic producers against competition from imports. This generic issue is not unique to agriculture, of course. But it resonates even more strongly in this sector because of the links with rural poverty and food security, and above all, because of the depressed and volatile nature of world agricultural commodity prices, due to a large extent to protectionism and subsidies on the part of OECD countries.

Some fundamental principles are clear: to create high import barriers (tariffs or NTBs) in the name of food security or to support an import-substitution agricultural development strategy is bad long-run policy. All of the standard arguments against protection apply to agricultural products, and the links to poverty and food security - contrary to how they are often perceived - generally argue against protection:

- The burden on poor consumers is higher from food protectionism than for many other products, since the poor spend disproportionately on food.
- The benefit of the protection of food crops to the rural poor is less than it might appear because the poorest are (in many countries) landless and are therefore harmed in their capacity as net consumers, and the next poorest class are often self-sufficient (non-commercial) producers, who neither gain nor lose. Of course, in some countries the rural poor may be concentrated in certain crops, and this will need to be factored into policy-making decisions. Also, to the extent that the rural landless rely for employment on commercial food crop production, raising food prices benefits them as labourers.⁴
- Raising prices via tariffs on food has a one-off impact on farm incomes, but to raise farmers' incomes on a sustainable basis, it is necessary either to raise the returns to labour in other sectors, or their productivity in agriculture itself. To reduce the gap between farm and non-farm incomes permanently requires measures that facilitate faster out-migration from agriculture, such as more effective investments in rural education and infrastructure.

⁴ This is not to say that such support increases the aggregate demand for labor, since it also reduces employment in other industries. The net effect is not obvious.

Notwithstanding these considerations, it should be recognized that a one-size-fits-all prescription for immediate deep unilateral reductions in agricultural trade taxes is not always appropriate. Rather, the design should depend on inter alia the existing structure of tariffs, the costs of adjustment, the stage of development of the fiscal system, the political sensitivities, and the on-going Doha Round discussions in which developing countries may have some leverage. The relevant questions then are the timing of the liberalization, and what kind of collateral policies are needed to aid adjustment, protect the vulnerable, and make the process politically sustainable. Appropriate policy design will depend on the characteristics and conditions of the country and commodity, but some general rules of thumb are useful to guide the choices:

- The size of the sector matters. Where the agricultural sector is a large part of the economy, rapid reduction in protection for the sector as a whole may generate significant unemployment and rural-urban migration. On the other hand, where the sector as a whole is a modest part of the whole economy - and a fortiori, where it is a modest part of the rural economy - any unemployed labour may be rapidly re-absorbed
- The pattern of protection also matters. Where agricultural protection is uneven (i.e. high protection focused on a few “sensitive” commodities), the case for reducing it is stronger, since farmers and labour will be more easily able to move to the large number of commodities that are not experiencing a reduction in price. To some extent, of course, the possibilities for shifting to other crops will also depend on factors affecting technical substitutability and on the availability of start-up capital.
- Effects on labour markets need to be factored into the decision calculus. Many export crops - especially nontraditional ones - are more labour-intensive than import substitutes, and so the net effect on labour demand should be positive when protection of the latter is reduced. The caveat here is that the conditions must be supportive to development of these export crops, which is why behind-the-border measures are so important. It is also essential to consider whether urban and rural labour markets are well integrated, and whether rural areas have other employment opportunities outside of agriculture. One lesson from Chile’s experience is that export growth can generate off-farm rural jobs in such areas as food processing plants, transport services and the like - so slowing the need for a drift to the cities (Valdès and Foster 2003). In fact, it was food processing, and not agriculture, which had the biggest impact on the wages of unskilled labour, and hence the largest pro-poor effect.
- The degree of protection needed to compensate for world distortions should not be over-estimated. The intellectual underpinning of protective tariffs is often that they compensate for world prices that are artificially depressed by protectionist policies, and which will therefore rise with global liberalization. The argument is therefore that in order to avoid irreparably damaging a production base which in the long run will be competitive - or to avoid adjustment costs when capital and labour markets are imperfect - tariffs should be in place until the global liberalization occurs. This argument itself is of dubious economic merit, but has strong political appeal. In any case, if tariffs are imposed using it as justification,

the magnitude of the tariffs should at least be grounded in solid analysis. A wide range of modelling work indicates that for most commodities the price increases with global liberalization are expected to be moderate - in the order of 10 percent or less, although there is a fairly wide variance in these estimates. For some of the most distorted markets - sugar and dairy are good examples - the increases from full liberalization would be larger, but these are unlikely to be fully liberalized soon in any case. This observation does not undercut the need to liberalize these markets, since the aggregate impact of even a moderate rise in commodity prices can have a significant positive effect on the welfare of developing country producers. But it does indicate that the magnitude of tariffs should be fairly modest if they are rationalized as “compensating for distorted world prices.”

- “Shock absorbers” may be needed. Currently most developing countries do not have recourse to the safeguard mechanisms that can be used by developed countries to cushion the impact on producers of large price movements in international commodity prices.⁵ Lacking this, it is understandable that they would be reluctant to reduce their bound tariffs to levels closer to their applied rates, since this would reduce their ability to raise applied rates in response to price shocks. In the current negotiations, it has been proposed that some kind of special safeguard be made available to developing countries. If made contingent on reducing bound tariffs below some threshold level, this could give governments some comfort in knowing that they would have a shock absorber if needed as a result of liberalization, whether undertaken unilaterally or as a result of a multilateral commitment (Konandreas, 2000; Foster and Valdès, 2004).
- Consider the fiscal implications. Economic analysis suggests that trade taxes are very inefficient forms of raising revenue. Nonetheless, in a few countries (fewer every year) they remain important for fiscal reasons, and in such cases, tariff reduction may need to be more gradual and coordinated with fiscal adjustments.
- Consider what kinds of collateral policies are necessary and feasible to partially compensate losers and facilitate adjustment, and how quickly they can be implemented. OECD countries have compensated farmers for reduction of protection by direct, decoupled (and WTO compliant) area-based payments. In countries where this is feasible, tariff reduction (and phase-out of other subsidies) can be carried out quickly.⁶ The experience of Mexico and Turkey show that this is a practical approach in some developing countries.⁷ In Turkey, successive World Bank-sponsored structural adjustment projects starting in the early 1980s had been unsuccessful in introducing reforms in the agricultural

⁵ In conformance with WTO rules, safeguards may only be used by countries that agreed to transform non-tariff barriers into tariffs in the Uruguay Round. Most developing countries did not do this.

⁶ To the extent possible, this needs to be done with a credible commitment to keep tariffs low. Otherwise, it may set up perverse incentives for lobbying to raise tariffs in the future not only to collect the initial rents, but also to collect the compensation when the tariffs are later reduced.

⁷ Care must be taken to ensure that these do not become permanent drains on the budget or distract from more productive forms of public expenditure in the sector. The medium term vision should be a phase out of such payments and integration of poor farmers over time into a national targeted safety net system. Baffes and de Gorter (2004) examine lessons of experience in direct income support, which can be useful in designing new schemes.

subsidy system, but the use of compensatory payments combined with financial assistance to farmers and agroindustrial workers disadvantaged by the reforms has so far proven to make the latest reforms more sustainable. However, given the liquidity constraints of other developing countries, such direct payments may not be affordable, or the necessary institutions (in particular, a land registration system) may not be in place. Reduction of protection may need to be more gradual in these cases. Whatever compensatory policies are adopted, other policy reforms and agricultural investments should be considered to complement the trade policy reforms. In addition, some of the most important reforms and investments may not be in the agriculture sector per se, but rather would be designed to generate rural non-agricultural employment, better integrate rural-urban labour markets, and facilitate out-migration.

The characteristics of the production structure will largely determine the poverty impact, which will condition the speed of reform and the design of collateral support. For commodities and in countries where production is mainly by small, resource-poor farmers who will have greater difficulty adjusting their cropping or diversifying their income sources, reduction of protection may need to be more measured, with greater attention to collateral policies. Where large commercial farmers hire a large quantity of labour, there may be some transient negative impact on the poor, particularly if labour markets are not functioning well. In the medium run, however, commercial farmers would generally be expected to have less difficulty moving into other crops and as noted above, a switch to export crops should absorb more labour.

Because many developing countries relied on parastatal economic enterprises to import, export, and domestically market key crops - often with exclusive legal rights - agricultural trade policy reform has often involved reform of these institutions. The Bank's role in this has undergone a paradigm shift over the last several decades. In the 1970s and even at the beginning of structural adjustment in the early 1980s, both investment loans and policy-based loans typically supported or at least acquiesced in this state enterprise model of agricultural marketing, with lending operations targeted at improving the enterprises' operational efficiency, rather than at fundamental reform. As problems with this model became more apparent over the years (Krueger, Schiff and Valdès) and particularly as evidence mounted of its significant role in creating macroeconomic crises, the paradigm shifted. Later adjustment programmes aimed to fundamentally reform these enterprises, and in many cases to dismantle them and leave commercial activities to the private sector. (It should be noted, however, that the Bank has not opposed state involvement ideologically or across the board; witness the ongoing reform programmes in Burkina Faso, where the Bank is supporting a restructuring of the cotton parastatal, as noted in the section on cotton below). This effort has had mixed results both in terms of actually dismantling the agencies and in terms of the aftermath (see Kherallah, *et al* for a good account of reform efforts and their results in Africa). But on balance the effect has been to introduce more competition into import and export channels in these countries, and constrain the ability of the public enterprises to distort markets, consistent with the goals of the WTO's disciplines on STEs.

Various regulatory requirements create barriers to trade in inputs which embody new technology that could enhance agricultural productivity growth in developing countries (see Gisselquist, Pray and Nash, 2002). These include testing and approval requirements for new varieties of seeds or fertilizer, as well as technical requirements for machinery that may be designed to protect local producers or may just be paternalistic. In principle, these regulations might be challenged under WTO rules on technical barriers to trade if they could be shown to discriminate against imports. But this would be a hard case to prove, and perhaps not even worth the effort for access to small markets, so in practice, WTO obligations are unlikely to be effective constraints on regulatory obstacles. Farmers in developing countries are then deprived of access to technology. In such cases, Bank programmes can help clear away these barriers. The agreement for an adjustment loan for Bulgaria, for example, called for early harmonization of Bulgaria's approved seed varieties list with that of the EU. EU regulations are not exactly best practice in this regard, since they require more extensive testing than is probably justified, but once a variety is accepted by one country, it is automatically accepted by all. This creates a large market, and minimizes the burden of testing relative to prospective benefits from gaining access to the market.

WTO obligations on domestic support encourage countries to make the kinds of public expenditures in agriculture that are non- or minimally trade distorting. This kind of "Green Box" support has also proven to be hugely more effective in promoting rural development, growth, and poverty reduction than has support through import barriers, price supports, input subsidies, etc. Estimates by the OECD secretariat indicate that only around 25 cents of every dollar of support administered through the latter instruments actually ends up in the farmer's pocket (Dewbre, Anton and Thompson, 2001). And IFPRI finds that appropriate public investments in agriculture are much more efficient than the alternative of protection by high tariffs (Diaz-Bonilla, Diao and Robinson, 2002).

World Bank supported policy advice and investment programmes have encouraged client countries to reform agricultural support systems in ways consistent with the philosophy underlying the WTO's rules. In almost all of the Central and Eastern European (CEEC) accession countries, the Bank has helped to put in place systems and institutions to undertake obligations of the *acquis communautaire* including implementation of the Common Agricultural Policy's direct payment system. Of course, this has sometimes involved also assistance in implementing other parts of the CAP which are not so minimally trade distorting, but even here, there is an attempt to minimize the distortion. For example, acceding countries have the option to apply "top-up" (CMDP) payments to the direct payments to farmers, and the EU's rules allow this to be done in different ways. The Bank has recommended area-based top-up payments with the rate being uniform across crops - that is, essentially decoupled payments.

In countries outside the CEECs, the Bank has sometimes financed investment projects to reform distortionary support systems. For example, in Turkey, when the government decided to phase out its highly inefficient input subsidies and link crop prices more closely to world market levels, the Agricultural Reform Implementation

Project (ARIP) provided US\$400 million to: 1) Finance support to the government to set up a decoupled direct income support system; 2) Partially compensate farmers of certain crops (those that were over-produced because of the previous artificially high support prices) for their costs in switching to alternative activities; and 3) Assist in the implementation of the new Law on Agricultural Sales Cooperatives by financing labour retrenchment, institutional development of coops and capacity building for the government institution overseeing the process. In addition, a quick-disbursing portion of the loan provided financing for US\$200 million in 2 tranches, conditional upon achievement of certain indicators of progress in the overall reform programme. A key objective of this quick-disbursing component was to enable the Government to make up some of the anticipated shortfall in funds needed for the critical first and second rounds of direct income support payments in a period of fiscal stringency.

One relevant lesson from this experience is that in the political economy of reform, a spoonful of sugar helps the medicine go down. The ARIP agreement called not only for phasing out existing input and output subsidies (as had other earlier SALs in Turkey, many conditions of which were either not implemented or later reversed), but also for implementing a new system of de-coupled (“green box, minimally trade distorting,” in WTO parlance) subsidies to partially cushion the blow to farmers. The loan also included severance payments for workers in quasi-public enterprises that needed to restructure or close down and aid to farmers to shift out of some crops the support prices of which were being withdrawn. This got the ministries of agriculture and industry on board- or at least made the reform package easier to swallow when it became clear that the status quo was unsustainable. And so far, the basic framework of the programme has been sustainable, although there have been some modifications in the details.

5. Aid for trade and the Behind-the-Border Agenda

There is increasing recognition that while there are large potential gains for developing countries from multilateral as well as unilateral reform, gains will not necessarily be automatic, and some countries may experience transitional adjustment costs. Increased international assistance is required to help countries to overcome supply-side constraints in order to take advantage of new trade opportunities from the Doha Round, or to address transitional adjustment costs from liberalization. This “aid for trade” is an essential element of a successful, pro-development Doha package⁸.

⁸ From the Hong Kong Ministerial Declaration: “Aid for Trade should aim to help developing countries, particularly LDCs, to build the supply-side capacity and trade-related infrastructure that they need to assist them to implement and benefit from WTO Agreements and more broadly to expand their trade. Aid for Trade cannot be a substitute for the development benefits that will result from a successful conclusion to the DDA, particularly on market access. However, it can be a valuable complement to the DDA. We invite the Director-General to create a task force that shall provide recommendations on how to operationalize Aid for Trade. The Task Force will provide recommendations to the General Council by July 2006 on how Aid for Trade might contribute most effectively to the development dimension of the DDA. We also invite the Director-General to consult with Members as well as with the IMF and World Bank, relevant international organisations and the regional development banks with a view to reporting to the General Council on appropriate mechanisms to secure additional financial resources for Aid for Trade, where appropriate through grants and concessional loans.”

It has also been recognized that there may be too little trade reform in part because MFN (non-discriminatory) trade reform is a global public good not adequately internalized in country processes. Trade policy reforms (such as lowering of tariffs) and investments in trade machinery (such as customs reform and ports) can have significant externalities. All countries benefit from one country's trade reforms and trade-related investments, and benefits are increased when undertaken by a number of countries concurrently. However, the full benefits of reform are not captured by the country itself, leading potentially to "under-investment" in trade-related reform, infrastructure, and institutions.

The World Bank and other IFIs have always had on their trade agenda the traditional investments in trade facilitation (trade infrastructure, customs improvement, etc.), but these have grown in prominence in lending programmes in recent years. At the Bank, projected commitments for trade facilitation projects in FY04-06 are over US\$1 billion, triple the level in the period FY96-03.

But augmenting this traditional agenda is a very important relatively recent development - the Integrated Framework of Trade-related Technical Assistance (IF), which brings together multilateral agencies (the IMF, International Trade Centre (ITC), UNCTAD, UNDP, WTO and World Bank) and bilateral and multilateral donors to assist least-developed countries (LDCs). After a rather rocky start in 1997, the IF was re-vamped and is now operating in 28 countries, with another nine in the offing. The IF was designed as a vehicle to mainstream trade in the Poverty Reduction Strategy (PRS) process, and to promote donor coordination in trade-related assistance. By the end of 2005, Diagnostic Trade Integration Studies (the first stage in the IF process) and national validation workshops were completed in 21 countries. A further seven LDCs have started the process and nine more have applied to join. As of end of May 2005, 22 Window II projects⁹ had been approved in 12 countries, amounting to US\$8 million, covering diverse areas, from trade negotiation capacity building (Cambodia, Madagascar, Ethiopia), export-related information gathering and dissemination (Yemen) to sector-specific institutional and technical support (e.g. Burundi, Ethiopia, Senegal). As of end of April 2005, 17 IF donors, including the Bank, had pledged a total of US\$30.2 million to the IF Trust Fund.

While the IF has made considerable progress, follow-up has often been incomplete and donor response slow. This has at times led to some frustration with the process on the part of potential beneficiaries. In response, Bank and IMF staff have recently recommended enhancing the IF process in several ways: by extending eligibility from LDCs to all low-income countries; by financing project preparation (including large-scale infrastructure projects) in areas of priority, with completed project proposals to be presented to donors; by funding through the IF process rolling, multi-year programmes of technical assistance and capacity-building; and by creating a separate window to finance diagnostics of regional, or cross-country, impediments to trade development (e.g. regional transport corridors, standards,

⁹ Window II of the IF is a bridging mechanism designed to finance small, priority technical assistance and capacity building projects prior to the incorporation of the DTIS findings in the PRS and subsequent donor funding. Window II currently provides a maximum of US\$1 million for each country.

disease or pest issues). Regional or cross-country issues might be particularly important for small, very poor, or landlocked countries dependent on action by a neighbour for whom the issue may not be a high priority. For example, the roads that Rwanda requires to have access to the ports of Mombasa or Dar es Salaam require the cooperation of Kenya, Uganda, and Tanzania-but for these countries, roads in the hinterland may be a low priority. Small, very poor, or landlocked countries are also likely to face numerous competing demands for existing donor resources within their PRS process and may benefit from cost-effective regional machinery for trade, such as regional laboratories, regional infrastructure or harmonized regulatory frameworks.

The IMF has focused its attention on meeting the needs of countries undergoing balance of payments shocks resulting from trade liberalization by other countries by introducing the Trade Integration Mechanism (TIM). Two countries have taken advantage of the TIM to date (as of August 2005)-Bangladesh (US\$78.03 million, equivalent to 10 percent of their IMF quota) and the Dominican Republic (US\$32.03 million, equivalent to 10 percent of their IMF quota). Other likely candidates could include other countries negatively affected by the end of textile quotas, countries affected by preference erosion, net food importing countries,¹⁰ and countries undertaking major programmes of trade reform, including significant reductions in applied tariffs.¹¹

In addition to the Bank lending to support general aid for trade, a number of Bank projects include actions or investments specifically targeted at agricultural trade. In the period FY00-04, a total of 35 investment projects with agricultural trade-related components were approved, with commitments of US\$2.053 billion. The commitments linked to these components totalled US\$580.8 million, or 28 percent of the total.¹² Almost all of these loans supported some kind of institution building. Many also supported investments to help meet sanitary or phytosanitary standards, diversify agricultural production and/or improve competitiveness. Agricultural trade policy conditions were also included in 11 PRSCs in five countries, with commitments totalling US\$1.052 billion.

Of particular note are the Bank's efforts to help client countries meet the increasingly complex food safety, agricultural health, and other standards they face in global markets. A programme of analytical work and policy analysis has generated more detailed understanding of the economic, institutional and policy aspects of standards and trade, including the strategic and policy options available to governments and the private sector in a range of developing countries.

¹⁰ Although the gains from the removal of export subsidies may well outweigh losses from the standpoint of poor countries, the negative terms of trade effects can precede in time the efficiency gains and some countries may be especially hard hit. Thus, some affected countries may require transitional income support.

¹¹ Fund staff have already sharpened surveillance of countries with trade-related vulnerabilities (as noted in Annex IV), as well as surveillance of the spillover effects from trade policies of large industrial and middle-income countries.

¹² This can be roughly compared to the total agricultural lending over this period of \$6.14 billion, and these components represent about 9.5 percent of this total. The comparison is not exact, since some projects with agricultural trade components are not included in the agricultural portfolio.

This has been complemented operationally by an initiative to mainstream SPS into the Bank's lending and country dialogue through (i) participatory national strategies for strengthening capacities to manage sanitary, phytosanitary, and other standards for export and domestic markets; (ii) preparation of project subcomponents related specifically to capacity building for sanitary, phytosanitary, and other standards that will be integrated into Bank investment loans; (iii) design and implementation of pilot projects that effectively link smallholder farmers and small enterprises with larger agribusinesses or food distributors via coordinated supply chain pilots; and (iv) sharing implementation lessons. Stand-alone projects are unlikely; instead small to medium-sized (US\$0.5 to US\$15 million) components of agricultural services, export promotion and competitiveness projects will likely be the norm. There are currently about 15 investment projects with standards components, with another 15 projects now under preparation.¹³

The Bank has also teamed up with the WTO, FAO, WHO, other agencies, and several bilateral partners to establish a Standards and Trade Development Facility (established in 2002) to provide grant financing to innovative capacity-building programmes, especially in low income countries. Through these initiatives it is expected that both the quality and the scope of Bank projects will increase to meet growing demand and facilitate the supply response to enhanced market access opportunities.

Finally, it is worth mentioning that many other agricultural projects target reforms of research, extension, and irrigation services to make them more responsive to farmers' requirements. This in itself is a type of aid for trade, since it helps to ensure that these systems will reflect market demand. Thus, as the incentive regime becomes more neutral through reform of trade policy, these services will reflect the needs of farmers to supply the markets in which they can best compete, be this staple food production for local or regional markets, or horticultural products for highly demanding global markets.

6. The World Bank and the Doha negotiations

The World Bank, of course, has no formal role in the negotiations and only recently has been accorded observer status in the WTO. But the Bank's Rural Development Strategy,¹⁴ endorsed by the Board, recognizes that the most fundamental element of "fostering an enabling environment" is "world-wide trade policy reform"¹⁵ because of the critical importance for rural growth and poverty alleviation of ensuring that developing country rural sectors are fully integrated into the world economy. For this reason, the Bank has undertaken a full programme of analytical studies and global advocacy to focus attention on the need for - and what needs to be done to assure - a successful, development-friendly outcome of the negotiations.

¹³ This list of projects includes some that started before FY2000, and so are not included in this number.

¹⁴ "Reaching the Rural Poor: A Renewed Strategy for Rural Development," World Bank, 2003.

¹⁵ Executive Summary, p. xvii; main text, pp. 23- 32.

Looking forward to the implementation of any Doha agreement, the Bank would expect to assist countries in addressing any shocks or need for adjustment in response to the new global incentive structure. Quick-disbursing adjustment lending would be appropriate in cases where countries face balance of payments shocks, for example, from food price spikes, and also need policy reform. This could also be a good role for hybrid operations, since there may be a need for both quick-disbursing funds and long-term investments to make necessary adjustments in productive structures. Investment projects might be aimed at, for example:

- Improving agricultural production systems, so local farmers could take advantage of the higher world prices.
- Restructuring marketing systems to reduce costs and keep down prices for consumers, while increasing the share of the final price captured by farmers.
- Reducing post-harvest losses, costs of storage, and transport costs by improving warehouse facilities and infrastructure.
- Restructuring and privatizing state-owned enterprises charged with procurement and distribution and improving public sector food security stockpiling policies.

6.1 Cotton

The Bank strongly supports the approach to the cotton initiative that has been adopted in the negotiations - that is, that problems in the global cotton market must be attacked both through trade reform and development assistance. A global deal that curtails trade-distorting subsidies is particularly important for cotton because of its direct effect in improving incomes of some of the world's poorest farmers. This is a necessary but not sufficient condition, because many of these same countries can productively use development assistance to ensure a supply response to new price incentives that a pro-poor Doha deal might bring. In this process, we view the Bank's role as important, but limited. The Bank has been spotlighting the adverse impacts on the rural poor of subsidies and protected markets, and aggressively encouraging the adoption by negotiators of a high level of ambition with respect to this commodity. While emphasizing that the Bank cannot compensate for the impact of the OECD subsidies and that it is the responsibility of these countries to take the lead in resolving the problem through both their trade and development policies, we are also helping cotton sectors in West Africa and elsewhere to manage their risks and to become more competitive through structural adjustment programmes, technical assistance, and sectoral investments.¹⁶ It is important to recognize that there is limited potential for downstream industry development in the West African countries in the short run because of infrastructural and institutional constraints. The Bank has therefore been encouraging donors not to focus funding initiatives on downstream industries, but rather on primary cotton production, and at the same time to test the potential for downstream development with appropriate preferential trade policy.

¹⁶ Bank activities in the cotton sector are discussed in detail in Baffes, Badiane and Nash, 2004.

The Bank has a clearly defined strategy for assistance to the francophone West and Central African cotton sectors, which is to help restructure the sectors - which have been dominated by monopolistic parastatals - to improve efficiency. This kind of strategy makes sense whether the global market is highly distorted or not. In other countries, cotton has only been supported in the context of more general rural projects. In each West African country, the Bank has tried to pursue country-specific reform options. Benin is the most advanced. The monopsony of the state company has been lifted, and it is being privatized. Private sector operators control more than 50 percent of the ginning capacities. Both the Bank and other development partners are supporting the reform process by providing assistance to producer organizations and the institutions that have been created by the private sector to take over many of the activities formerly carried out by the state company (research, extension, quality control, input credit recovery, etc). The reforms in Benin have proven that it is possible to have an effective input credit recovery mechanism without a monopoly system, working through a clearing house with participation of producers' organizations. In Mali, the strategy is also to eventually privatize the parastatal, but in Burkina - where the parastatal is well operated and has so far managed to avoid becoming a huge fiscal liability - the reforms would focus on opening up the sector to competition without necessarily privatizing the company. On a more general level, of course, the Bank's strategy has been, appropriately, to focus on public goods that are necessary for overall rural development, not on commodity-specific lending.

6.2 Food aid

Some innovative work is being carried out in the Bank that may make a constructive contribution to the debate on food aid. The objective of this pilot project - which was jointly prepared by CRMG and World Food Programme, and executed by WFP - was to contribute to an ex-ante risk-management system to protect the livelihoods of Ethiopians vulnerable to severe and catastrophic weather risks. The pilot used a weather derivative to provide contingency funding for an effective aid response in the event of contractually specified severe and catastrophic shortfalls in precipitation. The WFP in effect bought weather insurance from an international provider.

The contract provides contingency funding in case of an extreme drought during Ethiopia's 2006 agricultural season from March to October 2006. This demonstrates the possibility of transferring the weather risks of least-developed countries to international markets and also facilitates price discovery of insurance for Ethiopian drought risk in these markets in the future. The price discovery for Ethiopian weather risk in the international risk markets will enable Ethiopia to manage weather risk more effectively, especially with regard to future climate change.

More generally, this pilot project is the first step in a process leading towards ex-ante risk management in developing countries involving governments, donors and private-sector international risk markets. The greater timeliness of event-specific contingency funding can make aid more efficient in saving livelihoods by protecting vulnerable populations against productive asset depletion under distress in response to severe and catastrophic weather shocks. From the perspective of food aid donors,

it would obviate the need for fund-raising in response to crises, thereby making the response more efficient and more timely. If designed to deliver purchasing power to local markets (either directly to the hungry or to safety net systems), it would also be less disruptive of local markets than traditional food aid delivery mechanisms.

7. Conclusions

The framework created in the Uruguay Round Agreement on Agriculture has probably been responsible for some reduction of distortions in global agricultural markets that result from policies of the industrialized countries. But because of the mercantilist approach on which negotiations under WTO auspices are based, developing countries have been required to undertake little if any liberalization of their trade policies. It would appear that the dynamics of the current round of negotiations (e.g. a “round for free” for LDCs) will lead to a similar outcome for most low-income countries, although there is hope that some of the middle-income countries may agree to at least limited reforms. The evolution of the global trade architecture has thus left the IFIs with “responsibility”, such as it is, for supporting trade policy reform in the developing world. There has undoubtedly been much progress on this front, although the IFIs deserve less of the credit than they are often accorded.

But in addition to whatever role it may have played in policy reform, the World Bank has become increasingly active in supporting - through financial and technical assistance - a wide range of investments and institution building to help integrate the developing countries into the global trading system. The objective is to help them take full advantage of opportunities for greater integration, some of which are a direct result of openings catalyzed by the WTO. In this sense, the programmes of the Bank and other IFIs are highly complementary to those of the WTO, and some specific programmes are being undertaken in direct collaboration between the two institutions, as well as other development partners.

TABLE 5
Developing countries' share of world trade

	1980/81	1990/91	2000/01
Agriculture			
Total	35.4	32.2	36.3
To Developing	9.5	8.9	13.4
To Industrialized	25.8	23.3	22.9
Manufacturing			
Total	19.3	22.7	33.4
To Developing	6.6	7.5	12.3
To Industrialized	12.7	15.2	21.1

Source: COMTRADE

All of these forces have led to a rather dramatic increase in developing countries' share in global exports over recent decades (Table 5), both to the markets of industrialized countries in manufactured products and those of developing countries in agricultural and manufactured products. But with respect to agricultural exports to the industrialized countries, the share has stagnated. This seems to say that the emphasis in the Doha negotiations on reducing barriers in these markets is well placed.

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Part 2

Structuring development-friendly WTO rules

The Doha Round agricultural tariff-cutting formulae and tariff escalation

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1. Introduction

Tariff escalation is a phenomenon where tariffs increase along the processing chain, such that tariffs on the processed products (e.g. refined sugar) are higher than on the corresponding primary products (e.g. raw sugar). An escalating tariff structure creates greater protection for the processing sector in the importing country. For exporters, on the other hand, this acts as a disincentive for exporting processed products. For this reason, tariff escalation is seen as one of the impediments for developing value-adding processing industries. This is an issue for the developing countries in particular because of their much greater need for industrialization. Moreover, global trade in processed products has been growing relatively faster than in primary products.

Given the importance of the topic, many studies have been conducted on the quantification of the extent of tariff escalation (TE), notably in the context of the impact of the Uruguay Round (UR), and on what may be done to reduce the phenomenon. On the whole, almost all studies have shown that TE remains widespread despite the reductions in tariffs in the UR. One of the most comprehensive analyses of TE was conducted by FAO in 1997 (Lindland, 1997; Lindland, 1998), covering close to 300 agricultural commodities and two stages of processing beyond the primary level. The three import markets analysed were the EU, Japan and US. The study found that although there was a widespread reduction in the (bound) tariff wedges between processed and primary products following the

¹ The author is grateful to Katerina Mantzou for her assistance in converting non *ad valorem* tariffs to their *ad valorem* equivalents, to Daneswar Poonyth for providing guidance to Ms. Mantzou and to Maurizio de Nigris for assistance in the analysis of the data. The views expressed in the paper are those of the author and should not be attributed to FAO.

UR, over 50 percent of the commodity pairs examined would still have escalating bound tariffs after the full implementation of the UR commitments, with an average nominal tariff wedge of 17 percent. The highest post-UR bound tariff escalation was found in the dairy, sugar, fruit, tobacco and hides and skins sectors.

Similar results were found in other studies. For OECD countries, it was documented that the reduction of tariffs on processed products was lower than on primary products (OECD, 1996; OECD, 1997). A recent UNCTAD study (UNCTAD 2003) evaluated the degree of TE for 12 agricultural commodity pairs by averaging nominal tariffs for different processing stages in the Quad markets (Canada, the EU, Japan, and the US). It found that, with a few exceptions, the post-UR tariffs escalate not only between raw and semi-finished but also between semi-finished and finished products. On average, the escalations in Canada, Japan and the EU were higher between raw and finished products, while in the US the highest average escalation was found between semi-finished and finished goods. An earlier USDA study (USDA, 2001) also demonstrated that TE existed not only in agricultural markets in the developed but also in developing countries. Elamin and Khaira (2004) have also quantified TE for several product groups and extended the analysis to assess the impact of some tariff cutting formulae, including that proposed in the Harbinson draft modalities. Finally, a study by the Swedish Board for Agriculture (Burman *et al*, 2001) is fairly comprehensive in covering several aspects of tariff escalation, including some estimates on the impact on effective protection.

Consistent with these studies that have shown widespread TE in the post-UR period, many negotiating proposals have called for the elimination or reduction of TE as an explicit goal within the market access pillar of the Doha Round negotiations.

The latest official text of the negotiations, the Hong Kong Declaration of December 2005, in Annex A (para 17) under “other elements” of market access, states that: “There has been no further material convergence on the matters covered by paragraphs 35 and 37 of the July 2004 Framework text. The same may be said for paragraph 36 on tariff escalation, albeit that there is full agreement on the need for this to be done, and a genuine recognition of the particular importance of this for commodities exporters.” Although this text speaks of a lack of convergence, the fact is that hardly any concrete proposals have been tabled so far on TE. The latest official position - as of January 2006 - remains the agreement reached in the 2004 Framework to find a formula that will address TE.²

The Harbinson modalities text of March 2003 was more specific on this topic. The relevant text, in the paragraph following that on the tariff reduction formula (para 8), reads as follows: “In applying this formula, where the tariff on a processed product is higher than the tariff on the product in its primary form, the rate of tariff reduction for the processed product shall be equivalent to that for the product in

² In para 36 of the Framework, this is expressed as follows: “tariff escalation will be addressed through a formula to be agreed”.

its primary form multiplied, at a minimum, by a factor of [1.3]”.³ In other words, whenever the formula results in positive tariff escalation, a factor of [1.3] will be applied to reduce the gap. This rather concrete proposal was however not carried forward in the subsequent texts.

For example, the G-20 text of 7 July 2005 proposed that “as provided for in the Framework” an additional formula shall be established to reduce TE in developed countries. It was also said that the products in which TE, in terms of increased effective protection, exist, will need to be identified. Thus the text entertains the idea of an additional formula, but specific to reducing TE in developed countries only. Second, the text specifically mentions effective protection, which is a very different concept from nominal tariff escalation that most other texts refer to. It also says that these products need to be identified, which is both a very important and a difficult task as will be discussed towards the end of this paper.

In the 24 August 2003 WTO draft text for Cancun, it was stated that TE “will be effectively addressed”. What the text means by “effectively” is anybody’s guess. The 13 September 2003 Cancun text was more specific: “The issue of tariff escalation will be addressed by applying a factor of [...] to the tariff reduction of the processed product in case its tariff is higher than the tariff for the product in its primary form”. This is similar to the Harbinson proposal on the factor of [1.3]. Several important texts however did not mention TE. These include inter alia the EC-US text of August 2003, the October 2003 text of G10, the October 2005 text of the ACP Group and the US text of October 2005.

A related proposal is on the treatment of TE for tropical products. Various texts include a language that calls for the developed countries in particular, in implementing market access commitments, to provide for greater improvement of opportunities and terms of access for agricultural products of particular interest to the developing countries, including the “fullest liberalization of trade in tropical products, whether in primary or in processed form”. For tropical products at least, several proposals are clear that there should be no tariff escalation. However, exactly what tropical products are is yet to be defined.

Ultimately, given the vague language in the Hong Kong text, the key guideline for the ongoing negotiations would be the proposal in the 2004 Framework which speaks of a formula to be negotiated: “tariff escalation will be addressed through a formula to be agreed”. The question is what might that formula be?

Following this introduction of the issue and negotiating proposals, Section 2 outlines a method for quantifying TE and discusses the data base used and the products covered. Section 3 then presents the results of the likely impact of the new tariff cutting formulae on TE. Section 4 addresses the question of what may be done in the negotiations to address TE. Section 5 summarizes the main observations.

³ In the WTO negotiating texts, a square bracket [] indicates texts proposed, but not as yet agreed.

2. Methodology and the tariff data used

2.1 Measuring tariff escalation

Most studies quantify TE on the basis of the bound tariffs. This is a simpler method as all that is required in terms of statistics is the bound tariffs. Some studies have extended this analysis by using applied tariffs to analyse the extent of TE in practice. The other extension that is sometimes undertaken uses trade (import) weights to average tariffs, bound or applied, where many tariff lines define a product (e.g. several oilseeds and oils). Lastly, some studies have attempted to measure TE using the concept of effective protection (e.g. Lindland, 1997; Burman *et al*, 2001). Effective protection is obviously a better indicator of trade protection than is nominal protection, especially where a processed product is produced from multiple, rather than a single, primary product. In practice however it is very difficult to compute effective protection rates for a large number of products or tariff lines as this requires input-output coefficients.

The analysis presented below is based on nominal bound tariffs, those prevailing at the end of the UR implementation period. This is the simplest approach and is also the most useful in the context of the negotiations where the focus is on reducing bound tariffs.

As in the 1997 FAO study, nominal tariff escalation is measured in this paper on the basis of the nominal tariff wedge, the difference in tariffs between a processed and a primary product. The nominal tariff wedge (TW) for a given period is defined as:

$$TW = T - t$$

where T is tariff on the processed product and t is tariff on the primary product. Three situations can be characterized based on the tariff wedge:

- Tariff escalation: $TW > 0$
- Tariff de-escalation: $TW < 0$
- Tariff parity (neither escalation nor de-escalation): $TW = 0$.

The impact of a trade round, e.g. the Doha Round, on nominal tariff escalation is measured as follows (with subscript “0” referring to the base period and “1” for the TW after application of the formula cuts):

$$\Delta TW = TW_1 - TW_0$$

where,

ΔTW is the change in the tariff wedge due to the Round

TW_0 is the tariff wedge before the formula cuts (end of the UR)

TW_1 is the tariff wedge after formula cuts.

Depending on the signs of TW_0 and ΔTW , four outcomes can be characterized as follows:

- $TW_0 > 0$ and $\Delta TW < 0$ = a *decrease* in nominal tariff escalation
- $TW_0 > 0$ and $\Delta TW > 0$ = an *increase* in nominal tariff escalation
- $TW_0 < 0$ and $\Delta TW < 0$ = an *increase* in nominal tariff de-escalation
- $TW_0 < 0$ and $\Delta TW > 0$ = a *decrease* in nominal tariff de-escalation

The case that is mostly discussed in the literature and the one that the WTO proposals have been referring to is the first one, i.e. a situation where TE exists in the base case ($TW_0 > 0$) and the objective is to see that this escalation is reduced or eliminated in the Doha Round (i.e. $\Delta TW < 0$ or $\Delta TW = 0$). The outcome that is not desired is the second one where a positive TE further escalates following tariff cuts. The last two cases have specific economic meanings but are not of concern in the negotiations.

2.2 The data used

The analysis covers a sample of 11 countries, eight of which are developing (Brazil, Egypt, India, Indonesia, Pakistan, Philippines, Sri Lanka and Turkey) and three are developed (the EU, Japan and the US). For these countries, tariff escalation is quantified for the base period, the end of the Uruguay Round implementation period, and following the application of three tariff cutting formulae proposed by the US, G-20 and EU in October 2005. Table 1 shows the three formulae.

The starting point of the analysis is the conversion of non-ad valorem tariffs into ad valorem equivalents (AVEs). This was undertaken following the method agreed by the WTO Members in 2005 and using the databases on tariffs and trade referred to in that agreement, which include the IDB, COMTRADE and CTS databases. The AMAD and WITS databases were also used to fill any gaps in the data. However, many complex tariffs could not be converted, in particular those belonging to the HS-2 (meats) and HS-4 (dairy) groups. The analysis is based on 8-digit HS level for the three developed countries and on 6-digit HS level for the eight developing countries. The numbers of tariff lines used were roughly 1 700, 1 400 and 1 700 for the EU, Japan and US respectively and around 600 lines for the selected developing countries.

Various difficulties were encountered in the conversion process (Sharma, 2006). These included: missing import values for the years used for the calculation of the weighted import values; an inability to convert either the IDB or the COMTRADE import unit value into units used for the specific bound tariffs; ambiguous units used for specific bound tariffs, such as “percentage volume of alcohol per hectoliter” or “agricultural component”; different levels of disaggregation for some countries and different from the IDB dataset from which import unit values had to be drawn; tariffs mixed with two specific components with different units; different units used for the same products, complicating the application of the agreed 40/20 filter; and bound and applied tariffs not always matching.

The following were some of the key assumptions made in the application of the reduction formulae, which also speaks of the limitations of the data base. First, the flexibility provision in the fourth tier of the EU formula was not implemented;

rather, only the average cut rate specified in the proposal was used. Second, assumptions were made about the number of tariff lines that are sensitive and special (SnP and SP) products. A total of 2 percent of the tariff lines were assumed to be SnPs for the developed countries and 6 percent as SnPs plus SPs for the developing countries. It was assumed that these are the products that currently face the highest bound tariffs. Third, for these SnPs and SPs, tariffs were reduced by 25 percent (or a quarter) of the applicable formula reduction rate in the respective tier in which these products fall. For example, if the tier reduction rate is 80 percent, the rate applicable to the SnPs will only be 20 percent. Lastly, average reduction rates were measured as the average of the individual reduction rates for all tariff lines, i.e. these are average cut rates, and not the cuts in the average.

TABLE 1
Tariff-cutting formulae proposed by the US, G-20 and EU (all cuts are linear)

US Proposal						
	Developed countries			Developing countries		
	Threshold (bound tariff)	Cuts at (%) lowest end highest end		Threshold (bound tariff)	Cuts at (%) lowest end highest end	
Tier 1	> 60	85	90	> 60	57	60
Tier 2	> 40 to = 60	75	85	> 40 to = 60	50	57
Tier 3	> 20 to = 40	65	75	> 20 to = 40	43	50
Tier 4	0 to 20	55	65	0 to = 20	37	43
	Tariff cap	75		Tariff cap	112	
<i>Note: The parameters in the last two columns shown in italic are assumed - reduction rates are 2/3rd of the corresponding rates for the developed countries while tariff cap is set at 3/2rd of 75%.</i>						
G20 proposal						
Tier	Developed countries		Developing countries			
	Threshold (bound tariff)	Cut rate (%)	Threshold (bound tariff)	Cut rate (%)		
Tier 1	>75	75	>130	40		
Tier 2	> 50 to =75	65	> 80 to =130	35		
Tier 3	> 20 to =50	55	> 30 to =80	30		
Tier 4	0 to 20	45	0 to =30	25		
	Tariff cap	100	Tariff cap	150		
EU proposal						
Tier	Developed countries		Developing countries			
	Threshold (bound tariff)	Cut rate (%)	Threshold (bound tariff)	Cut rate (%)		
Tier 1	> 90	60	> 130	40		
Tier 2	> 60 = 90	50	> 80 = 130	35		
Tier 3	> 30 = 60	45	> 30 = 80	30		
Tier 4	0 to 30	35 (20-40)	0 = 30	25 (10-40)		
	Tariff cap	100	Tariff cap	150		

Source: Negotiating proposals, October 2005.

The products chosen for the TE analysis are shown in Table 2. Most of them are also products of export interest of developing countries. A prominent product group that is missing is hides, skins and leather for which appropriate tariff data did not exist (moreover, leather is classified as industrial product in the WTO classification and subject to a different tariff cutting formula).

TABLE 2
Primary and processed product pairs covered in the analysis

Product group	Primary	Processed
Cocoa	Cocoa beans (HS1801)	Coca powder, butter, paste and chocolate (HS1803 to HS1806)
Coffee	Green coffee (HS0901 (0901 11, 0901 12))	Roasted coffee (HS 09012100, 090122000)
Fruits	Fruits (HS0804 to HS0810)	Fruit juices and fruit products (HS2007 to 2009)
Sugar	Raw sugar (HS170111, 170112)	Refined white sugar (HS170199)
Oilseeds	Various oilseeds (HS1201 to 1207)	Vegetable oils (HS1507 to 1522)
Grains	Various grains (HS1001 to 1008, excluding rice)	Processed grain products (HS1101 to 1109)
Rice	Paddy and brown (husked) rice (HS100610, 100620)	Milled rice (HS100630, 100640)

3. The results

3.1 Tariff escalation at the end of the Uruguay Round

Table 3 shows the average bound tariffs for primary and processed products and the tariff wedges (TW) for the base period (i.e. end-UR). It shows that for the three developed countries taken together, TE (positive TW) existed for 16 of the 21 cases (Three countries times seven product pairs) and de-escalation in the other five (sugar in the EU, Japan and US and oilseeds in Japan and US). There is a large variation in TWs across products and countries. The simple average TW for the products with a positive TW is 14 percent for the EU, 59 percent for Japan and 5 percent for the US.

In some cases, the relatively high average bound rates are mainly due to one or two very high tariffs in the product group masking the fact that most of the tariffs are very low or zero. For example, the 18 percent average bound rate on US oilseeds is due to two lines with tariffs of 164 percent and 132 percent (groundnuts) while tariffs on the remaining 16 oilseeds are close to zero. Similarly, the relatively high average tariff on processed cocoa products is due to a very high tariff on chocolates. Likewise, in the case of Japan, the 61 percent average bound rate on oilseeds is due

to four tariff lines with 287 percent tariff on average while tariff rates on rest of the oilseeds are zero. Some similar patterns are also found in the EU tariffs. For the developed countries in particular, one also finds several instances of negative tariff wedges, mostly on products that have farm policies aimed at supporting farmers, e.g. sugar in the EU.

TABLE 3
End-Uruguay Round average bound tariffs on primary and processed products

	Brazil	Egypt	India	Indonesia	Pakistan	Philippines	Sri Lanka	Turkey	EU	Japan	US
Cocoa											
Primary	35	20	100	40	100	40	50	25	0	0.0	0.0
Processed	33	43	130	40	100	40	50	62	17	42.7	13.0
TW	-2.4	23	30	0	0	0	0.0	37	17	43	13
Coffee											
Primary	35	10	125	43	100	40	50	50	4	0.0	0.0
Processed	35	40	133	40	100	40	50	50	8	12.0	1.6
TW	0.0	30	8	-3	0	0	0.0	0.0	4	12	2
Sugar											
Primary	35	20	150	95	150	50	-	135	406	397.2	90.5
Processed	35	20	150	95	150	50	-	135	36	79.7	54.9
TW	0.0	0.0	0.0	0	0	0	-	0.0	-370	-318	-36
Fruits											
Primary	36	56	84	47	100	40	50	62	8	9.4	5.1
Processed	35	60	120	52	100	43	50	58	19	19.2	10.7
TW	-0.9	3.9	36	5	0	3	0.0	-4.1	11	10	6
Oilseeds											
Primary	34	16	106	39	100	39	50	19	0	60.5	18.2
Processed	35	21	210	40	100	38	50	29	29	5.8	4.6
TW	0.3	5	104	1	0	-1	0.0	9.5	29	-55	-14
Grains											
Primary	46	8	84	38	117	38	50	180	30	66.2	1.1
Processed	48	17	131	37	100	36	50	43	34	153.4	2.8
TW	2	9	47	-1	-17	-2	0.0	-137	4	87	2
Rice											
Primary	55	20	80	-	100	-	50	45	40	702.2	2.5
Processed	55	20	75	-	100	-	50	45	60	847.4	5.3
TW	0.0	0.0	-5.0	-	0	-	0.0	0.0	20	145	3

Note: A positive TW, the difference between the two bound rates, indicates tariff escalation, and a negative TW tariff de-escalation, in percentage points.

Source: Author.

In the case of the developing countries, of the 53 cases (eight countries times seven product groups, with three cases missing), there was tariff escalation in 17 cases in the base period, de-escalation in 11 and tariff parity (i.e. neither escalation nor de-escalation) in 25 cases (Table 3). The high frequency of tariff parity is due to fairly uniform tariff structure, i.e. the bound tariffs on both processed and primary products are same or similar. This is so for Sri Lanka in all the seven product pairs as well as in most cases for Pakistan. Of the 17 cases with tariff escalation, the tariff wedge exceeds 10 percentage points in seven cases. These are four cases for India and two each for Egypt and Turkey.

3.2 Impact of the formula cuts on tariff escalation

Table 4 presents tariff wedges (TWs) following the formulae cuts for the EU, Japan and US. The first column is the TW for the base period (UR) (as in Table 3). The following three pairs of columns show both the TW and Δ TW, following formula

cuts. The former measures the difference in tariffs between a primary and processed product while ΔTW measures a change in the TW between the base period and after formula cuts, and is an indicator of the change in degree of TE. Of the total of 21 cases, five pairs have negative TWs (tariff de-escalation) both in the base period and following the formula cuts. In all these cases, tariff de-escalations narrow after tariff reductions ($\Delta TW > 0$), which follows from the formulae. For example, the (negative) TW of 36 percent for the US sugar in the base case became 33 percent with the US formula cut. The decline in the TWs is notably marked for sugar in the EU and Japan, from the very high levels in the base case to much smaller values.

TABLE 4
Tariff wedges and changes in tariff wedge between primary and processed products following tariff cuts (EU, Japan and US markets)

Market	Product	End UR	US formula cuts		G-20 formula cuts		EU formula cuts	
		TW	TW	ΔTW	TW	ΔTW	TW	ΔTW
EU	Cocoa	17.1	5.5	-11.6	8.2	-8.9	10.6	-6.5
	Coffee	4.1	1.7	-2.4	2.3	-1.8	2.7	-1.4
	Sugar	-369.6	-66.8	302.8	-85.9	283.8	-79.7	289.9
	Fruits	11.0	3.4	-7.6	5.3	-5.7	7.0	-4.0
	Oilseeds	28.8	4.9	-24.0	6.8	-22.1	7.7	-21.1
	Grains	3.9	2.3	-1.6	2.8	-1.1	3.1	-0.8
	Rice	20.4	1.8	-18.6	6.8	-13.6	9.4	-10.9
Japan	Cocoa	42.7	8.4	-34.3	14.1	-28.6	20.2	-22.5
	Coffee	12.0	4.6	-7.4	6.6	-5.4	7.8	-4.2
	Sugar	-317.5	-61.8	255.8	-76.3	241.2	-65.3	252.2
	Fruits	9.8	2.9	-6.9	4.6	-5.2	6.2	-3.6
	Oilseeds	-54.7	-4.4	50.3	-12.0	42.7	-17.3	37.4
	Grains	87.2	14.3	-72.9	17.8	-69.5	17.6	-69.6
	Rice	145.2	0.0	-145.2	0.0	-145.2	0.0	-145.2
US	Cocoa	13.0	4.8	-8.2	7.0	-6.0	8.4	-4.6
	Coffee	1.6	0.6	-1.0	0.9	-0.7	1.1	-0.6
	Sugar	-35.5	-33.2	2.3	-41.4	-5.9	-32.8	2.7
	Fruits	5.6	2.8	-2.8	3.9	-1.7	4.0	-1.6
	Oilseeds	-13.5	-7.3	6.3	-9.5	4.0	-9.2	4.3
	Grains	1.7	0.6	-1.1	0.9	-0.8	1.1	-0.6
	Rice	2.8	1.0	-1.8	1.6	-1.3	1.8	-1.0

Note: TW is tariff wedge, the difference in tariffs between primary and processed products. A combination of $TWUR > 0$ and $\Delta TW < 0$ indicates a reduction in tariff escalation (see Section II). As an example, the EU cocoa case shows that TWUR was 17.1 percentage points which fell to 5.5 percentage points with the US formula cuts, indicating a fall in tariff escalation of 11.6 percentage points.

Source: Author.

Of the remaining 16 cases with positive TWs, the TE fell in all 16 instances ($\Delta TW < 0$). The average TWs fall most markedly with the US formula, followed by the G-20 and EU formulae. Note that TWs for rice in Japan are zero for all three formulae. This is because the very high UR bound tariffs on both groups of rice were capped at 75 percent under the US formula and at 100 percent under the G-20 and EU formulae, and thus the wedges are zero. For the 16 cases with positive TWs and escalation, the simple average of the TW fell from 25 percentage points in

the base period to 4, 6 and 7 percentage points with the US, G-20 and EU formula respectively. Thus, one main conclusion is that the formulae reduce the degree of TE significantly but do not eliminate it. Whether these reductions amount to the Framework's standard of "effectively" dealing with the phenomenon of the TE is a matter for debate.

Table 5 shows changes in TWs following formula cuts for the eight developing countries.⁴ As noted previously, there was tariff parity for 25 of the 53 product pairs in the UR itself. The formula cuts do not change this parity because tariffs on both primary and processed products are reduced by the same extent. Of the remaining 27 cases, there was TE in 17 cases in the base period and de-escalation in the other 10.

TABLE 5
Tariff wedges between primary and processed products in the base period and following the tariff cuts - eight developing countries

Product	End UR	US formula cuts		G-20/EU formula cuts		End UR	US formula cuts		G-20/EU formula cuts		
	TW	TW	ΔTW	TW	ΔTW	TW	TW	ΔTW	TW	ΔTW	
----- Brazil -----						----- Egypt -----					
Cocoa	-2.4	-1.2	1.3	-1.4	1.0	23.0	9.6	-13.4	15.6	-7.5	
Coffee	0.0	0.0	0.0	0.0	0.0	30.0	14.8	-15.2	20.5	-9.5	
Sugar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Fruits	-0.9	-1.2	-0.3	-1.7	-0.8	3.9	3.1	-0.8	2.8	-1.2	
Oilseeds	0.3	0.4	0.1	0.2	-0.1	5.2	3.2	-2.0	4.1	-1.0	
Grains	1.7	-8.6	-10.3	-3.9	-5.6	8.9	4.6	-4.3	6.2	-2.7	
Rice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
----- India -----						----- Indonesia -----					
Cocoa	30.0	10.6	-19.4	15.0	-15.0	0.0	0.0	0.0	0.0	0.0	
Coffee	8.3	2.9	-5.4	4.2	-4.2	-3.3	-1.3	2.1	-2.3	1.0	
Sugar	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	
Fruits	35.9	13.3	-22.6	18.5	-17.3	5.4	1.7	-3.7	3.8	-1.6	
Oilseeds	104.0	36.3	-67.7	43.4	-60.5	1.5	1.0	-0.5	0.9	-0.6	
Grains	46.9	17.3	-29.6	20.5	-26.4	-1.0	-0.4	0.6	-0.9	0.2	
Rice	-5.0	-2.2	2.8	-3.5	1.5	-	-	-	-	-	
----- Pakistan -----						----- Philippines -----					
Cocoa	0.0	-1.9	-1.9	0.0	0.0	-0.1	-0.3	-0.2	-0.1	0.0	
Coffee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sugar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Fruits	0.0	0.7	0.7	0.0	0.0	2.8	8.5	5.7	6.1	3.2	
Oilseeds	0.0	-1.4	-1.4	0.0	0.0	-1.3	0.7	1.9	0.1	1.4	
Grains	-16.7	-23.9	-7.2	-23.3	-6.7	-2.4	-2.4	-0.1	-2.4	-0.1	
Rice	0.0	0.0	0.0	0.0	0.0	-	-	-	-	-	
----- Sri Lanka -----						----- Turkey -----					
Cocoa	0.0	0.0	0.0	0.0	0.0	36.6	13.6	-23.1	23.5	-13.1	
Coffee	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Sugar	-	-	-	-	-	0.0	0.0	0.0	0.0	0.0	
Fruits	0.0	0.0	0.0	0.0	0.0	-4.1	-1.8	2.3	-2.0	2.1	
Oilseeds	0.0	0.0	0.0	0.0	0.0	9.5	4.4	-5.1	6.7	-2.9	
Grains	0.0	0.0	0.0	0.0	0.0	-137.4	-52.9	84.5	-78.1	59.3	
Rice	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

Note: See notes to Table 4 for explanations.

Source: Author.

⁴ Note that for the developing countries, the EU proposal is the same as the G-20 proposal, and so a separate analysis is not needed.

Of the 17, the tariff wedge exceeded 10 percentage points, which may be considered to be significant, or more than de minimis, in seven instances only. The formula cuts reduce these wedges considerably. For example, the TW for these seven cases falls from 44 percentage points on average in the UR to 16 and 22 percentage points with the US and G-20/EU formulae respectively. This translates into reductions in TE, as measured with ΔTW , of 28 and 22 percentage points.

Whether these reductions are sufficient or not is a matter of judgement. For example if the “desired” degree of TE is, say, 10 percentage points or less, the formula cuts are not enough and additional reductions will be needed with the use of a multiple factor like [1.3] or more as suggested in the Harbinson text.

3.3 The role of the tariff caps and SnP/SP exemptions

All of the above results were based on the assumption that 2 percent of tariff lines of the developed countries are SnPs and 6 percent of the developing countries’ tariff lines are SnPs or SPs. What difference would it make if no exemptions were made at all for these tariff lines? The only source of the difference in the results (i.e. in TWs and ΔTW s) under the two scenarios are where some tariff lines fall under the SnP/SP category in one case, while the full reduction rate is applied in the other scenario. In the case of the developed countries, such differences were noted particularly for the three product pairs where tariff de-escalation was found, namely sugar, rice and oilseeds. The reason was that the tariffs on primary products were very high to start with relative to those on the processed products, and so the former were classified as SnP. As a result, in the “with-SnP” scenario, the new bound rates on primary products remained much higher after formula cuts, leading to larger de-escalation. In other words, because of the SnP assumption, tariff de-escalation continued to be higher. Other than for these three groups of products with high tariffs, the difference in TWs and ΔTW s between the two scenarios was very small.

In the case of the developing countries, tariff parity was the rule rather than exception in 50 percent of the cases. As for the rest, there were far fewer changes in TWs and ΔTW s between the two scenarios. This does not mean that there were no differences in new bound rates between the with-SnP/SP and without-SnP/SP scenarios. With so many high tariff lines, this is bound to happen. However, as the bound rates were same, TWs were zero and so there were no changes in tariff escalation. As an example, in the case of the US formula cuts, Indonesia’s bound tariffs on both raw and white sugar fell from 95 percent in the UR to 81 percent under the with-SnP scenario and 41 percent under without-SnP scenario. But the tariff wedge did not change, as it was zero before and after the cuts.

What was very important, however, was the role of the tariff caps. The importance of tariff caps in determining the overall reduction rates, as well as for individual tariff lines, was stressed in Sharma (2006). In many cases, the provision to cap tariffs was effective in capping many very high tariffs to the levels of 100 percent or 75 percent, depending on the formula. As a result, large wedges in the UR scenario virtually disappeared after the formula applications because with capping, the new bound tariffs on both the processed and primary products were the same. The main

message is that tariff caps play a very important role in eliminating tariff escalation when bound tariffs are very high.

4. The negotiations: what might be done to tariff escalation?

The latest official position on the table (2004 Framework) is to address TE through a formula to be agreed. The only instance of a concrete idea on this was the Harbinson proposal to use a negotiated multiple to further reduce tariffs on processed products wherever tariffs escalate after formula cuts.

Even this seemingly simple idea is difficult to implement in practice without some further parameters that need to be agreed to. In what follows, two key building blocks that are essential for addressing TE in the ongoing negotiations are discussed: a list of tariff lines or processed products that will be the subject of the adjustment; and the nature of the adjustment factor itself.

4.1 Listing of products for addressing tariff escalation

The analysis in this paper was undertaken for seven product groups, covering many tariff lines, ranging from four to six lines in the case of rice to over 100 lines in the case of oils and fruits. One could define the entire HS-10 as primary products (primary grains and rice) and the entire HS-11 as the corresponding processed products, as done in this paper. But this does not always work, notably for processed products that are derived from multiple primary products, and where more than one processing stage is involved. Many such product chains are found in the meat and dairy groups. For example, the following product chain involves at least three stages of processing: live animals, carcasses, fresh cut meats and further processed meats. In such cases, the tariff lines to be identified for targeting TE could run into hundreds.

Without such a list to start with, there is nothing to apply the TE formula to. Given that there are potentially hundreds if not thousands of tariff lines that may be called processed, especially if several levels of processing are taken into consideration, an agreement would be needed on a list of processed products for targeting TE. As the exercise is about comparing tariffs on primary and processed products, a list of the corresponding primary products is also essential. The list of the processed products can not be Member-specific, as is identified for tariff concessions like in sensitive and special products, because a processed product is a processed product irrespective of the membership. Refined sugar for example can not be a processed product for one importing country and a primary product for the other. An expert panel could draw up a list of such products. However, given the member-driven nature of the negotiations, all interested Members could be asked to submit a list of a limited number of processed products for the purpose of TE, for example 100 tariff lines at the HS-6 level (about 25-30 products) as processed as well as the corresponding primary products. To prepare a final, common list the most common 100 tariff lines for processed and 150-200 corresponding lines for primary could be selected. These would be the products that would be targeted for containing TE.

4.2 Reducing tariff escalation for the identified processed products

The only concrete proposal so far on this is that in the Harbinson text of March 2003.⁵ In what follows, this proposal is illustrated with an example, along with an alternative, and perhaps a better, approach. As will be evident, there are several practical complications that one faces in implementing even a seemingly simple formula.

Table 6 shows a concrete example for a product chain, cocoa and products. In this case, the cocoa beans, the primary product, go through two stages of processing - 1st stage processing into cocoa paste, butter and powder, and a second stage processing into chocolates. Addressing TE where a product goes through more than one stage of processing is one complication, because a decision is needed on whether all the stages are to be considered or if one stage is to be ignored. For example, should chocolates be included in the cocoa product chain? Second, for the work to be manageable, tariff lines may need to be grouped into categories of homogenous primary and processed products. This will be required for averaging bound tariffs and for implementing reductions. In the cocoa example, all chocolate products (17 tariff lines) are considered to be one category of second stage processed product (chocolates). This simplifies considerably the application of a formula. The alternative, treating all 17 lines differently and computing separate tariff wedge is not impossible to implement but will probably not be manageable. This is a complication that will recur in numerous product chains.

⁵ “In applying this formula, where the tariff on a processed product is higher than the tariff for the product in its primary form, the rate of tariff reduction for the processed product shall be equivalent to that for the product in its primary form multiplied, at a minimum, by a factor of [1.3]”, paragraph 8 of the Harbinson modalities, March 2003.

TABLE 6
Bound tariffs and tariff wedges for cocoa and products

HS-8	description	UR bound tariff (%)	G-20 Tier 1/	G-20 formula cut		Change in TE (% points)
				Cut rate	New bound (%)	
18010000	Cocoa beans	0	4	0.45	0	-
18031000	Cocoa paste - not defatted	5	4	0.45	3	-
18032000	Cocoa paste - defatted	10	4	0.45	6	-
18040000	Cocoa butter, fat and oil	0	4	0.45	0	-
18050000	Cocoa powder	13	4	0.45	7	-
18061010	Chocolates - Containing added sugar	22	3	0.55	10	-
18061020	-- Containing added sugar	22	3	0.55	10	-
18062011	---- Containing added sugar	93	1	0.75	23	-
18062019	---- Containing added sugar	93	1	0.75	23	-
18062021	---- Containing added sugar	93	1	0.75	23	-
18062029	---- Containing added sugar	93	1	0.75	23	-
18062031	---- Containing added sugar	93	1	0.75	23	-
18062032	---- Containing added sugar	93	1	0.75	23	-
18063100	-- Filled	10	4	0.45	6	-
18063210	Chocolate confectionery	20	3	0.55	9	-
18063221	Chocolate confectionery	30	3	0.55	14	-
18063222	Chocolate confectionery	20	3	0.55	9	-
18069010	Preparations containing not less than	37	3	0.55	17	-
18069021	Preparations containing not less than	37	3	0.55	17	-
18069022	Preparations containing not less than	37	3	0.55	17	-
18069031	Preparations containing not less than	37	3	0.55	17	-
18069032	Preparations containing not less than	37	3	0.55	17	-
				----- Simple averages -----		
	Primary (cocoa beans - 1 tariff line)	0	-	0.45	0	-
	1st stage processed (paste, butter, powder, 4 tariff lines)	7	-	0.45	4	-
	2nd stage processed (chocolates, 17 tariff lines)	51	-	0.61	16	-
				----- Tariff wedges (TWs) -----		TE = ΔTW
	Between primary and 1st stage processed	7	-	-	4	-3
	Between primary and 2nd stage processed	51	-	-	16	-35
	Between 1st stage and 2nd stage	44	-	-	13	-31

Note: 1/ These are the tiers of the G-20 formula, with Tier 1 including the highest tariff lines, and so on. TW is tariff wedge, the difference in the bound tariffs between a processed and primary product. TE is tariff escalation, or ΔTW, before and after a formula cut.

Source: Author.

The third and fourth columns in Table 6 show the UR bound tariffs and the tier to which the tariffs belong to in the G-20 tariff-cutting formula, which is used here for illustration. The next column shows the corresponding reduction rates (based on the G-20 formula) while the sixth column is the resulting new bound rates. The bottom segment of the table shows summary statistics - simple averages of the tariffs and reduction rates, as well as computed TWs and tariff escalation (ΔTW). In this example, the end-UR TW is 7 percentage points between cocoa beans and 1st stage products, 51 percentage points between cocoa beans and 2nd stage products, and 44 percentage points between the 1st and 2nd stage products. With the G-20 formula cuts, the TWs are reduced to 4, 16 and 13 percentage points while tariff escalation (ΔTW) itself falls by 3, 35 and 31 percentage points, respectively.

According to the Harbinson proposal, a further adjustment is made whenever TWs are positive after formula cuts. In this example, all three TWs are positive. Assume that a multiple of 1.3 is agreed, which means reducing the tariff on a processed product by 1.3 times the tariff on the corresponding primary product.

There is a technical glitch in the formula as stated and a problem with the proposed formula itself.

The glitch is that the formula does not work where the bound tariff on the primary product is zero (as is the case with cocoa beans in the above example) because in this case a reduction rate is not defined (tariff reduced from 0 percent to 0 percent) and so there is nothing to multiply the 1.3 factor with. One finds many product pairs in the tariff data where this is the case, notably in the case of the developed countries due to many duty free tariff lines. Presumably, the Harbinson text refers to the reduction rate of the tier into which the primary product falls. In the cocoa example, this is 45 percent. Thus, the tariff on the processed product is reduced by 1.3×45 or 58.5 percent.

The problem with the Harbinson proposal is that there is no “the” single multiple that produces a desired outcome in all situations. In the cocoa case for example, a multiple of 1.3 will reduce the TW between the primary and 1st stage processed products because the reduction rate on the processed products is now 58.5 percent. However, this reduction will be very small (a TW of 2.9 after the adjustment, versus 3.8 before) as there was no reduction in the primary product (bound tariff being zero to start with). Higher multiples, like 1.9, will reduce the TW considerably. A multiple of 2.2 will fully eliminate the TE in this case.

The case of the pair of cocoa beans and chocolates illustrates that smaller multiples like 1.3 do not always reduce the TE. This is because the formula reduction rate for the chocolates, 61 percent, is higher than $45 \text{ percent} \times 1.3$. In this case, TE begins to decline only with a multiple of 1.5 or more while a factor of 1.8 will reduce TW by 50 percent over and above the formula cuts.

These examples illustrate the problem with the Harbinson proposal of negotiating a single multiple factor for addressing TE. Put simply, there is no one number that works in all situations.

In view of this, an alternative approach is proposed here, which is to negotiate a threshold within which to contain TE. This threshold may be called a *de minimis* level. Thus, the TWs for all identified product pairs are reduced to within the *de minimis* level of, say, 5 percentage points for the developed countries and 10 percentage points for the developing countries. In this case, the multiple discussed above becomes a variable rather than a fixed number.

In the cocoa example of Table 6, assuming a *de minimis* threshold of 5 percent, no adjustment is needed in the case of the TE between the primary and 1st stage processed products because the TW is 3.8 percent, i.e. below the 5 percent level. On the other hand, the TW between the primary and 2nd stage processed products is 16.5 percentage points after the G-20 formula application, which means a further adjustment is required. In this case, a reduction rate of 90 percent is required to reduce the TW to within 5 percentage points (the G-20 cut rate was 61 percent). In terms of the Harbinson formula, this translates into a multiple of 2 ($45 \text{ percent} \times 2 = 90 \text{ percent}$). As a third example, the TW between the 1st stage and 2nd stage processed products is 12.5 percentage points after the G-20 formula application. The required reduction rate in this case to meet the *de minimis* target is 85 percent, which implies a multiple of 1.88.

This example illustrates yet another issue to be settled. Note that there are two reduction rates for the 2nd stage processed products: 90 percent when compared with the primary product; and 85 percent when compared with the 1st stage processed products. Similar cases will arise whenever a product chain involves more than a single stage of processing. In order to address TEs between multiple pairs of primary and processed products, the reduction rate for the product in the last stage of processing has to be the highest of all the reduction rates, i.e. 90 percent and not 85 percent in the above example.

In conclusion, it appears very difficult to implement the Harbinson-type formula based on a single negotiated multiple, given the wide range of tariff wedges that are found in the tariff profiles. It is also clear that for applying this or other formula there has to be a target level of TE to be attained. In view of these problems, the alternative method suggested above appears more attractive. Bringing tariff wedges to within some agreed *de minimis* threshold would be an “effective” response to the phenomenon of escalating tariffs in line with the spirit of the Framework Agreement.

5. Summary

Effectively dealing with tariff escalation (TE) is one of the stated goals within the market access pillar of the ongoing WTO negotiations. This follows from the recognition that escalating tariffs act as a disincentive for exporting processed products, notably by developing countries where the need for developing value-added, processing economic activities is urgent. In this context, this study analysed the implications on TE of three tariff-cutting formulae and discussed some approaches for addressing TE in the negotiations. The analysis covered seven product pairs and 11 countries, three developed (EU, Japan and US) and eight developing. The following are the key findings of the study.

First, and in common with several previous studies, TE continues to remain for many product pairs even after the full implementation of the Uruguay Round tariff cuts. For the three developed countries covered, escalation of bound tariffs was found for 16 of the 21 cases (three countries times seven product pairs) examined. The simple average tariff wedge (the difference in bound tariffs between the processed and primary products) for the seven product pairs was 14 percent for the EU, 59 percent for Japan and 5 percent for the US. For these countries, tariff de-escalation, i.e. the tariff on a primary product is higher than on the corresponding processed product, was also fairly common. In the case of the developing countries, tariff parity, i.e. the same tariff rate for both the primary and processed products, was more common, reflecting uniform tariff structures. Tariff escalation was found in about 30 percent of the total cases, with significant escalation (10 percentage points or more) in half of the cases.

Second, all tariff-cutting formulae reduce TE. In the case of the developed countries, with 16 cases of TE, the simple average tariff wedge fell from 25 percentage points in the base period to 4, 6 and 7 percentage points with the US,

G-20 and EU formulae. Thus, one robust finding was that these formulae reduce TE significantly but do not eliminate it. Similarly, tariff de-escalations, where these existed, were squeezed further following the formula cuts.

In the case of the developing countries, tariff escalation in the base period was significant (tariff wedge exceeding 10 percentage points) in seven of the 53 cases analysed. For these cases, the base tariff wedge of 44 percentage points on average fell to 16 and 22 percentage points with the US and G-20/EU formulae respectively, which translate into 28 and 22 percentage points reductions in TE itself.

Third, tariff caps in the formula proposals were found to play an important role in containing or eliminating tariff escalations. As a result of these caps, many very high tariffs were reduced to the level of the cap for both the processed and primary products, thus eliminating the TE. The role played by the exemptions for sensitive and special products is less clear. Where both primary and processed tariff lines are sensitive, TE will not be affected because all tariffs are reduced uniformly. In some cases, the two tariff lines fall into different tiers of the tariff cutting formula and so tariff wedges are affected after the formula cuts.

Lastly, on how TE might be addressed in the negotiations, the analysis showed that there are two key building blocks that are required: i) a list of products (and tariff lines) that would be the subject of further adjustment for containing TE; and ii) a threshold within which all tariff wedges are to be contained. One of the important conclusions reached is that no formula or method will work unless there is a list of “TE products” to start with.

Agreeing to a list of “TE products” will not be simple, given the long-standing difficulty experienced in the GATT/WTO negotiations to agree to a seemingly simpler list of tropical products. Unlike with tropical products, many TE products will include import-sensitive products. But such a list is essential. An idea proposed in this paper is to request all interested Members to submit a list of 100 tariff lines for processed products (about 25-30 products) as well as the corresponding lines for primary products. The most common, say 20-25, processed products could be selected for addressing TE.

Once selected, it is relatively straightforward to adjust the tariff reduction rates so that tariff wedges are within a limit. One option is to make a one-time adjustment using a negotiated number like [1.3] as suggested in the Harbinton text wherever TE persist (perhaps significant ones) after formula cuts, and leave it there irrespective of the resulting degree of TE. This proposal, i.e. using a single negotiated number, is fraught with practical problems. Instead, an alternative would be for the Members to agree to contain TE, as measured by tariff wedges, within a *de minimis* level, which could be, for example, 5 percentage points for the developed countries and 10 percentage points for the developing countries. In this case, the Harbinton-type adjustment factor becomes variable instead of a fixed number. Containing TE within low levels would be an “effective” response to this long-standing issue.

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Special products: a comprehensive approach to identification and treatment for development

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1. Introduction

The Ministerial Declaration launching the Doha Development Agenda made several commitments to foster development among poorer developing countries. Paragraph 3 “committed to addressing the marginalization of least-developed countries in international trade”. Paragraph 13 stated that Special and Differential treatment (SDT) measures shall “be an integral part of all elements in the negotiations on agriculture” and these measures should be “operationally effective and enable developing countries to take account of their development needs, including food security and rural development”.¹ The World Trade Organization (WTO) thereby committed its trade rules to achieving development results.

The commitment “to fulfilling the development dimension of the Doha Development Agenda, which places the interests of developing and least-developed countries at the heart of the Doha Work Programme” was reiterated in the July 2004 Framework agreement.²

This paper focuses on the identification and treatment of a category of products deemed Special Products (SPs) based on the modality agreed by WTO members in the July 2004 Framework document (paragraph 41) and extended in the Hong Kong Ministerial declaration (paragraph 7) as follows:³

“Developing country Members will have the flexibility to designate an appropriate number of products as Special Products, based on criteria of food security, livelihood security and rural development needs. These products will be eligible for more flexible treatment. The criteria

¹ WTO, (WT/MIN(01)/Dec/1, Doha Ministerial : Ministerial Declaration 20 November, 2001.

² WTO, WT/L/579. Doha Work Programme, Decision adopted by the General Council on 1 August, 2004.

³ The underlined words in both quotes are introduced by the authors for emphasis.

and treatment of these products will be further specified during the negotiation phase and will recognize the fundamental importance of Special Products to developing countries.”

July Framework agreement of 2004, paragraph 41.

“Developing country Members will have the flexibility to self-designate an appropriate number of tariff lines as Special Products guided by indicators based on criteria of food security, livelihood security and rural development.

Hong Kong Ministerial declaration, paragraph 7.

The main differences between the July 2004 Framework and the December 2005 Hong Kong Ministerial declaration document is the greater flexibility (self designation), specificity (number of tariff lines) and reference to indicators included in the latter document. The approach presented here to advance the process of selecting SPs is fully consistent with the dimensions included in the SPs modality.

The fundamental message of the paper is that given that designating SPs is associated with increasing food security, livelihood security and rural development, the identification and treatment of SPs should be addressed in a development friendly and comprehensive manner, linked with binding commitments on WTO members. A comprehensive approach as presented in this document would increase the chances of achieving the Millennium Development Goals, particularly the first related to poverty and hunger and the last committed to establishing a global partnership for development.

The paper is divided into five sections as follows. The second section argues that Special Products is the most important development modality among WTO rules and that it should be addressed in the WTO in a more comprehensive manner. The third section details an approach to identification and designation of Special Products emphasising development indicators and trade policy considerations consistent with WTO’s modalities generally. The fourth section presents results from four case studies using the approach suggested to identify SPs. The final section draws lessons from the results of the identification exercise and summarizes the components of a comprehensive approach that would make identification and treatment of Special Products a useful policy measure for promoting development.

2. Special Products (SPs) - towards a comprehensive development approach

The modalities related to SPs fall under the Market Access pillar and are considered special and differential treatment (SDT) for developing countries. However, it is contended in this paper, that given that the 2005 Hong Kong Declaration modality that extends duty free and quota free market access to LDCs is neither enough to promote development generally nor does it cover sufficient countries, that the WTO SP modality should be broadened into a comprehensive modality linked to other WTO modalities, especially those related to trade development, commodity diversification and poverty reduction strategies. A comprehensive approach to SPs as set out in this section, is essential for trade expansion and advancing development

across the large majority of developing countries and a comprehensive SP modality would be conceived in a development context and linked directly with the other modalities in the WTO negotiations.

2.1 A comprehensive approach to special products

There are four dimensions to the comprehensive approach to SPs being presented in this paper. Firstly, conceiving SPs in a development context linked to achieving the outcomes related to the criteria on which the SP modality is currently based under market access. Secondly, linking the SP modality to the modalities under the other two pillars of the agriculture negotiations. Thirdly, establishing a link between SPs in the agriculture negotiations with other development related aspects of the overall agreement and fourthly recognizing the relationship between SPs and other product categories for which best endeavour modalities now exist and address them simultaneously as a component of a comprehensive SP modality.

Special Products is the only current modality that is directly associated with three critical dimensions of development - food security, livelihood security and rural development. Moreover, it is the only modality that is tied explicitly to indicators and criteria of development, linked to specific products/commodities. The agreement in the Hong Kong Ministerial that developing country Members will have the flexibility to self-designate an appropriate number of tariff lines as SPs when the Doha Round is concluded is very important. This new concession should be interpreted as an advance in the general appreciation of the heterogeneity between developing countries. More importantly, it allows countries to effectively link their trade policy to their development policy.

SPs based on rural development indicators also suggest that SPs can become growth poles for rural area development. Thus, the SP identification approach, viewing products as a part of development plans and regional strategies should include the building of capacity to serve the interest of the rural areas and the economic activities that will sustain their development. Therefore, SPs should be seen as measures promoting diversification, allowing the catching up of local capacity so that the SP could be produced efficiently and competitively and be an activity that contributes to food security, livelihood security and rural development. An important aspect of this argument is also related to the implicit concept of a safety net associated with SPs, particularly related to food security and livelihood security. The link between these two criteria and rural development should be explicit in that SPs are seen as permitting the policy space that enables risks to be taken, facilitating the transition out of the current livelihood systems or making them sustainable.

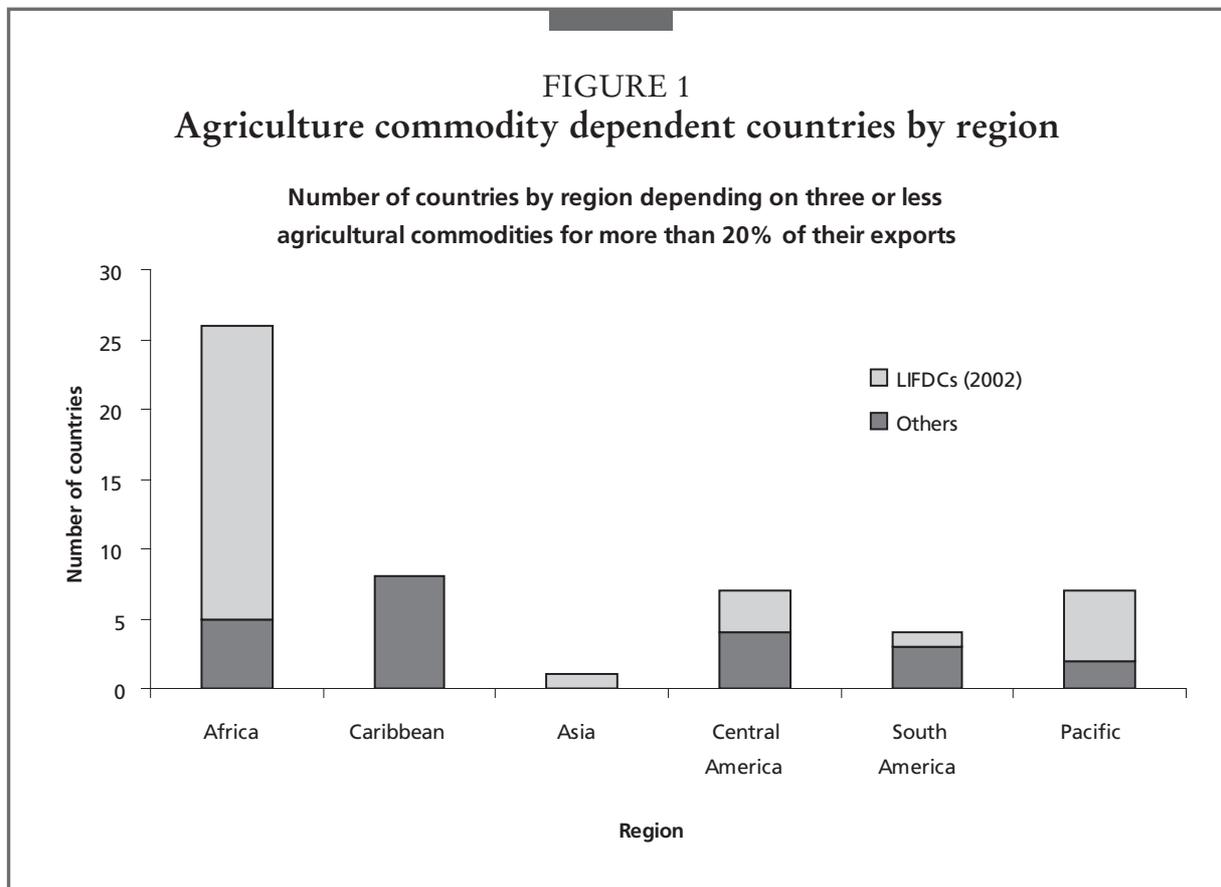
2.2 SPs and other WTO agriculture negotiations modalities

The approach to SPs should be recognized as requiring flexibility and change under more than just the market access modality. Reducing tariffs at a lower rate over a longer period has not by itself proved beneficial in achieving competitiveness or facilitating successful transition to new areas of production. Countries designating

SPs should be able to provide additional support to these selected commodities, both in terms of investment and related subsidies, as well as facilitating their marketing and exporting arrangements. Thus, just as cotton has modalities related to all three pillars, a modality section on Special Products and conditions for their development should be created that includes modalities related to domestic support and export competition. For instance, the treatment of SPs should link them more clearly with increased flexibility under Article 6.2 (under the Domestic Support pillar) to allow increased support for expanding domestic supply capacity and to Article 9.4(under the Export Subsidy pillar) for export trade assistance.

A comprehensive approach should make even more explicit the role of commodities for rural area transformation. This approach should recognize that it is through commodity strategy development leading to commodity diversification and increased trade that rural development, food security and livelihood security, would be achieved.

This link to specific products is seen as critical because this paper holds that commodities are the central element of trade as an engine of growth and development in rural areas where the poor are concentrated. Further, the focus on commodities and commodity concentration is essential as many of the poorest countries also have the highest dependence on a few products (Figure 1). SPs as an instrument promoting product diversification is therefore a critical part of its role in achieving rural development.



Using the Hong Kong Ministerial Declaration document as the reference, the role of Special Products should be elevated and mentioned as important to trade and development in the context of paragraph 55 (commodities), paragraph 41 (small economies), and even more importantly, paragraphs 48 (Integrated Framework) and 57 (Aid for Trade). The Hong Kong Declaration is explicit in its support for an enhanced Integrated Framework (IF) that makes funding more predictable, mainstreams trade into national development plans and poverty reduction strategies and greater cooperation and coherency across the six core agencies of the IF (IMF, ITC, UNCTAD, UNDP, WB and WTO). The IF's principles of country ownership and partnership are consistent with the principle of self-designation of SPs agreed in Hong Kong and the need for strategic alliances to achieve development.

The Development Committee paper on the IF calls for consideration to extending IF eligibility beyond LDCs and possibly creating a separate window to fund trade and development activities of non-LDCs.⁴ Given the references and importance attributed in the Hong Kong Ministerial declaration to the IF, the possibility of a non-LDC window of the IF as a means of further differentiating between WTO member situations should be explored. Assistance characterized by the IF approach tied to Special Products that are linked to poverty and rural development reduction would go a far way in making SDT more than "best endeavour" clauses and the Doha Round truly a Development Round.

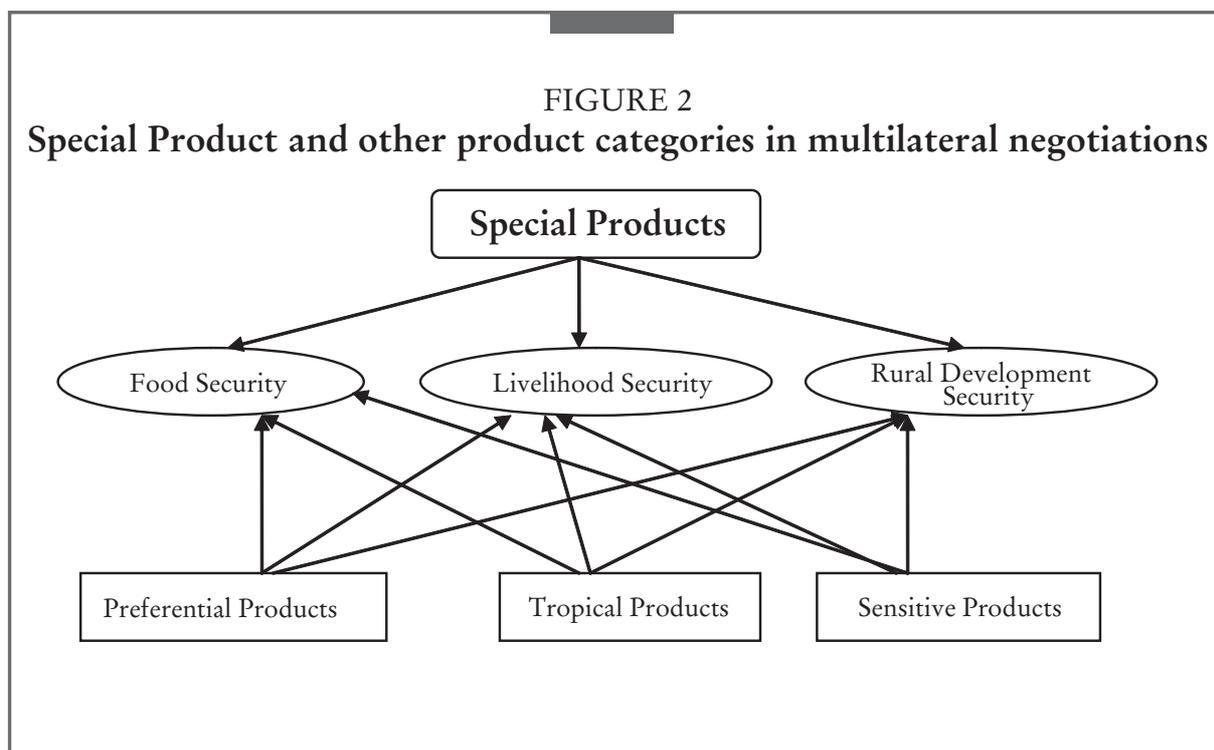
SPs and "best endeavour modalities"

The concept of Special Products is not new in multilateral negotiations. The identification of specific products, staple products and strategic products, linked to the economic growth of developing countries has been a part of multilateral trade negotiations at least since the 1950s. Similarly, the attention in the current negotiations (July 2004 Framework document) to tropical products, preferential products and sensitive products, are also all related to achieving development goals and increasing flexibility for developing countries. Although there is no officially agreed definition of these types of products Annex 1 provides a description of context and conditions including what products have been referred to when these terms have been used in different multilateral trading frameworks.

While it undoubtedly would complicate approaches to WTO negotiations to treat Special Products in a more integrated manner than it is now addressed - purely as a set aside for some products from the full impact of the proposed tariff cuts - it is important to recognize that just designating Special Products without linking them to a development programme would possibly serve the goal of increased trade liberalization, but would not serve to achieve the goal of development. Too many of the key interests of poor and small developing countries remain sidelined because it is believed that to address them would complicate the negotiations and jeopardise the achievement of further liberalization. Three reasons are offered for proposing

⁴ IMF, World Bank. *Doha Development Agenda and Aid for Trade*, Development Committee, September 12, 2005 (DC2005-0016).

SPs as an umbrella for these various types of products (special products, tropical products, preferential products and sensitive products) in the negotiations. Firstly, as Figure 2 below suggests the existence and goals underlying the creation of these product categories in multilateral negotiations are very similar.



In all cases attention is called to these product categories to address concerns related to food/livelihood security and rural development. Secondly, while there has been some clear agreement during the modalities stages on SPs, there has been no progress on other commitments “to address” issues related to Preferential Products and Tropical Products, both an explicit part of the modalities mandate. Linking them to a more comprehensive modality on a wider SP category can hopefully get the important issues associated with these products addressed. Thirdly, the very close overlap/relationship between sensitive and special products categories can immediately be identified, as some of the most frequently selected “sensitive” products by both developed and developing countries (sugar, rice, dairy products, meat) are undoubtedly also linked to the criteria for Special Products.

This link is already being made as represented by the ACP Ministerial Declaration for Hong Kong that called for “products receiving preferential access under long-standing preferences to be designated as sensitive products by preference-providing countries”.⁵ Further, “the treatment of such products shall be moderated in light of its impact on preference erosion and development objectives. Further, any TRQs expansion on an MFN basis shall not be at the detriment of ACP existing quotas”.

⁵ *G-90 Declaration, the Secretariat of the African, Caribbean and Pacific Group of States, ACP/61/057/05 Rev.2, December 2005.*

While this approach undoubtedly introduces increased complexity in WTO negotiations, the reality is that these product issues are in the negotiations and need to be addressed, both for further trade liberalization and for development. Such an approach would place the emphasis on ambition for development, enabling WTO processes to meet some of their commitments in the area of development.

In sum, a comprehensive approach, building SPs into development, agricultural sector and commodity development plans is needed. Coordination and consistency within regions and across bilateral and multilateral agreements and with multilateral development agencies is a key dimension. The process of designating and treating SPs would be linked to commitments and goals during specific time periods, including levels of assistance and increased liberalization of SPs as different phases of development are passed. This approach would introduce balance in WTO negotiations between trade liberalization and trade and development. SPs as one aspect of special and differential treatment could become the development rule of the WTO negotiations.

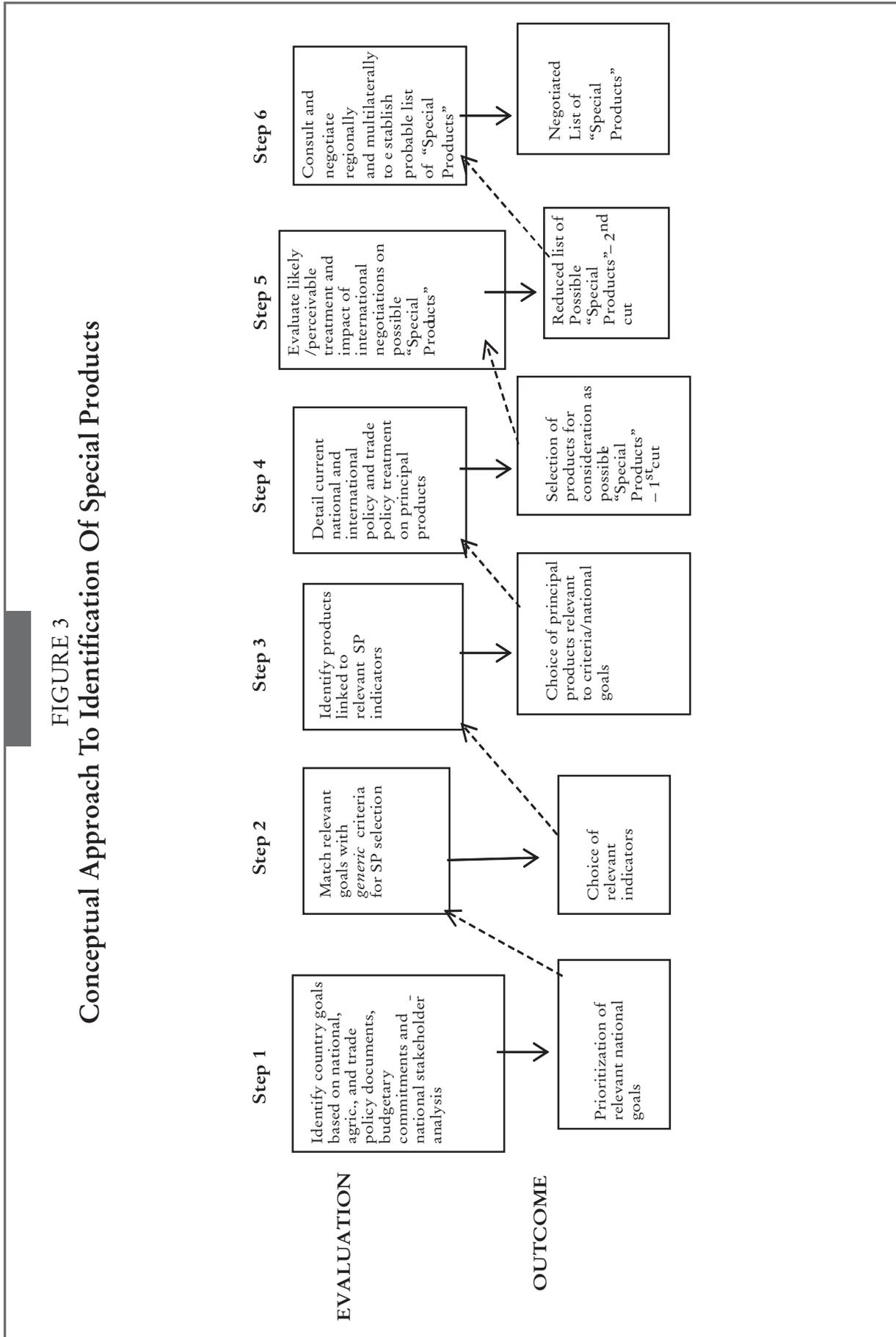
3. Special Products - identification

This section presents a conceptual approach and an analytical framework for identifying Special Products. The point of departure is to present an identification process that results in the designation of Special Products that will increase the chances of achieving the development goals imbedded in the concept of Special Products. Satisfactory progress on the designation of Special Products in that context means that countries will be better prepared to contribute to increased liberalization in the context of the WTO.

The three criteria for identifying Special Products represent a fundamental link between trade negotiation outcomes and development goals. As a result, the importance of understanding the role of the country's goals and strategies to designation of Special Products is recognized as being a critical point of departure for the analysis.

The following questions elaborate steps presented schematically in Figure 3 as a process designed to facilitate the identification of Special Products.

FIGURE 3
Conceptual Approach To Identification Of Special Products



1. What are the country's goals and strategies, including relative priorities and weights, for achieving food security, livelihood security and rural development?
2. What definition/indicators of food security, livelihood security and rural development match best with the national goals and policy commitments related to the criteria for choosing Special products?
3. What products are the main contributors to the achievement of these goals and strategies? How are these products ranked in terms of the criteria indicators and goals at the national aggregated level and particularly at the disaggregated local levels?
4. What national and international policies exist and are needed (related to the principal products) to promote achievement of the goals related to the three criteria? What is the status (do they conform/violate) of these current and needed policies in relation to WTO regulations (market access)?
5. Which of the products most need "flexibility" and why do they need the "flexibility"? At this point the list of principal products is reduced to those needing flexibility?
6. What are the policy/product combinations that do not conform to WTO regulations and what policy flexibility is needed (also related to substitutes). At this point possible treatment of Special Products is addressed at the national, regional and multilateral levels.
7. What are the current levels of disciplines in the WTO and ambition in multilateral Negotiations and how can the needed "flexibility" for possible Special Products be accommodated in the modalities negotiated? At this point probable Special Products and Flexibility are identified, negotiations for support and tradeoffs take place.
8. What adjustments can be made in the probable list of Special Products in order to negotiate a multilateral agreement that is beneficial to all the participating countries and their needs? At this point, one establishes the probable Special Products list and associated flexibility for negotiation.

The above approach is laid out as a series of steps but it should also be perceived as an iterative and dynamic process as countries will change goals and policies as national and international conditions change and are better understood.

The agreed framework for analysis on Special Products is underpinned by the criteria set as the basis for identifying the Special Products. In a trade context the next sub-section addresses definitional and measurement issues related to the three specific criteria agreed for designating Special Products.

3.1 Special Product identification: development criteria linked indicators

A major challenge facing developing countries in the establishment of an effective Special Products mechanism rests on the perceived misunderstanding of its policy basis by some WTO Members that view the Special Products initiative as motivated by simple protectionism or opposition to liberalization. It is therefore necessary to emphasize that the Special Products modality should be seen as providing

developing countries with policy flexibility to address crucial development concerns (food security, livelihood security and rural development) that might not be achieved through trade liberalization, in addition to coping with the unstable nature of agricultural markets, and negative impacts from trade liberalization (which can produce damaging shocks, especially to poor and vulnerable developing economies), as well as increasing the possibility for greater levels of liberalization.

How then can developing countries select products based on the three criteria agreed in the WTO negotiations as the basis for designating Special Products? Further, can the criteria be viewed as independent or mutually exclusive? Does a product need to satisfy all three criteria to qualify for special treatment under the Special Products initiative or need it only satisfy one of the criteria? In answering these questions we first examine the indicators that can be used to measure each of the three criteria and then assess the importance or contribution of each agricultural commodity and indicator towards achieving the objectives implied by the criteria. Box 1 provides working definitions of the criteria.⁶

BOX 1
Working Definitions

Food Security: According to FAO, “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”.

Livelihood Security: The adequate and sustainable access to income and other resources to enable households to meet basic needs. This includes adequate access to food, potable water, health facilities, educational opportunities, housing, and time for community participation and social integration.

Rural Development: is a process which affects the well-being of rural populations, including the provision of basic needs and services, i.e. access to food, health services, water supply, basic infrastructure (roads, etc.) and the development of human capital through education. It also refers to activities that reduces the vulnerability of the agricultural sector to adverse natural and socio-economic factors and other risks, and strengthens self-reliance.

⁶ There are various definitions for these concepts but they generally embody the critical elements mentioned in these three definitions.

3.2 Food Security Indicators⁷

In evaluating and monitoring food security four dimensions are considered critical:

- availability (production and supply side issues related to physical access and sufficient food)
- accessibility (market demand, income, and trade issues related to economic access),
- stability (including vulnerability both in terms of vulnerable groups and situations)
- use (food safety, nutrition and food choice issues).

The indicators used below are a few indicators considered most relevant in the context of linking products to food security dimensions:

(a) Contribution of product to nutrition

This indicator measures the share of calories per capita from the product. The ratio used can be:

- calories per capita per day derived from the product/calories per capita per day derived from all products

(b) Self sufficiency or import dependency in the product⁸

These indicators measure the share of domestic consumption in domestic production or the proportion of consumption of the product that is imported. The ratios used can be:

- total of product (X) consumed/total of product (X) produced
- total of product (X) imported/total of product (X) consumed

(c) Stability in access of the product

This indicator reflects the production and/or price variability of the main consumed products. The production variability is focused on products mainly produced within the country. The price variability measure covers all important food products, both domestically supplied and imported. The measure used can be:

- standard deviation/coefficient of variation of production and price of product
- degree of price transmission (international vs. domestic) of product
- variability in revenue (export) generated by product activity
- share of (household) total income derived from product activity(ies)

⁷ For more discussion on each of the indicators see an earlier paper by the authors (FAO 2005). Data for most of the indicators described below are generally available from FAOSTAT and the WTO.

⁸ These indicators can be used inter-changeably, since a low share of production in consumption could also imply a high share of imports in consumption.

(d) Product consumption expenditure

This indicator reflects the share of expenditure incurred on the purchase of a product in the total expenditure on the purchase of all products. The ratios used can be:

- expenditure on the individual food basket item/total expenditure on food basket

3.3 Livelihood security indicators

Livelihood security is an even broader concept than food security and includes several of the dimensions of food security. The aspects stressed in the indicators used here are employment and household income derived from the product.

(a) Level of employment in product/sector

This indicator reflects the product's share of employment in total employment in a specific area and/or industry, including vulnerable aspects of the labour force linked to the project. Some measures are:

- Share of employment of the product in total agricultural labour force or in total rural employment
- Share of labour force employed in product industry in total labour force - Gender/Age distribution of labour force employed by the product

(b) Income from product

This indicator reflects the product share of income in household income. This can be measured as:

- Income from product industry/ total household income

(c) Agricultural land/assets product share

This indicator reflects the product share of the agricultural land/holdings/assets under cultivation in the country or rural area. This can be measured as:

- Land acreage planted with product/total land under cultivation
- Farm holdings growing the products/total number of farm holdings

(d) Incidence of surge/displacement by imports

This indicator is a more defensive and dynamic indicator, measuring the extent to which some livelihood systems may be under threat by imports coming to the country.

- Correlation between imports and domestic production of product
- Growth rate of import substitutes/growth rate of competing domestic product

3.4 Rural Development Indicators

The linkages between rural area agricultural development and increased levels of overall economic development are well documented. Thus, the key phrases for selecting Special Products related to rural development criteria are “potential

growth” and “economic linkages and development”, which evaluate products in terms of their potential as growth and development poles.

(a) Importance of product in rural agricultural economy

This indicator measures the share of the product in total rural agricultural production.

- Product economic activity share in total rural agricultural output

(b) Product and rural area growth

This indicator seeks to capture the importance of a particular product to the growth taking place in a particular rural area.

- Product growth rates relative to rural area growth rates

(c) Domestic value-added potential of product

This indicator focuses on the value linkages of the product as a catalyst and contributor to rural development

- Degree to which the product can be transformed into other products/uses

(d) Tariff revenue from product import/export

This indicator recognizes the role of some products as critical suppliers of revenue for rural development investment in areas such as infrastructure, utility services and social services.

- Tariff revenue generated by the product

3.5 Issues related to implementation of the indicator analysis

The indicators above facilitate the identification of special products based on the criteria of food security, livelihood security and rural development. One of the main considerations in presenting them is to have quantifiable measures on which to base consideration of Special Products. This facilitates comparison across commodities and countries, but importantly, in the context of WTO negotiations, ensures objectivity. However, possible shortcomings of this process may emanate from several standpoints:

- the indicators may not capture all the products, especially small and remote area products
- not all important dimensions of the three criteria can be easily quantified
- data for all the indicators may not be easily obtainable from both national and international sources
- there is a strong level of inter-dependency amongst the indicators both within the same criteria and between different criteria
- accurately identifying substitute products and the degree of value addition for a product may prove difficult in some circumstances.

Despite the several challenges related to measuring the indicators, they provide a sound basis for identifying special products and data for four countries is used to present results in section 4 of this paper.

3.6 Special Products - trade policy and treatment

The current policy treatment of the product, including the trade policy measures, and its relationship to the current and potential trade regime commitments clearly will determine the final selection of Special Products. This applies to both the country's own treatment of the products and the treatment of the product by its trading partners and others in the multilateral trading system.

The July Framework document and the Hong Kong Ministerial Declaration are silent on treatment of Special Products stating that this “*will be further specified during the negotiation phase*”. However, the latter agreement on modalities indicates that member countries will be allowed to self designate an appropriate number of tariff lines as SPs.

If the “appropriate” number of Special Products is more flexible and allowed to correspond to the needs according to the three specified criteria as presented by countries, one would assume that Special Products will have a cost and countries will have to compensate with greater tariff reductions in some areas, possibly the opening of tariff rate quotas on Special Products. In these cases, the tariff reduction and the tariff rate quota would probably be less than on normal and “Sensitive Products” while similarly the level of in quota tariffs would be relatively higher.

There is also the issue of the level at which tariff lines should be designated - broader or narrower. This too is related to what is allowed in terms of numbers and categories of products to be classified as Special Products. Protection of the domestic market from alternative related crops that displace local crops may require identification of tariff lines in different HS Chapters to protect the same product.

Identification and treatment could also be linked to perceived vulnerability of the different Special Products as might be reflected through the current tariff profile of the country. In some cases, countries may have to explore renegotiation of tariff levels if in the light of the flexibility needed for Special Products the current tariff profile does not already provide sufficient protection.

The nature of the Special Safeguard Mechanism, its availability and what it offers in terms of flexibility is also important to Special Products and will undoubtedly influence both the choice and treatment of Special Products. The same applies to the determination on Sensitive products. Given that Sensitive products are also open to developed countries and the principle of “substantial improvement” will apply to each product chosen, it may be possible for developing countries to negotiate that in this Doha Round Special Products should be exempted from any commitments. This would essentially be treating Special Products for all developing countries the same as all products for least developed countries. Unfortunately, the controversial problem of the developing country category being too wide could again be a stumbling block.

3.7 Summary

In summary, using the criteria identified in the Doha negotiations for selecting Special Products raises several challenges.

- First, the concepts themselves are very broad and extremely complex to define and measure. They are to be applied to a range of very different countries and

conditions within those countries. The conditions differ both in terms of levels of development but also capacities and needs.

- Secondly, given the numerous variables affecting outcomes in the criteria to be used for selection of Special Products, it could be difficult to make definitive trade and trade policy linkages between specific products and the criteria outcomes.
- Thirdly, there is the issue of data availability, at the national level and more so at the rural level where the importance of the criteria are relatively more concentrated.
- Fourthly, while criteria for choice of Special Products have been specified, it is still not agreed what the treatment of Special Products will be. This treatment would clearly influence the choice of products to be classified as special.
- Fifthly, managing the large number of possible indicators and linking them to the criteria through a process that meets general acceptance in a multilateral context would clearly be a formidable task.

The next section of this paper provides results for four countries after applying the approach detailed above using both national level and sub-national level information. The main objective is to demonstrate the methodological approach through examples so that countries can advance their own processes of selecting Special Products and improve their participation in WTO negotiations. The lists of SPs arrived at are not suggested SPs for any country, only the country itself can decide on such a list.

4. Special Products: application of the methodology - case study results

This section presents results in two frames. First, analysis in the context of the criteria as evaluated through product, indicators and their trade policy regimes. Secondly, an evaluation of the indicators themselves, using factor analysis to test for interrelationships and possible reduction of the indicators into principal factors.

4.1 Indicator analysis results

The indicator analysis is based on secondary data available in the public domain for four countries - Belize, Egypt, Nigeria and Thailand. In the case of Belize and Thailand there has been relatively more detailed work. The national, agricultural and trade policy goals as presented in the WTO Trade Policy Review, National Development Plans and Agricultural Sector Plans and Policy Statements provided the background and context to the analysis.

Table 1 provides a summary of the nine indicators across which data were collected for each country. Four, three and two indicators were used for food security, livelihood security and rural development, respectively. The choice was in part driven by data availability.

TABLE 1
Criteria and indicators against which products evaluated

Indicator Name	Measure
I1. Product share in calorie consumption	Daily per caput calorie intake from product/Daily per caput calorie intake from all products
I2. Product import as a share of domestic consumption	Volume of product imported/Volume of product consumption (%)
I3. Ratio of domestic consumption of product in domestic production of product	Volume of product consumed/Volume of product produced (%)
I4. Co-efficient of variation of domestic production	Coefficient of variation of domestic production of product ¹
I5. Import growth rate	Exponential growth rate of product import volume ¹
I6. Share in area harvested	Land area utilised for cultivation of crop/Total land area under cultivation for all crops (%)
I7. Coefficient of correlation (production & import)	Coefficient of correlation between product production and product import volumes ¹
I8. Share in production (volume)	Volume of product produced/Total volume of all products produced (%)
I9. Production (volume) growth rate	Exponential growth rate of product production volume ¹ (%)

¹ For the period 1985-2002

Each agricultural product for the country in the FAOSTAT database was evaluated against the nine indicators above. Table 2 shows the number of products for each country evaluated in the context of the indicators and the number of products that qualified in the top thirty in at least one of the indicator categories. It also shows the number of products in terms of the number of indicators under which they qualified.

TABLE 2
Number of products evaluated by country and number of products meeting 1 to \geq 3 Indicators

	No. of products considered		No. of products with no. of indicators			Total Products
	Produced	Imported	\geq 3	2	1	\geq one indicator
Belize	99	248	20	38	90	148
Egypt	225	366	21	36	117	174
Nigeria	147	261	23	34	124	181
Thailand	252	392	18	40	128	186

The total products produced (and exported) and imported for each country indicates the total number of products evaluated. Obviously, some indicators evaluated only imports or production (exports) and depending on data availability the numbers of products evaluated under each indicator varied. For each base variable/indicator the top thirty products generally accounted for more than 75 percent of the total activity reflected by the indicator. For example, the top thirty products under total calorie consumption or land harvested accounted for greater than 75 percent of calories consumed or land harvested. The top thirty products for each variable was considered the base set of possible products, and products that made that cut and identified with at least three indicators were chosen as the list for further analysis. Table 3 shows the products and the indicators for each country that were in the top thirty on at least three of the indicators. Annex 2 presents the country tables with the indicator values for the products qualifying with three indicators.

TABLE 3
Products and at least three of their related indicators

Thailand		Belize		Egypt		Nigeria	
Product	Indicators	Product	Indicators	Product	Indicators	Product	Indicators
Sugar cane	I1, I3, I6, I8, I9	Chicken meat	I1, I5, I7, I8, I9	Oil of soybeans	I1, I2, I4, I7, I9	Sweet potatoes	I1, I4, I6, I7, I8
Barley	I2, I3, I4, I7	Potatoes	I1, I2, I3, I4, I7	Sugar beets	I3, I4, I6, I7, I8	Tomatoes	I3, I4, I6, I7, I8
Maize	I1, I6, I7, I8	Sorghum	I1, I3, I7, I8, I9	Oranges	I1, I3, I6, I7, I8	Flour of wheat	I1, I4, I8, I9
Bananas	I1, I6, I8	Beef and veal	I1, I5, I7, I9	Potatoes	I1, I3, I6, I7, I8	Taro (Coco Yam)	I1, I4, I6, I8
Cassava	I1, I6, I8	Beer of barley	I1, I5, I7, I8, I9	Sugar cane	I1, I3, I6, I7, I8	Vegetables fresh nes	I1, I4, I6, I8
Chicken meat	I1, I5, I8	Cassava	I1, I3, I4, I9	Maize	I1, I6, I7, I8	Sugar refined	I1, I4, I9
Cocoa beans	I2, I3, I7	Plantains	I1, I3, I4, I8	Sesame seed	I1, I2, I6, I7	Wheat	I2, I3, I4
Coconuts	I1, I6, I8	Beans, dry	I1, I5, I8	Dates	I1, I3, I6, I8	Cocoa beans	I6, I7, I9
Fruit tropical fresh nes	I1, I6, I8	Cantaloupes and other melons	I4, I8, I9	Grapes	I1, I6, I7, I8	Maize	I5, I6, I8
Jutelike fibres	I3, I6, I9	Cashew nuts	I1, I4, I9	Olives	I1, I3, I4, I6	Cashew nuts	I1, I4, I6
Mangoes	I1, I6, I8	Cocoa beans	I2, I3, I4	Onions, dry	I3, I5, I6, I8	Cassava	I1, I6, I8
Milled paddy rice	I1, I7, I8	Grapefruit juice Sing-Str	I5, I7, I8	Tomatoes	I1, I3, I6, I8	Citrus fruit nes	I1, I6, I8
Potatoes	I2, I3, I7	Maize	I3, I7, I8	Cocoa butter	I4, I5, I9	Cow peas, dry	I1, I6, I8
Rice, paddy	I6, I7, I8	Milled paddy rice	I1, I5, I8	Oil of groundnuts	I3, I4, I7	Fruit fresh nes	I1, I6, I8
Soybean cake	I2, I3, I7	Onions and shallots, green	I4, I7, I9	Rice, paddy	I3, I6, I8	Groundnuts shelled	I1, I4, I8
Sugar refined	I1, I7, I8	Orange juice concentrated	I1, I7, I8	Seed cotton	I6, I8, I9	Plantains	I1, I6, I8
Sweet corn prep. or pres	I4, I5, I9	Papayas	I7, I8, I9	Silk, raw and waste	I4, I5, I9	Soybeans	I1, I4, I6
Wheat	I2, I3, I7	Pigmeat	I1, I5, I7	Sorghum	I3, I6, I8	Yams	I1, I6, I8
		Soybeans	I4, I5, I9	Sunflower seed	I3, I7, I8	Flour of maize	I1, I5, I8
		Yams	I3, I4, I9	Flour/meal of oilseeds	I4, I5, I9	Groundnuts in shell	I4, I6, I8
				Sweet potatoes	I3, I4, I9	Sorghum	I3, I6, I8
						Pigmeat	I1, I5, I9
						Potatoes	I3, I4, I7

The FAOSTAT product descriptions were then mapped with the equivalent HS codes for the products qualifying against three indicators. This allowed evaluation of the trade characteristics of the product. In the case of Belize and Thailand additional disaggregated work and policy information led to some additional tariff lines being added beyond the indicator analysis at the national level. For Nigeria and Egypt the products in the indicator analysis lists reflect only those products that satisfied the threshold points on at least three indicators.

Belize

The Belize analysis in this section incorporates additional indicator results from a completed study on Special Products at the disaggregated level with stakeholders across the six districts of Belize.⁹ The results of the disaggregated work are consistent with earlier national level data analysis by FAO in that 19 of the 20 products identified as possible Special Products by the national level work (Annex 2) are also identified in the more recent study. As expected the main difference applying the indicator analysis at the disaggregated level is the identification of additional commodities that are important to food security, livelihood and rural development in particular rural areas. This is the case even in a country like Belize where there is considerable agricultural commodity concentration, for instance, where the top five products by acreage in each district account for 90 percent of the land under cultivation. However, the products vary considerably by District. Applying the indicators under the three criteria at the disaggregated level resulted in 47 products being identified as Special Products (Table 4). This resulted in 102 as opposed to the earlier 37 tariff lines (corresponding to 20 products) at the HS6 level. This SP list, based on the indicator analysis is much less than a list of 238 sensitive agricultural commodities compiled generally by Belize.

The trade policy information from Belize is particularly reinforcing of the indicator analysis approach adopted as more than 60 percent of the products that arise from the indicator analysis are products that are exceptions (above) to Belize's ceiling binding of 100 percent, products with a bound tariff of 105 or 110 percent. Further, all of these products have a tariff overhang of 60 percent or greater, the difference between CARICOM's Common External Tariff (to which Belize subscribes) and its ceiling binding. Most of the products that do not appear on the selected indicator list of three or greater appear on the list of products qualifying with one or two indicators for Belize. Thus, in the case of Belize a largely overlapping set of products are possible for Special Product identification. In the categories of the framework agreement perhaps as follows: food security (rice, maize, poultry, dried beans), livelihood security (sugar, citrus, bananas), rural development (pig meat, fruits, potatoes).

⁹ Belize Case Study, Special and Sensitive Products in the WTO Agriculture Negotiations, FAO Project - GCP/INT/818/JPN, FAO, January 2006.

TABLE 4
High indicator count products including trade policy dimensions

Product	HS Number	Bound Tariff	Applied Tariff	Trade Policy Remarks (Exception to Annex 1A of AoA)
Beef (Dressweight):	0202.10/.2010/.2090/.3010 /.3020/ .3030/.3090	110	40	x
Pigs (Dressweight):	0203.11/.12/.19/.21/.22/.29	110	40	x
Poultry (Dressweight):	0207.11/.12/.13/.1410/.142 0/.1430 /.1490/.24/.25/.26/.2710/ .2790	110	40	x
Milk:	0401.10/.20/.30;0402.21/.29	100	0	
Layers:	0407			
Hatching eggs	0407.002	100	0	
Other fresh eggs	0407.003	100	40	
Honey	0409	110	40	x
Irish Potato	0701.90	100	42 cents/100 lbs	
Tomatoes	0702	100	30	
Onions	0703.101	100	42 cents/100 lbs	
Cabbage	0704.901	100	30	
Carrots	0706.101	100	30	
Cucumber	0707.001	100	30	
Okra	0709.902	100	30	
Pumpkin	0709.903	100	40	
Sweet Pepper	0709.904	100	30	
Sweet Corn	0710.80	100	30	
Beans:	0710			
Black eye Peas	713.1030	110	45	x
Small Red Beans	713.3200	110	5	x
RK Beans	713.3310	110	40	x
Black Beans (Other)	713.3390	110	5	x
Cassava	0714.10	110	40	x
Sweet Potato	0714.20	110	40	x
Coco-Yam	0714.9030	110	40	x
Coconuts (nuts):	0801.11/.1910/.1999	100	40	
Cashew Nuts:	0801.31/.32	110	40	x
Bananas& Plantains	0803.0010/.0020/.0030	110	40	x
Pineapple	0804.30	110	40	x
Avocado	0804.40	100	40	
Mangoes	0804.5020	110	40	x
Oranges	0805.10	110	40	x
Lime	0805.3020	110	40	x
Grapefruit+C38	0805.3030	110	40	x
Canteloupes	0807.1910	100	40	

Determining the appropriate level of import protection

Product	HS Number	Bound Tariff	Applied Tariff	Trade Policy Remarks (Exception to Annex 1A of AoA)
Watermelon	0807.11	100	40	
Papayas	0807.20	110	40	x
Soursop	0810.9040	100	40	
Craboo	0810.9090	100	40	
Coffee:	0901.1110/.1199/.1210/.129 0/.21/.22	100	5	
Pepper:	0904.11/.12	100	40	
Ginger	0910.10	100	40	
Corn (Maize)	1005.9	110	40	x
Rice	1006.1000/.1090/.2010/.202 0/.3010/.3020/.3030/.3040/ 3050/.3060/.4010/.4090	110	25	x
Sorghum	1007.0090	100	40	
Soybeans	1201.0090	110	10	x
Peanuts:				
In shell	1202.10	100	40	
Shelled	1202.2090	110	40	x
Sugar -cane C35	1212.92	100	10	
Annatto	1404.1030	100	5	
Other chicken sausage:	1601.0020/..0030/.0090	100	20	
Sugar	1701.10	110	40	x
Cocoa	1801.001	100	5	

Thailand

In the case of Thailand seventeen products were highlighted by the indicator analysis based on the threshold of being important in terms of at least three of the nine indicators (Annex 2). These products were reclassified in terms of relevant HS codes and evaluated further in the context of trade policy information available for Thailand. The information included trade policy reviews, trade agreement reports and commodity market assessment documents. Incorporating this information led to the 78 tariff lines (Table 5) listed here as possible Special Products. The trade policy analysis findings, particularly in terms of products previously declared under the Special Safeguard clause, reinforced the indicator analysis findings. Out of the 51 tariff lines on the Thailand Special Safeguard list, seventy percent (34 tariff lines) are on the Special Products list. Seventeen lines on the SSG list did not qualify linked to SP criteria. The food security crops (rice, sugar, cassava, maize and chicken meat) are on the indicator list, with maize, chicken meat and rice all also having an SSG designation. These are also the crops that are prominent among the indicators under livelihood security and rural development and reinforce the expectation of overlapping product influence across the indicators and criteria. Some products that were also important under the two other criteria were coconuts and pineapples (livelihood security) and bananas and sugar (rural development).

TABLE 5
Thailand high indicator count products and trade policy dimensions

ITEM (Names used in FAOSTAT)	HS Number (HS 4 & 6 Digit)	Tariff lines at HS 6 digit level	Bound Tariff (%)	Applied Tariff (%)	Tariff over- hang (%)	Trade Policy Remarks
Bananas	0803	1	195.8	112.1	83.6	
Barley	1003	1	27.0	23.0	4.0	
Beans, Dry	0713.31,32,33,39	4	40.0	30.0	10.0	
Beet sugar	1701.12	1	94.0	1.5	92.5	SSG/TRQ
Beverages Dist Alcoholic	2208	7	72.6	343.0	-270.4	
Cassava	070990	1	40.0	40.0	0.0	
Chicken Meat	0207.11,12,13,14	4	33.8	35.0	-1.3	
Cocoa Beans	1801	1	27.0	27.0	0.0	
Coconuts	080110	1	54.0	60.0	-6.0	TRQ
Coconut (copra) oil, Crude oil	1513.11, 19	2	52.0	1.5	50.5	SSG/TRQ
Coffee	0901.11,12,21,22, 30, 40	6	90.0	40.0	50.0	SSG/TRQ
Copra	1203.00	1	36.0	0.0	36.0	SSG/TRQ
Extracts, essences and concentrates, of coffee	2101.10	1	49.0	60.0	-11.0	SSG/TRQ
Flour of Wheat	110100; 110311; 11321	3	34.7	17.5	17.2	
Food Wastes	2309.90	1	9.0	9.0	0.0	
Fruit Tropical Fresh nes	0809	4	84.4	43.4	41.0	
Jute-Like Fibers	530390	1	N/A	5.0		
Hen Eggs	0407	1	27.0	13.5	13.5	
Maize	1005	2	46.5	8.9	37.6	SSG/TRQ
Mangoes	080450	1	96.8	40.0	56.8	
Rice	1006.10,20,30,40	4	52.0	8.5	43.5	SSG/TRQ
Milk and cream	0401.10,20,30	3	41.0	40.0	1.0	SSG/TRQ
Milk and cream in powder	0402.10, 91	2	74.0	17.5	56.5	SSG/TRQ
Pineapples	080430	1	141.7	40.0	101.7	
Pineapples, Canned	2008.20	1	88.6	44.6	44.0	
Potatoes, fresh or chilled, Seed	0701.10, 90	2	125.0	60.0	65.0	SSG/TRQ
Rice Flour	1102.30;1103.14,29	3	30.0	30.0	0.0	
Soyabeans	1201	2	80.0	20.5	59.5	SSG/TRQ
Soybean Cake	2304.00	1	119.0	6.0	113.0	SSG/TRQ
Soybean oil	1507.10, 90	2	146.0	3.5	142.5	SSG/TRQ
Sugar Cane	1701.11	2	94.0	7.2	86.8	SSG/TRQ
Sugar Refined	1701.91,99	2	94.0	65.0	29.0	SSG/TRQ
Sweet Corn Prep. or Pres.	071040; 200490	2	45.6	35.1	10.5	
Tobacco Leaves	2401	3	72.0	67.5	4.5	SSG/TRQ
Vegetables Fresh nes	0706.10,90; 0709.40,90	4	40.0	40.0	0.0	

Total Agricultural Tariff Lines*	651
Special Products Lines	78
Percentage of Special Products in the total agricultural tariff lines at HS 6 digit level	12

* This is country specific total lines

Source: World Integrated Trade Solution (WITS) and Market Access Map database

A number of products that appeared on the indicator list (sweet corn, jute like fibres) were not on the Thailand Special Safeguard list and some on the Special Safeguard list (garlic, onions, palm oil) were not on indicator list. Two products, green coffee and whole milk did not show up as significant among the original nine indicators but were both highly significant on one or two indicators and the trade policy results suggested their inclusion on the list. The bias of national indicator level analysis toward bulky, high-valued and major crops is clear and possibly results in crops such as garlic and spices not making the indicator list of selected products. Further, even with disaggregated district level analysis, a crop that is scattered across districts as opposed to being concentrated in one or a few districts could be missed. There is also the influence of lobbying capacity by a particular commodity organization whereby a crop may be on the list for special treatment with no relation to its potential to be competitive, contribute to food security or rural development.

The concluded and anticipated regional trade agreements are also a major factor in shaping a final SP product list as evidence indicates that very different products are being considered for special treatment in the context of the different negotiations. For example, products such as pig meat and beef in its free trade negotiations with Australia, apples, pears, garlic and onions in its negotiations with China, and groundnuts with the US are products of concern to national stakeholders. None of these products are on the indicator list of this study and not all of them are on the Special Safeguard list of Thailand.

Egypt

For Egypt, among the products that qualify for selection as possible SPs under a large number of indicators, sugar beets, oranges, potatoes and oil of soybeans top the list with a top 30 ranking under five of the nine indicators (Table 6). Though there is some domestic production of oil of soybeans, the high variability in production, largely due to demand fluctuation which varies based on competitive prices and availability of substitutes (for example, palm oil) has led to a large reliance on imports.

Cereals in Egypt are the most consumed food, reflected also in the high dependence on these commodities by the population for deriving maximum calories. Therefore, production of wheat, rice and maize together account for almost 43 percent of all area harvested in the country. The low bound and applied rates for maize is consistent with the fact more than 40 percent of total domestic consumption of maize, like wheat, is met from imports. The importance of cereals is further underscored by their employment-generation capacity, with almost one-

third of the total agricultural labour force in the country employed in production of these three commodities. Cotton is produced on roughly five percent of the total harvested land while amongst the main fruit and vegetables, tomatoes, oranges and grapes occupy some seven percent of the total harvested area in the country.

Production of some soybean products (oil, flour and meal) and cocoa butter show a high potential for future growth. Particularly, in the case of soybean meal which has traditionally been imported (mainly for use as poultry feed). The government is in the process of installing several soybean crushing plants in order to reduce its import dependence. Another commodity that has shown a high growth rate of production is seed cotton, even though it's current share in Egypt's total agricultural output is very low.

TABLE 6
Egypt high indicator count crops and trade policy dimensions

Product	HS Number	Bound Tariff	Applied Tariff	Tariff overhang
Oil of Soybeans	1507	15	9	6
Sugar Beets	121291	30	20	10
Oranges	080510	60	40	20
Potatoes	0701	40	30	10
Maize	1005	5	1	4
Sesame Seed	120740	10	1	9
Dates	080410	40	30	10
Grapes	080610	60	40	20
Olives	070990	40	25	15
Onions, Dry	070310	20	20	0
Tomatoes	0702	20	20	0
Wheat	1001	5	1	4
Cocoa Butter	1804	30	30	0
Oil of Groundnuts	1508	20	12.5	7.5
Rice, Paddy	100610	20	20	0
Seed Cotton	120720	10	1	9
Silk, Raw and Waste	5002	n.a	n.a	n.a
Sorghum	1007	10	5	5
Sunflower Seed	1206	5	1	4
Flour/M meal of Oilseeds		n.a	n.a	n.a
Sweet Potatoes	071420	30	30	0

Nigeria

Table 7 shows the list of high indicator count products and trade policy information for Nigeria. The main products affecting food security are on the list - millet, cassava, maize, yams, sorghum, and cowpea. All of these products have the highest applied (100 percent) and bound (150 percent) rates, except maize which has a high applied rate of 70 percent. These products are also among the major products contributing to calorie availability. In terms of livelihood security, the main products identified by the indicators are cotton, cocoa beans and groundnuts. These crops are particularly important for employment in rural areas as indicated by the share of land harvested. For Nigeria there is a considerable overlap between the criteria hence most of the food security and livelihood security crops contribute to rural development.

TABLE 7
Nigeria high indicator count crops and trade policy dimensions

Product	HS Number	Bound Tariff	Applied Tariff	Tariff overhang
Sweet Potatoes	071420	150	100	50
Tomatoes	0702	150	100	50
Flour of Wheat	110100; 110311 / 110321	150	43	107
Taro (Coco Yam)	071490	150	100	50
Vegetables Fresh nes	070610 /070690 / 070940 / 070990	150	100	50
Sugar Refined	170191 / 170199	150	15	135
Wheat	1001	150	5	145
Cocoa Beans	1801	150	25	125
Maize	1005	150	70	80
Cashew Nuts	080130	150	100	50
Cassava	'070990	150	100	50
Citrus Fruit nes	080590	150	100	50
Cow Peas, Dry	071339	150	100	50
Fruit Fresh nes	081090	150	100	50
Groundnuts Shelled	120220	150	25	125
Plantains	080300	150	100	50
Soybeans	120100	150	25	125
Yams	071490	150	100	50
Flour of Maize	110220 / 110313 / 110329	150	40	110
Groundnuts in Shell	120210	150	25	125
Sorghum	1007	150	100	50
Pigmeat	020311 / 12 / 21 / 22	150	25	125
Potatoes	0701	150	100	50

Note: For products with multiple HS Numbers, tariffs presented in the table are average tariffs of those HS Numbers.

An important result in the context of the negotiations for Special Products is also the number of tariff lines that might be potentially claimed for exemption. Using the analysis above, for Egypt and Nigeria based mainly on the products qualifying under three indicator categories, and for Belize and Thailand incorporating more trade policy information, Table 8 indicates that as much as 15 percent of tariff lines could be suggested for designation as Special Products. For Egypt and Nigeria the estimates are considered low given that the analysis is based only on secondary data. It is expected that based on the Belize and Thailand experience, with further disaggregated level analysis, the percentages could be twice as high.

TABLE 8
Low estimate of tariff lines for SP exemption

Country	Total commodities evaluated	HS Lines	% of tariff lines at HS 6 level
Belize	148	102	15.0
Egypt*	174	28	4.3
Nigeria*	181	39	6.0
Thailand	186	78	12.0

* Based only on Indicator Analysis and considered low estimates.

5. Summary and Conclusions

This paper has argued for comprehensive treatment of Special Products in the modalities of the WTO if the goals of development to which the Doha Round committed are to be adequately addressed. It also presented a conceptual approach for the Identification of Special Products and results from applying this approach on four case study countries. The summary and conclusions are presented in three related contexts:

a) A comprehensive approach to Special Products

- (i) The WTO modalities allow self-designation of Special Products by developing countries, directly linking these products with development related criteria. For this to be effective, both in terms of increased trade participation and development, the approach to identification and treatment should be linked to national development plans, commodity strategies and regional development and trading frameworks.
- (ii) In the context of the Agriculture negotiations there should be an approach that sufficiently recognizes the development purposes of Special Products and therefore the need for policy flexibility for Special Products under all three pillars of the Agriculture agreement. Essentially, taking a similar approach to Special Products as is being done for Cotton.

- (iii) The problems of commodity dependent countries, the challenges of least developed countries and small economies are all related to promotion of increased product diversification and commodity competitiveness. It is only logical that the development related modalities that address these type of country interests be linked to Special Products.
- (iv) Special Products are also Tropical Products and Preferential Products, critical to food security, livelihood security and rural development. In order to address the modalities linked to these two neglected product areas in the ongoing negotiations, and to address them in an adequate manner, they should be linked to Special Products and Sensitive Products in the negotiations.

b) Lessons from case studies on the identification of Special Products

- (v) An approach to identification and designation of Special Products should include detailed national level disaggregated commodity indicator/criteria and trade analysis assessments to ensure adequate coverage of products to meet the objectives associated with the concept of Special Products.
- (vi) Based on the indicator analysis, the results suggest that there is a possibility of specifying a relatively small number of tariff lines, less than 15 percent, as Special Products. Given some of the current proposals in the negotiations this would increase the flexibility for developing countries without sacrificing their ability to call for ambition in the negotiations.

c) Possible treatment of Special Products

- (vii) Tariff overhang is limited in assisting Special Products designation. The uniform manner in which bound rates were set by countries implies that the protection needs of individual products were not evaluated when they were set during the Uruguay Round. Further, applied tariff rates were set and in many cases restrictions imposed on their level in other multilateral frameworks, often as loan conditionalities. Countries should be free to adjust bound and applied rates for Special Products.
- (viii) Given the possibility that designating Special Products does in fact lead to greater ambition that could result in bound rates falling below currently applied rates, the flexibility for all products now given to LDCs, should perhaps be considered for Special Products for all developing countries. Thus, for a specified period there could be no commitments, no tariff reductions and no TRQs on products designated Special Products. However, the impact of this consideration on developing country and LDC exports should also be assessed.
- (ix) Given the levels of ambition being pursued in the negotiations and the possible resulting narrowness of the gap between the bound and applied rates that might result for some products, Special Products should have access to the SSM.

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Annex 1

Preferential Products - has generally referred to products that have been granted market entry conditions more favourable than the “most favoured nation (MFN)” status offers. In other words, these products when exported by particular countries enter the markets of their trading partners at rates of duty lower than the same product from other countries competing for the same market. Bananas exported by ACP countries to the EU market is one example of a preferential product.

Sensitive Products - these are products for which countries seek to apply lower disciplines than agreed on in the negotiations. The specific purpose or conditions for seeking or being granted this allowance are not generally articulated. However, “non-trade” concerns (for environmental protection, food safety) are often cited by developed countries as the basis for sensitive products. Basic food products (rice and meat) and tariff revenue products (tobacco and alcohol) are generally listed as sensitive products. Special Products are not an option for developed countries and as a result where the objectives with Special Products coincide the products are expected to be similar. Both “Sensitive” and Special Products are options for developing countries.

Special Products - based on an interpretation of the July Framework Agreement, would be products for which countries feel application of the general disciplines agreed in the Doha Round negotiations to these products would undermine achievement of their goals related to ensuring food security, improving livelihood security and advancing rural development. Thus, cereals, sugar, milk and root crops have been identified as Special Products.

Staple Products - has generally referred to those products that characterize food consumption in a particular country. In the Special Treatment clause at the end of the Uruguay Round some countries were permitted to treat products specially (delay tariffication) if the products met certain conditions. One of these conditions for products qualifying for special treatment was that “the commodity concerned must be the predominant staple in the traditional diet”. For most of the countries using this option the product was rice, the most important food product in their diet.

Strategic Products - has generally referred to products which countries feel the need to manage for purposes related to national development. They may be both food products and developed products. In the Mauritius TPR, 2001 the report indicates that “several parastatal bodies, including the State Trading Corporation and the Agricultural Marketing Board, purchase, import, and store “strategic” products (including flour, ration rice, petroleum products, cement, table potatoes, onions, and garlic). Price controls, consisting of a fixed maximum price system (on imports and locally produced goods) and a maximum percentage mark-up system (only on imports), are also maintained on some of the strategic products”.

Tropical Products - has generally referred to the main agricultural exports from tropical zone countries, historically to products such as coffee, cocoa and tea. In several different Multilateral Negotiation Rounds there have been efforts to define what tropical products are but there has been no consensus. Participants in the Uruguay Round agreed to engage in negotiations seven product groups with the understanding that it was not to be considered a definition of tropical products. The seven products groups were: i) tropical beverages (cocoa, coffee, tea); ii) spices, flowers and plants ; iii) certain oilseeds, vegetable oil and oil cakes (e.g. palm and coconut oil); iv) tobacco, rice and tropical roots; v) tropical fruits and nuts (e.g. bananas, pineapples and peanuts); vi) tropical wood and rubber; vii) jute and hard fibres.

Annex 2

Country tables with the indicator values for the top products qualifying with three or more indicators.

Belize

Product	Count	Food Security				Livelihood Security			Rural Development	
		Share in calorie consumption (%)	Volume imported/Volume consumed (%)	Volume consumed/Volume produced (%)	Co-efficient of variation of domestic production	Import growth rate (%)	Share in area harvested (%)	Coefficient of correlation (prodn & import)	Share in production (vol) %	Production (vol) growth rate %
Potatoes	6	0.93	72.20	420.52	0.77	-44.69	0.05	0.14	0.04	-28.55
Sorghum	6	0.98	0.00	100.36	0.31	-31.29	1.59	0.40	0.35	38.61
Chicken Meat	5	4.05	0.02	1.02	0.23	855.37	0.00	0.55	0.41	23.12
Cassava	5	0.65	0.00	99.87	0.75	0.00	0.03	0.00	0.03	87.24
Plantains	5	1.82	0.00	100.00	0.85	0.00	0.56	0.00	0.86	-13.69
Beef and Veal	4	1.09	0.01	1.01	0.12	48.12	0.00	0.21	0.06	27.60
Beer of Barley	4	0.94	0.18	1.28	0.27	128.55	0.00	-0.07	0.22	-14.35
Beans, Dry	4	3.64	0.06	0.66	0.27	41.85	4.07	-0.48	0.20	-15.42
Cantaloupes&oth Melons	4	0.02	0.38	1.62	0.99	-100.00	0.02	0.10	0.01	22.00
Cashew Nuts	4	0.73	0.00	1.00	1.76	0.00	0.25	0.00	0.03	37.94
Maize	4	5.96	0.02	103.44	0.21	19.02	7.88	0.10	1.54	2.70
Milled Paddy Rice	4	9.84	0.11	1.18	0.38	62.00	2.98	-0.32	0.26	5.96
Onions+Shallots, Green	4	0.05	1.00	0.00	2.02	-84.30	0.04	0.02	0.01	66.01
Papayas	4	0.03	0.01	0.09	0.70	0.00	0.02	0.71	0.25	37.27
Soybeans	4	0.37	0.05	1.32	0.85	53.48	0.69	0.61	0.03	37.51
Yams	4	0.01	0.00	100.00	1.62	0.00	0.06	0.00	0.00	31.43
Cocoa Beans	3	0.39	89.16	538.03	0.69	0.00	0.05	0.00	0.00	-6.91
Grapefruitjuice Sing-Str	3	0.35	0.00	0.25	0.95	58.74	0.00	-0.10	0.25	-36.32
Oranjuice Concentrated	3	0.96	0.01	0.07	0.51	0.00	33.31	0.84	0.86	-14.00
Pigmeat	3	0.81	0.07	1.07	0.28	27.49	0.00	0.08	0.04	7.78
Sugar, raw	3	18	0	100	0.08	0	0	-0.27	48.3	-1.5

Egypt

Product	Count	Food Security				Livelihood Security			Rural Development	
		Share in calorie consumption (%)	Volume imported/Volume consumed (%)	Volume consumed/Volume produced (%)	Co-efficient of variation of domestic production	Import growth rate (%)	Share in area harvested (%)	Coefficient of correlation (prodn & import)	Share in production (vol) %	Production (vol) growth rate %
Oil of Soya Beans	5	1.03	79.71	480.00	0.45	-2.79	0.00	0.70	0.03	19.81
Sugar Beets	5	0.00	0.00	100.00	0.59	0.00	0.96	0.60	1.70	0.23
Oranges	5	0.47	0.08	90.00	0.05	-31.34	1.54	0.70	1.05	1.89
Potatoes	5	1.17	3.46	90.00	0.12	-9.99	1.40	0.70	1.20	2.01
Maize	4	4.83	41.45	160.00	0.13	0.20	14.91	0.90	4.17	1.41
Sesame Seed	4	0.63	64.82	270.00	0.13	-5.62	0.49	0.70	0.02	-0.21
Dates	4	1.70	0.03	100.00	0.24	30.23	0.51	-0.69	0.64	5.10
Grapes	4	0.77	1.83	100.00	0.80	20.17	1.04	0.84	0.67	1.73
Olives	4	0.44	0.20	100.00	0.49	0.00	0.74	-0.45	0.18	3.17
Onions, Dry	4	0.25	0.20	90.00	0.19	157.63	0.47	0.14	0.46	11.22
Tomatoes	4	1.23	0.10	100.00	0.16	-49.62	3.24	-0.78	4.08	-0.96
Wheat	3	33.12	44.00	180.00	0.15	5.15	17.8	-0.82	4.1	-1.34
Cocoa Butter	3	0.00	0.00	0.00	0.57	53.43	0.00	0.00	0.00	24.96
Oil of Groundnuts	3	0.25	0.25	100.00	0.70	-21.35	0.00	0.90	0.01	0.19
Rice, Paddy	3	0.25	0.78	80.00	0.18	25.20	10.70	0.30	3.55	-2.39
Seed Cotton	3	0.00	0.00	0.00	0.12	0.00	5.05	0.00	0.46	11.22
Silk, Raw and Waste	3	0.00	0.00	0.00	0.39	123.96	0.00	0.00	0.00	13.39
Sorghum	3	1.30	0.01	100.00	0.13	0.00	2.78	-0.11	0.57	-6.35
Sunflower Seed	3	0.00	10.32	100.00	0.18	2.29	0.29	0.70	0.03	-1.25
Flour/M Meal of Oilseeds	3	0.00	0.00	0.00	0.98	471.30	0.00	0.00	0.00	131.84
Sweet Potatoes	3	0.27	0.00	100.00	0.39	0.00	0.18	0.30	0.17	7.93
Sugar Refined	1	4.0	35.4	160.0	0.2	-12.5	0.0	0.1	0.4	-2.2

Nigeria

Product	Count	Food Security				Livelihood Security			Rural Development	
		Share in calorie consumption (%)	Volume imported/Volume consumed (%)	Volume consumed/Volume produced (%)	Co-efficient of variation of domestic production	Import growth rate (%)	Share in area harvested (%)	Coefficient of correlation (prodn & import)	Share in production (vol) %	Production (vol) growth rate %
Tomatoes	6	0.00	0.01	106.23	0.32	19.31	0.28	0.80	0.50	0.28
Sweet Potatoes	5	1.35	0.00	100.00	0.72	72.67	0.88	0.67	1.34	0.49
Cashew Nuts	4	0.36	0.00	90.60	0.48	0.00	0.65	0.00	1.05	1.05
Cassava	4	3.19	0.00	100.00	0.12	-96.94	7.29	0.27	19.18	1.68
Cocoa Beans	4	0.00	0.00	49.26	0.09	0.00	2.02	0.42	6.28	6.28
Flour of Wheat	4	4.48	2.31	102.00	0.65	-67.03	0.00	-0.49	0.81	7.63
Groundnuts in Shell	4	0.00	0.00	100.00	0.33	0.00	6.12	-0.20	1.60	-2.42
Maize	4	7.29	0.20	100.00	0.13	1912.90	9.27	-0.73	2.84	0.45
Potatoes	4	0.18	0.00	100.73	0.95	34.63	0.26	0.98	1.98	1.98
Sorghum	4	13.37	0.00	100.12	0.14	-99.59	15.56	-0.41	4.37	-0.30
Taro (Coco Yam)	4	0.59	0.00	100.00	0.62	0.00	1.39	0.00	2.19	0.55
Vegetables Fresh nes	4	0.66	0.00	99.99	0.27	-85.20	1.45	0.48	2.32	2.51
Wheat	4	4.50	96.90	2753.05	0.31	8.15	0.12	0.16	-7.62	-7.62
Citrus Fruit nes	3	0.64	0.00	100.00	0.11	0.00	1.65	0.00	1.88	0.05
Cow Peas, Dry	3	3.29	0.00	100.00	0.18	0.00	11.51	0.00	1.24	0.69
Flour of Maize	3	7.33	0.00	100.01	0.13	79.06	0.00	-0.11	1.48	0.54
Fruit Fresh nes	3	0.47	0.00	100.00	0.02	53.09	0.50	0.38	0.82	0.00
Groundnuts Shelled	3	1.55	0.31	100.24	0.33	16.77	0.00	-0.28	0.99	-2.69
Pigmeat	3	0.46	0.00	100.01	0.19	81.39	0.00	0.00	6.91	6.91
Plantains	3	1.53	0.00	100.00	0.14	0.00	0.64	0.00	1.14	1.82
Soybeans	3	1.08	0.64	98.84	0.37	-98.94	1.33	-0.27	1.34	1.34
Sugar Refined	3	3.40	82.32	558.16	0.75	11.55	0.00	0.62	36.80	36.80
Yams	3	7.95	0.00	100.00	0.18	0.00	6.37	0.00	15.18	0.88

Thailand

Product	Food Security				Livelihood Security			Rural Development	
	Share in calorie consumption (%)	Volume imported/Volume consumed (%)	Volume consumed/Volume produced (%)	Co-efficient of variation of domestic production	Import growth rate (%)	Share in area harvested (%)	Coefficient of correlation (prodn & import)	Share in production (vol) %	Production (vol) growth rate %
Barley	0.00	90.92	1736.33	0.72	-0.10	0.04	0.85	0.01	4.82
Maize	2.14	3.33	99.40	0.10	-63.90	7.01	0.10	2.18	-1.91
Bananas	1.45	0.00	99.70	0.03	0.00	0.77	-0.34	0.87	0.94
Cassava	1.45	0.00	88.90	0.09	0.00	6.03	-0.30	8.56	-4.00
Chicken Meat	1.69	0.02	77.50	0.20	149.33	0.00	0.60	0.58	6.56
Cocoa Beans	0.00	209.10	3025.20	0.00	4.30	0.00	0.55	0.00	0.00
Coconuts	2.68	0.09	98.90	0.02	-19.80	1.87	0.02	0.69	0.43
Fruit Tropical Fresh nes	0.39	0.00	95.80	0.02	0.00	1.01	0.00	0.35	0.70
Jute-Like Fibres	0.00	0.00	100.00	0.47	0.00	0.14	0.00	0.02	24.48
Mangoes	0.51	0.00	99.40	0.23	0.00	1.50	0.00	0.76	2.32
Milled Paddy Rice	39.68	0.03	53.80	0.13	18.40	0.00	0.68	7.19	-0.40
Potatoes	0.12	65.01	269.52	0.40	-10.10	0.04	0.91	0.05	2.11
Rice, Paddy	0.00	0.00	100.00	0.13	0.00	56.54	0.68	12.44	-0.30
Soyabean Cake	0.00	64.03	282.21	0.39	10.50	0.00	0.90	0.38	3.23
Sugar Refined	12.45	0.00	56.10	0.28	35.70	0.00	0.71	1.54	-1.99
Sweet Corn Prep. or Pres	0.00	5.60	1.50	1.01	76.52	0.00	0.00	0.02	29.35
Wheat	0.03	118.01	91180.83	0.18	8.60	0.01	0.91	0.00	0.00

The European Union preferential trade with developing countries. Total trade restrictiveness and the case of sugar

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1. Introduction

Preferential trade agreements are considered to be important instruments for integrating developing (DCs) and least developed countries (LDCs) into the world trading system, and thus in promoting their development. However, these agreements are discriminatory policies, entailing trade liberalization with respect to only a subset of trading partners and hence tend to interfere with multilateral trade liberalization processes. The world trading system is characterized by a wide variety of preferential trade agreements, whose compatibility with the principle of non-discrimination, the cornerstone of the multilateral trading system, is ensured by a set of exemptions to the Most Favoured Nation rule. In particular, an Enabling Clause² has created a permanent legal basis for trade preferences, both generally for all developing countries under the General System of Preferences (GSP) regimes, and for more specific preferential treatment of LDCs. Individual developed countries sometimes grant specific preferences for limited groups of developing countries which include non-LDCs, such as those that the EU extends to the African Caribbean and Pacific (ACP) countries.

Non reciprocal preferential market access for developing countries emerged as an element of special and differential treatment for these countries under the Uruguay Round of the GATT. These unilateral trade concessions to developing

¹ This paper integrates and presents the work of the Division on trade preferences. Julie Claro and Patrizia Mascianà provided excellent assistance with the data for which we are grateful.

² Decision on Differential and More Favourable Treatment, Reciprocity, and Fuller Participation of Developing Countries, GATT Document L/4903, 28 November 1979, BISD 26S/203.

countries have developed into a key issue in the efforts to negotiate further multilateral trade liberalization in the Doha Development Agenda. The July 2004 Framework Agreement of the WTO states that “the importance of long-standing preferences is fully recognized” (paragraph 44). Despite this declaration and the recent re-affirmation in the Hong Kong Ministerial declaration (paragraph 9), the debate continues on the importance of maintaining the effect preferences have on beneficiary countries, amidst the search for options that would lead to more liberalized trade regimes. Meanwhile, preferences are losing their value, being undermined by policy changes at the multilateral, bilateral and national levels. LDCs are concerned about the erosion of the value of their current preferential access, whilst middle-income countries appear concerned about the discrimination that they face in OECD markets. Developing countries that benefit from non-reciprocal preferential trade account for a very small proportion of global trade. This trade is limited and concentrated on few products that are often subject to restrictive policies in preference granting countries. A comprehensive survey of studies on the benefits of preference regimes undertaken by the Organisation of Economic Cooperation and Development (OECD) (2003), indicates that despite the different methodologies, different data sets and different assumptions, the overall impact of preferential trade arrangements on welfare and trade is found to be non-negligible and generally positive, but also relatively small.

The LDCs have been the focus of two major preference programmes to facilitate the expansion of their trade and promote their development: the Everything but Arms (EBA) initiative of the European Union (EU), and the United States (US) African Growth and Opportunity Act (AGOA). With the AGOA, the US extended preferences to 37 African countries, providing duty free access to agricultural commodities, some subject to tariff rate quotas and quota free access, including among others a range of textile and petroleum products. Rules of origin require that a product be grown, produced or manufactured in a beneficiary African country. In addition there are various conditions related to national security, liberalisation and human rights, reviewed on an annual basis. AGOA was extended in 2004 to continue until 2015. The EU’s Everything but Arms (EBA) initiative, introduced in 2001, is discussed in detail in the following section.

This paper assesses the degree of effectiveness of trade preferences extended to DCs and LDCs by the EU in improving market access. The EU currently offers a number of potentially conflicting preferential trade agreements, arising from historical relations developed over the colonial period, as reflected in the case of the Cotonou Agreement, and the promotion of the development of the LDCs, as in the case of the EBA initiative. The extent to which developing countries effectively enjoy preferential treatment in the EU market is measured by means of the Mercantilistic Trade Restrictiveness Index (MTRI) (Anderson and Neary, 1996), a theoretically founded bilateral aggregate measure of trade restrictiveness. The MTRI is estimated on the basis of trade flows within a general equilibrium model framework. The erosion in the value of preferences to sugar producing beneficiary countries due to trade and domestic policy reform of the EU sugar

sector is also estimated by means of a model structure comprised of a partial equilibrium model and a representation of bilateral trade flows based on the notion of gravity.

The next section provides a brief review of the most important preferential trade agreements implemented between the EU, the DCs and the LDCs. Section 3 is devoted to the theoretical basis and the estimation of the MTRI. Section 4 focuses on the sugar sector, an important sector in the present preferential trade regime of the EU, in which the erosion of the existing preferences is likely to result in significant impacts. The final section concludes by providing a perspective on the possible strategies available to countries which are likely to suffer such consequences, with special reference to developments in the sugar producing countries.

2. European Union preferential trade with developing countries

Preferential trade agreements have always formed an integral part of the EU's policy towards developing countries. Since the 1960s, a significant number of non-reciprocal trade preferences have been granted by the EU to a number of African Caribbean and Pacific (ACP) countries, within the Yaounde and the Lomé Conventions, and currently within the Cotonou Agreement. Other initiatives in which the EU is involved include the bilateral free trade areas with Mexico, South Africa and Chile, the negotiations with Mercosur, and the Generalized System of Preferences (GSP), which is extended to all developing countries. The two most important specific initiatives aimed at developing countries are the Cotonou process and the GSP framework, within which the EBA initiative has taken place.

The Cotonou Partnership Agreements include preferences and linkages between trade and financial assistance to over 70 ACP countries. The agreements follow a series of Lomé Convention arrangements which provide non-reciprocal trade benefits in 99 percent of the industrial goods and some agricultural products of significant importance to these countries. Under the Cotonou Agreement current non-reciprocal "Lomé" preferences will be maintained temporarily until 2008, when new reciprocal Economic Partnership Agreements are to be negotiated and implemented in a gradual manner.

The GSP scheme provides non-reciprocal preferences with lower tariffs or duty-free market access for imports from 178 developing countries and territories into the EU market. Under the GSP, industrialized countries grant autonomous trade preferences to all developing countries. The framework is an exception to the MFN principle that since 1971 allows WTO members to grant unilateral concessions to products originating in more than 100 developing countries. The EU's extended GSP, implemented since April 2005, includes three categories of benefits:

- the General Scheme for all developing countries (with 40 percent of products receiving duty-free access, but with ceilings and graduation criteria that eliminate largest exporters);
- the EBA initiative for Least Developed Countries which grants duty-free access on all products - with the exception of arms and munitions - to all LDCs; and,

- the ‘GSP plus’, which provides duty-free access for all products from ‘countries with special development needs’ that implement international conventions on the environment, as well as on human and labour rights.

The Everything but Arms (EBA) initiative came into effect in 2001, aiming at discriminating in favour of LDCs by granting duty free access to imports of all products that originate in these countries with the exception of arms and munitions. Total access to EU markets was immediate except for fresh bananas, rice and sugar where imports are subject to tariff rate quotas, with duty-free in-quota imports and a gradually reduced tariff for out-of-the-quota imports until 2009. An important difference between the EBA initiative and other EU schemes is that EBA preferences are granted to the LDCs for an unlimited period and are not subject to periodic review. This results in a reduction in the risk to which investors and exporters are exposed, thus enhancing the possibilities of increasing efficiency and diversifying the production base.

For specific ACP countries, the importance of EU preferences is undeniable. Small sugar and banana producers earn a substantial proportion of their foreign exchange from these single commodities (Fiji and Guyana earn as much as 20 percent of the foreign exchange from sugar), whilst in many cases these commodities are a major contributor to GDP (bananas contribute as much as 5 percent of GDP in St. Lucia and St. Vincent). Proponents of preferences identify preferential market access and the higher prices received by producers as one of the reasons for the relatively high levels of human development achieved in the beneficiary countries (e.g. Barbados and Mauritius through sugar; St. Lucia through bananas). The case is often made that preferences have played a part in explaining relatively strong economic performance and economic diversification of Mauritius (Subramanian, 2003).

If ACP preferences are important, the same appears not to apply to the EBA initiative, at least at this initial stage, as duty-free access for the majority of products was already granted under the Generalised System of Preferences (GSP) and the Cotonou Agreement. The evidence so far is that the initial impact of the EBA initiatives on LDCs’ total exports to the EU is small, whilst the limited export success is not uniform across countries.

In general, the effectiveness of preference schemes depends upon the way in which trade reacts to a complex set of rules, arising not only from the different existing regimes, but also from the heterogeneous tariffs implemented for different commodity specifications, and from a number of exceptions. The degree of bilateral trade restrictiveness is the product of how protection is distributed across products, and the countries’ specialization in terms of traded goods. Thus, even if the EU applied MFN bound tariffs to all exporters, the impact would be differentiated: trade would be more restricted in the case of countries exporting products facing the highest tariffs.

The determinants of the extent to which specific preferences are effective can be summarized as follows: (i) the composition of exports of the beneficiary country (e.g. primary versus processed); (ii) the preferences that are also granted within other trade schemes (e.g. EBA and GSP); and (iii) any exceptions for specific commodities.

3. Did developing countries really receive preferential treatment from the EU?

There is an extensive literature on measures of trade restrictiveness (Cipollina and Salvatici, 2006). Some studies rely on trade intensity measures, e.g. estimating the volume of trade in the distorted equilibrium relative to that in free trade. The rationale is that such a ratio summarizes the impact of all trade policy instruments. The problem is that import volumes could be much lower than in free trade, either because tariffs are high on supply-inelastic goods, or because though low, they are imposed on highly supply-elastic goods.

In order to measure the protection granted by a country's trade policy regime, two important aggregation hurdles need to be overcome, aggregation of different forms of trade policies and aggregation across goods with very different economic importance. Regarding the first aggregation problem, all types of trade policy instruments need to be brought into a common metric, in most cases an ad valorem equivalent. In order to solve the second problem, using theoretically sound aggregation procedures, it is necessary to specify the type of information to be maintained, so that the final number is equivalent to the original multiple data in the dimension of interest.

According to Anderson and Neary (1996), a general definition of a policy index is as follows. Depending on a pre-determined reference concept, any aggregate measure is a function mapping from a vector of independent variables - defined according to the policy coverage - into a scalar aggregate. The greatest advantage of this approach is that it is theoretically consistent since the equivalence is determined according to a fundamental economic structure. Secondly, it provides an unequivocal interpretation of the results, since the definition and properties of these "equivalence-based" indicators are predetermined. Finally, it solves the problem of the so-called "endogeneity bias", since the weights are not inversely related with the absolute value of the import demand elasticity.

3.1 The Mercantilistic Trade Restrictiveness Index (MTRI)

The MTRI relies on the idea of evaluating trade policy using trade volume as the reference standard. The interest is in the extent to which trade distortions limit imports from the rest of the world, so that the aggregation procedure answers the following question: what is the equivalent uniform tariff that, if imposed, would leave aggregate imports unchanged?

The MTRI is defined in terms of the uniform tariff τ^u that yields the same volume (at world prices) of tariff-restricted imports as the initial vector of (non-uniform) tariffs. This can be expressed with import demand functions M , while holding constant the balance of trade function at level B^0 :

$$(1) \quad \tau^u : M[p^u, p^0, B^0] = M^0(p^0, p^*, B^0), \text{ with } p^u = p^* (1 + \tau^u).$$

where p^* denotes the international prices (p_k^*) vector of the N goods $k = (1, \dots, N)$,

M^0 is the value of aggregate imports (at world prices) in the reference period, and p^0 is the initially distorted price vector.

Define the scalar import demand as

$$(2) \quad M(p, p^*, B) = \sum_{c=1}^r \sum_{k=1}^N p_{c,k}^* I_{c,k}^m(p, B)$$

where $I_{c,k}^m$ denotes the uncompensated (Marshallian) import demand function of good k from country $c = (1, \dots, r)$ where r is the number of countries. Accordingly, the MTRI uniform tariff τ^u would lead to the same volume of imports (at world prices) as the one resulting from the uneven tariff structure, denoted by the $N \times r$ bilateral tariffs matrix T whose elements are $t_{c,k}$:

$$(3) \quad \sum_{c=1}^r \sum_{k=1}^N p_{c,k}^* I_{c,k}^m[p^u, B^0] = \sum_{c=1}^r \sum_{k=1}^N p_{c,k}^* I_{c,k}^m[p^0, B^0]$$

The previous definition focuses on the overall distortions imposed by a country's trade policies on its import bundle. In this application, though, the interest is in calculating the MTRI uniform tariff bilaterally to obtain the level of trade restrictiveness that the EU imposes on exports of each country c . Accordingly, in equation (3), instead of summing over k and c , one would only sum over k to obtain a bilateral uniform tariff MTRI (τ_c^u) defined as follows:

$$(4) \quad \tau_c^u : M_c[p^*(1 + \tau_c^u) B^0] = M_c^0,$$

where M_c^0 is the value of aggregate imports (at world prices) from country c in the reference period.

In the standard definition, prices are assumed fixed on world markets.³ However, since the index is going to be computed in a model with endogenous world prices, the uniform tariff equivalent is redefined by relaxing the small country assumption, i.e., the vector of world prices p^* is a function of tariffs T . To accommodate this, the definition of the MTRI [equation (4)] is modified as follows

$$(5) \quad \tau_c^w : M_c[(1 + \tau_c^w) p^*(T) B^0] = M_c^0,$$

where (τ_c^w) is the bilateral MTRI uniform tariff with endogenous world prices (Antimiani and Salvatici, 2005). The same computation is performed both for the overall protection, and for the protection faced by each exporter in different sectors. To this end, the total number of goods (N) is partitioned into three groups: agriculture, manufacture, and services, and both the aggregated and the three sectoral MTRI indexes computed.

³ Anderson and Neary (2003), argue (footnote 8) that "there is a rationale for a ceteris paribus trade restrictiveness index that fixes world prices even when these prices are in fact endogenous". Such a rationale may be represented by the fact that, by keeping world prices constant, we focus on the component of protection explained by national policies, and not by the degree of market power of the country.

The computation is based on a modified version of the model of the Global Trade Analysis Project (GTAP). This is a static, multi-region, general equilibrium model, which includes an explicit treatment of international trade and transport margins, a “global” bank designed to mediate between world savings and investment, and a consumer demand system designed to capture differential price and income responsiveness across countries (Hertel, 1997). The model employs the simplistic, but robust assumptions of perfect competition and constant returns to scale in production activities. Bilateral international trade flows are handled using the Armington assumption by which products are exogenously differentiated by origin (Armington, 1969). In the standard closure case, global investment adjusts to global saving, so that national balances of payments are endogenous.

The calculation is based on the latest version of the GTAP database, version 6, which provides a baseline for year 2001. Trade policy is set at the tariff line level, but this implies a level of detail that is not consistent with the GTAP (or any other existing) model. To reach consistency between trade distortions and model aggregation, atheoretic trade weighted average tariffs are normally used, losing considerable information. Specific tariffs were converted into *ad valorem equivalent* (AVE) terms by dividing the duty by a unit value. A significant problem lies in the choice of this unit value, a rather sensitive issue both from a theoretical and from a political point of view. This has led to AVE calculations being based on the median unit value of worldwide exports originating from a reference group to which the exporter belongs.⁴ In the case of mixed tariffs, i.e. tariffs involving a choice (a maximum or a minimum operator) between various terms, the choice is made as follows:

- when the tariff is defined as an ad valorem base tariff, the base tariff is retained. If the base tariff is in specific terms and the cap and the floor are ad valorem, a simple average of the two bounds is retained;
- when the tariff involves choosing between two terms, priority is given to ad valorem tariffs.
- regarding tariff rate quotas (TRQs), three market regimes are considered, depending on the level of the fill rate:
 - if the fill rate is less than 90 percent (quota not binding), the in-quota tariff rate is chosen as the applied rate;
 - in the (90-99 percent) range (quota assumed to be binding), a simple arithmetic average is used; and
 - if it is higher than 99 percent (quota binding), the applied rate is equal to the out-of-quota tariff rate.

The presence of prohibitive tariffs is problematic when calculating AVEs. Therefore, an upper limit to the AVE is established starting at the HS6 level: the limit is set to 1 000 percent for the sum of all instruments.

⁴ These groups are defined on the basis of a hierarchical clustering analysis based on GDP per capita (in terms of PPP) and trade openness.

Finally, since the database does not provide information about protection for services, the protection data are integrated with estimates of ad valorem tariff equivalents for these sectors (Park, 2002). In terms of regional aggregation, 20 regions were singled out as EU trading partners. Although the database cannot take into account the 2004 EU enlargement, the analysis considers an enlarged EU (EU25) building a counterfactual baseline where the enlargement would have taken place in 2001 (Antimiani, Conforti and Salvatici, 2003). Accordingly, all trade barriers and export subsidies between EU members are eliminated and the EU trade policy extended to the new members.

TABLE 1
Countries, regions, products and endowments

Country/Region	Products	Primary factors
Brazil	paddy rice	land (sluggish)
ACPs	wheat	skilled labour (mobile)
Argentina	other cereals	unskilled labour (mobile)
ASEAN	oilseeds	capital (mobile)
Canada	vegetables and fruits	natural resources (sluggish)
EU candidates	cane and beet	
Chile	sugar	
India	raw milk	
Japan	vegetable oils and fats	
non-WTO members	livestock, cattle, sheep, goat and horses	
LDCs	plant based fibres	
Middle East and North Africa	other live animals	
China	other food products	
US	wool, silk worms, cocoons	
Rest of America	forestry	
Mexico	fishery	
Turkey	meat, cattle, sheep, goat and horses	
Rest of South-Asia	other meats	
Oceania	beverages and tobacco	
Rest of Europe	other foods	
	dairy products	
	processed rice	
	primary non food	
	water	
	constructions	
	trade	
	communication	
	financial services	
	transport	
	other services	
	garments	
	wood products	
	paper products, publishing	
	petroleum, coal products	
	chemical, rubber, plastic products	
	mineral products nec	
	other mineral products	
	motor vehicles and parts	
	electronic equipment	

As far as regional aggregation is concerned, the choice was driven by the geographical focus of the EU trade policies presented in Section 2, given the limitations of the GTAP database.⁵ It is worth recalling that many regional and preferential agreements allow for long implementation periods, and were not in place in 2001, as in the case of the EBA initiative.

In the model, the computation of τ_{rs}^H is performed by specifying a variable $tr(r,s)$, which is a product-generic tariff levied on imports from region r into region s (EU25 in this case). The model is run from the counterfactual baseline, assuming that all EU trade policies (i.e., tariffs and export subsidies) with respect to a specific region s are removed to compute the uniform tariff that would eliminate any incentive to increase or decrease the volume of imports from the region/country under consideration.

3.2. Results

Total MTRI values, reported in the first column of Table 2, show some expected results, such as the low value of protection faced by the LDCs, even before the implementation of the EBA initiative. However, it is striking to observe that a number of developing countries appear among those which are most constrained in their trade with the EU. This is the case for Brazil, India, and Argentina, and even for the ACP (non-LDC) group, which have enjoyed a long tradition of preferential access into the EU market. On the other hand, countries still awaiting WTO membership, such as Russia, appear not to be significantly discriminated against: on the contrary, they seem to face the lowest trade barriers.⁶

⁵ Several countries are not available as individual entities in the GTAP database version 6; therefore the LDCs and the ACP groups employed in the analysis are in fact only the best possible approximation of the real country composition. Particularly, the proxy for the LDC group includes Bangladesh, Malawi, Mozambique, Tanzania, Zambia, Madagascar, Uganda, and three residual entities: the “Rest of Southeast Asia”, the “Rest of South Asia” and the “Rest of Sub-Saharan Africa”. The proxy for ACPs, was designed to be mutually exclusive with respect to the LDCs, and thus only includes those countries which are not classified as LDCs.

⁶ This finding may cast some doubts about the (real) reasons for joining the club: there is some evidence, indeed, that countries belonging to the GATT/WTO do not show very different trade patterns than outsiders (Rose, 2004).

TABLE 2
MTRI bilateral uniform tariffs and trade weighted averages

	total MTRI	Agriculture	Trade-weighted average (agriculture)	Manufacture	Services
Brazil	22.36	47.93	17.16	1.1	26.08
ACPs (non LDCs)	8.85	49.41	22.78	0.28	19.29
Argentina	9.92	12.3	10.91	1.58	17.43
ASEAN	7.47	15.76	12.03	2.92	25.01
Canada	9.88	8.9	6.44	1.27	22.17
EU candidates	1.26	10.03	9.88	0.28	20.44
Chile	3.77	9.58	10.23	0.17	19.26
India	14.43	45.33	10.93	3.95	27.04
Japan	6.49	12.13	7.90	3.31	26.51
non-WTO members	3.03	7.1	11.00	0.99	22.15
LDCs	3.32	11.54	6.10	0.19	20.54
Middle East and North Africa	4.76	35.84	10.30	0.04	18.75
China	7.63	27.19	16.51	3.72	25.73
USA	7.29	13.31	9.38	1.78	21.97
Rest of America	15.58	42	23.56	0.02	17.21
Mexico	6.82	13.56	5.72	0.17	20.14
Turkey	3.85	23.14	3.80	0.5	20.59
Rest of South-Asia	9.76	9.89	4.52	7.66	22.72
Oceania	10.79	19.3	9.39	0.95	20.17
Rest of Europe	2.00	9.83	5.94	0.03	22.18

Source: Simulation results.

To shed some light on these apparently puzzling results, the MTRI uniform tariffs at the sectoral level were computed and the results are reported in the second, the fourth and fifth columns of Table 2. As expected, the protection for services, which were introduced into the model through the estimate of the ad valorem equivalents, appear quite high. Agricultural liberalization appears to lag behind manufactures and other secondary activities. Since the EU tariff profile is heavily biased against agricultural imports, notwithstanding the many preferential schemes, developing countries still face an overall level of protection higher than MFN-countries such as the US or Canada.

Focusing on the assessment of agricultural protection, both Brazil and India rank quite high, with uniform tariffs above 45 percent. Both of these countries are among the founder members of the so-called G-20 group. The LDCs do not seem to enjoy a large degree of preference in the agricultural sector: their MTRI uniform tariff is higher than those faced by Chile and even by Canada. In principle, this implies that agricultural exports will reap the most benefit from the EBA initiative, once this is fully implemented.

The second and the third columns of Table 2 compare the MTRI results with a more traditional import-weighted average tariff in the case of agricultural products. The two indexes appear to move together on average - the correlation coefficient is 0.72. This result is in line with the findings of Anderson and Neary (2003) and Bach and Martin (2001), who show that the trade-weighted average tariff is a linear

approximation to the tariff aggregator based on the expenditure function. Anderson and Neary (2003) also prove that the MTRI uniform tariff is more likely to be higher than the trade-weighted average the more elastic the demand for the tariff-constrained imports. Indeed, the trade-weighted average tariff under-predicts the MTRI uniform tariff in all but two of the twenty cases. The difference between the two measures is significant: it exceeds 100 percent on average, reaching over 500 percent in the case of Turkey.

The most unexpected result reported in Table 2 is the figure for the ACP countries which are not classified as LDCs (49 percent). ACPs benefit from one of the most generous preferential schemes granted by the EU, but despite the number of beneficiaries increasing over time, the share of EU imports from the ACP in total EU imports decreased from 6.7 percent in 1976 to 3.1 percent in 2002 (Manchin, 2005). The European Commission itself expressed serious doubts as to the benefits of the ACP preferential regime during the design of the Cotonou agreement (Bureau and Matthews, 2005). More insights on the reasons as to why these countries have been unsuccessful in taking advantage of their preferential status, can be gained by considering the contributions of individual agricultural products to the aggregated MTRI (Table 3).⁷

TABLE 3
Percentage contribution of each primary product to the agricultural MTRI

	add y rice	vegetables	sugar	oils & fats	meat	beverages & tobacco	other food	dairy	processed rice
Brazil	0	0	8	0	83	0	7	0	0
ACPs (non LDCs)	0	5	71	0	21	1	2	0	0
Argentina	0	15	3	0	32	1	41	1	0
ASEAN	10	1	2	5	36	1	19	0	23
Canada	2	1	0	0	15	1	34	37	0
Eu candidates	0	5	1	3	27	10	15	9	0
Chile	0	52	0	0	14	13	19	1	0
India	14	0	6	0	62	0	2	0	13
Japan	10	1	3	2	13	3	27	5	31
non-WTO members	12	8	11	2	12	1	22	19	4
LDCs	9	9	78	0	0	0	0	0	3
Middle East and North Africa	0	7	1	44	44	0	1	0	3
China	2	30	1	0	2	1	9	0	52
USA	10	3	1	1	18	4	26	5	13
Rest of America	1	37	52	0	8	0	1	0	1
Mexico	0	7	71	0	6	1	12	1	0
Turkey	0	2	8	20	56	0	1	11	1
Rest of Asia	53	2	1	0	0	1	7	0	12
Oceania	4	4	1	0	5	2	2	81	1
Rest of Europe	0	0	2	0	17	7	20	51	0

Source: Simulation results.

In the case of Brazil, most of the restrictiveness lies in the meat sector, while dairy is responsible for most of the protection imposed on New Zealand and Australia agricultural exports (“Oceania”), and “vegetable oils & fats” (particularly olive oil) raises the highest barriers for the Middle East and North Africa region. As far

⁷ This is done by weighting the tariff of individual products by their contribution in GDP.

as developing countries are concerned, the most restricted sector is sugar, which accounts for roughly two thirds of the EU protection both for least developed and ACP countries. These countries are subject to tariff rate quotas granting preferential access up to a given volume of imports. However, as recalled in the previous section, when a quota is binding, the level of protection reported in the database is the out-of-quota tariff rate. Accordingly, the high level of protection calculated by the MTRI indicates that the sugar regime “at the margin” is constraining the ACP exporters which are not LDCs, and that these countries may benefit from further liberalization in this sector. This result, which may be credible for the aggregated country group included in this analysis, needs to be detailed further by (i) considering individual ACP countries, whose situation varies considerably depending on the production costs and production scale, (ii) considering the overlap between the ACPs and the LDCs which will be involved in the EBA initiative, and (iii) modelling more explicitly the Tariff Rate Quotas available to each country.

4. Preferences and their erosion: the case of sugar

The recent reform of the EU’s sugar Common Market Organisation (CMO) includes, among other measures, the abolition of the intervention mechanism and its substitution with a private storage scheme, to be triggered when the domestic price reaches the “reference price”, an administered price to be gradually set to a level 36 percent lower than the current intervention price within two years, starting in 2006 (EU Commission, 2005). Due to preferential trade conditions established by the Cotonou framework, the reduction in the EU sugar support price directly affects the price paid for the exports of the sugar producing ACP countries. Therefore, the domestic reform of the EU is expected to erode the value of trade preferences, measured as export revenue, granted to these countries in a sector which is of high relative importance. In addition, the EBA initiative implies further preference value erosion with the gradual abolition of the Special Preferential Sugar (SPS), whilst at the same time the value of preferences to the LDCs themselves is eroded due to the EU sugar policy reform.

The analysis in the previous section highlighted the importance of sugar in determining the degree of trade restrictiveness faced by developing countries, the position of the ACPs as a group, and the need for more detailed investigation on individual countries, on the overlap among ACPs and LDCs, and on the functioning of the various Tariff Rate Quotas available for exporting to the EU. This section addresses these issues, and attempts to resolve the apparent inconsistency between the high trade restrictiveness shown by the ACPs as a group, and the unquestionable importance of the preferential agreement for these countries.

A number of studies have focused on the potential impact of the EBA on both the EU, and the beneficiary countries’ sugar sectors (Stevens and Kennan, 2001; Witzke and Kuhn, 2003; UNCTAD, 2005; van Berkum *et al*, 2005; Garside *et al*, 2005). More specifically, Witzke and Kuhn (2003) consider a policy scenario which is analogous to the reform agreed by the Council of Ministers. Their results indicate

that imports from the LDCs may reach 2 million tonnes by 2011, however, they do not formally analyse the erosion of preferences for the SP signatories and the LDCs themselves, brought about by the reform. van Berkum *et al.*, (2005) utilize a general equilibrium model to investigate the impact of the EU sugar policy reform on the world prices and conduct case studies on the impact of the reform on the SP signatories (Mauritius), the LDCs (Ethiopia) and the DCs (Brazil). Although informative, these studies do not formally cover important issues, such as the erosion of preferences, or the impact of differences in technology across countries, or the role played by infrastructure in influencing trade costs that in turn will determine, in conjunction with the relative prices, the volume of imports from the LDCs to the EU under the EBA initiative. Garside *et al.* (2005) collect detailed country specific value chain information through surveys and personal interviews. They conclude that countries with the following characteristics are more likely to be winners: lower dependence on preferential exports to the EU, potential for industry diversification, membership of regional trade blocks; higher competitiveness, in terms lower cost of production, consolidated corporate ownership of milling/refining, and the scope for expanding production to take advantage of unlimited access to EU sugar markets under the reformed regime. Their study, however, does not rely on a formal economic model.

4.1. Modelling approach

The impact of the EU sugar policy reform, as well as that of the EBA initiative, on the ACP countries that enjoy preferential access to the EU market and on selected LDCs is assessed by utilising a model structure based on Conforti and Rapsomanikis (2005). The structure consists of a global partial equilibrium model for the sugar market and a gravity model to replicate LDCs' bilateral trade with Europe. The sugar partial equilibrium model is a standard non-spatial model with rich policy specification, where the EU sugar policy reform can be effectively modelled, as compared to the skeletal policy specifications included in CGEs. The gravity model is used to quantify the maximum potential export flows from LDCs to the EU under the EBA initiative on the basis of both tariff and natural barriers, such as trade costs that arise from distance and infrastructure. The rationale behind gravity is intuitive: decreasing tariffs and decreasing transport costs lead to higher trade flows between two countries.⁸ Transport costs determined by the level of infrastructure may restrict LDCs' ability to export to the EU in spite of the progressive reduction in import tariffs and the gradual increase in the EBA TRQ starting from 2005 and the complete removal of border restrictions from the year 2009 onwards.

The COSIMO-AGLINK model, a partial equilibrium recursive dynamic model for the sugar market, developed by the Organisation for Economic Cooperation and Development (OECD) and the Food and Agriculture Organization (FAO) is used for the analysis. In addition to OECD Member States and the main developing

⁸ Recent years have experienced a surge in the use of the gravity model in analyzing bilateral trade, the impact of regional trade agreements, as well as in estimating trade costs (for a review see Piermartini and Teh, 2005). For recent surveys on the theories behind gravity see Harrigan (2002) and Feenstra (2002, 2003).

producing countries, 22 ACP countries and LDCs are included in the model, amounting to a total of 56 countries and regions. Two types of traded sugar are considered, refined and raw, and two sugar inputs, cane and beet⁹. The model is calibrated on the year 2003 and is utilised to generate a set of recursive dynamic solutions up to 2013. Both trade and domestic policies are explicitly included in most of the countries. World and domestic prices are determined endogenously by clearing the world market, as well as domestic markets of countries such as the EU 25, Mexico, the United States and China, which are insulated in terms of world market price effects.

In the ACP countries, the marginal economic incentive is calculated as a weighted pool (or blend) price of the price received for sugar exported under the Sugar Protocol (SP) and the Special Preferential Sugar (SPS), the price received for exports within the US tariff rate quota (TRQ) and of the world price for production exported to the world market. Thus, ACP countries are modelled as price-takers, with an imperfect transmission of world price signals. For those ACP countries which are also classified as LDCs, where the EBA initiative implies a TRQ that increases by 15 percent per year between 2002 and 2008 and duty free unlimited access after year 2009, the price determination described above is applied until 2008 on the basis of the corresponding TRQ established under the EBA initiative. From 2009 onwards, ACP-LDCs will benefit from the EU reference price, but the maximum amount of exports from each country will be limited according to the gravity equation results. Export flows to the EU, in turn, determine the domestic price in the exporting LDCs, thus affecting the incentive to produce sugar.

The empirical specification of the gravity model is as follows:

$$(8) \quad x_{ie,t} = c + \alpha x_{ie,t-1} + \beta \left(\frac{y_i}{y_e} \right)_t + \sum_0^n \delta_n \text{tar}_{ie,t-n} + \sum_k \zeta_k z_{ie,t}^k + (\eta_{ie} + \varepsilon_{ie,t})$$

where $x_{ie,t}$, denotes exports from country i to the EU in year t , $y_{i,t}$ the GDP of the exporting country and $y_{e,t}$ the EU in the same year. The variable $\text{tar}_{ie,t-n}$ denotes the level of the ad valorem tariff faced by the exporting country in time t , whilst the k variables z_{ij} refer to several variables relating to natural tariff barriers. $\varepsilon_{ie,t}$ is a error term, whilst η_{ie} is an unobserved country-specific and time-invariant effect that can be thought of as an additional determinant of exports on the basis of characteristics that are idiosyncratic to each country. The lagged dependent variable and the lagged tariff terms capture the adjustment process to the new environment.

The gravity model utilises a panel data set for food and tobacco exports to the EU from 47 LDCs during the period 1988-2004. Data on the value of food and tobacco exports to the EU and the relevant weighted tariff levels is from COMTRADE. Food and tobacco exports are used instead of sugar exports because sugar exports data are limited, as only a few LDCs exported sugar to the EU during the period 1988-2004,

⁹ In some major producing regions, such as Brazil and the US, the model also includes sweetener substitutes on the demand side, ethanol and the joint product aspect of sugar and molasses.

and because data on food and tobacco exports contains information on the impact of the EBA initiative on trade, since the initiative applied to these products from 2001 with the exceptions of sugar and rice. There are some advantages in applying gravity to panel data, as they allow the estimation of dynamic models and the investigation of the adjustment process, which may imply significant costs both for increasing production and to administer exports under the EBA. Moreover, panel data allow more variation in the sample.

The gravity equation is estimated using the Generalised Method of Moments (GMM), a standard procedure for dynamic panel data models.¹⁰ The estimated parameters are presented in Table 4.

TABLE 4
Dynamic gravity equation estimates

$x_{ie,t-1}$	$tar_{ie,t-1}$	$tar_{ie,t-2}$	$\left(\frac{y_i}{y_e}\right)_{ie,t-1}$	$z_{ie,t}^{transport}$
0.3643 (0.0052)	-0.0529 (0.0096)	-0.0796 (0.0068)	0.1283 (0.0472)	-0.0859 (0.0156)
J-Statistic	51.26			
Instrument rank	55			
Sargan test p -value	0.42			
Sample	1990 -2004			
Number of observations	539			

Different natural barrier variables, such as the length of paved roads, the number of telephone lines per thousand inhabitants, were experimented with but estimates were not statistically significant due to the lack of variation of the series, thus resulting in a parsimonious final specification. The parameter estimates are statistically significant and highlight the importance of tariff barriers in determining trade flows in the medium run. The estimated parameter for transport costs also confirms the importance of well functioning and efficient transport infrastructure.

The model is calibrated to sugar exports to the EU in 2003 for the LDCs that have exported to the EU during the period 1988-2004.¹¹ Both the partial equilibrium model and the gravity equations are calibrated using data on sugar for the year 2003. In the simulation, the gravity is utilized to determine the share of sugar exports from the selected LDCs to the EU. These exports are subject to tariffs that are determined by the EBA in-quota and out-of-the-quota tariffs, the corresponding GDPs and transport costs.

¹⁰A detailed description of the estimation method is beyond the scope of this paper. For details on GMM and its application on panel data see Arellano and Bond (1991). Surveys on GMM are provided by Blundell, Bond and Windmeijer (2000) and Arellano and Honore (2001). An intuitive review is provided by Bond (2002).

¹¹Ethiopia, Sudan, Mozambique, Mali, Mauritania, Chad and Sierra Leone.

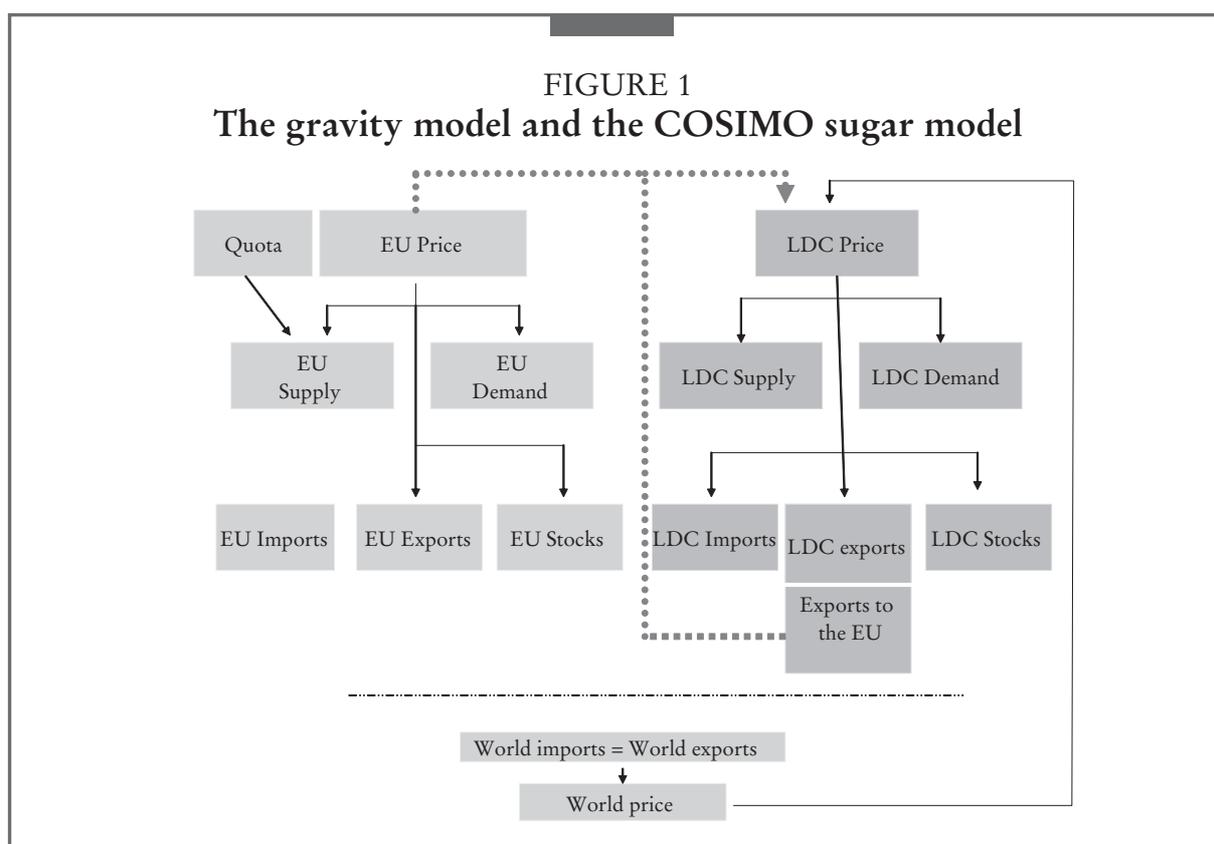


Figure 1 illustrates how the gravity model and the COSIMO-AGLINK were employed together, the price transmission and the mechanism that balances supply and demand. An initial price level determines supply and demand in both net exporting and net importing countries (EU). These in turn determine exports and imports at domestic and world level.

The gravity equation determines the level of exports to the EU on the basis of the level of tariffs, transport costs and GDP. Subsequently, the level of exports to the EU shapes economic incentive for production in the EBA country on the basis of a blend, or pool-weighted, of the world and the EU price. In these terms, the model reflects both the allocation of trade and the allocation of production and consumption at the same time.

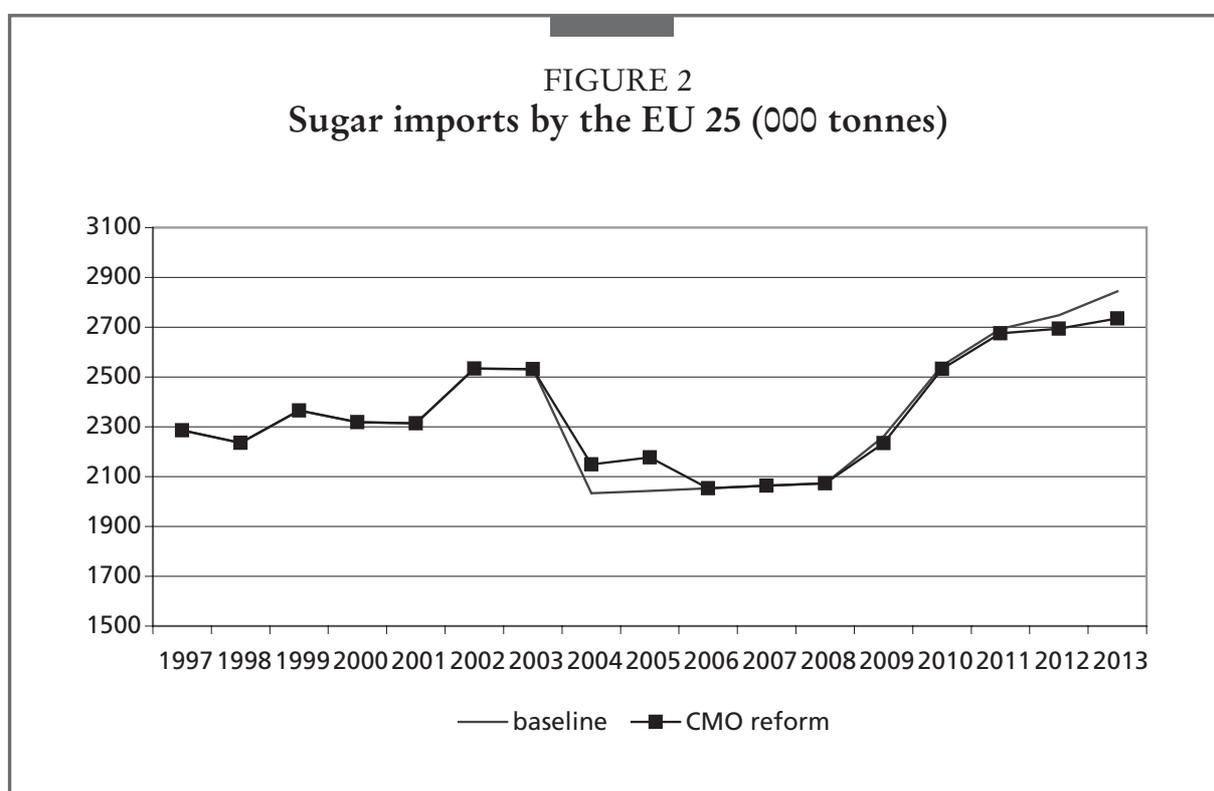
4.2 Results of the simulation exercise

A policy scenario was simulated based on the reform agreed by the European Union agricultural ministers in late November 2005, which included the abolition of the intervention mechanism and its substitution with a private storage scheme, to be triggered at a level 36 percent lower than the current intervention price, the merging of the present A and B quotas, and the establishment of an additional quota of one million tonnes. The model does not allow meaningful simulation of the other changes brought about by the EU reform.

The results of the simulation exercise suggest that the reform of the EU sugar CMO has a significant impact on the European market and a relatively more limited impact on the rest of the world. Concerning the EU's trade partners, the

exercise suggests that trade is diverted away from countries which currently enjoy preferential access to the EU market. In particular, higher cost ACP producing countries that export within the Sugar Protocol are expected to be displaced by more efficient LDCs, some of which are also ACP and enjoy duty-free unlimited-quota access to the EU market within the EBA initiative.

Total sugar imports by the EU are simulated to increase following the policy reform, albeit by a lower rate than that indicated by the baseline, particularly after 2009 (see Figure 1). In general, under both the baseline and the reform scenario, the EBA initiative results in an increase in imports by almost 700 thousand tonnes in three years. Towards the end of the simulation horizon, the effect of the EU reform causes imports to slow down due to the reduction in the price paid to ACP countries under the Sugar Protocol and to the LDCs under the EBA initiative. In addition to the impact on aggregate imports by the EU, policy reform is expected



to alter their composition as LDCs' exports are diverted towards the EU due to the EBA initiative, whilst imports under the Sugar Protocol, in the case of high-cost ACP countries, decrease. Three country groups can be identified among those enjoying preferential access to the EU market. ACP developing countries, which currently enjoy preferential access under the SP and the SPS are expected to be affected by both the abolition of the SPS, as well as by the reduction in the EU price. The EBA will have a significant impact on high cost producers, such as Barbados, where both total exports and exports to the EU fall dramatically (see Table 5), whilst the elimination of SPS will affect those relatively low cost ACP producing countries such as Swaziland, Mauritius, Jamaica, Guyana, Fiji and Côte d'Ivoire.

TABLE 5
Raw sugar exports of ACP countries and LDCs

Destination	EU under Sugar Protocol			EU under SPS protocol, then EBA			Rest of the World			Total		
	1995-97	2001-03	2011-13s	1995-97	2001-03	2011-13s	1995-97	2001-03	2011-13s	1995-97	2001-03	2011-13s
Belize	40.3	40.3	40.3	9.6	5.2	0.0	57.4	57.0	70.6	107.4	102.5	110.9
Trinidad and Tobago	45.7	45.7	45.7	10.4	5.5	0.0	3.4	0.6	0.0	59.5	51.7	45.0
Swaziland	123.0	123.0	123.0	56.8	32.4	0.0	215.4	282.9	353.0	395.1	438.3	476.0
Mauritius	512.4	512.4	493.5	39.2	27.0	0.0	76.0	22.2	0.0	627.6	561.6	493.5
Jamaica	123.9	123.9	123.9	28.5	17.4	0.0	21.0	0.0	21.1	173.3	141.3	145.0
Guyana	166.3	166.3	166.3	37.3	17.8	0.0	39.8	114.9	130.9	243.4	299.0	286.6
Fiji	172.5	172.5	172.5	35.1	19.3	-	153.1	83.0	84.1	360.8	274.9	256.6
Dominican Rep.	-	-	-	-	-	-	314.8	173.5	183.5	314.8	173.5	183.5
Côte d'Ivoire	10.6	10.6	10.6	12.0	9.1	-	26.5	42.0	33.5	49.1	61.8	44.2
Barbados	52.5	41.3	6.1	2.4	-	-	0.1	-	-	55.0	41.3	6.1
Kenya	-	-	-	-	4.1	-	0.0	-	0.3	0.0	4.1	0.3
Zimbabwe	31.5	31.5	31.5	32.4	23.4	-	113.4	69.7	56.8	177.3	124.6	88.4
Mozambique#	-	-	-	-	0.8	53.7	73.8	107.5	93.6	73.8	108.3	147.4
Ethiopia#	-	-	-	-	15.0	113.6	43.7	74.2	-	43.7	89.2	113.6
Burkina Faso#	-	-	-	-	0.7	1.7	-	11.8	-	-	12.6	1.7
Tanzania*	3.1	10.6	10.6	1.5	2.2	39.6	0.0	7.1	-	4.6	19.9	50.2
Sudan#	-	-	-	-	18.4	97.8	81.5	223.3	118.5	81.5	241.7	216.3
Malawi*	21.7	21.7	21.7	13.9	9.3	88.7	23.4	58.8	-	59.0	89.8	110.4
Zambia*	-	-	-	11.6	12.0	39.7	-	27.2	-	-	39.2	39.7
Madagascar*	11.2	11.2	-	12.2	9.9	20.8	0.0	0.0	-	23.4	21.1	20.8
Total ACPs	1,314.8	1,311.2	1,245.2	302.9	229.6	455.6	1,243.1	1,355.8	1,146.0	2,860.8	2,896.5	2,858.8
Bangladesh	-	-	-	-	-	2.3	-	31.0	12.8	-	31.0	15.0
Other LDCs	-	-	-	-	2.4	6.0	30.2	39.2	49.9	30.2	41.6	55.9
Total LDCs	36.1	43.6	32.4	39.1	70.7	463.8	252.5	580.2	274.8	327.7	694.5	779.7

* ACP sugar exporters classified also as LDCs

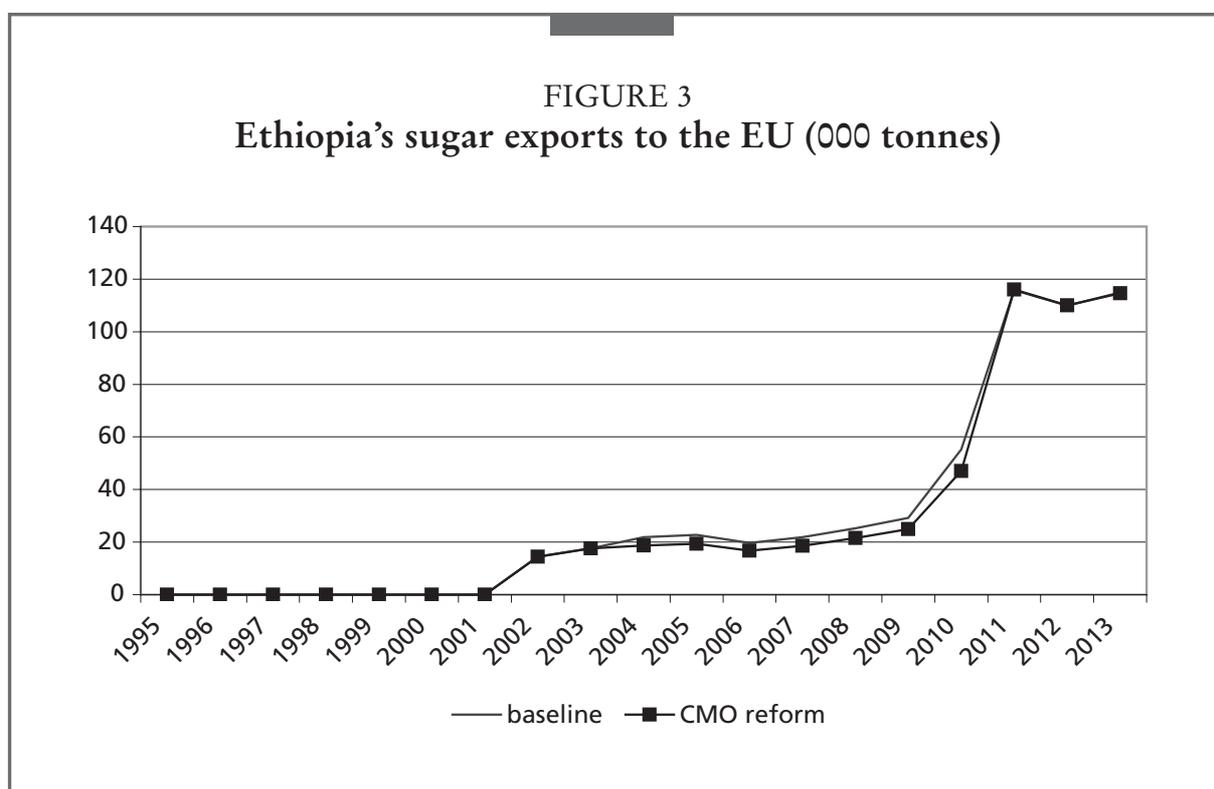
EBA only

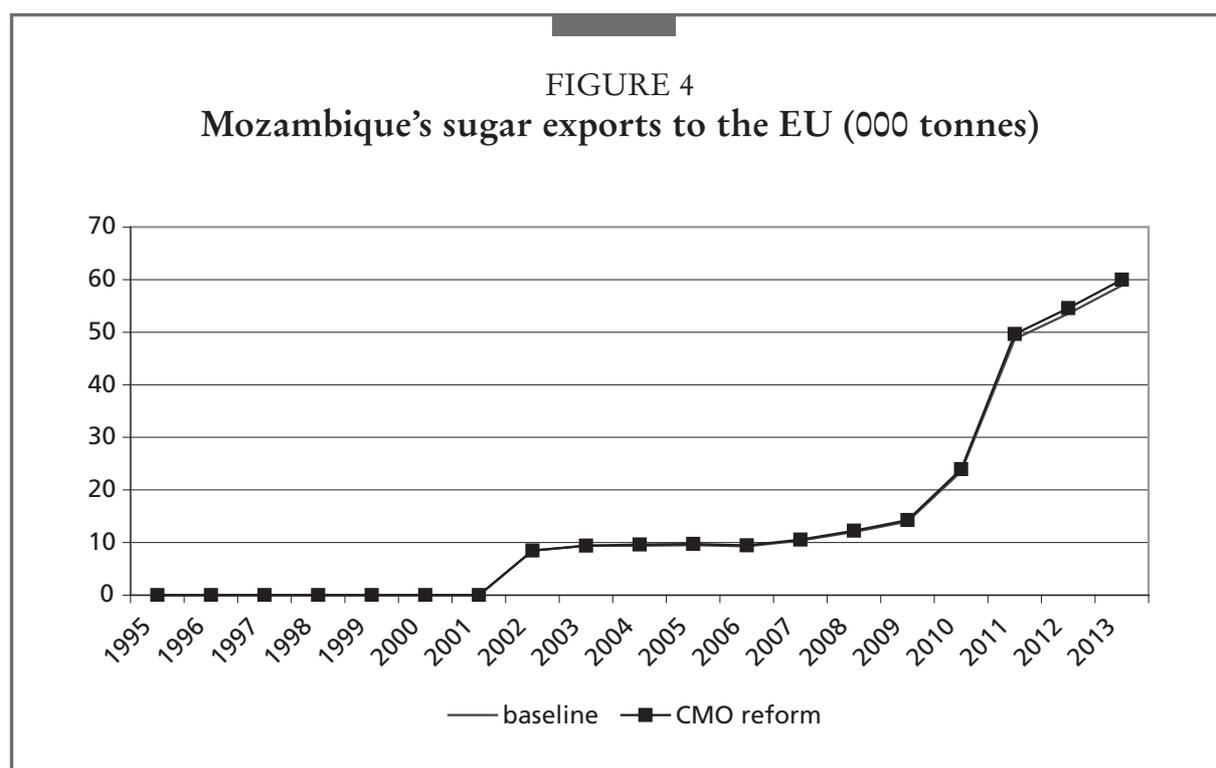
2011-13s denotes baseline, 2011-13s denotes reform

Secondly, for least developed ACP countries that export to the EU under the SP and SPS, the EBA initiative leads to unlimited duty-free access to the EU market. As a consequence, Malawi and Tanzania are expected to increase their exports to the EU significantly. Trade costs are assumed not to pose significant barriers to exports, as these countries have been exporting to the EU for quite a long time.

Finally, a third group comprises those LDCs which are not SP and SPS signatories and, therefore, will obtain significant benefits from the EBA initiative. Some of these LDCs are important sugar producers, such as Ethiopia, Mozambique and Sudan. Exports from Ethiopia to the EU (see Figure 3) are predicted to reach 113 thousand tonnes by 2013, whilst those from Mozambique will increase from 10 to 55 thousand tonnes during the same period (Figure 4), although the exceptional results of Ethiopia and Mozambique derive from their very low starting points. In a similar manner, Sudan is simulated to increase its exports to the EU about fivefold. The EU policy reform is not expected to alter these export trends as they are predominantly determined by the EBA initiative.

Other LDCs that are not significant sugar exporters, but have been exporting small amounts of sugar regularly to the EU in the recent years are Mali, Mauritania, Chad and Sierra Leone, included in the simulation under the heading “other LDCs”, and Bangladesh. For these countries, the baseline indicates that exports may increase due to the EBA (Table 5), but to a moderate level mainly due to the constraints imposed by transport costs, while the reform of the EU policy does not imply significant changes.





In total, sugar exports of the ACP countries to the EU are projected to increase to 1.7 million tonnes in 2011-13, while those of the LDCs would increase threefold, reaching 498 thousand tonnes. Export of the ACPs toward non-EU destinations are projected to decrease by some 15 percent in the same period, while those of the LDCs would be reduced by over 50 percent.

Finally, it is worth considering the effect on the developing ACP countries that are signatories of the SP and SPS and the LDCs in terms of export revenues, given that significant changes take place both in terms of the price received and in the volumes traded. The EU sugar policy reform will decrease export revenues for these countries due to a reduction in the price received. However, for the LDCs as a group, the reform will lead to a total export revenue almost 150 percent higher than that of the 2001-03 period. ACP countries-signatories to the SP would also gain as a group, but solely due to countries that are classified as Least Developed and will export to the EU under the EBA initiative. Other ACP countries will experience substantial losses, such as Barbados, Zimbabwe and Côte d'Ivoire. In the same vein, wide potential gains arise for some of the LDCs, particularly Sudan, Tanzania, Malawi, Zambia and the "other LDCs".

5. Concluding remarks

Large exporting developing countries appear to be substantially restricted in their trade with the EU, including for agricultural products, to a greater degree than countries which are treated on a purely MFN basis, like the US, or Australia and New Zealand. This is the result for countries like Brazil, India, and Argentina, when

protection is measured in terms of the MTRI, a theoretically-consistent aggregated index of protection. LDCs do not seem to enjoy a large degree of preferences, extending unlimited duty free access to these countries, as the EBA initiative should do, may not therefore be a particularly significant event.

Sugar appears important in shaping the degree of trade restrictiveness in agriculture for most developing countries. However, the existence of a quantitative limitation on the total amount of duty-free sugar that ACP countries can export to the EU appears to undermine the value of this preferential trade flow in terms of the MTRI.

The results of the detailed assessment on the sugar sector based on the COSIMO-AGLINK model and the gravity equations indicate that the change in the volume of sugar imports to the EU from the SP signatories and from the LDCs under the EBA initiative would be limited to about 500 thousand tonnes, based on the combined effect of the natural trade costs and the price changes. At the same time, the reform of the EU domestic regime does not seem to make a particularly significant difference in terms of export volumes from the LDCs and for most of the ACP countries. However, their export revenues are significantly affected by the reduction of the EU domestic price, even if the effect of the reform on the world price is too small to determine any significant trade creation and diversion outside SP and EBA countries. On the other hand, the EU domestic price still remains far higher than the world market price. This implies that preferences remain valuable to exporters.

The expected policy developments are likely to affect significantly a number of ACP developing countries, both the high cost producers, such as Barbados and a number of Caribbean Island States, mainly due to the reduction in the EU price, and the relatively low cost producers which are not in the LDC group, such as Trinidad, Swaziland, Mauritius, Jamaica, Guyana, Fiji and Côte d'Ivoire, mainly due to the abolition of the SPS. Therefore, if it is true that the ACPs as a group have been facing a constraint in the volume of their sugar exports to the EU arising from the presence of individual quotas, as captured by the calculation of the MTRI, it is also true that within the ACPs there are a number of countries which are going to be seriously displaced both by the price reduction in the EU, and by the abolition of the SPS quota brought about by the implementation of the EBA initiative.

Looking beyond these results, there are at least two critical questions which must be addressed. First, what might be better and more useful alternatives to preferences to achieve the goals of increased development and greater participation in global trade? The response to this question might be labelled the "Beyond Preferences Option". Secondly, how might preferential schemes be modified to increase the value of preferences to beneficiary developing countries, to enable these countries to benefit more from the existence of these preferences, and to reduce the negative impacts that the existence of preferences might have on the goals of realizing increased trade liberalization. The response to this second group of questions might be labelled the "Within Preferences Option".

On alternatives to preferences, two possible options are export promotion and diversification. In both options investment for increased efficiency and competitiveness is at the core, but in the context of the promotion option the emphasis is much more

on the demand side in the initial stages than is the case under the diversification option. Obviously, these options are not mutually exclusive, and the response of the representatives of the small banana countries in the light of the outcome of the Hong Kong Ministerial and EU's change to its banana regime from the current tariff rate quota (TRQ) to a tariff only system is instructive. Concerning promotion, the idea is to enact a set of policy measures and to devote resources to enable production, processing and marketing activities which have been so far focused on the products currently traded under preferences, to continue trading their output and to expand it in non-preferential markets. This could take the form of vertical or horizontal alliances among producers and traders, aimed at increasing market penetration of traditional markets. Investment in the production of higher-valued products and more sustainable branding targeted at specific market segments, such as the health, fair trade, and ethnic based markets. The spokesman for the Windward Islands of the Caribbean indicated in January 2006 that henceforth the intention is to move toward having all their bananas sold under the Fair trade label.¹²

Concerning diversification, the idea is to devise a set of policies and to devote resources to support, over a transition period, the production, processing and marketing of products which are currently not traded, but for which there is a potential national, regional and/or international market. The point of departure of this approach is moving out of what may be inefficient and uncompetitive product areas into different products that have greater potential for competitiveness. This approach recognizes the need for policy changes in both developed and developing countries in the establishment of new sustainable trading processes. It links policy changes in developed countries, such as reduced domestic subsidies and reduced tariff escalation, to availability of resource assistance to enable the formation of strategic alliances for the production and trading of new crops. In this vein, another component of the plan announced by the Windward Islands banana dependent countries is to explore the production of mangoes given the changes in the banana trade regime.

Concerning the "Within Preferences Option", the EU is presently negotiating the Economic Partnership Arrangements with the ACP countries, learning from the lessons of the previous Lomé regime. Among the most important of these lessons are that unilateral preferences are not enough, that the trade relationship should go beyond market access, that synergies should be promoted between trade and aid, that trade should be mainstreamed in development support, that domestic reforms are needed, and perhaps most importantly and running through all of these lessons, that the domestic supply capacities must be greatly increased.¹³ The US on the basis of a conclusion that AGOA is helpful to the 37 countries in Africa, has recently extended these preferences to 2015. Against this backdrop, a number of options for improving the benefits of preferences should be explored. Setting more transparent trading regulations, facilitating the meeting of standards, and longer transition periods would be useful means to enhance the value of preferences. At the same

¹²www.bbc.co.uk/Caribbean/news/story/2006/01/060110.

¹³Claude Maerten, European Commission, Head of Unit TRADE C 2, TRALAC's Annual International Trade Law Conference, 11 November 2004.

time, actions aimed at improving the domestic supply-side capacity, and at building commodity institutions would increase the benefits from the actual preferences.

Moreover, a number of actions may be pursued with the aim of reducing the negative impact of the erosion of preferences. The sugar sector constitutes a pertinent example. For this product, the strategies of product differentiation and value addition appear to have a limited potential in the long run. While some consumers in developed countries' markets may be willing to pay price premiums for differentiated products such as unrefined sugar, or for labels which promise the respect of social and environmental standards in production, the potential size of these markets appears small, and overall consumption appears to be decreasing. At the same time, on the production costs side there a number of major producers, such as Brazil and Thailand, which are likely to remain the most competitive at any cost level.

The LDCs have put forward a proposal envisaging the maintenance of a quota system up to the year 2019, and a far longer calendar for the tariff reductions (LDCs 2004), which has also been endorsed formally by the ACP group. This approach appears different from the logic followed by the European Commission in reforming its domestic market regime, which promotes market orientation while compensating the likely losses. However, the compensating measures proposed by the Commission, also appear inconsistent with the logic of the domestic reform. In this vein, compensating measures should be linked, in principle, to the compensation offered to the EU domestic producers expected to be forced out of the sector by the reform of the domestic regime. A simple calculation following this approach indicates that the amount of resource destined to restructuring aid should be more than tripled compared to what has been indicated so far, in order to compensate the same 60 percent of the likely loss provided to the European farmers, and to provide a deficiency payment scheme, decreasing through time, as a complementary tool to provide a safety net (Matthews and Chaplin, 2006).

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The United Nations Food and Agriculture Organization (FAO) estimated that about 100 million rural households were involved in cotton production worldwide in 2001 (Sarris, 2003). Among the countries in which cotton is an important contributor to rural livelihoods are China, India, and Pakistan - where 45, 10, and 7 million rural households, respectively were engaged in cotton production. In African cotton producing countries, including Nigeria, Benin, Togo, Mali, and Zimbabwe, the number of rural households depending on cotton totalled 6 million. The high dependence on cotton in these countries has important poverty ramifications, especially when large price changes take place.

The cotton market has been subject to considerable support, mainly in the US and to a lesser extent in the EU and China. During 2002 support by major players reached almost US\$6 billion, more than one quarter of the global value of production. This support, which coincided with the lowest nominal cotton prices since 1972, brought numerous reactions. Brazil initiated a WTO consultation process claiming losses due to subsidies by the US (WTO, 2002). Four West African cotton producing countries-Benin, Burkina Faso, Chad, and Mali-pressed for removal of support to the cotton sector through the WTO and asked for financial compensation for cotton producing low income countries to offset the injury caused by support (WTO, 2003).

This paper reviews the recent market and policy developments in the global cotton market with particular emphasis on the implications of the 6th WTO ministerial in Hong Kong. To that end, the next section briefly discusses the structure of the global cotton market while section 3 takes a brief look at the cotton sectors of the WCA countries. Section 4 summarizes the cotton policies of major players while section 5 discusses the implications of such policies. Section 6 analyzes the cotton-related part of the Hong Kong declaration. Key conclusions of this paper are that the export subsidy part of the cotton-related text of the declaration is, to some extent, superfluous, since the only export subsidies applicable, the US Step-2 payments and export credit guarantees, had already been declared illegal by the WTO Panel on the Brazil/US cotton dispute case. Similarly, the market access pillar does not add anything new. With respect to domestic support, considering market conditions and subsidy levels of 1999-2002, the US must undertake an almost 40 percent reduction to comply with the Panel's ruling. To that, if one adds the commitments to be agreed under the general reduction formula to be agreed for domestic support and any additional cuts due to "ambitiousness", a substantial reduction of US cotton subsidies should take place. The ultimate outcome will depend, among other factors, on the 2007 US Farm Bill.

2. The global market structure

About three quarters of cotton is produced by developing countries. During the last four decades cotton production has grown at an annual rate of 1.8 percent to reach 24 million tonnes in 2005 from 10.2 million tonnes in 1960 (for the remainder of this paper, cotton refers to cotton lint). Most of this growth came from China and India, which tripled and doubled their production. Other countries that

significantly increased their shares were Greece, Pakistan, and Turkey (see table 2). Some “new entrants” also contributed to this growth. Australia, for example, which produced only 2 000 tonnes of cotton in 1960, currently averages 0.5 million tonnes. Francophone Africa produced less than 100 000 tonnes in the 1960s and now produces ten times as much. The United States and the Central Asian republics, two of the four dominant cotton producers during the 1960s, have maintained their output levels at about the same levels, effectively halving their market shares. A number of Central American countries that accounted for 250 000 tonnes during the 1970s now produce virtually no cotton at all.

TABLE 2
Global balance of the cotton market (thousand tonnes)

	1960	1970	1980	1990	2000	2002	2004	2005
PRODUCTION								
China	1 372	1 995	2 707	4 508	4 417	4 916	6 320	5 769
US	3 147	2 219	2 422	3 376	3 818	3 747	5 062	4 946
India	1 012	909	1 322	1 989	2 380	2 312	4 080	4 250
Pakistan	306	543	714	1 638	1 816	1 736	2 482	2 309
Central Asia	1 491	2 342	2 661	2 593	1 412	1 509	1 737	1 724
Brazil	425	549	623	717	939	848	1 318	1 207
Franc Zone	63	140	224	562	728	952	1 135	1 071
Turkey	192	400	500	655	880	900	900	805
Australia	2	19	99	433	804	386	624	497
Greece	63	110	115	213	421	375	390	380
World	10 201	11 740	13 831	18 970	19 437	19 437	26 193	24 958
EXPORTS								
US	1 444	848	1 290	1 697	1 472	2 591	3 000	3 215
Central Asia	381	553	876	1 835	1 203	1 172	1 251	1 316
Franc Zone	48	137	185	498	767	833	952	1 092
Australia	0	4	53	329	849	575	420	561
Brazil	152	220	21	167	68	170	360	425
Greece	33	0	13	86	244	275	263	283
India	53	34	140	255	24	17	175	275
Syria	97	134	71	91	212	120	152	150
Egypt	346	304	162	18	79	150	140	125
Tanzania	34	66	36	40	39	41	88	99
World	3 667	3 875	4 414	5 081	5 857	6 618	7 542	8 270

Notes: Bangladesh is included in Pakistan prior to (and including) 1970. Franc Zone includes Benin, Burkina Faso, Cameroon, Central Africa Republic, Chad, Côte d'Ivoire, Guinea, Madagascar, Mali, Niger, Senegal, and Togo. Central Asia includes Uzbekistan, Turkmenistan, Tajikistan, Kazakhstan, Azerbaijan, and Kyrgyzstan.

Source: International Cotton Advisory Committee, Cotton: Review of the World Situation, various issues.

More than one quarter of the area allocated to cotton is currently under genetically modified (GM) varieties, accounting for almost 40 percent of world production. GM cotton in the US—where it was first introduced in 1996—currently accounts for about 80 percent of the area allocated to cotton. Other major GM cotton producers are Argentina (70 percent of cotton area), Australia (80 percent), China (60 percent), Colombia (35 percent), India (10 percent), Mexico (40 percent), and South Africa (90 percent). Countries that are at a trial stage include Brazil, Burkina Faso (the only SSA country), Israel, Pakistan, and Turkey (Cotton Outlook, 2005).

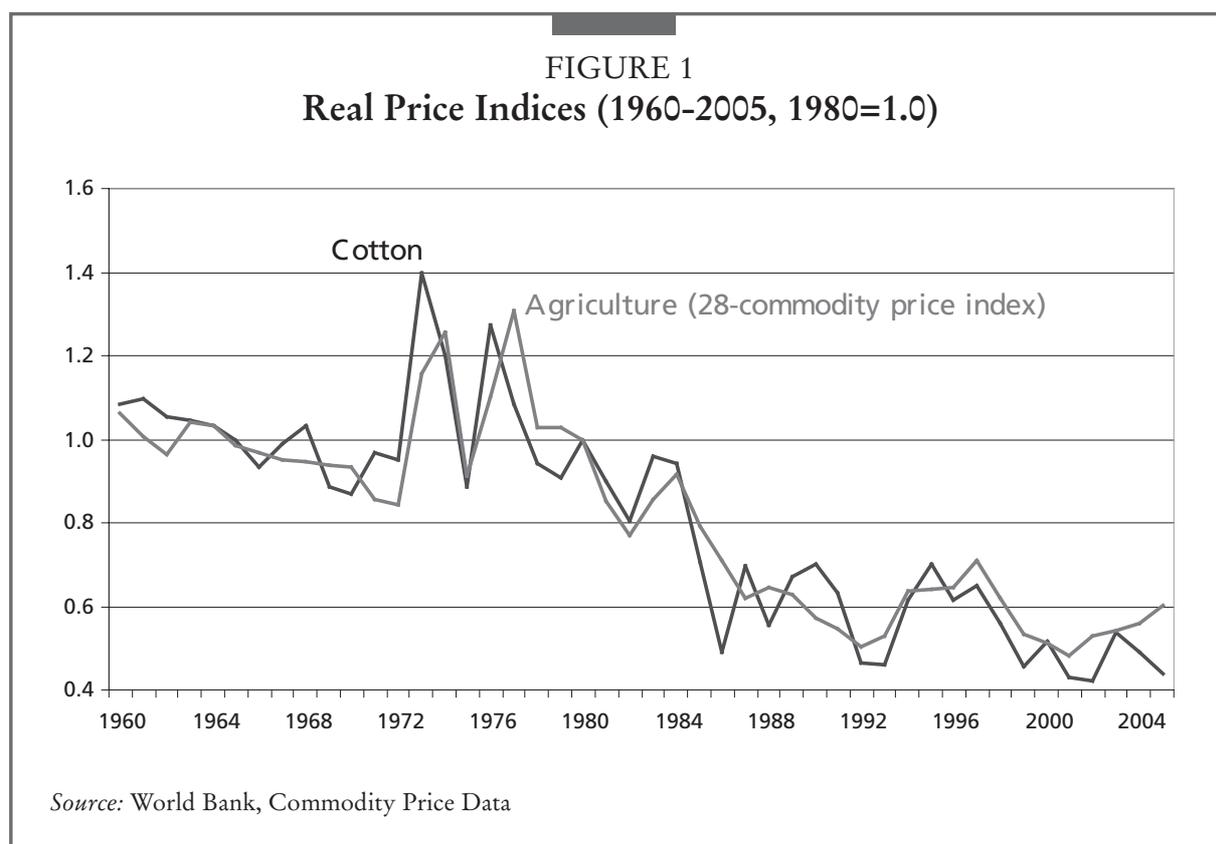
Although the last decade has witnessed the expansion of organic products, cotton has not enjoyed much success. For example, global organic cotton production during 2004/05 was 25 400 tonnes, about 0.1 percent of world cotton production (Chaudhry and Wakelyn, 2006). Organic cotton production was introduced in the US in 1990/91, when 330 tonnes of organic cotton was produced. Following a peak of 7 425 tonnes in 1995/96, the US now produces less than 2 000 tonnes. Currently, the world's two major organic cotton producers are India and Turkey, which together account for two thirds of global organic cotton production.

The consumption pattern of cotton is determined by the size of the textile industries of the dominant cotton consumers. China, the leading textile producer, currently consumes more than one-third of global cotton output. Other major textile producers are India, Pakistan, Turkey, and the United States, which together with China account for more than three-quarters of global cotton consumption. Several East Asian countries have emerged as important cotton consumers. For example, Indonesia, the Republic of Korea, Taiwan, and Thailand, which together consumed 130 000 tonnes in 1960 (1.2 percent of world consumption), absorbed more than 1.5 million tonnes in 2005 (6.5 percent of world consumption).

Between 1960 and 2005, global cotton demand has grown at the same rate as population (about 1.8 percent per annum) implying that per capita cotton consumption has remained almost stagnant at about 3.5 kilograms. By contrast, consumption of chemical fibres, which compete with cotton, has increased consistently over the last 50 years by 2.2 percent per annum, causing cotton's share in total fibre consumption to decline from 60 percent in 1960 to 40 percent in 2002.¹ One-third of cotton production is traded internationally. The three dominant exporters—the United States, Central Asia, and Francophone Africa—account for more than two-thirds of global trade exports. Currently, the 10 largest importers account for more than 70 percent of global cotton trade. Three major producers—China, Turkey and Pakistan—also import cotton to supply their textile industries. The four East Asian textile producers—Indonesia, Thailand, Taiwan, and the Republic of Korea—accounted for 22 percent of world cotton imports in 2002, compared to just 3 percent in 1960. To summarize, there has been an increased concentration of cotton use in (and hence trade flows to) Asian countries, not surprisingly since this is the region with the highest concentration of chemical fibre and garment industries.

¹ More detailed statistics along with methods of deriving them can be found in Baffes (2004).

Real cotton prices have declined over the last two centuries, although with temporary spikes. The reasons for the long-term decline are similar to those characterizing most primary commodities: on the supply side reduced production costs due to technological improvements and on the demand side stagnant per capita consumption and competition from synthetic products. Between 1960–64 and 1999–2003 real cotton prices fell by 55 percent, remarkably similar to the 50 percent decline in the broad agriculture price index of 28 commodities (figure 1). Reductions in the costs of production have been associated primarily with yields increases from 300 kilograms per hectare in the early 1960s to 700 kilograms per hectare in 2005 (a 1.8 percent annual increase).² The phenomenal growth in yield has been aided primarily by the introduction of improved cotton varieties, expansion of irrigation and use of chemicals and fertilizers. Additional diffusion of GM technology along with precision farming introduced during the 1990s, are expected to further reduce the costs of production. Technological improvements have also taken place in the textile industry, so that the same quality of fabric can now be produced with lower quality cotton, a trend that has taken place in many other industries whose main input is a primary commodity.



² It is worth elaborating on one interesting statistic. During the last 50 years, cotton production (and consumption), yields, and population have grown at approximately the same annual rate: 1.8 percent, which implies that, roughly speaking, the cotton-related clothing needs of the earth's increasing population are met by yield increases alone.

In addition to their declining pattern, cotton prices have been volatile, a phenomenon very common among most primary commodities (Deaton 1999, Cashin and McDermott, 2001). The degree of volatility, however, has changed considerably during the last 40 years. Various measures of price volatility calculated by Baffes (2005a) consistently show that cotton prices during 1985-2002 were at least twice as volatile compared to 1960-72, but half as volatile compared to 1973-84. This conclusion is similar to findings by Valdès and Foster (2003) who looked at price variability of corn, rice, sugar, and wheat as well as findings by Sarris (2000) who examined intra- and inter-year price variability of wheat and maize. Real cotton prices during these three periods have experienced an annual decline of 1.5, 3.2, and 1.5 percent respectively. Therefore, not only prices have been twice as volatile in 1985-2002 compared to 1973-84, but also they have declined twice as fast. In a more recent study, Pan and Valderrama (2005) compared the price variability of 22 primary commodities and concluded that during the past four years, 17 commodities exhibited more price variability than cotton. Similarly, Gilbert (2006) ranked 21 commodities according to their volatility and found cotton to be somewhere in the middle. Therefore, from a global market perspective, the cotton market is not that different from other agricultural commodities.

3. Cotton in Francophone Africa

The cotton industry in Francophone Africa was pioneered by the French state-owned Compagnie Française de Développement des Fibres Textiles (CFDT), along with various national cotton companies. These companies had a legal monopsony in cotton, and most had a monopoly on primary processing, marketing, and supplying inputs. They would announce a base buying price before planting, sometimes supplementing that price with a second payment (payable the following season) based on the company's financial health. Cotton growing expanded rapidly, from 225 000 tonnes in 1980 to one million tonnes two decades later (see Table 3). Growers used inputs well adapted to local conditions to produce high yields of cotton of consistent quality (Lele *et al.* 1989).

TABLE 3
Cotton production in WCA countries (thousand tonnes)

	1970	1980	1990	2000	2002	2004	2005
Burkina Faso	8	23	77	116	170	263	275
Mali	20	41	115	102	182	175	250
Benin	14	6	59	141	143	175	140
Côte d'Ivoire	12	56	116	125	172	145	119
Cameroon	14	32	47	79	95	124	112
Chad	35	31	60	58	77	80	72
Togo	2	10	41	56	77	75	70
Senegal	-	7	18	9	16	18	20
Franc Zone	140	224	562	728	954	1 135	1 071
WORLD	11 740	13 831	18 970	19 437	19 294	26 204	24 110
% of World	1.2	1.6	3.0	3.7	4.9	4.3	4.4

Notes: The total for Franc Zone includes small quantities of cotton produced by Central Africa Republic, Guinea, Madagascar, and Niger.

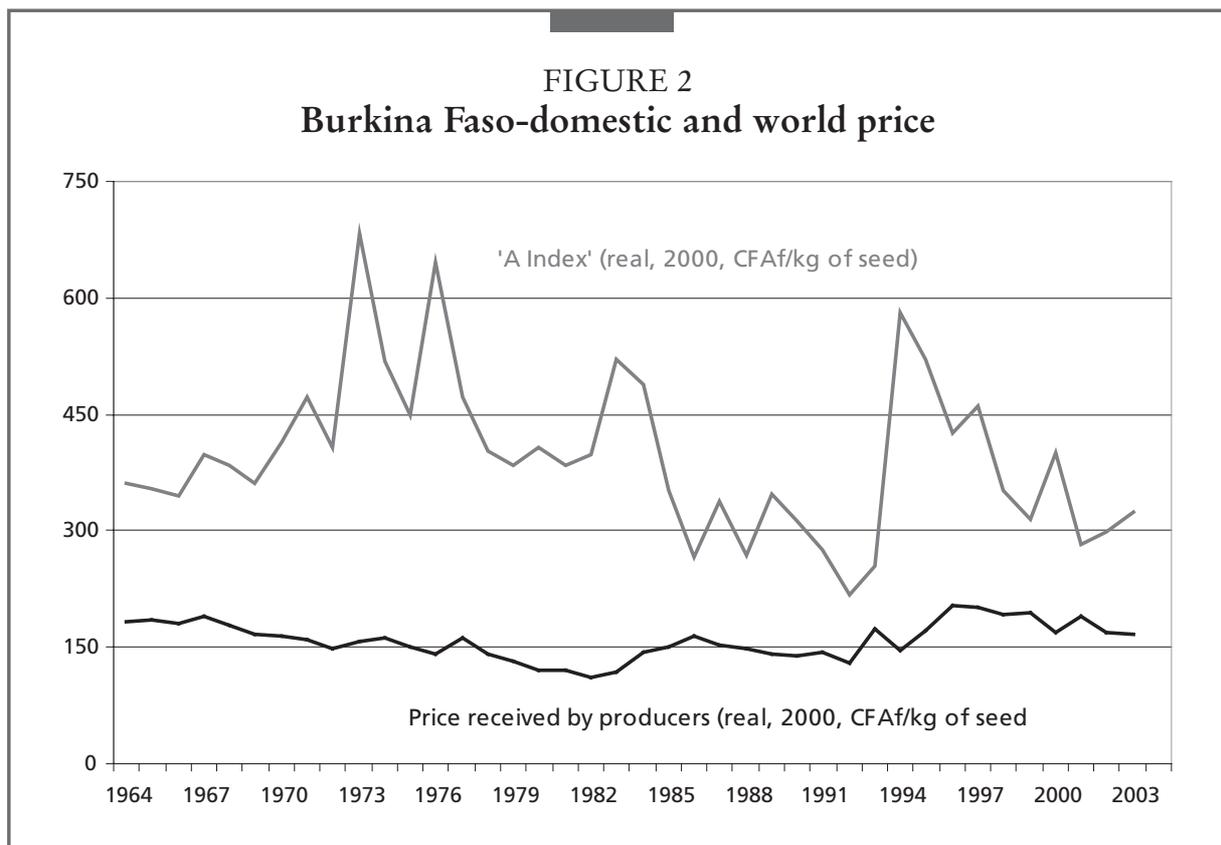
Source: International Cotton Advisory Committee, *Cotton: Review of the World Situation*, various issues.

Despite apparent successes, the system exhibited several weaknesses. Prices to producers were very low, often less than 50 percent of border prices (see Table 4). Furthermore, the correlation between domestic and world prices is practically non-existent, indicating that in addition to the high implicit taxation, there was no transmission of world price signals to the domestic markets as shown by a number of regression models (not reported here). As an example, Figure 2 depicts the domestic and world price of cotton for Burkina Faso.

TABLE 4
Prices received by WCA cotton growers (Percent of the 'A Index')

	1980-84	1985-89	1990-94	1995-99	2000-04
Burkina Faso	28	49	50	49	58
Mali	31	46	49	45	61
Benin	35	53	51	54	60
Chad	30	50	46	49	48
Côte d'Ivoire	38	58	53	52	57
Cameroon	43	68	53	47	53
Togo	30	51	53	52	55
Senegal	29	50	55	49	54
Average	33	53	51	50	56

Notes: The share is calculated as the ratio of the price received by cotton growers over the 'A Index' converted into domestic currency by using the IMF (International Financial Statistics) annual average CFAf/\$ exchange rate and adjusted to cotton seed equivalent by using 0.42 ginning ratio (except Mali where the ginning ratio was the actual one). The resulting figures were averaged over the periods reported in this table; the average reported in the last row is the arithmetic average over the 8 countries.



The absence of competition in domestic markets and the involvement of the state cotton companies in the provision of services allowed costly operating inefficiencies to develop, absorbing a large share of export prices. Uniform pricing of cotton and farm inputs across all areas of a country meant that transport costs were not properly taken into account in decisions about where to grow cotton. Finally, the system did not respond flexibly to changes in world market conditions. For example, in the mid-1980s and early 1990s low world prices and an overvalued currency led to the de facto bankruptcy of a number of state cotton companies. The companies had to be supported by injections of funds from national governments and the donor community.

During the past several years, in conjunction with the Agence Française de Développement (AFD), the donor community has held intensive discussions with the governments and other stakeholders in West and Central Africa, including state cotton enterprises, CFDT, and input suppliers (Baffes, 2000). Some recent reforms in Francophone Africa point to the future direction of institutional changes in the region's cotton sector (Badiane *et al.* 2002; Goreux, 2004). In Burkina Faso the reform process has advanced relatively well. Producers acquired one third of SOFITEX's (the cotton company) shares in 1999; more recently a private company acquired another third, while the remaining third remains with the state. In Côte d'Ivoire, the state cotton company was split into three private companies of comparable size in 1998; following a two-year transition period, the two new private companies began operating independently. However, the direction of the reform process in Côte d'Ivoire is less clear due to the civil conflict.

The cotton sector in Benin is currently passing through a transitional phase to liberalization. In the 1990s, the government licensed several private ginners who now make up about 48 percent of the country's ginning capacity. SONAPRA, the cotton parastatal owns the remaining 52 percent capacity. While the system has proven to be workable (with the highest cotton production in Benin's history, 415 000 tonnes of seed cotton, obtained when the system was in its second year), serious aberrations have come up over the last two years. Some actors have not been respecting the rules as laid down when the producer organizations were created. These aberrations threaten the success of the reform programme if no action is taken.

Some noticeable efforts are being made to reform the cotton sector in Mali, following the near-bankruptcy of the state cotton company a few years ago. The government, however, has stepped back from its commitment to implement the sector reform programme and, as it currently appears, not much progress is expected to take place until 2007.

Progress on cotton reforms in Chad has been somewhat limited by the fiscal difficulties of Cotontchad, the publicly-owned company that handles all cotton-related activities, and the lack of ownership of reform by the government. Although the government of Chad had decided to disengage from the cotton sector in 1999, so far it has failed to take the necessary steps to move in this direction. Furthermore, the decision by the government of Chad to breach a loan agreement with the World Bank-which, in turn, has temporarily suspended all loan activities to Chad-adds further uncertainty to direction of the cotton sector.

4. Cotton policies by major players

Cotton has been subject to various interventions that mostly take the form of domestic support (taxpayer-financed support). In contrast, two thirds of the support given to OECD commodity producers takes the form of border measures (i.e. consumer-financed support). During 2004/05, government assistance to US cotton producers reached US\$4.2 billion, China's totaled US\$1.1 billion, and the EU provided almost US\$1 billion (Table 5).³

TABLE 5
Estimated assistance to cotton growers (million US\$)

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
US	1 132	1 882	3 809	1 868	3 307	2 889	1 372	4 245
China	2 013	2 648	1 534	1 900	1 217	800	1 303	1 145
EU	870	864	795	706	980	957	994	1 066

Source: International Cotton Advisory Committee; US Department of Agriculture; European Union.

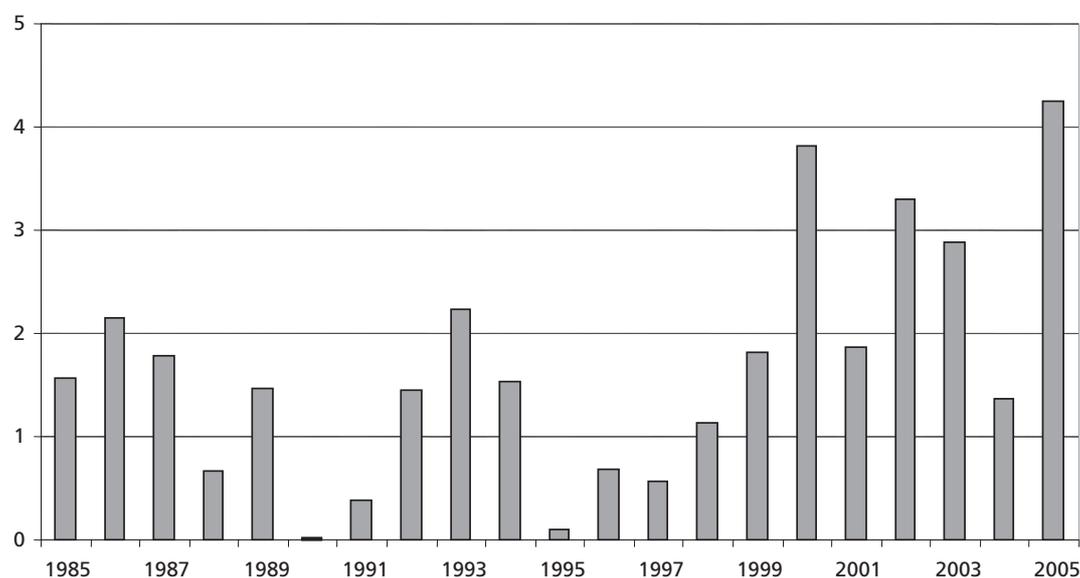
³ A commonly used source of data on agricultural support is OECD's annual monitoring report of agricultural policies; however, the OECD monitor does not report government assistance to the cotton sectors as a separate entity. The data on cotton subsidies reported in this paper (and elsewhere) originate either from ICAC or from country sources.

4.1 United States

Cotton subsidies in the United States have a long history dating from the commodity programs of the Great Depression. The specific provisions of these programmes, including the one for cotton, change with each “Farm Bill” passed by the Congress (Farm Bills are introduced approximately every 4 to 5 years), but their chief objective has remained largely unchanged: to transfer income from taxpayers (and to some extent consumers) to producers. The main channels of support to US cotton producers are price-based payments, decoupled payments, crop insurance, and countercyclical payments. US cotton users and exporters also receive some support.

- *Price-based payments* (also known as loan rate payments) are designed to compensate cotton growers for the difference between the market price and the target price when the latter exceeds the former.
- *Decoupled payments* (renamed direct payments in the 2002 Farm Bill) are predetermined annual payments calculated on the basis of area historically used for cotton production. Direct payments were introduced with the 1996 Farm Bill to compensate producers for “losses” following the elimination of deficiency payments.
- *Crop insurance* is subsidy to weather-related crop failures.
- *Countercyclical payments* were introduced in 1998 (as “emergency payments”) to compensate producers for income “lost” due to low commodity prices. They were made permanent under the 2002 Farm Bill.
- *Step2- payments* (also referred to as export subsidies) made to cotton exporters and domestic end-users when domestic prices exceed world prices, so that U.S. exporters maintain their competitiveness.
- *Export credit guarantees* which insure importers of US cotton against potential defaults.

FIGURE 3
Assistance to US cotton growers (FY85-05), \$ billion



Source: United States Department of Agriculture.

In addition to these transfers there are other publicly funded programme - among them research and extension services and subsidized irrigation. The US cotton programme, which has been subject to review by the US General Accounting Office twice (1990 and 1995), was (and still is) very complex and expensive. Perhaps the best summary of the programme's complexity and costs was given by the 1995 GAO audit report (p. 3):

The cotton program has evolved over the past 60 years into a costly, complex maze of domestic and international price supports that benefit producers at great cost to the government and society. From 1986 through 1993, the cotton program's costs totaled US\$12 billion, an average of US\$1.5 billion a year. Moreover, the program is very complex, with dozens of key factors that interact and counteract to determine price, acreage, and payments and to restrict imports. The severe economic conditions and many of the motivations that led to the cotton program in the 1930s no longer exist ... The [U.S.] Congress could, for example, reduce or phase out payments over a number of years, perhaps over the life of the next [1996] farm bill.

4.2 European Union

During the 1960s and 1970s Greece and Spain together were producing 130 000 tonnes of cotton. Following their accession to the European Union, cotton growers in these two countries became eligible for Common Agricultural Policy funds causing cotton production to grow by an annual average of 7.3 percent, to exceed 400 000 tonnes during the 1990s. Support to cotton producers was based on the difference between the market price and a support price. The policy also influenced the quantity produced by specifying a maximum for which assistance will be provided-the equivalent of 255 000 tonnes for Greece and 82 000 tonnes for Spain.

During the past 10 years, the budgetary expenditure on the cotton sector ranged between US\$0.7 and US\$1.0 billion, implying that, on average, EU cotton producers received more than twice the world price of cotton. EU cotton producers receive support even in periods of high prices, since the budgetary allocation to the cotton sector must be disbursed. For example, EU cotton producers received approximately the same level of support in 1995 and 2002, although cotton prices in 1995 were twice the level of 2002.

The EU has implemented a number of adjustments to its cotton programme including the 1999 reform which effectively imposed a cap on the budgetary expenditures allocated to the industry (European Commission, 2000). A major reinstrumentation of the EU cotton programme was undertaken under the Luxembourg Council's decision of April 22, 2004, which was based on the September 2003 proposal. Under the new programme, an estimated €700 million will fund two support measures, with 65 percent of the support taking the form of a single decoupled payment and the remaining 35 percent taking the form of an area payment (European Commission, 2003). Eligibility for the decoupled payment is limited to growers who produced cotton during the 3-year period 1999-2001. The area payment will be given for a maximum area of 380 000 hectares in Greece, 85 000 hectares in Spain, and 360 hectares in Portugal and will be proportionately reduced if claims exceed the maximum area allocated to each country. To receive decoupled payments, cotton growers must keep the land in good agricultural use. To receive area payments they must plant (not necessarily produce) cotton. Karagiannis (2004) estimated that the recent decoupling is likely to reduce EU cotton production by 10 to 25 percent (depending on the elasticity assumption.)

4.3 China

China's cotton sector became fully government controlled in 1953 following the introduction of the first five-year plan (Zhong and Fang, 2003). The central planning policies adopted then were similar to those of the Soviet Union and remained in place for the next 35 years. The central government set production targets and procurement quotas (all primary processing facilities were owned by cooperatives). Some changes took place in 1978 when the government substantially raised the price of cotton and supplied more fertilizer. Market-oriented reforms were introduced in 1980 when the communal production system was partially abolished and individual farmers were given land use rights. Cotton production increased considerably in response to both the 1978 and the 1980 policy changes.

Currently, China intervenes in its cotton sector through price support measures (a reference price typically set above world prices), subsidies to transportation and marketing, and public stockholding. China also imposes a one percent tariff on cotton imports up to 0.894 million tonnes while the bound tariff outside the TRQ is 40 percent. (for a detailed discussion of China's TRQ system see Gruère and Guitchounts (2005). In reality, however, China applied the same one percent tariff on all cotton imports exceeding the TRQ during 2004 (Ke 2006). The International Cotton Advisory Committee estimates that support to the cotton sector from 1997 to

2004 ranged from US\$0.8 billion to US\$2.0 billion. Huang, Rozelle, and Chang (2004) estimate that in 2001 the nominal rate of protection for cotton averaged 17 percent.⁴

In 1999 the government announced reform measures that included creating a cotton exchange to facilitate domestic trading, reducing prices paid to producers, and lowering stocks. In September 2001 further reforms were announced. First, the internal cotton market was open to cross-regional trade. Second, various enterprises were allowed to buy cotton directly from producers with the approval of the provincial government. Third, primary processing operations were separated from marketing cooperatives, in effect making them commercial enterprises.

To some extent the reform efforts have achieved their stated objectives. China currently operates a cotton exchange that trades future contracts (Shuhua, 2003). Its publicly held stocks declined from 3.5 million tonnes in the two-year period 1998–99 to 1.25 million tonnes in 2004–05. According to ICAC figures, estimated support to the cotton sector declined from US\$2.1 billion to US\$1.2 billion between the two periods—cotton prices during these two periods averaged US\$1.31 and US\$1.29 a kilogram.) Furthermore, as mentioned earlier, the import quota has been extended when necessary in order to meet domestic demand requirements.

5. Implications of cotton policies

Numerous models have evaluated the impact of cotton policies on the cotton market with considerable variation in the results. The International Cotton Advisory Committee, for example, concluded that in the absence of direct subsidies, average cotton prices during the 2000/01 season would have been 30 percent higher than what they actually were (ICAC 2002). The study, which was based on a short run partial equilibrium model, did acknowledge that while removal of subsidies would result in lower production in the countries which receive them (and hence higher prices in the short term), such impact would be partially offset by shifting production to non-subsidizing countries in the medium to longer terms. Goreux (2004), who extended the ICAC model by replacing the base year with 1998–2002 average subsidies, estimated that in the absence of support the world price of cotton would have been between 3 and 13 percent higher in these five years, depending on the value of demand and supply elasticities. Gilson *et al.* (2004) using subsidy data for 1999 and a model similar to that of Goreux (2004), estimated that removal of subsidies by the US, EU, and China would increase the world price of cotton by 18 percent.

⁴ However, it should be noted that not all researchers and analysts agree that China subsidizes its cotton. Fang and Beghin (2003), for example, estimated that between 1997 and 2000 the nominal protection coefficient for cotton averaged 0.80, implying that China taxes its cotton sector. More recently, Shui (2005, p. 2) wrote that “... results suggested clearly that after 1999 all agents along the cotton supply chain [in China] received no financial assistance from the government but rather paid taxes and fees to the government.” The different views on the nature and degree of intervention reflect the complexities of China’s agricultural policies as well as the unreliability of the data.

Reeves *et al.* (2001) used a Computable General Equilibrium model and found that removal of production and export subsidies by the US and the EU will induce a 20 percent reduction in US cotton production, a 50 percent reduction in US cotton exports, with much higher figures for the EU. They also estimated that if support was not in place, world cotton prices would be 10.7 percent higher compared to their 2001/02 levels. Simulations from a model developed by the Food and Agriculture Policy Research Institute (FAPRI, 2002) found that under global liberalization (i.e., removal of trade barriers and domestic support of all commodity sectors including cotton), the world cotton price would increase over the baseline scenario by an average of 12.7 percent over a 10-year period. Based largely on FAPRI's data and assumptions, Sumner (2003) estimated that had all US cotton subsidies not been in place during the marketing years 1999-2002, the world price of cotton would have been almost 13 percent higher (see Figure 3 for nominal cotton prices during the past two decades). Anderson and Valenzuela (2006) also estimated that, in the absence of all cotton subsidies world prices would have been 12.9 percent higher.

Based on a partial equilibrium model, Tokarick (2003) finds that multilateral trade liberalization in all agricultural markets (including cotton) would induce a 2.8 percent increase in the world price of cotton and a US\$95 million annual increase in welfare. Poonyth *et al.* (2004) and others estimate that removal of cotton subsidies—as reported in the WTO notifications—would increase the world price of cotton between 3.1 percent and 4.8 percent, depending on assumptions about demand and supply elasticities. In contrast, Shepherd (2004) and Pan *et al.* (2004) and others find a negligible impact of subsidies on the world price of cotton.

The highly divergent results for these models reflect in part the structure of the models and the assumed elasticities. Several other factors also influence the results. The reasons behind the highly divergent results of cotton models were the subject of an FAO experts' consultation (FAO, 2004). First, there are differences in the level and structure of support. For example, some models incorporate China's support to its cotton sector and model its removal; others do not. Second, there are differences in the underlying scenarios. Some models assume liberalization in all commodity markets while others assume liberalization only in the cotton sector. Third, the models use different base years and hence different levels of subsidies. For example, support in the US was three times as high in 1999 as in 1997. Setting all the differences aside, however a simple average over all models shows that world cotton prices would have been about 10 percent higher without support. Applying a simple average to the Francophone Africa cotton producing countries shows that these countries lost approximately US\$150 million annually in export earnings due to the subsidies.

Not all models report results on the gainers and losers from the removal of cotton subsidies. In that respect the most complete analysis is offered by the FAPRI model, which finds the largest gains in trade for Africa, with an expected average increase in exports of 12.6 percent. Exports increase by 6.0 percent for Uzbekistan and by 2.7 percent for Australia, while exports from the United States decline by 3.5 percent. The most dramatic impact is on the production side. The European Union's cotton

output would decline by more than 70 percent-not a complete surprise considering that the European Union's cotton output during the late 1990s was three times higher than it was before Greece and Spain joined.

Two important WTO-related developments have taken place in response to the high cotton subsidies: The Brazil *vs.* US cotton case (case DS 267) and the request by four WCA cotton producing countries-the so-called cotton-4-that cotton subsidies should be removed and until such removal takes place, the cotton-4 should be compensated accordingly. The remaining of this section elaborates on these developments.

5.1 Brazil vs the United States

On September 27, 2002, Brazil requested consultation with the United States regarding U.S. subsidies to cotton producers. On March 18, 2003, the Dispute Settlement Body of the WTO established a panel to examine the issues, and on April 26, 2004, the WTO issued an interim ruling in favor of Brazil. The final ruling (issued on September 8, 2004) concluded that "the United States is under the obligation to take appropriate steps to remove the adverse effects or ... withdraw the subsidy" (WTO, 2004a).

Brazil argued that U.S. cotton subsidies were inconsistent with provisions of the Agreement on Subsidies and Countervailing Measures, the Agreement on Agriculture, and the General Agreement on Tariffs and Trade 1994 and were causing "serious prejudice to the interests of Brazil" because of a "significant price depression and price suppression" (WTO, 2002). Brazil's main claims along with the Panels' findings can be summarized as follows (Schnepf, 2004):

- The United States provided domestic support to its cotton sector during 1999–2002 in excess of the support decided during the 1992 marketing year under the peace clause (article 13) of the Agreement on Agriculture. The Panel found that indeed, the US exceeded WTO commitments during the 1992 marketing year.
- Export subsidies (the so-called step-2 payments) violated the Agreement on Agriculture. The Panel considered the domestic part of the step-2 separate from its export component and found that the former is prohibited import substitution subsidy while the latter prohibited export subsidy.
- The export credit guarantees function as export subsidies. The Panel found that indeed, they act as subsidies since the financial benefits do not cover the cost of the programme.
- The direct payments should have been placed under the WTO's *Amber Box* category (disciplined support) instead of the *Green Box* category (undisciplined support). The Panel found that these payments should have been placed in the *Amber Box* because of the prohibition on planting fruits and vegetables.
- Subsidies have caused "serious prejudice." The Panel found that because the domestic support measures are contingent on market prices have caused serious prejudice in terms market price suppression during 1999–2002.

Using the econometric model developed by FAPRI, Brazil claimed that the U.S. subsidies induced a 41 percent increase in US cotton exports, reducing the world price of cotton by 12.6 percent and causing an estimated injury to Brazil of more than US\$600 million for 2001 alone. The United States appealed the case but the original ruling remained by and large intact. In February 2006, the US announced that it would eliminate the export subsidies. However, it remains unclear what, if any, steps it will take regarding containing the overall level of subsidies and declaring direct payments in the Amber Box.

The ruling was issued against the background of the ongoing critical agricultural negotiations, the expiration of the peace clause, the more assertive stance taken by the G-20, and the West African sectoral initiative on cotton. The ruling has numerous implications for the WTO and the Doha Development Agenda as well as for developing countries and international institutions (Baffes 2005b):

- As the first case of a developing country challenging an OECD farm subsidy programme in the WTO, it may set a precedent. If further cases follow, there may be a shift in the focus of WTO activities from negotiation to litigation.
- The way to avoid a significant increase in such disputes is to make significant progress in the Doha Development Agenda. Hence, the ruling may help agencies such as the EU Commission and the US Trade Representative's Office confront domestic protectionist lobbies.
- The ruling strengthens the claims of many developing countries that OECD subsidies distort global commodity markets and depress world prices.
- This dispute spotlights the importance of models analyzing the effects of subsidies on world prices and export shares, making model developers more accountable for the analysis. The ruling reveals the importance and weaknesses of current measures of support and the differences in WTO, US, and EU definitions of "decoupled support."

5.2 West African cotton sector initiative

On May 16, 2003, four West African cotton producing countries (Benin, Burkina Faso, Chad, and Mali) submitted a joint proposal to the WTO demanding removal of support to the cotton sector by the United States, China, and the European Union and compensation for damages until full removal of support. The West African countries were aided in this move, often referred to as the "cotton initiative," by IDEAS, a Geneva-based NGO funded by the Swiss government.

The four countries argued that subsidies cost them an estimated US\$250 million in export earnings during the 2001/02 marketing season-US\$1 billion when the indirect effects of these subsidies were considered (cotton prices averaged US\$0.82 a kilogram in October 2001, the lowest since November 1972 with the exception of August 1986). Because the standard WTO remedies (compensation through supplementary concessions or imposition of countervailing duties) were not feasible, the proposal called for "transitional...financial compensation...to offset the injury caused by support of production and export." The compensation would be proportional to the subsidies, declining and ending as the subsidies were reduced

and abolished. The proposal argued that the direct and indirect effects of support for cotton production should be taken into account when determining compensation and that “the unit amount and the total amount of subsidies should be taken into account when dividing the compensation among countries which subsidize production” (WTO, 2003).

The cotton initiative received considerable attention during the Cancùn Ministerial. The Director General of WTO urged ministers to consider the proposal “seriously.” While numerous countries were sympathetic, there were doubts whether it would benefit the Doha Development Agenda to treat one commodity differently from others. Furthermore, it soon became apparent that direct compensation was unlikely. The inability to deal effectively with the initiative was one reason for the failure to reach agreement in Cancun.

It was finally determined that while the trade part of the initiative (subsidies) fell within WTO’s mandate, the development part (compensation) should be handled by the multilateral institutions in coordination with the concerned governments. To that end, at a WTO-sponsored conference on March 23–24, 2004, in Cotonou, Benin, both bilateral and multilateral donors reaffirmed their willingness to deal with the development part of the cotton initiative (see Table 6 for a detailed timetable of all events related to the cotton initiative).

TABLE 6
Timeline of the “Initiative in Favour of Cotton”

DATE	EVENT	COMMENTS/OUTCOME
July 8-9, 2002 ¹	The ICAC and the World Bank sponsor the conference “Cotton and Global Trade Negotiations” in Washington, D.C.	Cotton policy-related issues were debated by a highly diverse group of participants including representatives from cotton producing countries (both government officials and private sector), civil society organizations, embassies, and international organizations. It is believed that this conference raised awareness regarding the global cotton trade distortions, in turn triggering the so-called “cotton problem”.
September 27, 2002 ²	OXFAM publishes the report “Cultivating Poverty: The Impact of US Cotton Subsidies”	The report was influential because it contrasted poor West African cotton producers with their counterparts in the US. It noted that “US cotton farmers receive more in subsidies than the entire GDP of Burkina Faso ... and ... three times more in subsidies than the entire USAID budget for Africa’s 500 million people.”
May 16, 2003 ³	Benin, Burkina Faso, Chad, and Mali (the ‘cotton-4’) launch the “Initiative in Favour of Cotton”	The initiative demanded that countries discontinue subsidizing their cotton sectors and until subsidies are removed, nonsubsidizing countries should be compensated accordingly. The initiative was aided by the Geneva-based NGO IDEAS.
September 10-13, 2003 ⁴	The cotton initiative becomes an intensely debated and highly controversial topic during the 5th WTO Ministerial in Cancun	The initiative was facilitated by the director general of the WTO who “urged ministers to consider the proposal seriously.” Many countries were sympathetic to the initiative. By some accounts, the inability to make progress on the initiative was partially responsible for the failure to reach agreement in Cancun.
March 23-24, 2004 ⁵	The WTO sponsors the “African Regional Workshop on Cotton” in Cotonou, Benin	Because of numerous practical difficulties it was decided that the initiative would be dealt with at two levels: development (compensation) and trade (subsidies). The development component was the subject of the Cotonou workshop.
May 31-June 1, 2004 ⁶	FAO holds cotton expert consultations in Rome	Key experts from international organizations and the academic community discussed the chief reasons behind the diverse conclusions reached by models that examined the effects of subsidies on the global cotton market.
July 5-6, 2004 ⁷	The European Union sponsors the EU-Africa Cotton Forum in Paris	The forum endorsed the EU-Africa Cotton Partnership within the trade and development perspective.

DATE	EVENT	COMMENTS/OUTCOME
August 1, 2004 ⁸	The WTO General Council reaches a decision on the frameworks of trade negotiations	According to the decision, all trade-related aspects of cotton will be dealt within the context of agricultural negotiations. The decision also emphasized that the theme should be addressed “ambitiously, expeditiously, and specifically.”
November 19, 2004 ⁹	The WTO establishes the Sub-Committee on Cotton	The Sub-Committee facilitates exchange of information on “how development assistance could best be used to help recipient countries adjust while also working on reducing trade distortions through the agriculture negotiations.” Since then, the sub-Committee has been meeting on a regular basis.
January 28, 2005 ¹⁰	The Development Assistance Committee (DAC) of OECD convenes a Briefing on cotton in Paris	DAC’s briefing, “The Development Dimensions of African Cotton,” was a follow up of the Cotonou Workshop; it assessed the progress on the development assistance aspects of the cotton initiative. Cotton-4 representatives tabled a specific proposal demanding direct compensation. The proposal did not find support by the donor community.
May 18, 2005 ¹¹	The IMF and the government of Benin cosponsor a cotton conference in Cotonou	IMF’s managing director proposed a four-pronged approach which would include, preserving macroeconomic stability, enhancing cotton production efficiency, eliminating developed countries’ cotton subsidies, and protecting the poor during adjustment.
December 13-18, 2005 ¹²	WTO holds its 6th Ministerial meeting in Hong Kong	It was agreed that export subsidies will be eliminated by developed countries in 2006 and developed countries will give duty and quota free access for cotton exports from LDCs. Moreover, “trade distorting domestic subsidies for cotton production should be reduced more ambitiously than under whatever general formula ...”

Source: Compiled by the author from the following sources:

¹ www.icac.org/meetings/cgtn_conf/documents/english.html

² www.oxfam.org/eng/policy_pape.htm

³ www.wto.org/english/tratop_e/agric_e/negs_bkgrnd20_cotton_e.htm#origins

⁴ www.wto.org/english/tratop_e/agric_e/negs_bkgrnd20_cotton_e.htm#origins

⁵ www.wto.org/english/news_e/spsp_e/spsp24_e.htm

⁶ www.fao.org/es/esc/en/20953/22215/highlight_47647en.html

⁷ www.cotton-forum.org/indexflash.html

⁸ www.wto.org/english/tratop_e/agric_e/negs_bkgrnd20_cotton_e.htm#origins

⁹ www.wto.org/english/tratop_e/agric_e/cotton_subcommittee_e.htm

¹⁰ www.oecd.org/document/26/0,2340,en_2649_37413_34352154_1_1_1_37413,00.html

¹¹ www.imf.org/external/np/sec/pr/2005/pr05121.htm

¹² www.wto.org/english/thewto_e/minist_e/min05_e/final_text_e.htm

On August 1, 2004, the WTO General Council reached a decision to proceed with multilateral trade negotiations, emphasizing that the theme should be addressed “ambitiously, expeditiously, and specifically” (WTO, 2004b). The Director General was instructed to consult with international organizations, including the Bretton Woods institutions, the Food and Agriculture Organization, and the International Trade Centre, to direct existing programmes and any additional resources toward development of the economies where cotton is of vital importance. Progress on the “cotton initiative” is being monitored regularly at WTO meetings following the establishment of the sub-committee on cotton (WTO, 2004c).

6. Cotton and the 6th WTO Ministerial in Hong Kong

Cotton received considerable attention during the 6th WTO Ministerial in Hong Kong. Widespread fears that the cotton initiative may contribute to another Cancun-type collapse did not materialize. Consistent with the convention established at the WTO-sponsored Cotonou workshop, the text deals separately with the issue of trade (i.e. subsidies) in paragraph 11 and development (compensation) in paragraph 12 (see Appendix A for cotton text of the declaration). The next two sections elaborate on these two issues.

6.1 Trade (subsidies)

On export subsidies, the declaration says that “all forms of export subsidies for cotton will be eliminated by developed countries in 2006”. Since the EU does not give any export subsidies, the text is relevant only to the US. As discussed earlier, the two types of exports subsidies given by the US are the export credit guarantees and the Step-2 payment, both of which were found illegal export subsidies by the WTO’s Panel. In order to comply with the Panel’s ruling, in February 2006 the US announced that it will eliminate export subsidies. Hence, the declaration on export subsidies adds no new commitment. Note that export subsidies represented about 12 percent of total cotton support during 1995-2002.

On market access, the declaration indicates that “developed countries will give duty and quota free access for cotton exports from least-developed countries from the commencement of the implementation period.” Again, this text is relevant only to the US since the EU does not impose any border restriction on cotton imports—it would have been relevant to China if it were considered a developed country by the WTO. Although the US applies TRQs on cotton imports, they are largely irrelevant since the US is (and has been always) a net cotton exporter. Therefore, any increase in US cotton imports due to the removal of TRQs is likely to cause minor trade diversion rather than altering the landscape of existing cotton trade patterns. For example, some US textiles may use imported instead of domestically produced cotton while the US cotton they would have used will be exported. Again, as was the case with export subsidies, the market access part of the declaration is unlikely to make any difference in the cotton market.

Finally, on domestic support, the declaration indicates that "... trade distorting subsidies for cotton production should be reduced more ambitiously than under whatever general formula is agreed and that it should be implemented over a shorter period of time than generally applicable." The EU has already reformed its cotton programme - its three key elements are: (i) 65 percent/35 percent decoupled/area payments; (ii) €700 million cap per annum; (iii) duration until 2013-and it appears than none of these elements are likely to change as a result of the declaration.⁵ Therefore, the domestic support pillar (as was the case with the other two pillars) is applicable to the US only.

The key issue is whether direct payments are trade distorting support. While the US has placed them in the green box, the WTO Panel ruled that they should have been placed in the amber box because of the prohibition of planting fruits and vegetables on the eligible land. If direct payments are placed in the amber box, then, with the exception of crop insurance, the entire cotton programme should be placed in the amber box and any ambitious reduction has to be calculated over the full outlays of the programme.

However, regardless of the box status of direct payments, the US is under the obligation to reduce its cotton support to levels not exceeding the 1992 outlays. According to the WTO's Panel, the US disbursed US\$2.01 billion to its cotton sector during the 1992 marketing year while the average disbursements during the dispute period, 1999-2002, were US\$3.22 billion.⁶ Therefore, taking as a base the market conditions and subsidy levels experienced during 1999-2002, the U.S. must undertake an almost 40 percent reduction in order to comply with the Panel's ruling. To that, if one adds the commitments to be agreed under the general reduction formula as well as any additional cuts due to "ambitiousness", one would expect a substantial reduction of US cotton subsidies. To what extent this will be the case depends, among other factors, on the 2007 Farm Bill, discussions of which should be well under way during the summer of 2007.

6.2 Development (compensation)

With respect to the development assistance aspects of cotton, the Hong Kong declaration urges the Director-General "... to further intensify his consultative efforts with bilateral donors and with multilateral and regional institutions, with emphasis on improved coherence, coordination and enhanced implementation and to explore the possibility of establishing through such institutions a mechanism to deal with income declines in the cotton sector ... urge Members to promote and support South-South cooperation, including transfer of technology ... invite the Director-General to furnish a third Periodic Report to our next Session with updates, ... and to set up an appropriate follow-up and monitoring mechanism." This part of the declaration is consistent with the outcome of the OECD's DAC committee briefing as well as the work of the sub-Committee on Cotton.

⁵ It appears that there is (unconfirmed) discussion within the EU to fully decouple cotton support.

One unclear aspect of the declaration, however, is its reference to the possibility of establishing a mechanism (through donor institutions) to deal with income declines in the cotton sector. One of the key points of the Cotonou workshop-unanimously accepted by all donors and later echoed at the DAC briefing-was that no new channels of support will be created. Furthermore, the proposal advanced by the cotton-4 countries during the DAC briefing asking for the creation of a compensation fund was overwhelmingly rejected.

7. Concluding remarks

In some respects, cotton shares similar characteristics with other commodity markets, namely volatile and declining nature of prices and competition from synthetic products. In other respects, however, it differs markedly. For example, despite its low share in world trade-estimated at about 0.12 percent of global merchandise trade-as many as 100 million households depend on that commodity, therefore, the price fluctuations imply that millions of poor households get in or out of poverty.

Policies have certainly affected cotton prices to the detriment of non-subsidized cotton growers. Hence, for good reasons cotton became a central theme during the Doha Development Agenda negotiations. To what extent the Hong Kong Ministerial is a success or a failure is still open to question. However, it is worth mentioning the progress that has taken place of the policy aspects of the cotton market during the last four years (ignoring, for convenience, the actual events that triggered such progress):

- The views of developing countries have indeed been heard in the WTO.
- The EU moved from a price support mechanism based on current production to one which is based on historical production (65 percent) and area (35 percent).
- The US announced that it will remove the export subsidy component of its cotton programme.
- There has been considerable awareness outside the “cotton community” regarding the effects of cotton subsidies. Consider that the leading article of the December 2005 issue of the *Business 2.0* magazine (entitled “100 percent Rotten”) dealt with cotton, which, in reference to the Step-2 programme, noted “... [textile firms in the US] could probably import foreign cotton cheaply enough that it might not need the subsidy, just as Apple Computer buys foreign-made memory chips and none worse off” (Zachary 2005). Such awareness is likely to exert pressure for more reforms, regardless of the Doha outcome.

At this stage, however, it appears that two other aspects of the “cotton problem”-policy reforms in cotton-dependent countries and technology adoption-have received disproportionately less attention. In many developing countries (especially in sub-Saharan Africa but also Central Asia) where cotton is an important source

⁶ Figure 4 depicts the US cotton support for the past two decades showing a 1991/92 level of support of US\$1.5 billion, US\$0.5 billion less than the Panel’s figure. The discrepancy may be due to the definition of the period (marketing versus calendar year).

of rural incomes, reform programmes for restructuring the cotton sector to increase its efficiency remain largely incomplete. Fully implementing reforms should be the immediate focus of the policymakers. After all, even if cotton prices increase either as a result of elimination of subsidies or as a result of market forces, it will do no good to poor producers if such increase is absorbed by bankrupt parastatals, debt-ridden cooperatives, or corrupt public officials unwilling to engage in serious reform efforts. Furthermore, serious reform efforts will signal the willingness of these countries to participate in the creation of a conducive global trading environment.

Finally, cotton producers in many developing countries face the challenge of adopting genetically modified seed technology in order to compete effectively with their competitors who are using such technologies and enjoy the cost advantages and yield gains. That, however, would entail extensive field trials to develop varieties suitable to local growing conditions as well as putting in place the appropriate legal and regulatory framework—challenging and time consuming processes requiring attention at a policymaking level.

Appendix A

Cotton Text of the 6th WTO Ministerial Declaration (WT/MIN(05)/W/3/Rev.2)

A1. Main Text (paragraphs 11 and 12, emphasis added)

11. We recall the mandate given by the Members in the Decision adopted by the General Council on 1 August 2004 to address cotton ambitiously, expeditiously and specifically, within the agriculture negotiations in relation to all trade-distorting policies affecting the sector in all three pillars of market access, domestic support and export competition, as specified in the Doha text and the July 2004 Framework text. We note the work already undertaken in the Sub-Committee on Cotton and the proposals made with regard to this matter. Without prejudice to Members' current WTO rights and obligations, including those flowing from actions taken by the Dispute Settlement Body, we reaffirm our commitment to ensure having an explicit decision on cotton within the agriculture negotiations and through the Sub-Committee on Cotton ambitiously, expeditiously and specifically as follows:

- All forms of export subsidies for cotton will be eliminated by developed countries in 2006.
- On **market access**, developed countries will give duty and quota free access for cotton exports from least-developed countries (LDCs) from the commencement of the implementation period.
- [It is recognized that the objective is that, as an outcome for the negotiations, **trade distorting domestic subsidies** for cotton production should be reduced more ambitiously than under whatever general formula is agreed and that it should be implemented over a shorter period of time than generally applicable. We will commit ourselves to give priority in the negotiations to reach such an outcome.]

12. With regard to the development assistance aspects of cotton, we welcome the Consultative Framework process initiated by the Director-General to implement the decisions on these aspects pursuant to paragraph 1.b of the Decision adopted by the General Council on 1 August 2004. We take note of his Periodic Reports and the positive evolution of development assistance noted therein. We urge the Director-General to further intensify his consultative efforts with bilateral donors and with multilateral and regional institutions, with emphasis on improved coherence, coordination and enhanced implementation **and to explore the possibility of establishing through such institutions a mechanism to deal with income declines in the cotton sector**. Noting the importance of achieving enhanced efficiency and competitiveness in the cotton producing process, we urge the development

community to further scale up its cotton-specific assistance and to support the efforts of the Director-General. In this context, we urge Members to promote and support South-South cooperation, including transfer of technology. We welcome the domestic reform efforts by African cotton producers aimed at enhancing productivity and efficiency, and encourage them to deepen this process. We reaffirm the complementarity of the trade policy and development assistance aspects of cotton. We invite the Director-General to furnish a third Periodic Report to our next Session with updates, at appropriate intervals in the meantime, to the General Council, while keeping the Sub-Committee on Cotton fully informed of progress. Finally, as regards follow up and monitoring, we request the Director-General to set up an appropriate follow-up and monitoring mechanism.

A2 Annex A (paragraph 21, emphasis added)

21. While there is genuine recognition of the problem to be addressed and concrete proposals have been made, Members remain at this point short of concrete and specific achievement that would be needed to meet the July Framework direction to address this matter ambitiously, expeditiously and specifically. There is no disagreement with the view that all forms of export subsidies are to be eliminated for cotton although the timing and speed remains to be specified. Proposals to eliminate them immediately or from day one of the implementation period are not at this point shared by all Members. In the case of trade distorting support, proponents seek full elimination with “front-loaded” implementation.* There is a view that the extent to which this can occur, and its timing, can only be determined in the context of an overall agreement. Another view is that there could be at least substantial and front-loaded reduction on cotton specifically from day one of implementation, with the major implementation achieved within twelve months, and the remainder to be completed within a period shorter than the overall implementation period for agriculture.**

* Concrete proposals have been made, with a three-step approach: 80 percent on day one, an additional 10 percent after 12 months and the last 10 percent a year later.

** A Member has indicated that it is prepared to implement all its commitments from day one and, in any case, to autonomously ensure that its commitments on eliminating the most trade-distorting domestic support, eliminating all forms of export subsidies and providing mfn duty- and quota-free access for cotton will take place from 2006.

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Cotton developments in West and Central Africa: domestic and trade policy issues and the WTO

John Baffes

1. Introduction

Cotton is an important cash crop to a number of developing countries at both household and national levels. It accounts for more than one quarter of total merchandise exports in many low income countries, especially in West and Central Africa (WCA). For example, it contributes about 50 percent to total merchandise exports in Burkina Faso and about 25 percent in Chad, Benin, and Mali. Moreover, the per capita GDP in most of these “cotton-dependent” countries is well below US\$500 (see Table 1).

TABLE 1
Cotton’s Importance to WCA Economies (2001-03 averages)

	Cotton Exports			Merchandise exports (US\$ millions)	Per capita GDP (2000 US\$)
	Value (US\$ millions)	Share of merchandise exports (%)	Share of GDP (%)		
Burkina Faso	105	44.6	3.3	235	245
Chad	53	29.4	2.4	182	381
Benin	126	27.7	4.5	455	289
Mali	193	22.7	6.1	849	203
Togo	42	8.9	2.7	467	251
Cameroon	100	4.9	0.9	2,042	619
Côte d’Ivoire	145	2.9	1.2	4,971	632
Senegal	17	1.7	0.3	1,035	475

Source: Food and Agriculture Organization (FAOSTAT) and World Bank (World Development Indicators).

The United Nations Food and Agriculture Organization (FAO) estimated that about 100 million rural households were involved in cotton production worldwide in 2001 (Sarris, 2003). Among the countries in which cotton is an important contributor to rural livelihoods are China, India, and Pakistan - where 45, 10, and 7 million rural households, respectively were engaged in cotton production. In African cotton producing countries, including Nigeria, Benin, Togo, Mali, and Zimbabwe, the number of rural households depending on cotton totalled 6 million. The high dependence on cotton in these countries has important poverty ramifications, especially when large price changes take place.

The cotton market has been subject to considerable support, mainly in the US and to a lesser extent in the EU and China. During 2002 support by major players reached almost US\$6 billion, more than one quarter of the global value of production. This support, which coincided with the lowest nominal cotton prices since 1972, brought numerous reactions. Brazil initiated a WTO consultation process claiming losses due to subsidies by the US (WTO, 2002). Four West African cotton producing countries-Benin, Burkina Faso, Chad, and Mali-pressed for removal of support to the cotton sector through the WTO and asked for financial compensation for cotton producing low income countries to offset the injury caused by support (WTO, 2003).

This paper reviews the recent market and policy developments in the global cotton market with particular emphasis on the implications of the 6th WTO ministerial in Hong Kong. To that end, the next section briefly discusses the structure of the global cotton market while section 3 takes a brief look at the cotton sectors of the WCA countries. Section 4 summarizes the cotton policies of major players while section 5 discusses the implications of such policies. Section 6 analyzes the cotton-related part of the Hong Kong declaration. Key conclusions of this paper are that the export subsidy part of the cotton-related text of the declaration is, to some extent, superfluous, since the only export subsidies applicable, the US Step-2 payments and export credit guarantees, had already been declared illegal by the WTO Panel on the Brazil/US cotton dispute case. Similarly, the market access pillar does not add anything new. With respect to domestic support, considering market conditions and subsidy levels of 1999-2002, the US must undertake an almost 40 percent reduction to comply with the Panel's ruling. To that, if one adds the commitments to be agreed under the general reduction formula to be agreed for domestic support and any additional cuts due to "ambitiousness", a substantial reduction of US cotton subsidies should take place. The ultimate outcome will depend, among other factors, on the 2007 US Farm Bill.

2. The global market structure

About three quarters of cotton is produced by developing countries. During the last four decades cotton production has grown at an annual rate of 1.8 percent to reach 24 million tonnes in 2005 from 10.2 million tonnes in 1960 (for the remainder of this paper, cotton refers to cotton lint). Most of this growth came from China and India, which tripled and doubled their production. Other countries that

significantly increased their shares were Greece, Pakistan, and Turkey (see table 2). Some “new entrants” also contributed to this growth. Australia, for example, which produced only 2 000 tonnes of cotton in 1960, currently averages 0.5 million tonnes. Francophone Africa produced less than 100 000 tonnes in the 1960s and now produces ten times as much. The United States and the Central Asian republics, two of the four dominant cotton producers during the 1960s, have maintained their output levels at about the same levels, effectively halving their market shares. A number of Central American countries that accounted for 250 000 tonnes during the 1970s now produce virtually no cotton at all.

TABLE 2
Global balance of the cotton market (thousand tonnes)

	1960	1970	1980	1990	2000	2002	2004	2005
PRODUCTION								
China	1 372	1 995	2 707	4 508	4 417	4 916	6 320	5 769
US	3 147	2 219	2 422	3 376	3 818	3 747	5 062	4 946
India	1 012	909	1 322	1 989	2 380	2 312	4 080	4 250
Pakistan	306	543	714	1 638	1 816	1 736	2 482	2 309
Central Asia	1 491	2 342	2 661	2 593	1 412	1 509	1 737	1 724
Brazil	425	549	623	717	939	848	1 318	1 207
Franc Zone	63	140	224	562	728	952	1 135	1 071
Turkey	192	400	500	655	880	900	900	805
Australia	2	19	99	433	804	386	624	497
Greece	63	110	115	213	421	375	390	380
World	10 201	11 740	13 831	18 970	19 437	19 437	26 193	24 958
EXPORTS								
US	1 444	848	1 290	1 697	1 472	2 591	3 000	3 215
Central Asia	381	553	876	1 835	1 203	1 172	1 251	1 316
Franc Zone	48	137	185	498	767	833	952	1 092
Australia	0	4	53	329	849	575	420	561
Brazil	152	220	21	167	68	170	360	425
Greece	33	0	13	86	244	275	263	283
India	53	34	140	255	24	17	175	275
Syria	97	134	71	91	212	120	152	150
Egypt	346	304	162	18	79	150	140	125
Tanzania	34	66	36	40	39	41	88	99
World	3 667	3 875	4 414	5 081	5 857	6 618	7 542	8 270

Notes: Bangladesh is included in Pakistan prior to (and including) 1970. Franc Zone includes Benin, Burkina Faso, Cameroon, Central Africa Republic, Chad, Côte d'Ivoire, Guinea, Madagascar, Mali, Niger, Senegal, and Togo. Central Asia includes Uzbekistan, Turkmenistan, Tajikistan, Kazakhstan, Azerbaijan, and Kyrgyzstan.

Source: International Cotton Advisory Committee, Cotton: Review of the World Situation, various issues.

More than one quarter of the area allocated to cotton is currently under genetically modified (GM) varieties, accounting for almost 40 percent of world production. GM cotton in the US—where it was first introduced in 1996—currently accounts for about 80 percent of the area allocated to cotton. Other major GM cotton producers are Argentina (70 percent of cotton area), Australia (80 percent), China (60 percent), Colombia (35 percent), India (10 percent), Mexico (40 percent), and South Africa (90 percent). Countries that are at a trial stage include Brazil, Burkina Faso (the only SSA country), Israel, Pakistan, and Turkey (Cotton Outlook, 2005).

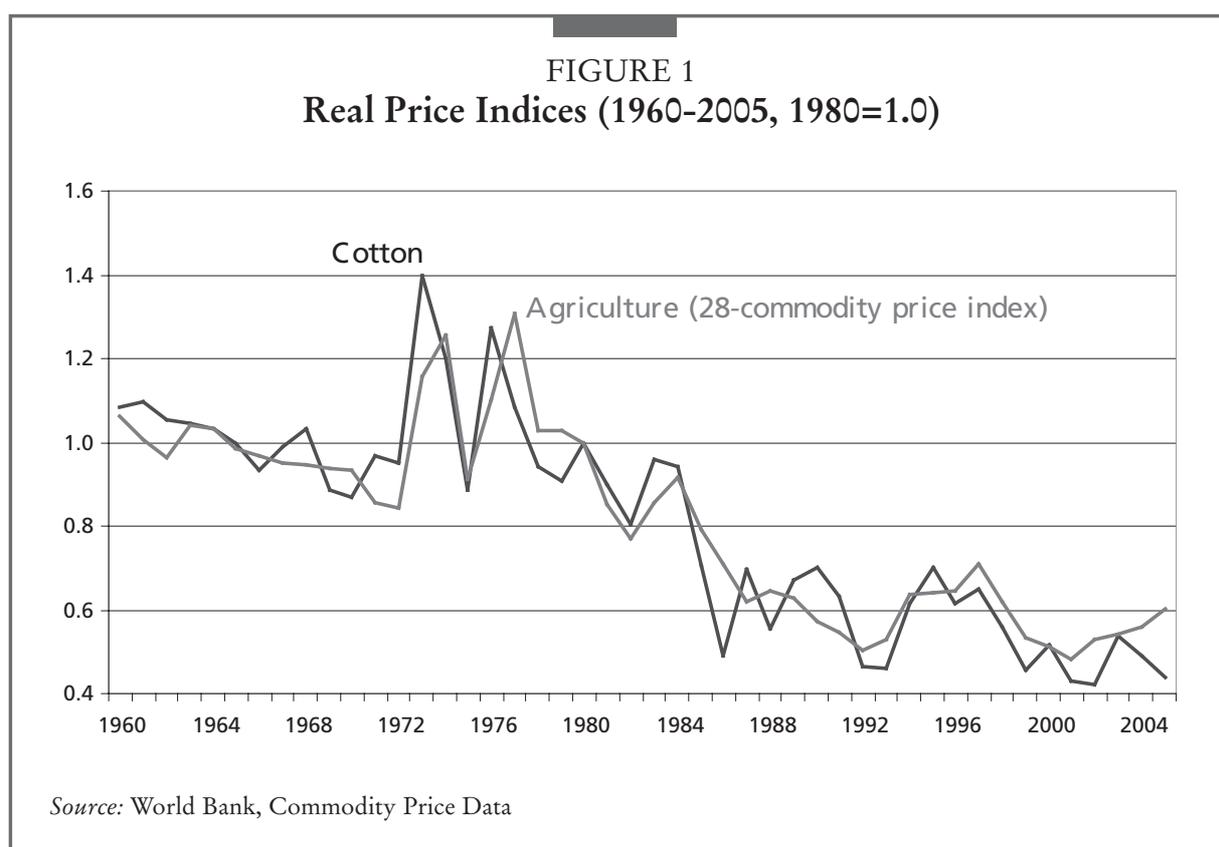
Although the last decade has witnessed the expansion of organic products, cotton has not enjoyed much success. For example, global organic cotton production during 2004/05 was 25 400 tonnes, about 0.1 percent of world cotton production (Chaudhry and Wakelyn, 2006). Organic cotton production was introduced in the US in 1990/91, when 330 tonnes of organic cotton was produced. Following a peak of 7 425 tonnes in 1995/96, the US now produces less than 2 000 tonnes. Currently, the world's two major organic cotton producers are India and Turkey, which together account for two thirds of global organic cotton production.

The consumption pattern of cotton is determined by the size of the textile industries of the dominant cotton consumers. China, the leading textile producer, currently consumes more than one-third of global cotton output. Other major textile producers are India, Pakistan, Turkey, and the United States, which together with China account for more than three-quarters of global cotton consumption. Several East Asian countries have emerged as important cotton consumers. For example, Indonesia, the Republic of Korea, Taiwan, and Thailand, which together consumed 130 000 tonnes in 1960 (1.2 percent of world consumption), absorbed more than 1.5 million tonnes in 2005 (6.5 percent of world consumption).

Between 1960 and 2005, global cotton demand has grown at the same rate as population (about 1.8 percent per annum) implying that per capita cotton consumption has remained almost stagnant at about 3.5 kilograms. By contrast, consumption of chemical fibres, which compete with cotton, has increased consistently over the last 50 years by 2.2 percent per annum, causing cotton's share in total fibre consumption to decline from 60 percent in 1960 to 40 percent in 2002.¹ One-third of cotton production is traded internationally. The three dominant exporters—the United States, Central Asia, and Francophone Africa—account for more than two-thirds of global trade exports. Currently, the 10 largest importers account for more than 70 percent of global cotton trade. Three major producers—China, Turkey and Pakistan—also import cotton to supply their textile industries. The four East Asian textile producers—Indonesia, Thailand, Taiwan, and the Republic of Korea—accounted for 22 percent of world cotton imports in 2002, compared to just 3 percent in 1960. To summarize, there has been an increased concentration of cotton use in (and hence trade flows to) Asian countries, not surprisingly since this is the region with the highest concentration of chemical fibre and garment industries.

¹ More detailed statistics along with methods of deriving them can be found in Baffes (2004).

Real cotton prices have declined over the last two centuries, although with temporary spikes. The reasons for the long-term decline are similar to those characterizing most primary commodities: on the supply side reduced production costs due to technological improvements and on the demand side stagnant per capita consumption and competition from synthetic products. Between 1960–64 and 1999–2003 real cotton prices fell by 55 percent, remarkably similar to the 50 percent decline in the broad agriculture price index of 28 commodities (figure 1). Reductions in the costs of production have been associated primarily with yields increases from 300 kilograms per hectare in the early 1960s to 700 kilograms per hectare in 2005 (a 1.8 percent annual increase).² The phenomenal growth in yield has been aided primarily by the introduction of improved cotton varieties, expansion of irrigation and use of chemicals and fertilizers. Additional diffusion of GM technology along with precision farming introduced during the 1990s, are expected to further reduce the costs of production. Technological improvements have also taken place in the textile industry, so that the same quality of fabric can now be produced with lower quality cotton, a trend that has taken place in many other industries whose main input is a primary commodity.



² It is worth elaborating on one interesting statistic. During the last 50 years, cotton production (and consumption), yields, and population have grown at approximately the same annual rate: 1.8 percent, which implies that, roughly speaking, the cotton-related clothing needs of the earth's increasing population are met by yield increases alone.

In addition to their declining pattern, cotton prices have been volatile, a phenomenon very common among most primary commodities (Deaton 1999, Cashin and McDermott, 2001). The degree of volatility, however, has changed considerably during the last 40 years. Various measures of price volatility calculated by Baffes (2005a) consistently show that cotton prices during 1985-2002 were at least twice as volatile compared to 1960-72, but half as volatile compared to 1973-84. This conclusion is similar to findings by Valdès and Foster (2003) who looked at price variability of corn, rice, sugar, and wheat as well as findings by Sarris (2000) who examined intra- and inter-year price variability of wheat and maize. Real cotton prices during these three periods have experienced an annual decline of 1.5, 3.2, and 1.5 percent respectively. Therefore, not only prices have been twice as volatile in 1985-2002 compared to 1973-84, but also they have declined twice as fast. In a more recent study, Pan and Valderrama (2005) compared the price variability of 22 primary commodities and concluded that during the past four years, 17 commodities exhibited more price variability than cotton. Similarly, Gilbert (2006) ranked 21 commodities according to their volatility and found cotton to be somewhere in the middle. Therefore, from a global market perspective, the cotton market is not that different from other agricultural commodities.

3. Cotton in Francophone Africa

The cotton industry in Francophone Africa was pioneered by the French state-owned Compagnie Française de Développement des Fibres Textiles (CFDT), along with various national cotton companies. These companies had a legal monopsony in cotton, and most had a monopoly on primary processing, marketing, and supplying inputs. They would announce a base buying price before planting, sometimes supplementing that price with a second payment (payable the following season) based on the company's financial health. Cotton growing expanded rapidly, from 225 000 tonnes in 1980 to one million tonnes two decades later (see Table 3). Growers used inputs well adapted to local conditions to produce high yields of cotton of consistent quality (Lele *et al.* 1989).

TABLE 3

Cotton production in WCA countries (thousand tonnes)

	1970	1980	1990	2000	2002	2004	2005
Burkina Faso	8	23	77	116	170	263	275
Mali	20	41	115	102	182	175	250
Benin	14	6	59	141	143	175	140
Côte d'Ivoire	12	56	116	125	172	145	119
Cameroon	14	32	47	79	95	124	112
Chad	35	31	60	58	77	80	72
Togo	2	10	41	56	77	75	70
Senegal	-	7	18	9	16	18	20
Franc Zone	140	224	562	728	954	1 135	1 071
WORLD	11 740	13 831	18 970	19 437	19 294	26 204	24 110
% of World	1.2	1.6	3.0	3.7	4.9	4.3	4.4

Notes: The total for Franc Zone includes small quantities of cotton produced by Central Africa Republic, Guinea, Madagascar, and Niger.

Source: International Cotton Advisory Committee, *Cotton: Review of the World Situation*, various issues.

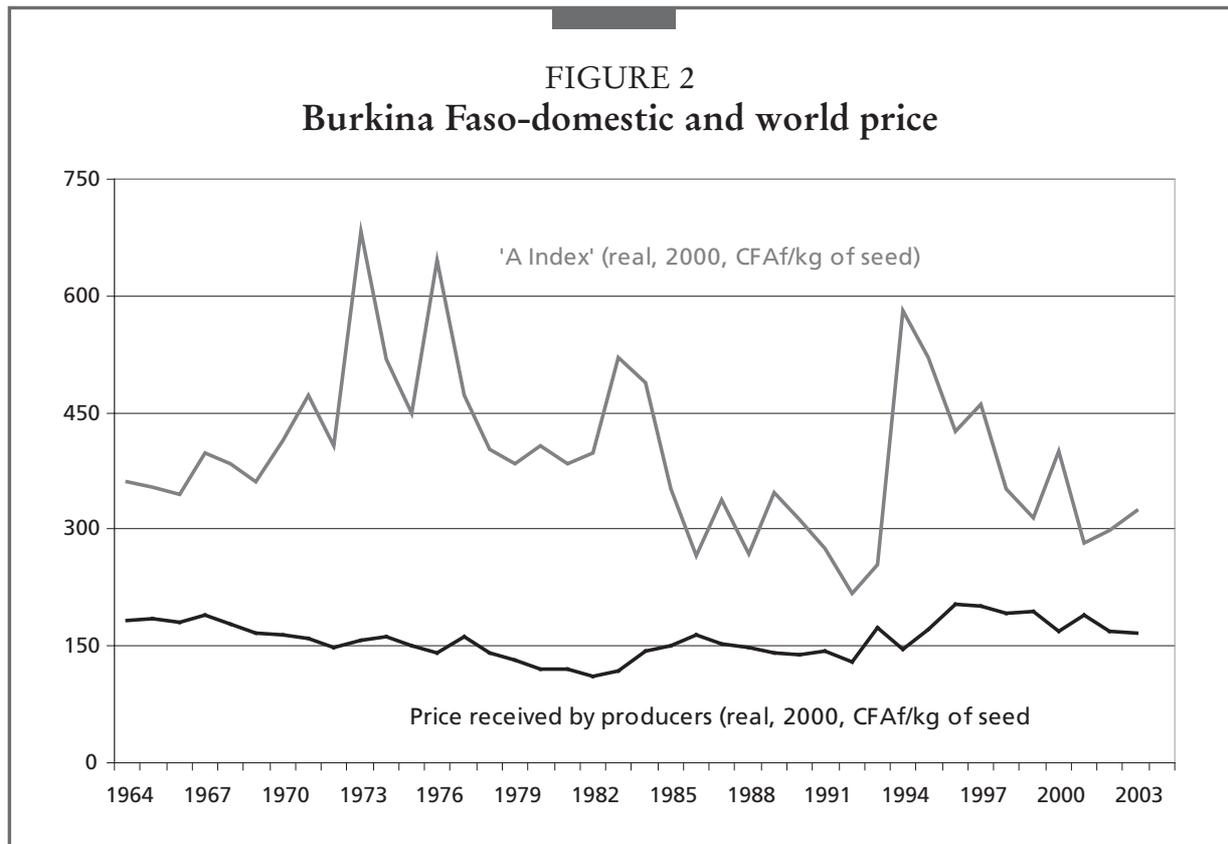
Despite apparent successes, the system exhibited several weaknesses. Prices to producers were very low, often less than 50 percent of border prices (see Table 4). Furthermore, the correlation between domestic and world prices is practically non-existent, indicating that in addition to the high implicit taxation, there was no transmission of world price signals to the domestic markets as shown by a number of regression models (not reported here). As an example, Figure 2 depicts the domestic and world price of cotton for Burkina Faso.

TABLE 4

Prices received by WCA cotton growers (Percent of the 'A Index')

	1980-84	1985-89	1990-94	1995-99	2000-04
Burkina Faso	28	49	50	49	58
Mali	31	46	49	45	61
Benin	35	53	51	54	60
Chad	30	50	46	49	48
Côte d'Ivoire	38	58	53	52	57
Cameroon	43	68	53	47	53
Togo	30	51	53	52	55
Senegal	29	50	55	49	54
Average	33	53	51	50	56

Notes: The share is calculated as the ratio of the price received by cotton growers over the 'A Index' converted into domestic currency by using the IMF (International Financial Statistics) annual average CFAf/\$ exchange rate and adjusted to cotton seed equivalent by using 0.42 ginning ratio (except Mali where the ginning ratio was the actual one). The resulting figures were averaged over the periods reported in this table; the average reported in the last row is the arithmetic average over the 8 countries.



The absence of competition in domestic markets and the involvement of the state cotton companies in the provision of services allowed costly operating inefficiencies to develop, absorbing a large share of export prices. Uniform pricing of cotton and farm inputs across all areas of a country meant that transport costs were not properly taken into account in decisions about where to grow cotton. Finally, the system did not respond flexibly to changes in world market conditions. For example, in the mid-1980s and early 1990s low world prices and an overvalued currency led to the de facto bankruptcy of a number of state cotton companies. The companies had to be supported by injections of funds from national governments and the donor community.

During the past several years, in conjunction with the Agence Française de Développement (AFD), the donor community has held intensive discussions with the governments and other stakeholders in West and Central Africa, including state cotton enterprises, CFDT, and input suppliers (Baffes, 2000). Some recent reforms in Francophone Africa point to the future direction of institutional changes in the region's cotton sector (Badiane *et al.* 2002; Goreux, 2004). In Burkina Faso the reform process has advanced relatively well. Producers acquired one third of SOFITEX's (the cotton company) shares in 1999; more recently a private company acquired another third, while the remaining third remains with the state. In Côte d'Ivoire, the state cotton company was split into three private companies of comparable size in 1998; following a two-year transition period, the two new private companies began operating independently. However, the direction of the reform process in Côte d'Ivoire is less clear due to the civil conflict.

The cotton sector in Benin is currently passing through a transitional phase to liberalization. In the 1990s, the government licensed several private ginners who now make up about 48 percent of the country's ginning capacity. SONAPRA, the cotton parastatal owns the remaining 52 percent capacity. While the system has proven to be workable (with the highest cotton production in Benin's history, 415 000 tonnes of seed cotton, obtained when the system was in its second year), serious aberrations have come up over the last two years. Some actors have not been respecting the rules as laid down when the producer organizations were created. These aberrations threaten the success of the reform programme if no action is taken.

Some noticeable efforts are being made to reform the cotton sector in Mali, following the near-bankruptcy of the state cotton company a few years ago. The government, however, has stepped back from its commitment to implement the sector reform programme and, as it currently appears, not much progress is expected to take place until 2007.

Progress on cotton reforms in Chad has been somewhat limited by the fiscal difficulties of Cotontchad, the publicly-owned company that handles all cotton-related activities, and the lack of ownership of reform by the government. Although the government of Chad had decided to disengage from the cotton sector in 1999, so far it has failed to take the necessary steps to move in this direction. Furthermore, the decision by the government of Chad to breach a loan agreement with the World Bank-which, in turn, has temporarily suspended all loan activities to Chad-adds further uncertainty to direction of the cotton sector.

4. Cotton policies by major players

Cotton has been subject to various interventions that mostly take the form of domestic support (taxpayer-financed support). In contrast, two thirds of the support given to OECD commodity producers takes the form of border measures (i.e. consumer-financed support). During 2004/05, government assistance to US cotton producers reached US\$4.2 billion, China's totaled US\$1.1 billion, and the EU provided almost US\$1 billion (Table 5).³

TABLE 5
Estimated assistance to cotton growers (million US\$)

	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
US	1 132	1 882	3 809	1 868	3 307	2 889	1 372	4 245
China	2 013	2 648	1 534	1 900	1 217	800	1 303	1 145
EU	870	864	795	706	980	957	994	1 066

Source: International Cotton Advisory Committee; US Department of Agriculture; European Union.

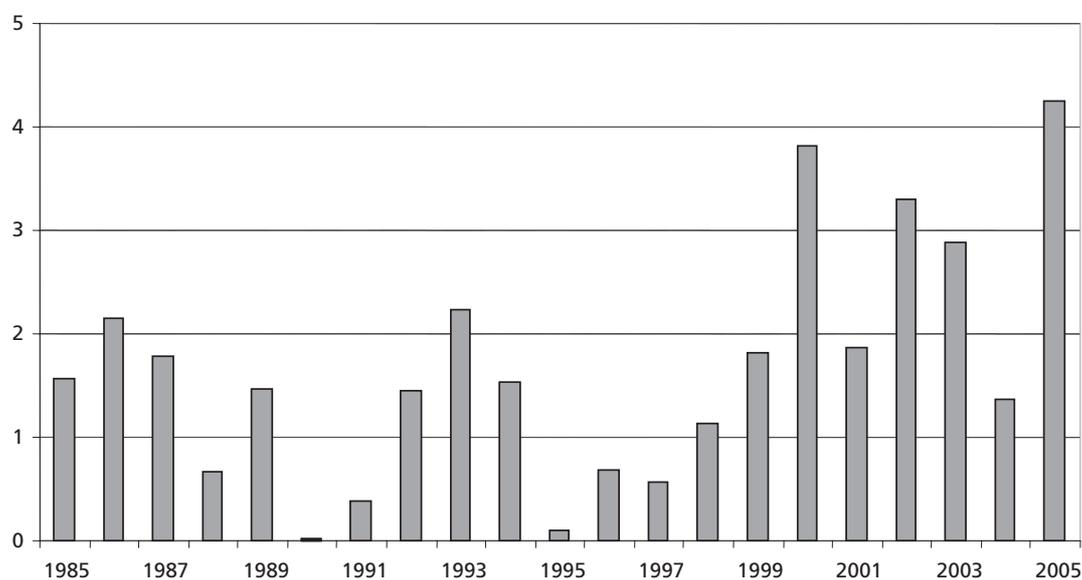
³ A commonly used source of data on agricultural support is OECD's annual monitoring report of agricultural policies; however, the OECD monitor does not report government assistance to the cotton sectors as a separate entity. The data on cotton subsidies reported in this paper (and elsewhere) originate either from ICAC or from country sources.

4.1 United States

Cotton subsidies in the United States have a long history dating from the commodity programs of the Great Depression. The specific provisions of these programmes, including the one for cotton, change with each “Farm Bill” passed by the Congress (Farm Bills are introduced approximately every 4 to 5 years), but their chief objective has remained largely unchanged: to transfer income from taxpayers (and to some extent consumers) to producers. The main channels of support to US cotton producers are price-based payments, decoupled payments, crop insurance, and countercyclical payments. US cotton users and exporters also receive some support.

- *Price-based payments* (also known as loan rate payments) are designed to compensate cotton growers for the difference between the market price and the target price when the latter exceeds the former.
- *Decoupled payments* (renamed direct payments in the 2002 Farm Bill) are predetermined annual payments calculated on the basis of area historically used for cotton production. Direct payments were introduced with the 1996 Farm Bill to compensate producers for “losses” following the elimination of deficiency payments.
- *Crop insurance* is subsidy to weather-related crop failures.
- *Countercyclical payments* were introduced in 1998 (as “emergency payments”) to compensate producers for income “lost” due to low commodity prices. They were made permanent under the 2002 Farm Bill.
- *Step2- payments* (also referred to as export subsidies) made to cotton exporters and domestic end-users when domestic prices exceed world prices, so that U.S. exporters maintain their competitiveness.
- *Export credit guarantees* which insure importers of US cotton against potential defaults.

FIGURE 3
Assistance to US cotton growers (FY85-05), \$ billion



Source: United States Department of Agriculture.

In addition to these transfers there are other publicly funded programme - among them research and extension services and subsidized irrigation. The US cotton programme, which has been subject to review by the US General Accounting Office twice (1990 and 1995), was (and still is) very complex and expensive. Perhaps the best summary of the programme's complexity and costs was given by the 1995 GAO audit report (p. 3):

The cotton program has evolved over the past 60 years into a costly, complex maze of domestic and international price supports that benefit producers at great cost to the government and society. From 1986 through 1993, the cotton program's costs totaled US\$12 billion, an average of US\$1.5 billion a year. Moreover, the program is very complex, with dozens of key factors that interact and counteract to determine price, acreage, and payments and to restrict imports. The severe economic conditions and many of the motivations that led to the cotton program in the 1930s no longer exist ... The [U.S.] Congress could, for example, reduce or phase out payments over a number of years, perhaps over the life of the next [1996] farm bill.

4.2 European Union

During the 1960s and 1970s Greece and Spain together were producing 130 000 tonnes of cotton. Following their accession to the European Union, cotton growers in these two countries became eligible for Common Agricultural Policy funds causing cotton production to grow by an annual average of 7.3 percent, to exceed 400 000 tonnes during the 1990s. Support to cotton producers was based on the difference between the market price and a support price. The policy also influenced the quantity produced by specifying a maximum for which assistance will be provided-the equivalent of 255 000 tonnes for Greece and 82 000 tonnes for Spain.

During the past 10 years, the budgetary expenditure on the cotton sector ranged between US\$0.7 and US\$1.0 billion, implying that, on average, EU cotton producers received more than twice the world price of cotton. EU cotton producers receive support even in periods of high prices, since the budgetary allocation to the cotton sector must be disbursed. For example, EU cotton producers received approximately the same level of support in 1995 and 2002, although cotton prices in 1995 were twice the level of 2002.

The EU has implemented a number of adjustments to its cotton programme including the 1999 reform which effectively imposed a cap on the budgetary expenditures allocated to the industry (European Commission, 2000). A major reinstrumentation of the EU cotton programme was undertaken under the Luxembourg Council's decision of April 22, 2004, which was based on the September 2003 proposal. Under the new programme, an estimated €700 million will fund two support measures, with 65 percent of the support taking the form of a single decoupled payment and the remaining 35 percent taking the form of an area payment (European Commission, 2003). Eligibility for the decoupled payment is limited to growers who produced cotton during the 3-year period 1999-2001. The area payment will be given for a maximum area of 380 000 hectares in Greece, 85 000 hectares in Spain, and 360 hectares in Portugal and will be proportionately reduced if claims exceed the maximum area allocated to each country. To receive decoupled payments, cotton growers must keep the land in good agricultural use. To receive area payments they must plant (not necessarily produce) cotton. Karagiannis (2004) estimated that the recent decoupling is likely to reduce EU cotton production by 10 to 25 percent (depending on the elasticity assumption.)

4.3 China

China's cotton sector became fully government controlled in 1953 following the introduction of the first five-year plan (Zhong and Fang, 2003). The central planning policies adopted then were similar to those of the Soviet Union and remained in place for the next 35 years. The central government set production targets and procurement quotas (all primary processing facilities were owned by cooperatives). Some changes took place in 1978 when the government substantially raised the price of cotton and supplied more fertilizer. Market-oriented reforms were introduced in 1980 when the communal production system was partially abolished and individual farmers were given land use rights. Cotton production increased considerably in response to both the 1978 and the 1980 policy changes.

Currently, China intervenes in its cotton sector through price support measures (a reference price typically set above world prices), subsidies to transportation and marketing, and public stockholding. China also imposes a one percent tariff on cotton imports up to 0.894 million tonnes while the bound tariff outside the TRQ is 40 percent. (for a detailed discussion of China's TRQ system see Gruère and Guitchounts (2005). In reality, however, China applied the same one percent tariff on all cotton imports exceeding the TRQ during 2004 (Ke 2006). The International Cotton Advisory Committee estimates that support to the cotton sector from 1997 to

2004 ranged from US\$0.8 billion to US\$2.0 billion. Huang, Rozelle, and Chang (2004) estimate that in 2001 the nominal rate of protection for cotton averaged 17 percent.⁴

In 1999 the government announced reform measures that included creating a cotton exchange to facilitate domestic trading, reducing prices paid to producers, and lowering stocks. In September 2001 further reforms were announced. First, the internal cotton market was open to cross-regional trade. Second, various enterprises were allowed to buy cotton directly from producers with the approval of the provincial government. Third, primary processing operations were separated from marketing cooperatives, in effect making them commercial enterprises.

To some extent the reform efforts have achieved their stated objectives. China currently operates a cotton exchange that trades future contracts (Shuhua, 2003). Its publicly held stocks declined from 3.5 million tonnes in the two-year period 1998–99 to 1.25 million tonnes in 2004–05. According to ICAC figures, estimated support to the cotton sector declined from US\$2.1 billion to US\$1.2 billion between the two periods—cotton prices during these two periods averaged US\$1.31 and US\$1.29 a kilogram.) Furthermore, as mentioned earlier, the import quota has been extended when necessary in order to meet domestic demand requirements.

5. Implications of cotton policies

Numerous models have evaluated the impact of cotton policies on the cotton market with considerable variation in the results. The International Cotton Advisory Committee, for example, concluded that in the absence of direct subsidies, average cotton prices during the 2000/01 season would have been 30 percent higher than what they actually were (ICAC 2002). The study, which was based on a short run partial equilibrium model, did acknowledge that while removal of subsidies would result in lower production in the countries which receive them (and hence higher prices in the short term), such impact would be partially offset by shifting production to non-subsidizing countries in the medium to longer terms. Goreux (2004), who extended the ICAC model by replacing the base year with 1998–2002 average subsidies, estimated that in the absence of support the world price of cotton would have been between 3 and 13 percent higher in these five years, depending on the value of demand and supply elasticities. Gilson *et al.* (2004) using subsidy data for 1999 and a model similar to that of Goreux (2004), estimated that removal of subsidies by the US, EU, and China would increase the world price of cotton by 18 percent.

⁴ However, it should be noted that not all researchers and analysts agree that China subsidizes its cotton. Fang and Beghin (2003), for example, estimated that between 1997 and 2000 the nominal protection coefficient for cotton averaged 0.80, implying that China taxes its cotton sector. More recently, Shui (2005, p. 2) wrote that “... results suggested clearly that after 1999 all agents along the cotton supply chain [in China] received no financial assistance from the government but rather paid taxes and fees to the government.” The different views on the nature and degree of intervention reflect the complexities of China’s agricultural policies as well as the unreliability of the data.

Reeves *et al.* (2001) used a Computable General Equilibrium model and found that removal of production and export subsidies by the US and the EU will induce a 20 percent reduction in US cotton production, a 50 percent reduction in US cotton exports, with much higher figures for the EU. They also estimated that if support was not in place, world cotton prices would be 10.7 percent higher compared to their 2001/02 levels. Simulations from a model developed by the Food and Agriculture Policy Research Institute (FAPRI, 2002) found that under global liberalization (i.e., removal of trade barriers and domestic support of all commodity sectors including cotton), the world cotton price would increase over the baseline scenario by an average of 12.7 percent over a 10-year period. Based largely on FAPRI's data and assumptions, Sumner (2003) estimated that had all US cotton subsidies not been in place during the marketing years 1999-2002, the world price of cotton would have been almost 13 percent higher (see Figure 3 for nominal cotton prices during the past two decades). Anderson and Valenzuela (2006) also estimated that, in the absence of all cotton subsidies world prices would have been 12.9 percent higher.

Based on a partial equilibrium model, Tokarick (2003) finds that multilateral trade liberalization in all agricultural markets (including cotton) would induce a 2.8 percent increase in the world price of cotton and a US\$95 million annual increase in welfare. Poonyth *et al.* (2004) and others estimate that removal of cotton subsidies—as reported in the WTO notifications—would increase the world price of cotton between 3.1 percent and 4.8 percent, depending on assumptions about demand and supply elasticities. In contrast, Shepherd (2004) and Pan *et al.* (2004) and others find a negligible impact of subsidies on the world price of cotton.

The highly divergent results for these models reflect in part the structure of the models and the assumed elasticities. Several other factors also influence the results. The reasons behind the highly divergent results of cotton models were the subject of an FAO experts' consultation (FAO, 2004). First, there are differences in the level and structure of support. For example, some models incorporate China's support to its cotton sector and model its removal; others do not. Second, there are differences in the underlying scenarios. Some models assume liberalization in all commodity markets while others assume liberalization only in the cotton sector. Third, the models use different base years and hence different levels of subsidies. For example, support in the US was three times as high in 1999 as in 1997. Setting all the differences aside, however a simple average over all models shows that world cotton prices would have been about 10 percent higher without support. Applying a simple average to the Francophone Africa cotton producing countries shows that these countries lost approximately US\$150 million annually in export earnings due to the subsidies.

Not all models report results on the gainers and losers from the removal of cotton subsidies. In that respect the most complete analysis is offered by the FAPRI model, which finds the largest gains in trade for Africa, with an expected average increase in exports of 12.6 percent. Exports increase by 6.0 percent for Uzbekistan and by 2.7 percent for Australia, while exports from the United States decline by 3.5 percent. The most dramatic impact is on the production side. The European Union's cotton

output would decline by more than 70 percent—not a complete surprise considering that the European Union’s cotton output during the late 1990s was three times higher than it was before Greece and Spain joined.

Two important WTO-related developments have taken place in response to the high cotton subsidies: The Brazil *vs.* US cotton case (case DS 267) and the request by four WCA cotton producing countries—the so-called cotton-4—that cotton subsidies should be removed and until such removal takes place, the cotton-4 should be compensated accordingly. The remaining of this section elaborates on these developments.

5.1 Brazil vs the United States

On September 27, 2002, Brazil requested consultation with the United States regarding U.S. subsidies to cotton producers. On March 18, 2003, the Dispute Settlement Body of the WTO established a panel to examine the issues, and on April 26, 2004, the WTO issued an interim ruling in favor of Brazil. The final ruling (issued on September 8, 2004) concluded that “the United States is under the obligation to take appropriate steps to remove the adverse effects or ... withdraw the subsidy” (WTO, 2004a).

Brazil argued that U.S. cotton subsidies were inconsistent with provisions of the Agreement on Subsidies and Countervailing Measures, the Agreement on Agriculture, and the General Agreement on Tariffs and Trade 1994 and were causing “serious prejudice to the interests of Brazil” because of a “significant price depression and price suppression” (WTO, 2002). Brazil’s main claims along with the Panels’ findings can be summarized as follows (Schnepf, 2004):

- The United States provided domestic support to its cotton sector during 1999–2002 in excess of the support decided during the 1992 marketing year under the peace clause (article 13) of the Agreement on Agriculture. The Panel found that indeed, the US exceeded WTO commitments during the 1992 marketing year.
- Export subsidies (the so-called step-2 payments) violated the Agreement on Agriculture. The Panel considered the domestic part of the step-2 separate from its export component and found that the former is prohibited import substitution subsidy while the latter prohibited export subsidy.
- The export credit guarantees function as export subsidies. The Panel found that indeed, they act as subsidies since the financial benefits do not cover the cost of the programme.
- The direct payments should have been placed under the WTO’s *Amber Box* category (disciplined support) instead of the *Green Box* category (undisciplined support). The Panel found that these payments should have been placed in the *Amber Box* because of the prohibition on planting fruits and vegetables.
- Subsidies have caused “serious prejudice.” The Panel found that because the domestic support measures are contingent on market prices have caused serious prejudice in terms market price suppression during 1999–2002.

Using the econometric model developed by FAPRI, Brazil claimed that the U.S. subsidies induced a 41 percent increase in US cotton exports, reducing the world price of cotton by 12.6 percent and causing an estimated injury to Brazil of more than US\$600 million for 2001 alone. The United States appealed the case but the original ruling remained by and large intact. In February 2006, the US announced that it would eliminate the export subsidies. However, it remains unclear what, if any, steps it will take regarding containing the overall level of subsidies and declaring direct payments in the Amber Box.

The ruling was issued against the background of the ongoing critical agricultural negotiations, the expiration of the peace clause, the more assertive stance taken by the G-20, and the West African sectoral initiative on cotton. The ruling has numerous implications for the WTO and the Doha Development Agenda as well as for developing countries and international institutions (Baffes 2005b):

- As the first case of a developing country challenging an OECD farm subsidy programme in the WTO, it may set a precedent. If further cases follow, there may be a shift in the focus of WTO activities from negotiation to litigation.
- The way to avoid a significant increase in such disputes is to make significant progress in the Doha Development Agenda. Hence, the ruling may help agencies such as the EU Commission and the US Trade Representative's Office confront domestic protectionist lobbies.
- The ruling strengthens the claims of many developing countries that OECD subsidies distort global commodity markets and depress world prices.
- This dispute spotlights the importance of models analyzing the effects of subsidies on world prices and export shares, making model developers more accountable for the analysis. The ruling reveals the importance and weaknesses of current measures of support and the differences in WTO, US, and EU definitions of "decoupled support."

5.2 West African cotton sector initiative

On May 16, 2003, four West African cotton producing countries (Benin, Burkina Faso, Chad, and Mali) submitted a joint proposal to the WTO demanding removal of support to the cotton sector by the United States, China, and the European Union and compensation for damages until full removal of support. The West African countries were aided in this move, often referred to as the "cotton initiative," by IDEAS, a Geneva-based NGO funded by the Swiss government.

The four countries argued that subsidies cost them an estimated US\$250 million in export earnings during the 2001/02 marketing season-US\$1 billion when the indirect effects of these subsidies were considered (cotton prices averaged US\$0.82 a kilogram in October 2001, the lowest since November 1972 with the exception of August 1986). Because the standard WTO remedies (compensation through supplementary concessions or imposition of countervailing duties) were not feasible, the proposal called for "transitional...financial compensation...to offset the injury caused by support of production and export." The compensation would be proportional to the subsidies, declining and ending as the subsidies were reduced

and abolished. The proposal argued that the direct and indirect effects of support for cotton production should be taken into account when determining compensation and that “the unit amount and the total amount of subsidies should be taken into account when dividing the compensation among countries which subsidize production” (WTO, 2003).

The cotton initiative received considerable attention during the Cancùn Ministerial. The Director General of WTO urged ministers to consider the proposal “seriously.” While numerous countries were sympathetic, there were doubts whether it would benefit the Doha Development Agenda to treat one commodity differently from others. Furthermore, it soon became apparent that direct compensation was unlikely. The inability to deal effectively with the initiative was one reason for the failure to reach agreement in Cancun.

It was finally determined that while the trade part of the initiative (subsidies) fell within WTO’s mandate, the development part (compensation) should be handled by the multilateral institutions in coordination with the concerned governments. To that end, at a WTO-sponsored conference on March 23–24, 2004, in Cotonou, Benin, both bilateral and multilateral donors reaffirmed their willingness to deal with the development part of the cotton initiative (see Table 6 for a detailed timetable of all events related to the cotton initiative).

TABLE 6
Timeline of the “Initiative in Favour of Cotton”

DATE	EVENT	COMMENTS/OUTCOME
July 8-9, 2002 ¹	The ICAC and the World Bank sponsor the conference “Cotton and Global Trade Negotiations” in Washington, D.C.	Cotton policy-related issues were debated by a highly diverse group of participants including representatives from cotton producing countries (both government officials and private sector), civil society organizations, embassies, and international organizations. It is believed that this conference raised awareness regarding the global cotton trade distortions, in turn triggering the so-called “cotton problem”.
September 27, 2002 ²	OXFAM publishes the report “Cultivating Poverty: The Impact of US Cotton Subsidies”	The report was influential because it contrasted poor West African cotton producers with their counterparts in the US. It noted that “US cotton farmers receive more in subsidies than the entire GDP of Burkina Faso ... and ... three times more in subsidies than the entire USAID budget for Africa’s 500 million people.”
May 16, 2003 ³	Benin, Burkina Faso, Chad, and Mali (the ‘cotton-4’) launch the “Initiative in Favour of Cotton”	The initiative demanded that countries discontinue subsidizing their cotton sectors and until subsidies are removed, nonsubsidizing countries should be compensated accordingly. The initiative was aided by the Geneva-based NGO IDEAS.
September 10-13, 2003 ⁴	The cotton initiative becomes an intensely debated and highly controversial topic during the 5th WTO Ministerial in Cancun	The initiative was facilitated by the director general of the WTO who “urged ministers to consider the proposal seriously.” Many countries were sympathetic to the initiative. By some accounts, the inability to make progress on the initiative was partially responsible for the failure to reach agreement in Cancun.
March 23-24, 2004 ⁵	The WTO sponsors the “African Regional Workshop on Cotton” in Cotonou, Benin	Because of numerous practical difficulties it was decided that the initiative would be dealt with at two levels: development (compensation) and trade (subsidies). The development component was the subject of the Cotonou workshop.
May 31-June 1, 2004 ⁶	FAO holds cotton expert consultations in Rome	Key experts from international organizations and the academic community discussed the chief reasons behind the diverse conclusions reached by models that examined the effects of subsidies on the global cotton market.
July 5-6, 2004 ⁷	The European Union sponsors the EU-Africa Cotton Forum in Paris	The forum endorsed the EU-Africa Cotton Partnership within the trade and development perspective.

DATE	EVENT	COMMENTS/OUTCOME
August 1, 2004 ⁸	The WTO General Council reaches a decision on the frameworks of trade negotiations	According to the decision, all trade-related aspects of cotton will be dealt within the context of agricultural negotiations. The decision also emphasized that the theme should be addressed “ambitiously, expeditiously, and specifically.”
November 19, 2004 ⁹	The WTO establishes the Sub-Committee on Cotton	The Sub-Committee facilitates exchange of information on “how development assistance could best be used to help recipient countries adjust while also working on reducing trade distortions through the agriculture negotiations.” Since then, the sub-Committee has been meeting on a regular basis.
January 28, 2005 ¹⁰	The Development Assistance Committee (DAC) of OECD convenes a Briefing on cotton in Paris	DAC’s briefing, “The Development Dimensions of African Cotton,” was a follow up of the Cotonou Workshop; it assessed the progress on the development assistance aspects of the cotton initiative. Cotton-4 representatives tabled a specific proposal demanding direct compensation. The proposal did not find support by the donor community.
May 18, 2005 ¹¹	The IMF and the government of Benin cosponsor a cotton conference in Cotonou	IMF’s managing director proposed a four-pronged approach which would include, preserving macroeconomic stability, enhancing cotton production efficiency, eliminating developed countries’ cotton subsidies, and protecting the poor during adjustment.
December 13-18, 2005 ¹²	WTO holds its 6th Ministerial meeting in Hong Kong	It was agreed that export subsidies will be eliminated by developed countries in 2006 and developed countries will give duty and quota free access for cotton exports from LDCs. Moreover, “trade distorting domestic subsidies for cotton production should be reduced more ambitiously than under whatever general formula ...”

Source: Compiled by the author from the following sources:

¹ www.icac.org/meetings/cgtn_conf/documents/english.html

² www.oxfam.org/eng/policy_pape.htm

³ www.wto.org/english/tratop_e/agric_e/negs_bkgrnd20_cotton_e.htm#origins

⁴ www.wto.org/english/tratop_e/agric_e/negs_bkgrnd20_cotton_e.htm#origins

⁵ www.wto.org/english/news_e/spsp_e/spsp24_e.htm

⁶ www.fao.org/es/esc/en/20953/22215/highlight_47647en.html

⁷ www.cotton-forum.org/indexflash.html

⁸ www.wto.org/english/tratop_e/agric_e/negs_bkgrnd20_cotton_e.htm#origins

⁹ www.wto.org/english/tratop_e/agric_e/cotton_subcommittee_e.htm

¹⁰ www.oecd.org/document/26/0,2340,en_2649_37413_34352154_1_1_1_37413,00.html

¹¹ www.imf.org/external/np/sec/pr/2005/pr05121.htm

¹² www.wto.org/english/thewto_e/minist_e/min05_e/final_text_e.htm.

On August 1, 2004, the WTO General Council reached a decision to proceed with multilateral trade negotiations, emphasizing that the theme should be addressed “ambitiously, expeditiously, and specifically” (WTO, 2004b). The Director General was instructed to consult with international organizations, including the Bretton Woods institutions, the Food and Agriculture Organization, and the International Trade Centre, to direct existing programmes and any additional resources toward development of the economies where cotton is of vital importance. Progress on the “cotton initiative” is being monitored regularly at WTO meetings following the establishment of the sub-committee on cotton (WTO, 2004c).

6. Cotton and the 6th WTO Ministerial in Hong Kong

Cotton received considerable attention during the 6th WTO Ministerial in Hong Kong. Widespread fears that the cotton initiative may contribute to another Cancun-type collapse did not materialize. Consistent with the convention established at the WTO-sponsored Cotonou workshop, the text deals separately with the issue of trade (i.e. subsidies) in paragraph 11 and development (compensation) in paragraph 12 (see Appendix A for cotton text of the declaration). The next two sections elaborate on these two issues.

6.1 Trade (subsidies)

On export subsidies, the declaration says that “all forms of export subsidies for cotton will be eliminated by developed countries in 2006”. Since the EU does not give any export subsidies, the text is relevant only to the US. As discussed earlier, the two types of exports subsidies given by the US are the export credit guarantees and the Step-2 payment, both of which were found illegal export subsidies by the WTO’s Panel. In order to comply with the Panel’s ruling, in February 2006 the US announced that it will eliminate export subsidies. Hence, the declaration on export subsidies adds no new commitment. Note that export subsidies represented about 12 percent of total cotton support during 1995-2002.

On market access, the declaration indicates that “developed countries will give duty and quota free access for cotton exports from least-developed countries from the commencement of the implementation period.” Again, this text is relevant only to the US since the EU does not impose any border restriction on cotton imports—it would have been relevant to China if it were considered a developed country by the WTO. Although the US applies TRQs on cotton imports, they are largely irrelevant since the US is (and has been always) a net cotton exporter. Therefore, any increase in US cotton imports due to the removal of TRQs is likely to cause minor trade diversion rather than altering the landscape of existing cotton trade patterns. For example, some US textiles may use imported instead of domestically produced cotton while the US cotton they would have used will be exported. Again, as was the case with export subsidies, the market access part of the declaration is unlikely to make any difference in the cotton market.

Finally, on domestic support, the declaration indicates that "... trade distorting subsidies for cotton production should be reduced more ambitiously than under whatever general formula is agreed and that it should be implemented over a shorter period of time than generally applicable." The EU has already reformed its cotton programme - its three key elements are: (i) 65 percent/35 percent decoupled/area payments; (ii) €700 million cap per annum; (iii) duration until 2013-and it appears than none of these elements are likely to change as a result of the declaration.⁵ Therefore, the domestic support pillar (as was the case with the other two pillars) is applicable to the US only.

The key issue is whether direct payments are trade distorting support. While the US has placed them in the green box, the WTO Panel ruled that they should have been placed in the amber box because of the prohibition of planting fruits and vegetables on the eligible land. If direct payments are placed in the amber box, then, with the exception of crop insurance, the entire cotton programme should be placed in the amber box and any ambitious reduction has to be calculated over the full outlays of the programme.

However, regardless of the box status of direct payments, the US is under the obligation to reduce its cotton support to levels not exceeding the 1992 outlays. According to the WTO's Panel, the US disbursed US\$2.01 billion to its cotton sector during the 1992 marketing year while the average disbursements during the dispute period, 1999-2002, were US\$3.22 billion.⁶ Therefore, taking as a base the market conditions and subsidy levels experienced during 1999-2002, the U.S. must undertake an almost 40 percent reduction in order to comply with the Panel's ruling. To that, if one adds the commitments to be agreed under the general reduction formula as well as any additional cuts due to "ambitiousness", one would expect a substantial reduction of US cotton subsidies. To what extent this will be the case depends, among other factors, on the 2007 Farm Bill, discussions of which should be well under way during the summer of 2007.

6.2 Development (compensation)

With respect to the development assistance aspects of cotton, the Hong Kong declaration urges the Director-General "... to further intensify his consultative efforts with bilateral donors and with multilateral and regional institutions, with emphasis on improved coherence, coordination and enhanced implementation and to explore the possibility of establishing through such institutions a mechanism to deal with income declines in the cotton sector ... urge Members to promote and support South-South cooperation, including transfer of technology ... invite the Director-General to furnish a third Periodic Report to our next Session with updates, ... and to set up an appropriate follow-up and monitoring mechanism." This part of the declaration is consistent with the outcome of the OECD's DAC committee briefing as well as the work of the sub-Committee on Cotton.

⁵ It appears that there is (unconfirmed) discussion within the EU to fully decouple cotton support.

One unclear aspect of the declaration, however, is its reference to the possibility of establishing a mechanism (through donor institutions) to deal with income declines in the cotton sector. One of the key points of the Cotonou workshop—unanimously accepted by all donors and later echoed at the DAC briefing—was that no new channels of support will be created. Furthermore, the proposal advanced by the cotton-4 countries during the DAC briefing asking for the creation of a compensation fund was overwhelmingly rejected.

7. Concluding remarks

In some respects, cotton shares similar characteristics with other commodity markets, namely volatile and declining nature of prices and competition from synthetic products. In other respects, however, it differs markedly. For example, despite its low share in world trade—estimated at about 0.12 percent of global merchandise trade—as many as 100 million households depend on that commodity, therefore, the price fluctuations imply that millions of poor households get in or out of poverty.

Policies have certainly affected cotton prices to the detriment of non-subsidized cotton growers. Hence, for good reasons cotton became a central theme during the Doha Development Agenda negotiations. To what extent the Hong Kong Ministerial is a success or a failure is still open to question. However, it is worth mentioning the progress that has taken place of the policy aspects of the cotton market during the last four years (ignoring, for convenience, the actual events that triggered such progress):

- The views of developing countries have indeed been heard in the WTO.
- The EU moved from a price support mechanism based on current production to one which is based on historical production (65 percent) and area (35 percent).
- The US announced that it will remove the export subsidy component of its cotton programme.
- There has been considerable awareness outside the “cotton community” regarding the effects of cotton subsidies. Consider that the leading article of the December 2005 issue of the *Business 2.0* magazine (entitled “100 percent Rotten”) dealt with cotton, which, in reference to the Step-2 programme, noted “... [textile firms in the US] could probably import foreign cotton cheaply enough that it might not need the subsidy, just as Apple Computer buys foreign-made memory chips and none worse off” (Zachary 2005). Such awareness is likely to exert pressure for more reforms, regardless of the Doha outcome.

At this stage, however, it appears that two other aspects of the “cotton problem”—policy reforms in cotton-dependent countries and technology adoption—have received disproportionately less attention. In many developing countries (especially in sub-Saharan Africa but also Central Asia) where cotton is an important source

⁶ Figure 4 depicts the US cotton support for the past two decades showing a 1991/92 level of support of US\$1.5 billion, US\$0.5 billion less than the Panel’s figure. The discrepancy may be due to the definition of the period (marketing versus calendar year).

of rural incomes, reform programmes for restructuring the cotton sector to increase its efficiency remain largely incomplete. Fully implementing reforms should be the immediate focus of the policymakers. After all, even if cotton prices increase either as a result of elimination of subsidies or as a result of market forces, it will do no good to poor producers if such increase is absorbed by bankrupt parastatals, debt-ridden cooperatives, or corrupt public officials unwilling to engage in serious reform efforts. Furthermore, serious reform efforts will signal the willingness of these countries to participate in the creation of a conducive global trading environment.

Finally, cotton producers in many developing countries face the challenge of adopting genetically modified seed technology in order to compete effectively with their competitors who are using such technologies and enjoy the cost advantages and yield gains. That, however, would entail extensive field trials to develop varieties suitable to local growing conditions as well as putting in place the appropriate legal and regulatory framework—challenging and time consuming processes requiring attention at a policymaking level.

Appendix A

Cotton Text of the 6th WTO Ministerial Declaration (WT/MIN(05)/W/3/Rev.2)

A1. Main Text (paragraphs 11 and 12, emphasis added)

11. We recall the mandate given by the Members in the Decision adopted by the General Council on 1 August 2004 to address cotton ambitiously, expeditiously and specifically, within the agriculture negotiations in relation to all trade-distorting policies affecting the sector in all three pillars of market access, domestic support and export competition, as specified in the Doha text and the July 2004 Framework text. We note the work already undertaken in the Sub-Committee on Cotton and the proposals made with regard to this matter. Without prejudice to Members' current WTO rights and obligations, including those flowing from actions taken by the Dispute Settlement Body, we reaffirm our commitment to ensure having an explicit decision on cotton within the agriculture negotiations and through the Sub-Committee on Cotton ambitiously, expeditiously and specifically as follows:

- All forms of export subsidies for cotton will be eliminated by developed countries in 2006.
- On **market access**, developed countries will give duty and quota free access for cotton exports from least-developed countries (LDCs) from the commencement of the implementation period.
- [It is recognized that the objective is that, as an outcome for the negotiations, **trade distorting domestic subsidies** for cotton production should be reduced more ambitiously than under whatever general formula is agreed and that it should be implemented over a shorter period of time than generally applicable. We will commit ourselves to give priority in the negotiations to reach such an outcome.]

12. With regard to the development assistance aspects of cotton, we welcome the Consultative Framework process initiated by the Director-General to implement the decisions on these aspects pursuant to paragraph 1.b of the Decision adopted by the General Council on 1 August 2004. We take note of his Periodic Reports and the positive evolution of development assistance noted therein. We urge the Director-General to further intensify his consultative efforts with bilateral donors and with multilateral and regional institutions, with emphasis on improved coherence, coordination and enhanced implementation **and to explore the possibility of establishing through such institutions a mechanism to deal with income declines in the cotton sector**. Noting the importance of achieving enhanced efficiency and competitiveness in the cotton producing process, we urge the development

community to further scale up its cotton-specific assistance and to support the efforts of the Director-General. In this context, we urge Members to promote and support South-South cooperation, including transfer of technology. We welcome the domestic reform efforts by African cotton producers aimed at enhancing productivity and efficiency, and encourage them to deepen this process. We reaffirm the complementarity of the trade policy and development assistance aspects of cotton. We invite the Director-General to furnish a third Periodic Report to our next Session with updates, at appropriate intervals in the meantime, to the General Council, while keeping the Sub-Committee on Cotton fully informed of progress. Finally, as regards follow up and monitoring, we request the Director-General to set up an appropriate follow-up and monitoring mechanism.

A2 Annex A (paragraph 21, emphasis added)

21. While there is genuine recognition of the problem to be addressed and concrete proposals have been made, Members remain at this point short of concrete and specific achievement that would be needed to meet the July Framework direction to address this matter ambitiously, expeditiously and specifically. There is no disagreement with the view that all forms of export subsidies are to be eliminated for cotton although the timing and speed remains to be specified. Proposals to eliminate them immediately or from day one of the implementation period are not at this point shared by all Members. In the case of trade distorting support, proponents seek full elimination with “front-loaded” implementation.* There is a view that the extent to which this can occur, and its timing, can only be determined in the context of an overall agreement. Another view is that there could be at least substantial and front-loaded reduction on cotton specifically from day one of implementation, with the major implementation achieved within twelve months, and the remainder to be completed within a period shorter than the overall implementation period for agriculture.**

* Concrete proposals have been made, with a three-step approach: 80 percent on day one, an additional 10 percent after 12 months and the last 10 percent a year later.

** A Member has indicated that it is prepared to implement all its commitments from day one and, in any case, to autonomously ensure that its commitments on eliminating the most trade-distorting domestic support, eliminating all forms of export subsidies and providing mfn duty- and quota-free access for cotton will take place from 2006.

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The potential benefits to developing countries from domestic support reductions in developed countries¹

Harry de Gorter

1. Introduction

Domestic agricultural subsidies, concentrated mostly in high-income countries, have been a contentious issue both in the World Trade Organization (WTO) trade negotiations and in a number of recent trade disputes. Recent WTO Panel rulings on Canadian dairy, European Union sugar and United States cotton (WTO 1999; 2004a; 2004b) have several important implications for increased disciplines on domestic agricultural support. These Panel rulings have yet to affect URAA domestic support disciplines but many argue they will, highlighting the political importance of domestic support in both trade disputes and WTO negotiations.

The purpose of this paper is to put domestic support in perspective with regard to the potential impacts on trade distortion. The paper begins by highlighting the levels and trends in domestic support relative to border protection, followed by a discussion of the ways in which domestic support, including that in the Green and Blue boxes, can still distort trade significantly. The benefits to developing countries from domestic support reductions in rich countries can only be realized if there are meaningful disciplines in the WTO. Several problems associated with WTO measures and disciplines on domestic support are therefore outlined. An assessment of current proposals on domestic support reductions in the WTO negotiations shows that little trade liberalization will occur. The three key recent WTO Dispute panel rulings are evaluated as to their implications for domestic support disciplines in the WTO. The final section discusses the features of a truly non-distorting domestic support policy, and provides some options available to make rules and commitments more transparent and effective in reducing trade distortions.

¹ This paper benefited greatly from comments at the FAO Workshop on “WTO Rules for Agriculture Compatible with Development”, 2-3 Feb 2006, especially from Ann Tutwiler and Alan Matthews.

2. Domestic support in perspective

The levels and trends in border versus domestic support² are given in Table 1. The total Producer Support Estimate (PSE) has increased moderately from the base period, 1986-88, by 5 percent but product specific domestic support has increased substantially by 81 percent (with border protection decreasing significantly by 17 percent). As a share of the PSE, domestic support now accounts for about 40 percent, up from 22 percent in 1986-88.

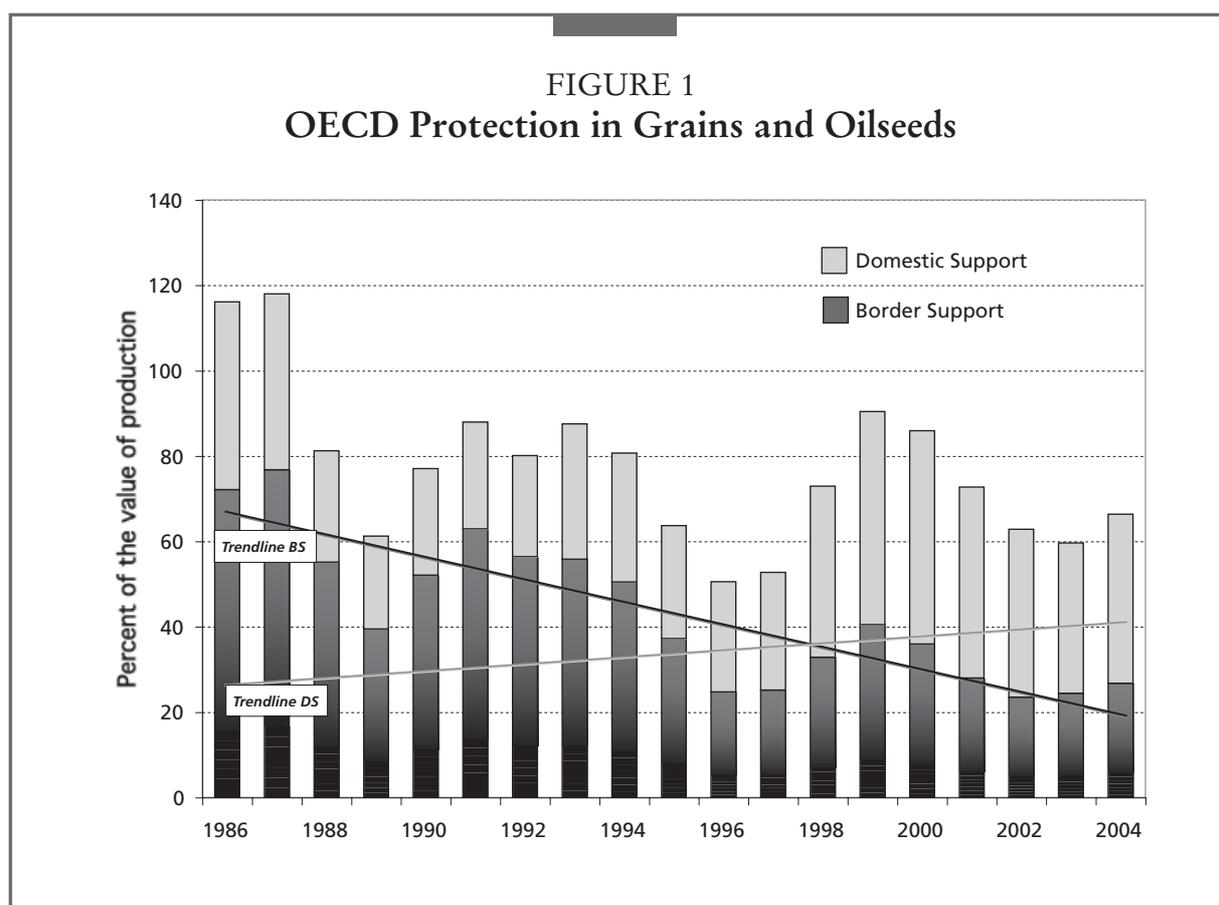
TABLE 1
Domestic support in perspective (OECD in billion US \$)

	1986-88	2002-04	% chge
Total PSE	242 867	254 244	5%
Domestic Support	54 388	98 408	81%
Border Support	188 479	155 836	-17%
Border as a % of Total PSE	78	61	
GSSE	40 946	61 269	50%

Source: Calculated from data in OECD (2005).

The levels and trends in domestic support are more concentrated in grains and oilseeds sectors compared with all other commodities in OECD countries (see Figure 1). Although the average level of protection is higher in the grains and oilseeds sectors, the decreasing trend in total support is greater for grains and oilseeds. Meanwhile, the trend in the level of domestic support is increasing more for grains and oilseeds. Domestic support averaged 44 percent of total support for grains and oilseeds, while only 22 percent for all other commodities. The concentration of domestic support in specific commodity sectors magnifies the economic distortion because of large changes in relative prices and also hurts specific countries specializing in these commodity sectors.

² Domestic support here is defined as product specific government subsidies to producers, including fully coupled input and output subsidies, and also payments based on input constraints, farm income and historical entitlements.



Domestic support defined here using OECD data excludes non-product specific government expenditures (listed under the category General Support and Services Expenditures - “GSSE” separate from the “PSE”) on R&D, infrastructure and marketing. These expenditures are currently in the order of US\$61 billion, about two-thirds the level of product specific taxpayer funded domestic producer support. Deemed as public good expenditures and so excluded from the PSE, these expenditures can, however, affect the relative advantage of agricultural production between developing and developed countries. If rich countries can afford more R&D, for example, then an advantage in world markets can be obtained. Infrastructure expenditures can likewise provide an advantage for rich countries. If the current negotiations are to be truly a development round and a level playing field is desired, then some attention should be paid to how balanced these public good expenditures are between developed and developing countries. Furthermore, some programmes under the GSSE category include payments that can be viewed as direct export subsidies (e.g. expenditures on inspection services and marketing, with the total averaging almost US\$30 billion in 2002-04).

A breakdown of support that is infra-marginal (defined as support based on only part of current or historical production) is given in Table 2. Total infra-marginal support (both consumer and taxpayer financed) has increased 44 percent from the base period. Taxpayer or domestic infra-marginal support (not requiring border protection) skyrocketed by 171 percent while infra-marginal support from consumers requiring

border protection declined significantly by 22 percent. Infra-marginal support now constitutes 38 percent of the PSE and 63 percent of domestic support, up significantly from 29 and 43 percent, respectively, in 1986-88. The importance of distinguishing infra-marginal support will be explained later when discussing the implications of the WTO Panel rulings on Canadian dairy and European Union sugar policies.

TABLE 2
Importance of infra-marginal support (OECD in billion US\$)

	1986-88	2002-04	% chge
Total Infra-marginal Support	67	96.3	44%
Domestic	23	62.3	171%
Border	43.8	34	-22%
Share of total PSE	29%	38%	
Share of Domestic Support	43%	63%	
Share of Border Support	25%	22%	

Source: Calculated from data in OECD (2005).

3. The economic effects of domestic support on trade distortion

Many studies conclude that the trade liberalizing effects of eliminating domestic support pale in comparison to the effects of eliminating import barriers.³ Meanwhile, many studies on individual policies in the Blue and Green Boxes argue that they are minimally trade distorting (e.g. USDA, 2004). However, the theory is limited and there is little empirical evidence because of the short time in which decoupled programmes have been in place. The purpose of this paper is not to dispute these findings but to highlight some of the characteristics and mechanisms of domestic support measures which can affect trade distortion. Keeping in mind that domestic support accounts for 40 percent of the PSE and is increasing (and that excludes US\$61 billion of “public good” expenditures under the GSSE category that may directly provide advantages to farmers in developed countries), at the very least, careful attention should be given to the effects of domestic support in order to ensure the continuation of its minimally trade distorting effects and that it does not become a substitute to border protection in distorting trade. Meanwhile, there are several studies that show how domestic support can have very significant trade distorting effects, including those policies currently in the Blue and Green boxes (Sumner 2003; FAO 2004).

Taxpayer financed policies under the Amber Box (as opposed to consumer

³ For example, studies by Anderson and Martin (2005), and Hoekmann, Ng and Olarreaga (2004) conclude that domestic support only contributes about 5 percent of the total gains to trade liberalization in agriculture.

financed transfers in the aggregate measurement of support (AMS) that require border protection - this anomaly or inconsistency is discussed later) account for about 34 percent of total domestic support as measured by the OECD (2005). Normally economists favour domestic subsidies over border protection. But in the case of agriculture, the difference between a production subsidy and an import tariff is minimal, given the very inelastic demand at the farm level and high supply elasticities (Stiglitz and Charlton, 2004). Furthermore, the trade distortions of a subsidy on purchased inputs can be very high if the subsidy is a large proportion of total costs, if its supply curve is very price elastic relative to other inputs (like land), and if the elasticity of substitution between the inputs is high (see analysis in OECD 2002a). These are indeed characteristics of much agricultural production. Hence, disciplines on domestic support, like those on border measures, may be very important.

Policies under the Blue Box have also been very ineffective in reducing trade distortions compared with a standard coupled production subsidy. Take the Blue Box policies of the European Union as an example. Although area payments for cereals are restricted to a base level of hectares, this programme is coupled in (i.e. influences) the farmer's decision on how much land to plant. This holds true not only because farmers are obligated to produce cereals on the base acres to receive the payments, but also because area payments in the European Union are made on an aggregate fixed area base that is set at the national or regional level. Individual farmers do not have a base area - just eligible acres for which they receive payments and have area set-asides. If the regional base area is exceeded, the per-unit subsidy is prorated downwards proportionately for all farmers. Because the prorating occurs on the total area planted *ex post*, farmers have an incentive to overplant in order to maximize their share of the fixed budget outlays, or to defend against share erosion due to overplanting by other producers. This means that the area payments are fully coupled in plantings because an individual farmer is not penalized for his own decision to overplant (de Gorter, Hranaiova, and Tsur 2005; OECD, 2003a). Area payments with a national base area are therefore not a limit on total acres planted.

Previous policies in the Blue Box for the United States have also been prone to overproduction, even though farmers were being paid not to produce. Payments made to farmers for not producing induced farmers to rent seek and plant more to increase their base so they can plant less more in the future and hence increase payments (de Gorter and Fisher, 1993). Joseph Heller in *Catch-22* (1961, p.82) perhaps best articulates the central insight into the potential trade distorting effects of such policies:

He was a long-limbed farmer... His specialty was alfalfa, and he made a good thing of not growing any. The government paid him well for every bushel of alfalfa he did not grow. The more alfalfa he did not grow, the more money the government gave him, and he spent every penny he didn't earn on new land to increase the amount of alfalfa he did not produce... He invested in land wisely and soon was not growing more alfalfa than any other man in the country...

Nevertheless, acreage set-asides in the United States and European Union, when evaluated in a static framework, are deemed to offset the output enhancing effects of output subsidies but perhaps do not when analysed in a dynamic framework of analysis.

Policies currently designated in the Blue and Green Boxes can also have trade distorting effects through several other mechanisms, especially when large sums of money are involved (for a good survey, see Abler and Blandford, 2005). Several general categories of potential trade distortions from Green Box policies can be identified.

First, decoupled payments can reduce risk by reducing farm income variability (the insurance effect) or the increased wealth created by payments may make farmers less risk averse. Agricultural production is characterized by a high degree of uncertainty and so direct payments may affect a risk-averse farmer's production decision. Mullen, Chau, de Gorter and Gloy (2005) compare the contribution of the wealth, insurance and subsidy effects to the total change in output for three studies (Table 3). Although the three studies use different frameworks and analyse different policies and commodities, a comparison of the results can still be instructive. In each case, the risk effects are higher than the equivalent coupled subsidy effect. This shows that wealth and insurance effects are important both in terms of their relative (to the subsidy effect) and their absolute impacts on output. Recent studies by Anton and the OECD (2003b; 2004) confirm the importance of risk on trade distortion.

TABLE 3
Impact of risk *vs* subsidy with decoupled payments (share of total change in output, in percent)

	Wealth Effect	Insurance Effect	Subsidy Effect
Mullen <i>et al.</i>	12	57	31%
Hennessy	8.5-14	65-78	10-20%
de Gorter and Tsur	NA	75	25%

Source: Mullen *et al.*

A second mechanism for how decoupled payments affect trade distortion is through expectations about future policies and dynamic considerations. Producers will develop expectations of future assistance based on past government actions, thereby affecting current production decisions. This is highlighted by the updating of base acres and payment yields in the last United States Farm Bill.

A third mechanism is when constraints due to imperfect input markets are relaxed with decoupled subsidies. Direct payments can affect farmers' investment and exit decisions if there are constraints facing them in capital and labour markets. Direct payments allow banks to make loans that they otherwise would not and also allow farmers with specialized skills to stay in agriculture. Vercaemmen (2003), for example, finds that decoupled payments have the same impact on investment as fully coupled subsidies.

A fourth mechanism is cross-subsidization and exit decisions with subsidies that are infra-marginal or based on only part of your output. Rulings in the recent high profile trade disputes for Canadian dairy and European Union sugar policies concluded that infra-marginal support to farms constitutes an export subsidy. The argument was that farms receiving higher prices for part of their production sold on domestic markets implicitly financed losses on exports sold at lower world prices that are below average total cost of production. These case rulings on “cross-subsidization” may have implications for all types of infra-marginal support schemes in agriculture, including those that are taxpayer financed, and are equally applicable to an importer or exporter.

The economic underpinnings of cross-subsidization are given in Chau and de Gorter (2005), and Kropp, Just and de Gorter (2005). These studies show, however, that financing a loss in one market with the profits of another does not tell the whole story. Increasing returns enable producers to sell a portion of their output below their average total cost of production and thereby drives cross-subsidization. However, cross-subsidization is shown to occur even if profits at the infra-marginal level of production are negative and if world prices are below the average variable costs of production (situations not recognized by the WTO rulings). In addition, infra-marginal support entices some high cost farms to remain in business producing at the maximum level of output entitled to the payment. These high cost farms that remain in business only because of the infra-marginal support generate additional output distortions. The impact of this “exit deterrence” on output distortion is independent of cross-subsidization and was not recognized in the WTO rulings.

Kropp, Just and de Gorter (2005) show that for the same level of transfers, infra-marginal support can in theory be more trade distorting than coupled support. An empirical study of the United States dairy industry shows that infra-marginal subsidies distort production by 60 to 70 percent of an equivalent coupled subsidy; therefore infra-marginal schemes are potentially important for international trade agreements.

Although the analysis is based on farmers having to produce on their infra-marginal levels (e.g. base levels), the analysis has implications for many taxpayer financed subsidy programmes, including product specific subsidies currently in the Green Box for the United States. It can be argued that after the 1996 Farm Bill, farmers acted as if they had to produce to get payments because:

- land has to be kept in “good agricultural use” (fixed costs are therefore incurred as well as variable costs);
- base acres and payment yields were updated;
- new crops were added to the so-called decoupled programmes;
- new crops were added to the coupled subsidy programmes;
- decoupled payments were added to the same commodity;
- coupled payments were continued and added to the same commodity;
- Congress debated continually for adding coupled subsidies from 1998 to the 2002 Farm Bill (enacted emergency market loss assistance subsidies in the meantime);

- restrictions on what you can plant on the base acres (e.g. no fruits and vegetables);
- tenant gets the payment (not necessarily the landowner); and
- the WTO Panel on United States cotton subsidies concludes that direct payments are at least partially coupled.

Therefore, these policies currently under the Green Box for the United States policies perhaps should be subject to the same disciplines in the WTO (Sumner, 2005). This means trade distortions from cross-subsidization and exit-deterrence can arise from a wide array of policies, particularly any policies in which producers receive a higher per unit revenue on a limited amount of production (a significant and growing share of total support as shown in Table 2).

In conclusion, commonly noted but little analysed mechanisms that generate trade distortion from “decoupled” payments include cross-subsidization, exit deterrence, risk reduction and wealth effects, expectations for more support or a change in rules, and the relaxation of input constraints. In addition, distortions are accentuated because decoupled payments are given in tandem with coupled subsidies, each of which changes over time and hence the interaction effects generate even more distortions. More work has to be done to determine the extent of such distortion and analyse more types of programmes including environmental and GSSE type expenditures. Policy design and enforcement are also important issues to be addressed (FAO, 2004).

4. Problems with domestic support disciplines in the WTO’s agreement on agriculture

This section examines the proposals by the United States, European Union and G-20 running up to Hong Kong concerning disciplines specific to domestic support. All proposals were similar in nature, being based on the provisions of the July 2004 Framework. The main issues under negotiation are discussed by examining the Framework agreement in general for a select number of countries. The three specific aforementioned proposals are then assessed as to their prospects for success.⁴

The July 2004 Framework retains many of the concepts of the URAA but adds new ideas of great significance. With respect to domestic support, the framework calls for a minimum 20 percent cut in “overall trade-distorting support” (OTDS), defined as the sum of the following components: the AMS bound ceiling and the allowed maximum of both Blue Box payments and *de minimis* support. In addition, it also caps each component of overall support - specifically AMS, *de minimis* support, and Blue Box subsidies. Reductions in support for each component are to count toward the country’s commitment to reduce overall support. The overall commitment to reduce trade-distorting support may become binding when the ceilings are below actual overall support. Similarly, one or more of the individual

⁴ This section borrows heavily from de Gorter and Cook (2005), Cook (2005), Baffes, Cook and de Gorter (2005) and Jales and Nassar (2005).

component reduction commitments may require reduction in actual support to be under the ceiling. Reduction commitments for individual categories are required even if together they exceed the required reduction in overall support. In addition, the framework calls for deeper cuts in OTDS and its individual components by countries that provide higher levels of support. This tiered approach to progressively reduce domestic support is designed to help harmonize support levels among countries. The specific details of the tiered formula were specified in the various proposals put forward leading up to Hong Kong, including that of the European Union, United States and G-20.

The Framework calls for an expansion of the Blue Box criteria to include payments on fixed acres and yields that are not linked to production constraints. Total Blue Box subsidies would be limited to 5 percent of an historical average value of production. The framework includes an exception for countries currently above the cap to gradually make reductions to the 5 percent cap during the implementation period. Green Box definitions are to be reviewed and clarified, but the Framework does not call for a numerical cap on this form of support. However, tighter scrutiny, along with implementation of the outcome of the WTO Cotton Panel, could yet cause some significant adjustments in Green Box criteria and policies.

4.1 The difference between baseline and current levels of domestic support for a sample of countries

Table 4 shows the actual level of OTDS is much lower than the ceilings for all countries. For example, the current level of OTDS in the European Union is US\$62.73 billion, well under the ceiling of US\$108.82 billion.⁵ This begs the essential question of whether commitments to reduce support will affect current policies at all. As for the individual components of OTDS, current support is also below the ceiling except for Blue Box payments in the European Union. Also notable are several cases where the current level of support is close to the ceilings: AMS and non-product-specific support in the United States, AMS in Korea, and non-product-specific support in Canada. Note that product-specific and non-product-specific *de minimis* and Blue Box ceilings are each 5 percent of the value of production, except for European Union Blue Box payments, where actual levels exceed the 5 percent limit by US\$8.74 billion.

⁵ The data for the European Union is based on 1999-2001. WTO notifications on domestic support are notoriously lagged with the United States yet to notify what box counter-cyclical payments are to be designated as.

TABLE 4

Analysis of the 2004 framework agreement proposals on domestic support, selected countries (US \$ million)

	EU ^a	USA	Japan	Korea	Mexico	Canada
<i>Current ceilings</i>						
Overall trade-distorting support (OTDS)	93 503	44 118	43 622	7 261	15 476	5 412
AMS	59 538	19 103	34 031	1 321	8 718	2 771
Product-specific <i>de minimis</i> ^b	1 428	5 773	1 497	2 132	2 703	692
Non-product-specific <i>de minimis</i>	11 900	9 621	4 047	2 539	2 703	974
Blue Box	20 637	9 621	4 047	1 269	1 352	974
<i>Current levels</i>						
OTDS	62 679	23 299	7 096	1 814	876	1 391
AMS	41 505	16 026	6 017	1 325	876	577
Product-specific <i>de minimis</i>	103	102	131	121	0	137
Non-product-specific <i>de minimis</i>	434	7 171	175	368	0	677
Blue Box	20 637	0	772	0	0	0
Potential “water” in the AMS due to price gap ^c	2 058	5 862	3 725	1 317	777	287

Note: The data in the table correspond to the average of the last three years of notified support for each region or country: European Union and United States = 1999-2001; Japan = 2000-02; Korea and Canada = 1998-2000; Mexico = 1996-98.

a. The European Union blue box ceiling here is the historical average of actual support (in grey), higher than the permitted 5 percent of value of production of US\$11.9 billion.

b. Product-specific *de minimis* ceiling is less than 5 percent of the total value of production because support for some products are over five percent of the value of production and so is included in the AMS. The proportion varies by country, with the European Union having the highest share of *de minimis* in the AMS, whereas Mexico has none.

c. Assumes all countries eliminate official support prices without actually changing support, so the price-gap portion of the AMS simply evaporates.

Source: de Gorter and Cook.

Because of the wide gap between the permitted level of support and the actual level of support, a gap known as “water”, a reduction in ceilings and permitted levels is likely to have little or no impact on actual policy, for several reasons. First, proposed reductions affect the bound AMS ceilings and the newly created maximum permitted levels for *de minimis* and Blue Box support - *not the actual levels of support*. This alone greatly dilutes the disciplines. The permitted level of *de minimis* support (10 percent of the value of production - 5 percent each for product- and non-product-specific) is a large number by itself. The maximum allowed *de minimis* would average one-third of the producer support estimate (PSE) for OECD countries in 2001 and 87 percent of the domestic-support component of the PSE (defined as total support less border support).⁶ Current use of *de minimis* support is already quite significant for some countries. Current levels in Canada, for example, exceed notified total AMS support by more than 40 percent (see the last column in Table 4). United States *de minimis* support is almost 50 percent of total notified AMS.

⁶ See de Gorter 2004, Baffes, Cook and de Gorter, and Cook.

But water has also accumulated because of an inflated baseline, shifting between boxes, and double counting of border support. Policy shifts occurring after the base period of the URAA but before the implementation period are exemplified by the European Union's conversion of approximately US\$20 billion of Amber Box support to the Blue Box in 1992, which inflated the baseline that included Blue Box payments exempt from any reduction commitments. Another factor was the shift of payments from the Blue Box to the Green Box during the implementation period. Crop deficiency payments in the United States, for example, were in the Blue Box before the 1996 Farm Bill. But with decoupling in the 1996 Farm Bill, the programme was shifted into the Green Box. The change in policy was a positive step, but the baseline remained high and allowed water to accumulate in the Blue Box, as shown in the US column in Table 4.

Another source of water in domestic support ceilings is the peculiar manner in which the AMS is calculated. In addition to trade-distorting, taxpayer-funded domestic subsidies, the AMS includes "market price support", defined as production multiplied by the difference between the official domestic support price and a fixed world reference price: $MPS = Q * (P_d^{off} - P_w^{ref})$ where Q is current production, P_d^{off} is the official domestic price support and P_w^{ref} is the fixed world reference price. The product of that operation does not depict "domestic support" per se. Instead, it is a faulty measure of support provided at the border through tariffs, import quotas or export subsidies. Actual world prices fluctuate above and below the world reference price, while domestic market prices do likewise relative to the domestic administered price. Measuring MPS in this way can cause a major discrepancy between actual MPS levels and the level notified to the WTO. So the MPS component of the AMS is a poor measure of border protection for a subset of commodities that have official domestic support prices.

This problem in measuring the AMS is highlighted by the fact that it sometimes is notified to the WTO as a negative number (when the support price is below the fixed world reference price) and thus may offset taxpayer-financed, trade-distorting subsidies. At the other extreme, support prices have been so far above world reference prices that the AMS has exceeded the OECD's total PSE for some countries in the past, even though the AMS is supposed to measure trade-distorting domestic support, which is just one component of the PSE. The majority of the AMS for the European Union, Japan, Korea and Mexico is the MPS while constituting 30-40 percent for Canada and the United States (Cook, 2005; Baffes, Cook and de Gorter, 2005). But most importantly, the MPS component of the AMS is very arbitrary because a country can simply reduce or eliminate the official price support without changing actual support. Indeed, the AMS has declined over time, while the PSE has increased (de Gorter, Ingco and Ignacio, 2003).

Japan is a case in point where the official support price for rice was eliminated in 1997, and Japan's total AMS, as notified to the WTO, dropped by US\$20 billion, without altering border protection and so there was no market impact. So a substantial portion of the water in Japan's total AMS of approximately US\$28 billion (Table 4) can be attributed to an adjustment made to an administered price in

order to “achieve” reduction commitments without actually reducing support. As discussed below, the redundancy of this “price-gap” component of the AMS must be recognized and circumvented by limiting support-reduction commitments to taxpayer-financed, trade-distorting subsidies.

Because of the ambiguity of the legal text of the URAA and the discretion given to governments in how they declare specific support programmes, there is evidence that support has been moved from box to box to meet domestic support disciplines. This is possible because there are no product-specific limits for the Amber Box - it is an aggregate sectorwide limit for all agricultural products and policies. This enables countries that reform policies in one sector to increase support in other sectors or introduce new support for the reformed sector.

Support can be shifted between, as well as within, boxes. Lax criteria have allowed countries to move support toward either undisciplined or less constrained categories (Oxfam, 2005). For example, the United States declared the new emergency crop subsidies of 1998-2001 as non-product-specific *de minimis* support even though they were based on specific product prices. The move allowed the United States to circumvent the ceiling on total AMS. In anticipation of ceilings becoming a constraint, the 2004 Framework now proposes to expand the definition of the Blue Box and its ceiling to 5 percent of an historical value of production for all of agriculture. With little change in the levels of emergency payments (except in name: they are now called countercyclical payments), the United States may be able to dramatically reduce its non-product-specific *de minimis* support by shifting it to the Blue Box. The United States and other countries may be able to do so simply because of a proposed change in the definition of what is “less trade distorting.”

4.2 Assessing the October Zurich proposals

All proposals advanced by the United States, European Union and G-20 in October 2005 in Zurich are based on the July 2004 Framework and all involve tiered reductions with larger cuts in those economies with the largest absolute amount of domestic support.⁷ The United States proposal called for a 75 percent reduction in OTDS for countries with over US\$60 billion, a 53 percent reduction for OTDS between US\$10 and US\$60 billion, and a 41 percent reduction for lower levels of OTDS. The proposed reductions in the AMS tiers are slightly higher at 80-60-37 percent.⁸ The European Union called for 70-60-50 percent cuts in each of OTDS and AMS. The European Union places itself in the highest band, the United States in the middle and all others except Japan in the lowest.

The United States calls for a 50 percent reduction in allowed *de minimis* (to 2.5 percent of the value of production) for each of product and non-product specific support. The European Union calls for an 80 percent reduction in allowed *de minimis* to one percent of the value of production while G-20 argues for reductions in *de minimis* as needed to meet overall OTDS reductions.

⁷ All three proposals use the same three tiers of >US\$60 billion, US\$10-US\$60 billion, and < US\$10 billion.

⁸ United States and G-20 proposals use tiers of >US\$25 billion, US\$12-25 billion, and < US\$12 billion.

All three proposals agree with the expanded definition of the Blue Box as put forth in the July Framework to encompass payments with production-limiting requirements and payments that do not require production. However, the United States calls for the cap to be set at 2.5 percent of the value of production, instead of five percent as proposed in the July Framework.

Both the United States and the European Union propose product specific caps in the Amber Box but with differing base periods: the United States recommends a base period of 1999-2001 while the European Union argues that product specific caps should be based on the entire implementation period.

Several analysts are in common agreement that there will be very little probable effect of the proposals except for that of G-20 proposal (de Gorter and Cook, 2005; Jales and Nassar, 2005; Brink, 2005; Cook, 2005; Hart and Beghin, 2005; Jenson and Zobbe, 2005; International Food and Agricultural Trade Policy Council, 2005). For example, the overhang calculated by Jales and Nassar, highlighting the very large gaps between committed and actual support in recent years, and the consequent need for large reductions in ceilings before any real policy changes will be required. The European Union may be required to reduce the AMS. However, the European Union will be converting most of their trade distorting payments into Green Box payments after the 2003 CAP reforms. This combined with water due to the price-gap measure and the already large overhang due to the difference between actual support and the ceiling will require no policy adjustments for the European Union, regardless of what proposal is adopted.

The ceilings for OTDS show no significant reduction in support to be required under the European Union and United States proposals, but a significant reduction under the G-20 proposal. Assuming the water due to the price-gap is eliminated simply by taking official price supports off the book, the United States will be left with a required cut of only about US\$2 billion, far less than the proposed 60 percent nominal reduction. The caps on overall support for the rest of the countries other than the European Union and United States are found to be well above actual levels and so will not be required to reduce support, regardless of what proposal is adopted (de Gorter and Cook, 2005; Jales and Nassar, 2005).

While the reductions in actual support required by even the most ambitious of these proposals would be modest, the potential value of such disciplines is perhaps greater than it seems in that it would rule out the possibility of countries' potentially reverting to much higher levels of support in the future.

5. Implications of the WTO panel rulings on United States cotton subsidies

Much has been written on the cotton case (Sumner, 2005; Baffes, 2004; Schnepf, 2004). The conclusion is that the United States will have to make dramatic changes not only to the cotton subsidy programmes but also to all other crop subsidies and maybe even those for the sugar and dairy sectors as well (Sumner, 2005). Step-2 payments and export credit guarantees are deemed prohibited, although representing a small share of total expenditures on cotton subsidies. Interestingly,

a subsidy on exports simultaneous with an identical subsidy on domestic sales is equivalent to a production subsidy, not an export subsidy but presumably the legal interpretation of how the payments were implemented overrules simple economics. Furthermore, export credit guarantees were deferred to the OECD in the URAA which concluded that such guarantees are not so trade distorting as one would believe (OECD, 2000b). Nevertheless, because these subsidies were not listed in the URAA, they are not allowed to be part of the export subsidy commitments in the URAA but rather are simply prohibited and hence need to be eliminated.

But the bulk of cotton (and other crops) subsidies are direct, countercyclical (formerly emergency) payments and fully coupled deficiency payments. Direct payments were deemed trade distorting and so fail the test of being Green Box because of the restriction that no fruit and vegetable crops be planted on base acres. To be decoupled, a payment cannot be conditional on what is or is not being planted. Presumably, the elimination of the fruit and vegetable planting restriction will put the United States into compliance with this large payment programs for cotton. This would mean no effective change in the levels of the bulk of United States cotton subsidies (and for that of all other crops as well) and so no benefits will be conferred on developing countries.

A question arises as to whether the United States is obligated to either revise the rules on their subsidy programmes or eliminate the subsidies for all other crops as well. Does the cotton ruling automatically apply to all other programs or would there need to be legal action taken in the future on each of the other crops as well? How does the ruling on one crop automatically extend to other crops? Presumably only the countries bringing the case to the WTO (Brazil and a couple of other parties in the case of cotton) can retaliate to encourage the United States into compliance. Can Brazil retaliate if other crop subsidy programmes are not brought into compliance with that determined for cotton? Or is the world relying on moral suasion for the United States to comply not only for cotton but for all other crops too?

What if the United States complies by putting the direct payment scheme into the Amber Box (which has plenty of water in it as shown earlier) and the countercyclical payments into the newly proposed expanded definition of the Blue Box? Under this scenario, no benefits to developing countries will be forthcoming again.

The WTO Panel ruled that direct payments were trade distorting (the implication being that they should not be in the Green Box) but did not cause price suppression. Does this give fewer obligations for the United States to eliminate these subsidies (assuming they refuse to eliminate the fruit and vegetable restriction)? The United States clearly violated the URAA by updating the base and payment yields (both on the basis of the law and economic theory) yet the Panel deferred saying that there was no need to rule on it because of the fruit and vegetable restriction. If the United States eliminates the fruit and vegetable restriction, does this mean no action is required even though updating is explicitly prohibited? Does it mean a new case has to be brought before the WTO Dispute Settlement Body or can the cotton case be revived to rule on the updating of base acres and payment yields?

Emergency payments were put in the Amber Box by the United States presumably because they are dependent on price but the URAA very clearly states:

Payments in any given year shall not be related to... prices... applying to any production undertaken in any year after the base period.

Because no production is required to receive emergency payments, they are legally decoupled (ignoring the issues of the fruit and vegetable planting restriction and base updating) as current prices can be used, but only for base period production. So a strict interpretation of the law puts countercyclical payments into the Green Box (it is a new programme, updating the base is not an issue) yet because of base updating, direct payments should be in the Amber Box.

Yet Brazil is now demanding “a limit on countercyclical and coupled subsidies”. What is that limit? The URAA baseline levels of 1992? Or reduce them to the threshold level where price suppression no longer exists? And what is this level? And what if the United States complies with cotton and not other crops and sectors?

Meanwhile, there is no reference in the WTO’s final ruling on direct payments, or in the Brazilian submission asking for concessions to retaliate. Are only those subsidies causing serious prejudice to be reduced (or eliminated regardless of URAA base period levels)?

The WTO Panel ruling on cotton, although a landmark, has yet to show how the United States will be brought into compliance on the key issues of direct, countercyclical and coupled payments. Elimination of the Step-2 payments and export credit guarantees seems straight forward but represent only a small part of total subsidies. Other countries also face similar issues like the European Union’s switch of Blue Box payments into the Green Box with the new 2003 single-farm payment programme (not only are there planting restrictions but there are also rules such as having to be a farmer). Will new legal cases have to be brought forward to induce the European Union to comply? Environmental programmes in the United States like the EQUIP and the CRP also have restrictions on plantings so the rulings of the WTO Cotton Panel extend to other types of programmes as well. Yet it seems unclear as to how compliance is forthcoming on the basic arguments in the cotton case against the United States, let alone extending the same arguments to other crops, farm programmes and countries (not to mention issues discussed earlier that are not addressed by the Panel like cross-subsidization, risk reduction, etc.).

6. Suggestions for new rules and commitments

Domestic support is on the rise in terms of absolute levels and relative to border protection, now representing about 40 percent of the PSE (not counting public good expenditures under the OECD’s GSSE category). The key questions are: what are the characteristics of domestic support measures that cause potential trade distortions? And will the WTO disciplines be effective?

Many studies conclude that policies in the Amber Box are far less distorting than border protection, while those in the Blue and Green Boxes are minimally

distorting. But some argue that Amber Box subsidies are close to being as trade distorting as an export subsidy because of very inelastic demand at the farm level and very elastic supply (Stiglitz and Charlton, 2004). Furthermore, there are studies now showing that other domestic subsidies can be quite trade distorting by way of cross-subsidization, exit deterrence, risk reduction and wealth effects, expectations for more support or a change in rules, and the relaxation of input constraints.

Countries beginning the switch from a coupled to a decoupled programme are undertaking a significant step in right direction of trade liberalization. Ideally, governments would give a one-time unconditional payment, a subsidy buy-out, to all engaged in farming or deemed in need of compensation as an annuity (bond) that is non-transferable to the farmer's successors, and non-renewable. However, the decoupling experience shows that there can be problems in both the design of programmes and in their implementation.

The experience so far indicates that with anything short of an ideal decoupling scheme, some distortions will continue (Baffes and de Gorter, 2004; Orden, 2005). However, features that will increase the effectiveness of a slightly less than ideal decoupling scheme include:

- Make payment programme transitory and for adjustment purposes only.
- Require no constraints on input use.
- Implement credible and time consistent policies with no changes in the eligibility rules, payments or eligible sectors or farmers.
- Discontinue all other coupled programmes.
- Bind payments and time frame in the WTO to prevent backsliding.

But the analysis shows that one needs to be concerned about the ineffectiveness of (a) the disciplines in the WTO on domestic support and (b) WTO Panel rulings in both including all distorting mechanisms and inducing compliance. In terms of the proposals on domestic subsidy reforms in Hong Kong, policy reforms occurring between the end of the base period of the URAA and the beginning of the implementation period have inflated AMS ceilings to levels well above actual support, making proposed cuts in bound levels of support less painful than they need to be. The European Union has recently changed many of its payment programmes to be put in the Green Box (even though the cotton ruling would imply otherwise), and so should be able to easily absorb steep cuts in OTDS. The proposed change in the Blue Box definition would accommodate countercyclical payments under current United States programmes. Japan simply eliminated its official support price for rice without changing the actual level of support, creating plenty of room to fulfill any obligations to reduce domestic support ceilings without having to change policies. More water is added to bound levels by the new discipline on OTDS, which aims to reduce maximum allowed levels of support, rather than current levels. The proposed maximum allowed levels include 15 percent of the total value of production - 5 percent each for product - and non-product-specific *de minimis* support, and 5 percent for Blue Box subsidies.

Analysis shows that the reductions in domestic support required under the framework will likely affect only the AMS for the European Union, United States,

and the Republic of Korea, and *de minimis* support in Canada. Even then, most of the required AMS reductions can be circumvented by eliminating official support prices, without actually changing support. Given the water in the current system, cuts of up to 80 percent may be required before meaningful reductions in domestic trade-distorting support occur. Short of that, effective and balanced domestic-support reductions will require major changes in the current methods of measurement and classification, as well as strong commitments to reduce trade-distorting support. Therefore, the WTO should consider the following options:

- The 2004 Agriculture Framework proposed a cap on product-specific AMS. Hence, the WTO should implement support-reduction commitments by individual commodity sectors, rather than on a single AMS for all sectors. Doing so would limit countries' ability to shift support among sensitive commodities. The WTO also should consider introducing a commitment to reduce support per unit and by sector, along the lines of a tariff, to make reductions more effective.
- Reduction commitments should be imposed on Blue Box subsidies as well. Doing so would reduce the degree to which the expanded definition of the Blue Box can be used to shelter subsidies.
- The "price-gap" measure of market price support in the AMS should be eliminated. Henceforth, only taxpayer-financed support to farmers should be reported. This would prevent countries from reducing their AMS simply by reducing or eliminating an official support price, without actually reducing support.
- Because of the WTO Cotton Panel ruling, previously product-specific direct-income payments to farmers in the Green Box should be distinguished from expenditures for public goods. The former should be reported as part of a new Amber Box.
- Reduction commitments should be imposed only on the taxpayer-financed portion of the current AMS-plus the Blue Box, product-specific and non-product-specific *de minimis* subsidies, and previously product-specific, direct farm income payments under the current Green Box. This new (flashing?) Amber Box would report only domestic subsidies that distort trade and that are not border protection. Such a discipline will minimize countries' ability to avoid reductions in support by shifting support from box to box.
- The WTO should require a substantial cut in new Amber Box subsidies, such as allowing a maximum of 5 percent of the value of production at world prices, as suggested in some proposals, with a phase-in for countries currently above 5 percent, as proposed in the framework for other subsidies. A commitment should also be made to extend that ceiling to each individual commodity sector in the future. This would help overcome the problem of an artificially high base level of the previous AMS and would flush most of the water from current commitment ceilings.
- The Green Box should be maintained for expenditures that provide public goods or prevent negative externalities. But programmes listed in Annex 2 of the Agreement on Agriculture as non-trade-distorting or minimally trade-distorting must be more tightly defined to screen out abuses. For example, crop

insurance programmes, which have been found to be very trade-distorting, are currently in the Green Box, and tax concessions are not even considered support. Strict rules, definitions, and monitoring arrangements are required. In recognition of the fact that even these newly defined Green Box expenditures are likely to have some effect on production (and therefore on trade), they should be capped at 5 percent of the total value of agricultural production, as measured at world prices, or at current levels of spending for measures included in the new Green Box, whichever is lower.

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Domestic support to agriculture in developing countries

Mario Jales

1. Introduction

The current round of multilateral negotiations at the World Trade Organization (WTO) will have only a modest impact on the agricultural domestic support commitments of most developing countries. While the 2001 Doha Ministerial Declaration called for substantial reductions on the level of trade-distorting domestic support, it also recognized the need for special and differential treatment (SDT) for developing countries in all areas of the negotiations. The Framework adopted by the General Council in 2004 and the 2005 Hong Kong Ministerial Declaration have established that, except for a small number of middle-income WTO member countries, no developing country will have its ability to support agriculture further constrained by the ongoing negotiations. For the developing world, effective reductions in developed countries' subsidies and stricter disciplines to prevent members from circumventing commitments remain the most important domestic support issues in the Doha Round. Reforming developed country subsidies has the potential to be significantly more development friendly than expanding developing country entitlements to provide trade-distorting domestic support.

This paper analyses the flexibility needed by developing countries in terms of domestic support commitments. It aims to determine whether the Green Box, *de minimis* and Article 6.2 provisions provide enough policy space to support agriculture in a developing country context. The paper is divided in three parts in addition to this introduction. Part 2 investigates the experience of developing countries with domestic support during the Uruguay Round implementation period. It draws mainly from official notifications submitted to the WTO. Part 3 evaluates the current stage of negotiations in the Doha Round, with a focus on the provisions that have already been agreed in the Framework Agreement and in the Hong Kong Ministerial Declaration. It examines the likely effects of these provisions and classifies developing countries according to the adjustment effort that would be required to conform to new disciplines. Finally, Part 4 looks ahead

in the negotiations. It lists the issues that still need to be negotiated and considers whether the Doha Round will constrain policy space for domestic support to agriculture in developing countries.

2. Developing countries' record on domestic support

Although developing countries represent three-quarters of the WTO membership, they account for only a minor share of global agricultural domestic support. The great majority of developing countries either do not maintain any form of official domestic support to agriculture or apply measures that are exempt from commitments at the WTO. Nevertheless, given the heterogeneity of the developing world, domestic support to agriculture can vary quite widely among countries.

The main source for information on domestic support programmes are the notifications submitted periodically by member countries to the WTO Committee on Agriculture. The notifications consist of: (i) Table DS:1, which provides annual figures on the Current Total Aggregate Measure of Support (AMS); (ii) Supporting Tables DS:1 to DS:9, which present data on Green Box, Development Programmes, Blue Box, Product-Specific and Non-Product-Specific AMS, and Product-Specific and Non-Product-Specific *de minimis*; and (iii) Table DS:2, which provides detailed information on newly-introduced or modified domestic support measures for which exemption from commitments is claimed. Nonetheless, notifications from many developing and developed countries are overdue, incomplete, or contain mistakes.

2.1 Overall profile

Domestic support practices vary significantly among developing countries. Table 1 classifies WTO developing countries according to the status and content of their domestic support notifications.

TABLE 1
Developing countries' record on domestic support at the WTO (Most recent notification)

NO NOTIFICATION (Total = 44)		NO SUPPORT (Total = 15)		ONLY EXEMPT SUPPORT (Total = 42)		NON-EXEMPT SUPPORT (Total = 10)		
Least-Developed Countries	Recently-Acceded Countries	Other Developing Countries	Least-Developed Countries	Other Developing Countries	Only Green Box Support	Only Art. 6.2 Support	Only Green Box, Art. 6.2 and De Minimis Support	AMS Support
1 Angola 2 Burkina Faso 3 Central African R. 4 Chad 5 Congo, Dem. R. 6 Djibouti 7 Guinea 8 Guinea Bissau 9 Lesotho 10 Mali 11 Mauritania 12 Mozambique 13 Niger 14 Rwanda 15 Senegal 16 Sierra Leone 17 Solomon Is. 18 Tanzania 19 Togo	1 Albania 2 Cambodia 3 China 4 Macedonia, FYR 5 Moldova 6 Nepal 7 Saudi Arabia 8 Chinese Taipei	1 Antigua & Barbuda 2 Belize 3 Brunei 4 Cameroon 5 Congo 6 Côte d'Ivoire 7 Dominica 8 Ghana 9 Grenada 10 Kuwait 11 Mauritius 12 Papua N. Guinea 13 Saint Kitts & Nevis 14 Saint Lucia 15 Saint Vincent & G. 16 Suriname 17 Swaziland	1 Benin 2 Haiti 3 Madagascar 4 Maldives 5 Myanmar 6 Uganda	1 Bolivia 2 Ecuador 3 El Salvador 4 Gabon 5 Hong Kong 6 Macao 7 Nigeria 8 Qatar 9 Singapore	1 Armenia 2 Botswana 3 Dominican R. 4 Georgia 5 Guatemala 6 Guyana 7 Indonesia 8 Jamaica 9 Kenya 10 Kyrgyz R. 11 Mongolia 12 Nicaragua 13 Oman 14 South Africa 15 Trinidad & Tobago 16 Zambia 17 Zimbabwe	1 Burundi 2 Gambia 3 Malawi Only Green Box and Art. 6.2 Support 1 Bahrain 2 Cuba 3 Egypt 4 Fiji 5 Honduras 6 Malaysia 7 Namibia 8 Paraguay 9 Sri Lanka 10 U.A.E.	1 Bangladesh 2 Barbados 3 Brazil 4 Chile 5 India 6 Pakistan 7 Panama 8 Peru 9 Philippines 10 Tunisia 11 Turkey 12 Uruguay	1 Argentina 2 Colombia 3 Costa Rica 4 Israel 5 Jordan 6 Korea, R. 7 Mexico 8 Morocco 9 Thailand 10 Venezuela

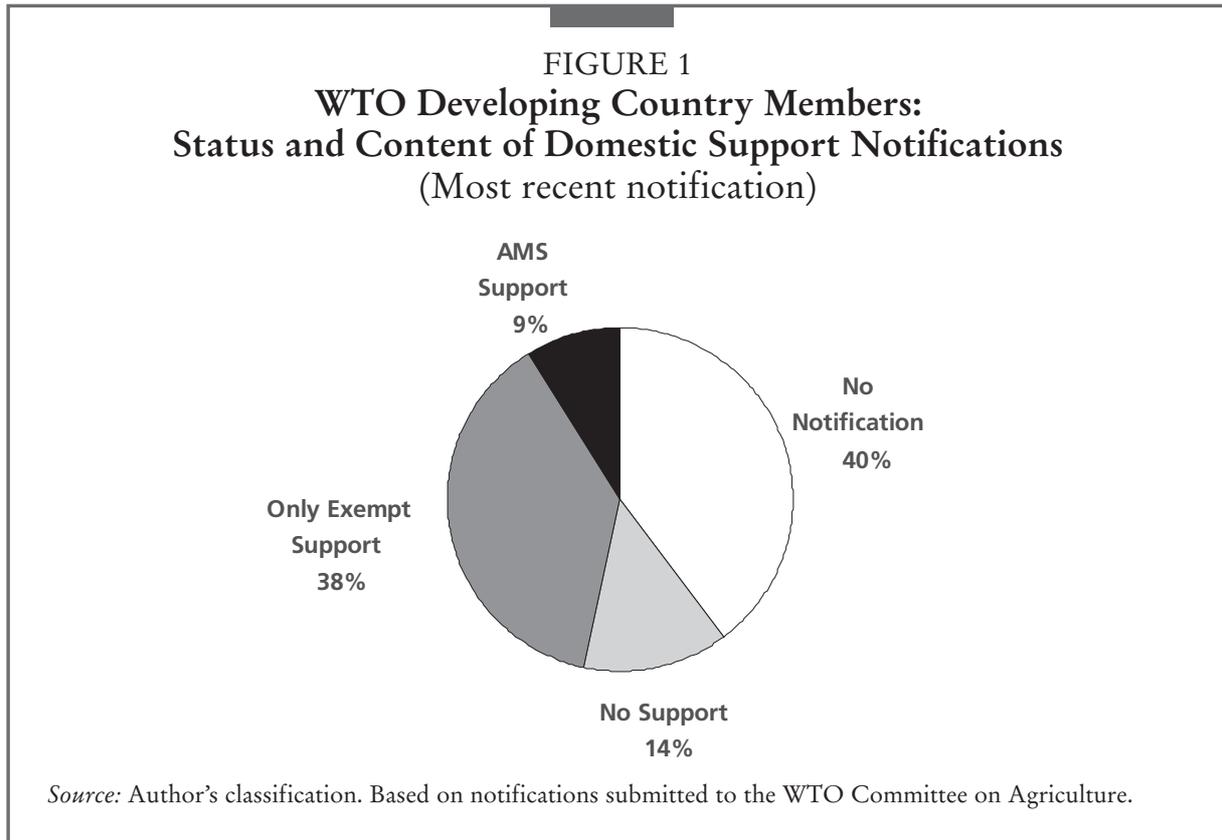
South Africa was considered as a developing country despite the fact that it declared itself as a developed country in the Uruguay Round.

Cyprus and Malta were considered developed countries because they joined the European Union in 2004 and are in the process of adapting agricultural programmes to the European Common Agricultural Policy (CAP).

Romania was considered as a developed country because it is in the process of acceding to the European Union and will have to adapt its agricultural programmes to the European Common Agricultural Policy (CAP).

Source: Author's classification. Based on notifications to the WTO Committee on Agriculture.

The first and largest group (see Figure 1) is comprised of countries that had not submitted a single notification to the Committee on Agriculture as of 31 December 2005. Not less than 44 of the 111 developing country members of the WTO fall in this category. The group contains a large number of least-developed countries (LDCs)¹ and recently acceded countries,² but also includes middle-income developing countries. The great majority of these countries have not observed the notification requirements set out by the Committee on Agriculture.³



The second group consists of countries that have submitted notifications, but which do not provide support to the agricultural sector. It contains small customs entities without a sizeable agricultural sector (i.e. Hong Kong, Macao, Qatar and Singapore), but also countries where agriculture accounts for a substantial share of the gross domestic product (GDP) and economically active population (i.e. Bolivia, Ecuador, El Salvador, Gabon and Nigeria).

¹ Not all LDCs have failed to notify domestic support to the WTO. Eleven LDCs (Bangladesh, Benin, Burundi, Gambia, Haiti, Madagascar, Maldives, Malawi, Myanmar, Uganda and Zambia) submitted notifications at some point in time between 1995 and 2005.

² Not all recently acceded countries have failed to notify domestic support to the WTO. Armenia, Georgia, Jordan and Oman have all submitted notifications since WTO accession.

³ All non-LDC WTO members must notify domestic support annually. Countries with AMS commitment levels should submit notifications no later than 90 days following the end of the year in question. LDCs should submit notifications every two years. Where no support exists, a statement to this effect should be made (WTO Committee on Agriculture, *Notification Requirements and Formats*, G/AG/2, 30 June 1995).

The third group is comprised of countries that provide support only in forms that are exempt from WTO commitments. Some of these countries (i.e. South Africa) only provide Green Box support. Others provide Article 6.2 support in conjunction (i.e. Paraguay) or not (i.e. Malawi) with Green Box support. Finally, other developing countries provide Green Box, Article 6.2 and *de minimis* support. Several larger developing countries are found in this subgroup (i.e. India, Brazil, Pakistan and Philippines).

The fourth group includes the ten developing countries that have notified AMS support in their most recent submissions to the Committee on Agriculture. They are mostly high-income (Israel and the Republic of Korea) or middle-income (Argentina, Colombia, Costa Rica, Jordan, Mexico, Morocco and Venezuela) developing countries. Some WTO members claim that other members have failed to notify existing AMS support.⁴ The above classification is based only on official figures submitted by notifying countries.

While Table 1 attests that there is no such thing as a single domestic support profile for developing countries, it also indicates that the majority of these countries (nearly 80 percent of those for which notifications are available) do not provide the most trade-distorting types of agricultural subsidies (AMS and Blue Box) that are so prevalent in the developed world.

2.2 Specific types of support

Given that domestic support notifications from many developing countries are long overdue, this section of the paper focuses on the 42 countries that have submitted notifications for any year since 2000. Eight other countries (Bangladesh, China, Egypt, India, Mexico, Nigeria, Pakistan and Venezuela), which do not fall in this group, are also examined because of their importance at the respective regional levels. A total of 50 countries is thus analysed.

Green Box

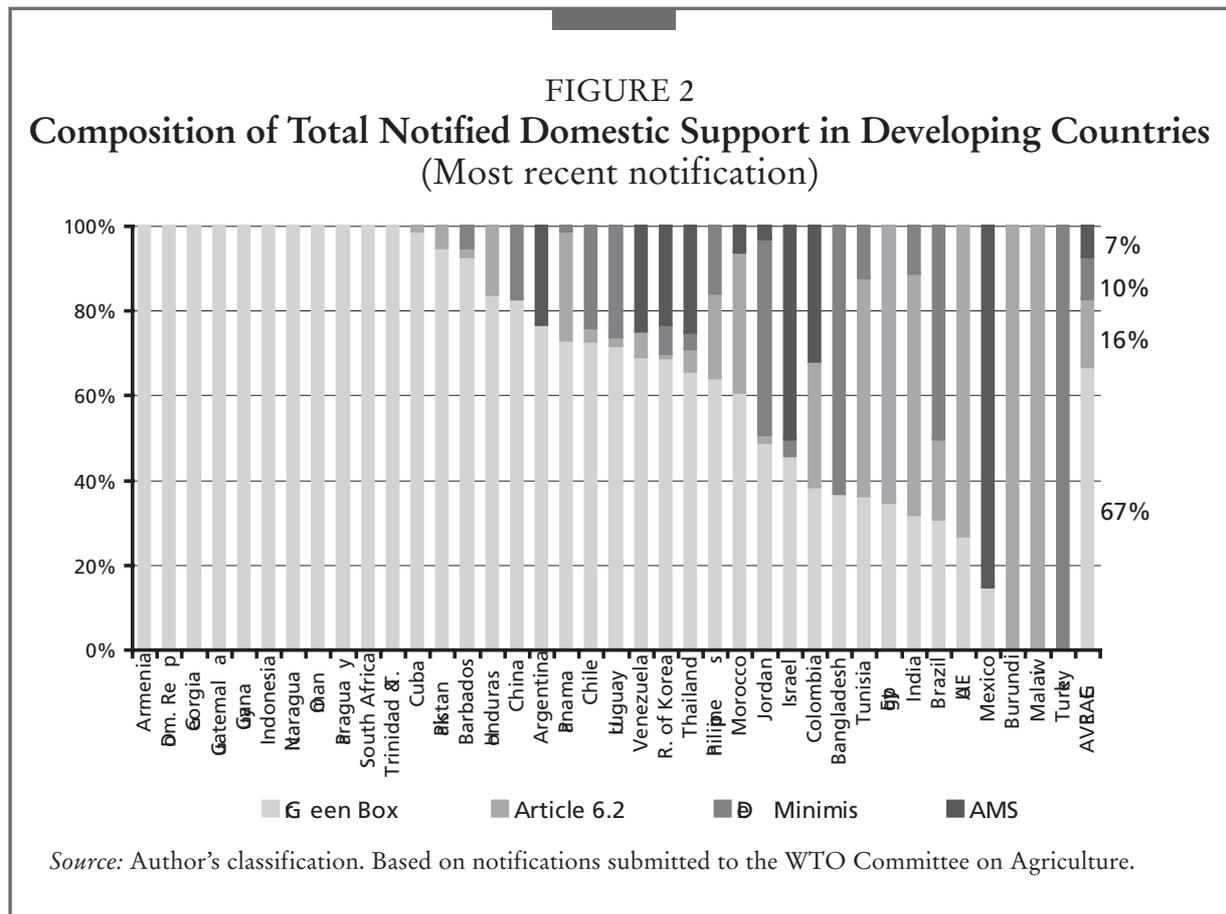
In the last year for which a notification is available, Green Box support accounted for 67 percent of the total support notified by the average developing country. The share varied significantly between countries, from 15 percent in Mexico to 100 percent in Armenia, the Dominican Republic, Georgia, Guatemala, Guyana, Indonesia, Nicaragua, Oman, Paraguay, South Africa and Trinidad & Tobago (see Figure 2). If the analysis is extended to the entire 1995-2005 period, the share of Green Box support in the total support notified by the average developing country is 66 percent.⁵

⁴ Australia, Canada and the United States, among others, claim that Turkey has incorrectly classified AMS support as *de minimis* support. Trade-distorting support for sugar beets in Turkey exceeded 50 percent of the value of production between 1995 and 2001. The Turkish government maintains that this does not constitute AMS support because there is no private trading.

⁵ For comparison purposes, the share of Green Box support in total notified support in the most recent notifications of Japan, the United States and the European Union were respectively 76 percent, 70 percent and 24 percent. For 1995-2001, the share was 61 percent in Japan, 76 percent in the United States and 23 percent in the European Union.

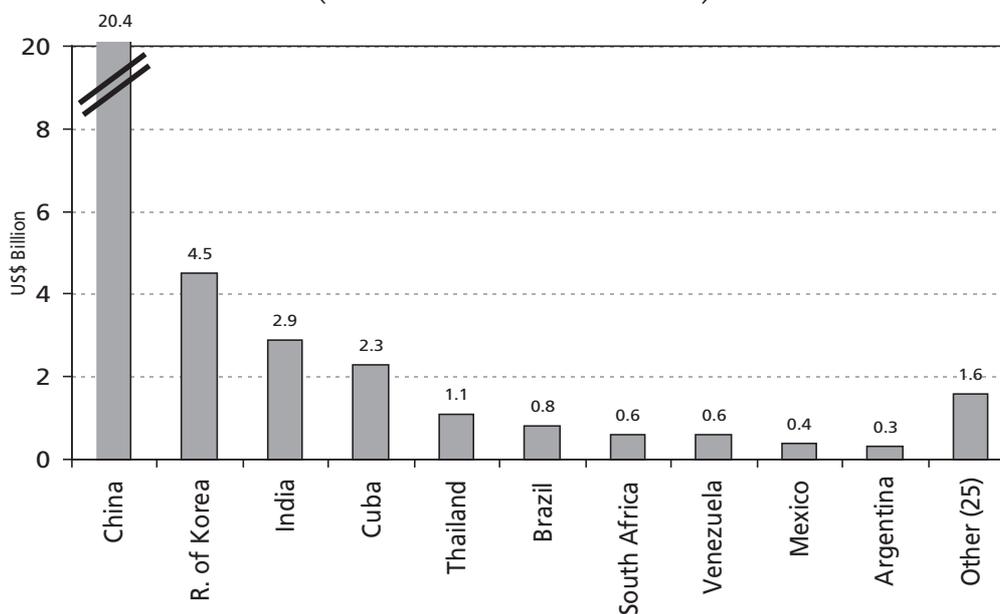
In absolute terms, China is the developing country that provides by far the most Green Box support (see Figure 3). According to a communication submitted by the Chinese government to the WTO Working Party on the Accession of China,⁶ Green Box support totalled US\$20.4 billion in 1998. The Republic of Korea, India, Cuba and Thailand are the only other developing countries that have provided more than US\$1 billion in Green Box support in the last year for which a domestic support notification is available. These five countries together account for close to 90 percent of all Green Box support notified by the 50 developing countries analysed in the present study.

Relative to the total value of agricultural production, Green Box support in China is less prevalent than in the Republic of Korea or Cuba. Figure 4 presents Green Box support relative to total agricultural production value for seven selected developing countries. Except for the Republic of Korea, in none of the seven developing countries does Green Box support exceed 10 percent of the value of agricultural production. In China, Israel and South Africa, Green Box expenditures represent between 5 and 10 percent of total agricultural production value. In Brazil, Tunisia and Bangladesh, the share is under 2 percent. By comparison, in developed countries such as Japan and the United States, Green Box support represents between 25 and 30 percent of total agricultural production value.



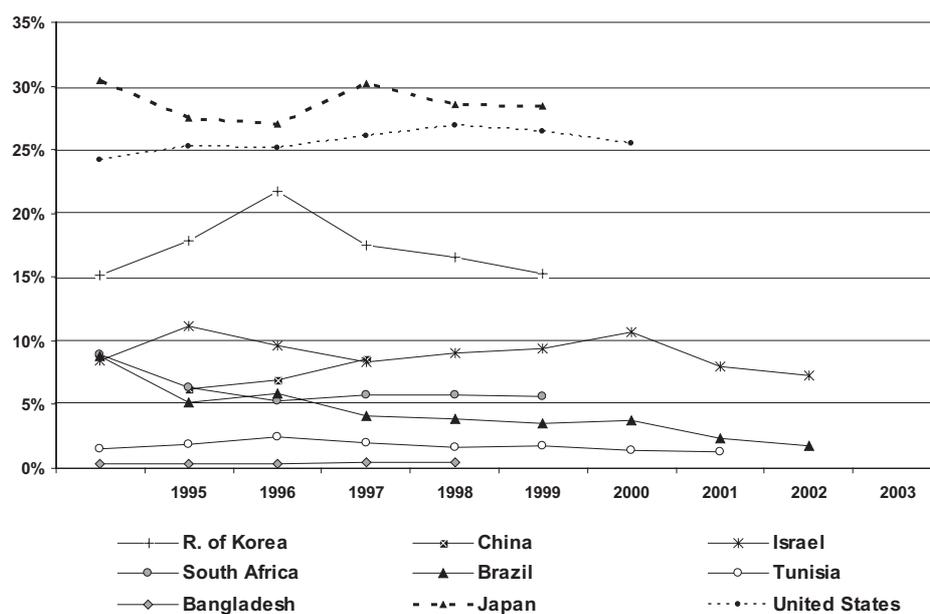
⁶ WTO Working Party on the Accession of China, *Communication from China*, WT/ACC/CHN/38/Rev.3 (19 July 2001).

FIGURE 3
Green Box Support in Developing Countries
(Most recent notification)



Source: Notifications submitted to the WTO Committee on Agriculture.

FIGURE 4
Green Box Support as a % of the Value of Agricultural Production
(Most recent notification)



Source: Author's calculations. Based on WTO and OECD data.

Most Green Box support in developing countries is provided in the form of general services, especially research, sanitary defence, education and training, extension and promotion, infrastructure, and government administration. Other important categories of Green Box support include public stockholding for food security purposes, domestic food aid, payments for relief from natural disasters, and structural adjustment assistance provided through investment aids. Figure 5 illustrates the composition of Green Box support in six selected developing countries.

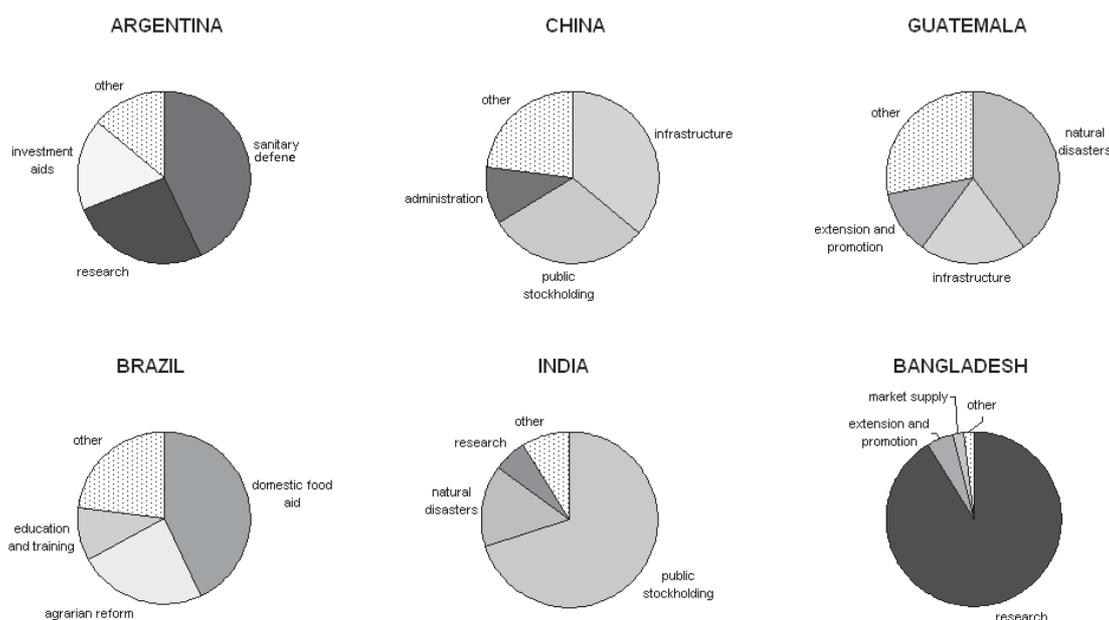
As an important meat exporter, Argentina spends a considerable share (43 percent) of its Green Box support on sanitary defence. Research (26 percent) and structural adjustment assistance through investment aids (17 percent) are Argentina's second and third most important categories of Green Box support. The composition of Green Box support in Paraguay and Uruguay - where meat also accounts for an important share of agricultural production and exports - is similar to that of Argentina. In these two countries, sanitary defence accounts for over 60 percent of total Green Box support, and research for between 12 and 14 percent.

In Brazil, domestic food aid and agrarian reform together account for over two-thirds of total Green Box support. Education and training account for an additional 10 percent. These figures indicate the strong social orientation of Brazilian Green Box policies.⁷ Cuba also devotes significant portions of its total Green Box support to domestic food aid (41 percent) and education and training (24 percent). In Venezuela, domestic food aid alone accounts for 88 percent of total Green Box spending.

In China, infrastructural services constitute the single most important category of Green Box support (36 percent of total expenditures). Similar situations are found in Honduras (31 percent), Chile (32 percent) and the Dominican Republic (36 percent). Even higher shares of total Green Box spending are geared towards infrastructural services in Colombia (45 percent), Guyana (49 percent), the Republic of Korea (51 percent), the Philippines (60 percent), Georgia (61 percent), and Thailand (68 percent).

⁷ Nonetheless, Brazilian expenditures on research and infrastructure have fallen significantly in 1995-2003. While the two categories represented between 25 and 30 percent of total Green Box support in the second half of the 1990s, they accounted for only 12 percent in 2003. This is of significant concern given that total Green Box support has fallen from US\$4.9 billion in 1995 to US\$820 million in 2003. Green Box support as a percentage of agricultural production value has fallen from 9 percent to less than 2 percent in the same period.

FIGURE 5
Composition of Green Box Support in Selected Developing Countries
 (Most recent notification)



Source: Author's calculations. Based on notifications submitted to the WTO Committee on Agriculture.

China also allocates an important share (30 percent) of its Green Box spending to public stockholding for food security purposes. This type of support is even more prevalent in India, where it accounts for 70 percent of all Green Box support. The only other developing countries analysed in this study to notify support for public stockholding were the Philippines (10 percent of its total Green Box spending), Indonesia (7 percent), Israel (6 percent), the Republic of Korea (2 percent) and Brazil (0.7 percent).

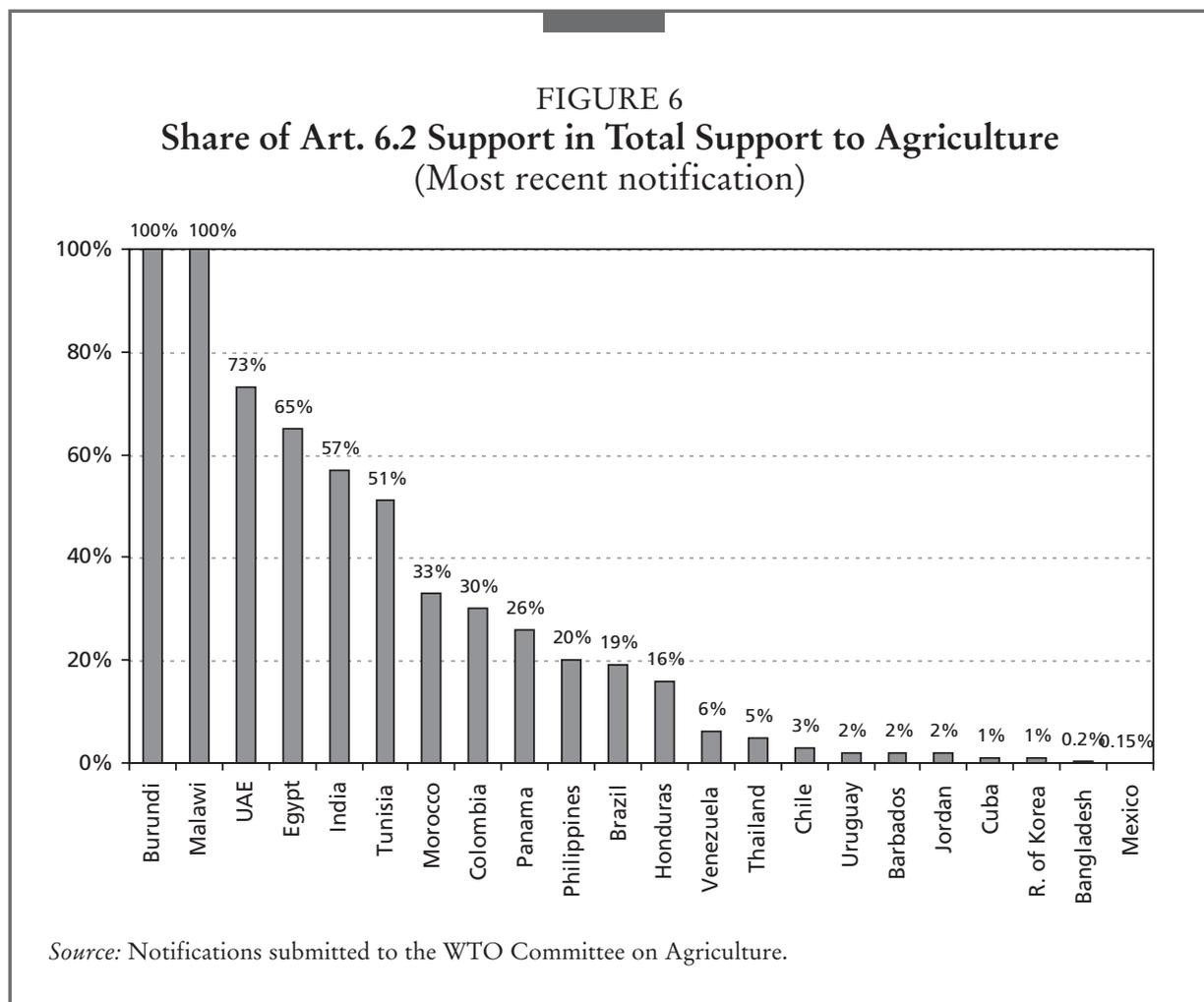
Approximately 40 percent of Guatemala's Green Box support comprises payments for relief from natural disasters. This is not surprising given that the country is situated in a region prone to earthquakes and hurricanes. India also destines a significant share (15 percent) of its Green Box spending to cover relief from natural calamities.

Finally, the vast majority (91 percent) of Bangladesh's scarce Green Box support is channelled through research services. A similar case is found in Trinidad & Tobago (82 percent).

Article 6.2

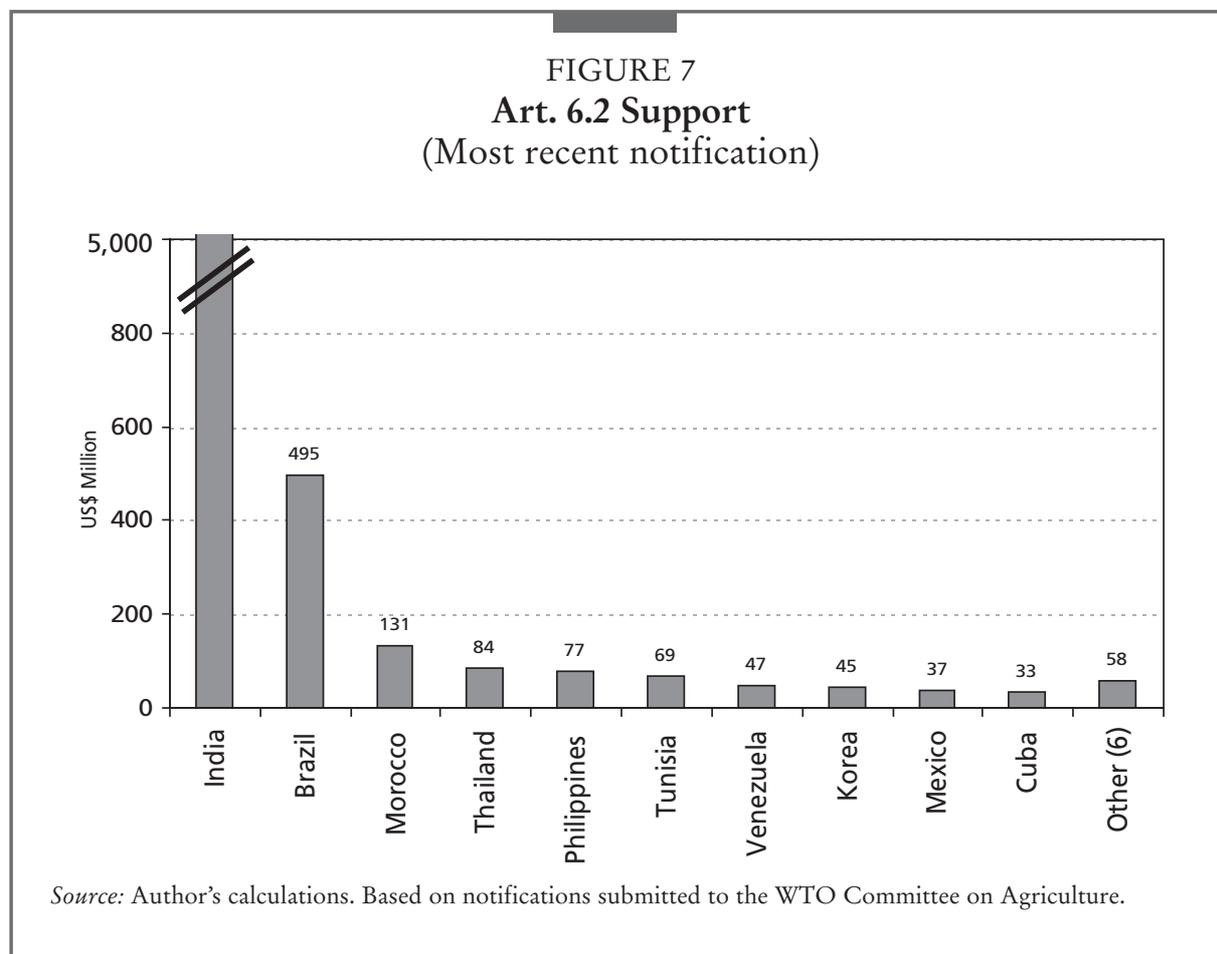
Taking into account the last year for which notifications are available, the agricultural and rural development measures described in Article 6.2 of the Uruguay Round Agreement on Agriculture (URAA) accounted for 16 percent of the total support notified by the average developing country (see Figure 2).⁸ This makes Article 6.2 programmes the second most important type of support for developing countries.

Figure 6 presents the share of Article 6.2 support in total support to agriculture in every one of the 22 countries that notified Article 6.2 support in their most recent notifications. Shares vary significantly between countries, from 0.15 percent in Mexico to 100 percent in Burundi and Malawi.



⁸ If the analysis is extended to the entire 1995-2005 period, the share of Article 6.2 support in the total support notified by the average developing country is 17 percent.

In absolute terms, India is the country that provides by far the most Article 6.2 support (see Figure 7). In 1997, India's Article 6.2 support totalled US\$5.2 billion. Brazil comes in a distant second place, with US\$495 million notified in 2003. The other 20 countries notified a combined total of US\$579 million.

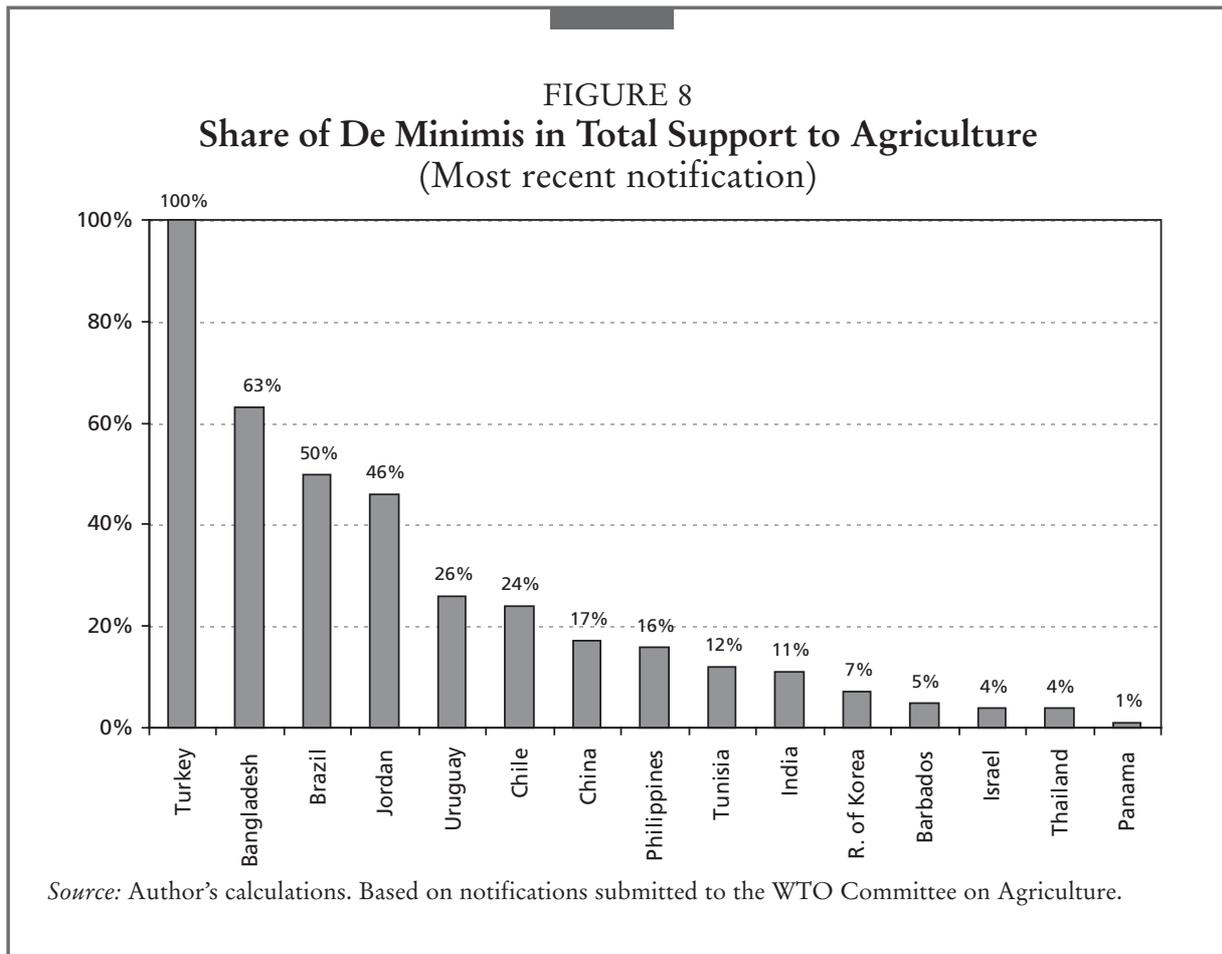


Of the three types of Article 6.2 support, input subsidies generally available to low-income and resource-poor producers are the most prevalent in five countries: Cuba, Egypt and Thailand (100 percent of total Article 6.2 support), the Republic of Korea (85 percent), and India (78 percent). Investment subsidies generally available to agriculture are dominant in the other 17 countries with Article 6.2 programmes. Support to encourage diversification from growing illicit crops was only notified by Colombia, and only in 1995-2001. In its two most recent notifications (2002 and 2003), Colombia did not notify support under this category.

De minimis

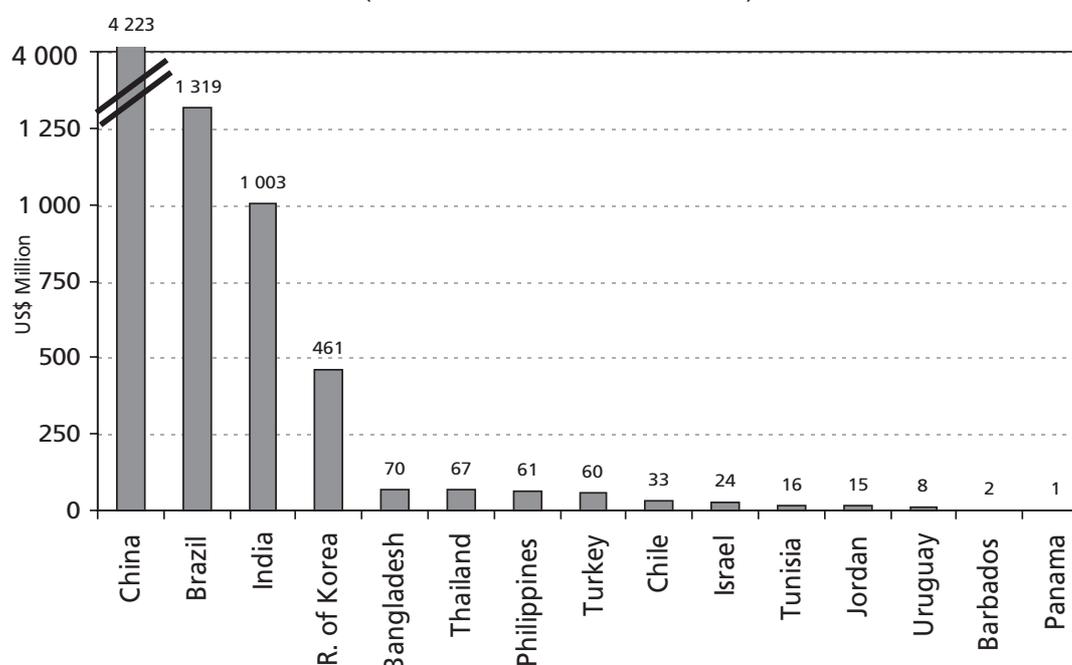
De minimis support represents 10 percent of total notified support in the average developing country (see Figure 2). Only 16 of the 50 developing countries analysed in this study provided *de minimis* support in the last year for which a notification is available. Except for three South Asian countries (Bangladesh, India, and Pakistan), they are all middle-income or high-income developing countries.

As was the case with Green Box and Article 6.2 support, the share of *de minimis* in total support varies widely between countries, from one percent in Panama to 100 percent in Turkey (see Figure 8). In absolute terms, only four countries notified substantial amounts of *de minimis* support: China, Brazil, India and the Republic of Korea (see Figure 9). In all four countries, non-product-specific support accounted for over 80 percent of total *de minimis* support.⁹



⁹ The same was true in Chile, Pakistan and Uruguay. In Barbados, Panama, the Philippines, Thailand, Tunisia and Turkey, 100 percent of *de minimis* support was product-specific. In Jordan, Israel and Bangladesh, product-specific support accounted for respectively 72, 70 and 43 percent of total *de minimis* support.

FIGURE 9
De Minimis Support in Developing Countries
(Most recent notification)



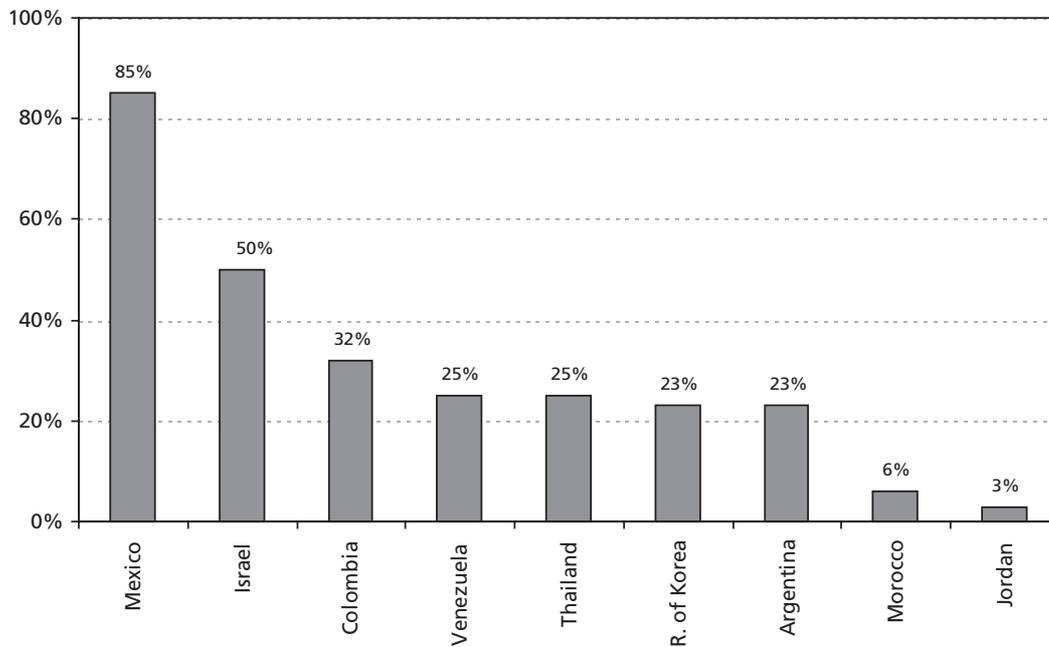
Source: Notifications submitted to the WTO Committee on Agriculture.

Aggregate Measure of Support (AMS)

The most trade-distorting form of domestic support is the least commonly used by developing countries. AMS support represents only 7 percent of total domestic support to agriculture in the average developing country (see Figure 2). Only nine out of the 50 developing countries analysed in this study notified AMS support in their most recent notifications. They are all middle-income or high-income developing countries.

AMS accounts for a very significant share of total domestic support in Mexico and Israel. In contrast, it has only a marginal role in Morocco or Jordan. In Colombia, Venezuela, Thailand, the Republic of Korea and Argentina, AMS accounts for a modest share of total support (see Figure 10).

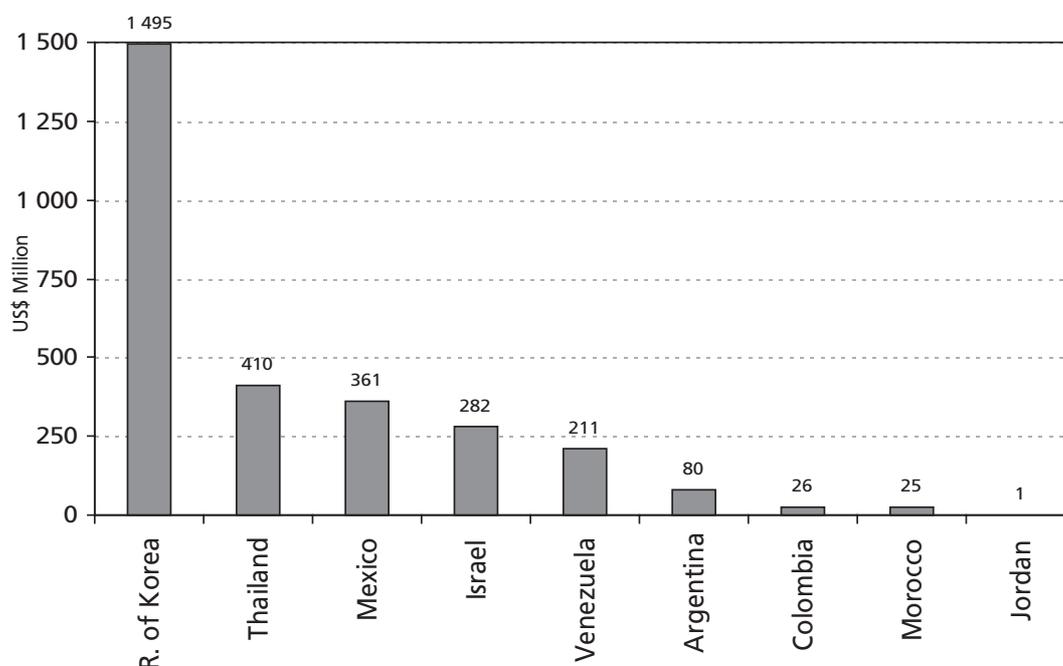
FIGURE 10
Share of AMS in Total Support to Agriculture
(Most recent notification)



Source: Author's calculations. Based on notifications submitted to the WTO Committee on Agriculture.

Just one country - the Republic of Korea - accounts for more than 50 percent of total AMS support in the 50 countries examined (see Figure 11). AMS support is also highly concentrated on a few products. Over 97 percent of Korean AMS is connected with support to rice. In Thailand, rice accounts for 79 percent of AMS support, with manioc and coffee accounting for the remainder. In Venezuela, AMS is due exclusively to maize; in Argentina, to tobacco. In Mexico, most of the notified AMS is due to maize; in Colombia, to coffee. In Israel, AMS is split between milk and eggs.

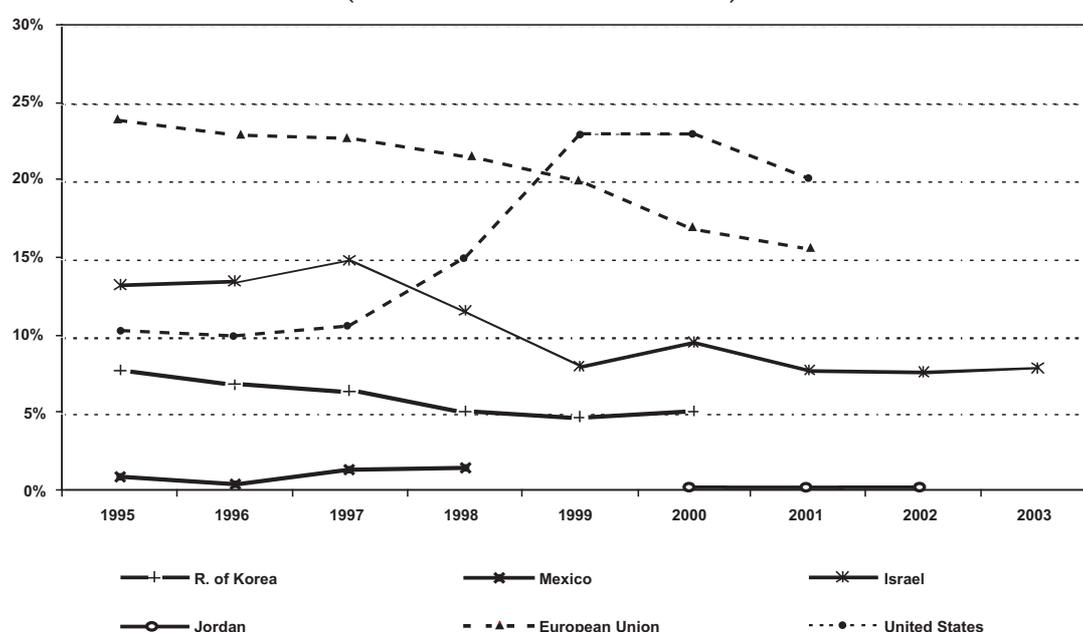
FIGURE 11
AMS in Developing Countries
(Most recent notification)



Source: Notifications submitted to the WTO Committee on Agriculture.

When compared with the total value of production, AMS in developing countries is substantially less prevalent than in the United States and the European Union (see Figure 12). There is also a significant difference between high-income developing countries (Republic of Korea and Israel) and other developing countries (Mexico and Jordan). While AMS represents between 5 and 10 percent of the value of agricultural production in the former, it corresponds to less than 1.5 percent in the latter.

FIGURE 12
AMS Support as a % of the Value of Agricultural Production:
Selected Countries
(Most recent notification)



Source: Author's calculations. Based on WTO and OECD data.

Blue Box

No WTO developing country member has notified Blue Box support in the 1995-2005 period.

3. Doha Round: what has been already agreed

The 2005 Hong Kong Ministerial Declaration and the 2004 Framework Agreement contain significant provisions regarding domestic support reform efforts in developing countries. While some important issues remain unaddressed, the two documents provide a good starting point to understand the potential effects of the Doha Round on developing countries' domestic support commitments.

3.1 Hong Kong Ministerial Declaration

In the Hong Kong Ministerial Declaration,¹⁰ adopted on 18 December 2005, WTO member countries agreed that: (i) developing countries with no AMS commitments will be exempt from reductions in *de minimis* and the overall cut in trade-distorting domestic support, (ii) developing countries with AMS commitments will undertake reduction commitments for AMS and overall trade-distorting domestic support, and

¹⁰ WTO, *Doha Work Programme – Ministerial Declaration* (WT/MIN(05)/DEC, 22 December 2005).

(iii) Green Box criteria will be reviewed to ensure that programmes of developing countries that cause not more than minimal trade-distortion are effectively covered. These provisions and their potential impact on developing countries are analysed below.

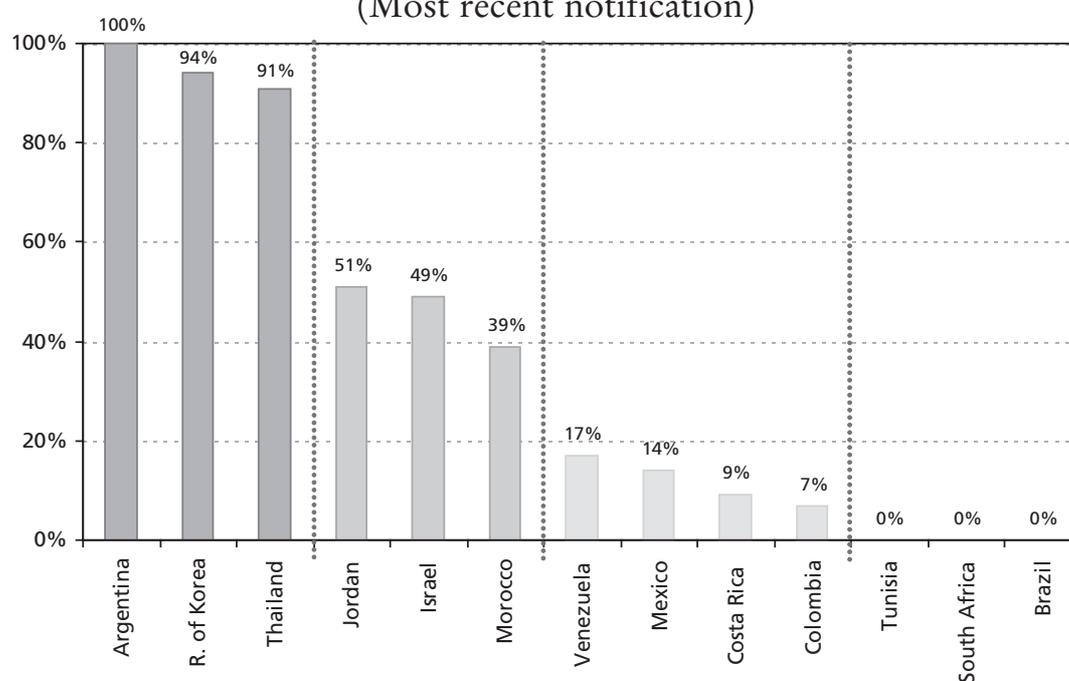
Developing countries with no AMS commitments will not have to undertake reduction commitments in de minimis and overall trade-distorting support

This is arguably the most important provision concerning domestic support in the developing world. It exempts 94 of the 111 WTO developing country members from undertaking reduction commitments for *de minimis* and overall trade-distorting domestic support in the Doha Round. This includes large developing countries such as China, India, Indonesia and Pakistan. For these countries, *de minimis* commitments will remain at the levels established in the URAA or the respective accession agreement, namely 8.5 percent of the value of production for China and 10 percent of the value of production for the remaining developing countries without AMS commitments.

Developing countries with AMS commitments will undertake reduction commitments in AMS and overall trade-distorting domestic support

Only 17 developing countries have AMS commitments and will therefore be affected by this provision (namely: Argentina, Brazil, Chinese Taipei, Colombia, Costa Rica, Israel, Jordan, Republic of Korea, Macedonia, Mexico, Moldova, Morocco, Papua New Guinea, South Africa, Thailand, Tunisia and Venezuela). Figure 13 compares notified AMS support with AMS commitment levels in 13 developing countries. Cuts on AMS commitment levels will require different degrees of adjustment from these countries. Four distinct scenarios are identified.

FIGURE 13
Notified AMS as a % of AMS Commitment Levels:
Four Cases among Developing Countries
(Most recent notification)



Source: Notifications submitted to the WTO Committee on Agriculture. Notifications are not available for four developing countries with AMS commitments (Chinese Taipei, Macedonia, Moldova and Papua New Guinea).

According to the most recent domestic support notifications submitted to the WTO, three countries that have AMS commitments (Brazil, South Africa and Tunisia) do not provide AMS support. For this first group of countries, it should be relatively easy to implement cuts in AMS spending limits. Nonetheless, these countries will be making a concession in terms of reducing the amount of AMS support that they would be authorized to provide if they decided to do so in the future.

A second group is comprised of four Latin American countries (Colombia, Costa Rica, Mexico and Venezuela) that do provide AMS support, but which are using less than 20 percent of their AMS entitlements. Given the substantial difference between bound and applied levels of support, it should be relatively easy for these countries to undertake cuts in AMS. However, implementation would be considerably more troublesome if very strict product-specific caps were established for developing countries.

The third group contains three countries (Israel, Jordan and Morocco) that are using around 40 to 50 percent of their AMS entitlements. They would be forced to reduce applied levels of support only if the AMS reduction coefficient for developed countries was set at 90 percent or higher. In this case, the two-thirds proportionality rule would require a 60 percent cut from developing countries. It is unlikely that the Doha Round will produce such an outcome.

Finally, the fourth group contains the three developing countries (Argentina, Republic of Korea and Thailand) that are the most vulnerable to cuts in AMS. According to their most recent notifications, these countries are using between 90 and 100 percent of their AMS entitlements. They will invariably have to reduce AMS spending in the Doha Round. Given that AMS support in these countries is highly concentrated in a few products, they are also likely to be vulnerable to product-specific caps.

Four other developing countries with AMS commitments (Chinese Taipei, Macedonia, Moldova and Papua New Guinea) have not submitted notifications to the WTO. Therefore, it is not possible to indicate the status of their domestic support programs. Three of these countries are newly-acceded countries (Moldova joined the WTO in 2001; Chinese Taipei, in 2002; Macedonia, in 2003). Therefore, they may benefit from some type of additional special and differential treatment.¹¹

Green Box criteria will be reviewed to ensure that programmes of developing countries that cause not more than minimal trade-distortion are effectively covered

The objective of this provision is to make the Green Box more user-friendly for developing countries. The G-20 believes that several provisions of the Green Box, as currently stated in the URAA, reflect the nature of agricultural programmes administered by developed countries. "Developing countries may not necessarily be able to cover their programmes under such provisions."¹² Therefore, the group argues that Green Box provisions may require modifications and clarifications in order to take into account the special circumstances prevailing in developing countries.

The fundamental requirement that Green Box measures have no, or at most minimal, trade-distorting effects or effects on production will remain unchanged. As will the basic criteria that the support be provided through a publicly-funded government programme (not involving transfers from consumers) and refrain from providing price support to producers.

The review of Green Box criteria should grant some additional legal security to developing countries regarding agricultural programmes that are not cited in the illustrative lists of Annex 2 of the URAA. Lists should be expanded to include policies that are in use by developing countries. For example, the G-20 calls for the inclusion of an eighth category of general services in Paragraph 2 of Annex 2, which would cover "agrarian, land and institutional reform, and any other programmes related to food and livelihood security and rural development, in developing country members, including services related to such reform and other programmes."¹³ This type of support is already explicitly covered by the caput of Paragraph 2, which deals with programmes that provide general services or benefits to agriculture or the rural community. So much so that Brazil has notified support to agrarian reform under the Green Box for every single year between 1995 and 2003.

¹¹ Proposals calling for special treatment for recently-acceded countries have been made and discussed. However, no specific flexibility provisions have commanded consensus. WTO, *Report by the Chairman of the Special Session of the Committee on Agriculture to the TNC* (WT/MIN(05)/DEC, Annex A, 22 December 2005), A-7.

¹² G-20, *Review and Clarification of Green Box Criteria* (02 June 2005), 2.

¹³ *Ibid.*, 5.

Making implicit reference to programmes such as agrarian reform makes the URAA more development-oriented and protects developing countries from potential challenges. In principle, developing country members have nothing to lose. Nevertheless, developed countries might see the revision of criteria as a concession that will have a cost. Furthermore, the review of the Green Box to ensure that developing country programmes are effectively covered may detract attention from another urgently-needed review to ensure that developed country programmes classified in the Green Box truly cause no or minimal production and trade distortions.

3.2 Framework Agreement

Additionally, the Framework for Establishing Modalities in Agriculture,¹⁴ adopted by the WTO General Council on 1 August 2004, contained the following provisions on domestic support for developing countries:

Longer implementation periods and lower reduction coefficients for all types of trade-distorting domestic support

Paragraph 6 of the Framework enshrined the traditional form of special and differential treatment for developing countries. This provision will actually only be used by the 17 developing country members that have AMS commitments - the only ones required to undertake domestic support reduction commitments in accordance with the Hong Kong Ministerial Declaration. It is still unclear if this special and differential treatment will apply to the cap on Blue Box spending.

Continued access to the provisions under Article 6.2

Paragraph 6 of the Framework also ensures the continued access of developing countries to the exemptions from domestic support reduction commitments for the agricultural and rural development programmes contained in Article 6.2 of the URAA. This provision is important because Article 6.2 support is the second most common type of support provided by the average developing country. It is especially important in India, where input subsidies generally available to low-income or resource-poor producers and investment subsidies generally available to agriculture accounted for 57 percent of total notified domestic support in the last year for which a notification is available (marketing year 1997-1998).

Developing countries that allocate almost all de minimis support for subsistence and resource-poor farmers will be exempt from reductions in de minimis

This provision must now be read in conjunction with the provision in the Hong Kong Ministerial Declaration that exempts developing countries with no AMS commitments from undertaking reduction commitments in *de minimis* support. As it was seen above, the overwhelming majority of developing countries do not have AMS commitments and are already exempt from undertaking reductions in *de minimis* support. Therefore, the exemption for developing countries that allocate

¹⁴ WTO, *Framework for Establishing Modalities in Agriculture* (WT/L/579, Annex A, 1 August 2004).

almost all *de minimis* support for subsistence and resource-poor farmers could only have meaning for the 17 developing countries that do have AMS commitments. However, according to the most recent domestic support notifications of these countries, only six of them provide *de minimis* support: Brazil, Israel, Jordan, the Republic of Korea, Thailand and Tunisia.¹⁵ In order to benefit from this exemption, countries would have to prove that “almost all” *de minimis* support is allocated to subsistence and resource-poor farmers. In conclusion, this provision has an extremely limited - if not nonexistent - scope of application.

Least-developed countries will not have to undertake any reduction commitments

This provision has lost its *raison d'être* in the domestic support pillar of the negotiations for three reasons. First, because no single LDC has AMS commitments. Second, because of the 33 LDC members of the WTO,¹⁶ only Bangladesh has ever notified *de minimis* support. Because it has no AMS commitments, Bangladesh is also exempt from reducing *de minimis* support. Finally, the four other LDCs that have ever notified domestic support to agriculture (Burundi, Gambia, Malawi and Zambia) have only made use of types of support that are already exempt from reduction commitments: Green Box and Article 6.2 support.

The domestic support provisions already agreed in the 2005 Hong Kong Ministerial Declaration and the 2004 Framework Agreement, combined with the domestic support notifications submitted to the Committee on Agriculture, indicate that, except for a small number of middle- and high-income developing countries, no other developing country should have its ability to support agriculture further constrained by the ongoing WTO negotiations. Nevertheless, the exact outcome of the Doha Round will depend on both the treatment of issues that remain unresolved in the negotiating process and on the type of agriculture that developing countries envisage for their future.

4. Ways forward

4.1 What needs to be negotiated

Significant issues still remain open regarding developing countries' domestic support commitments in the Doha Round. The most critical are:

1. the reduction coefficient for AMS;
2. the reduction coefficient for overall trade-distorting domestic support;
3. whether developing countries with AMS commitments will have to apply a separate cut to *de minimis* support (in addition to the cut that may result from the cut on overall trade-distorting domestic support);

¹⁵ The other 11 developing countries with AMS support either did not provide *de minimis* support in their most recent notification (Argentina, Colombia, Costa Rica, Mexico, Morocco, South Africa and Venezuela) or have not yet submitted domestic support notifications to the WTO (Chinese Taipei, Macedonia, Moldova and Papua New Guinea).

¹⁶ Annex B presents a list of the least-developed country members of the WTO.

4. whether product-specific AMS caps will apply to developing countries, and, if affirmative, which methodology and base period will be used;
5. whether the 20 percent down payment in overall trade-distorting domestic support will apply to developing countries;
6. which Green Box provisions will be revised and how; and
7. the length of the implementation period.

4.2 Policy space for domestic support in developing countries

While most developing countries will be exempt from domestic support reduction commitments in the Doha Round, the outcome of the negotiations for some developing countries will depend on the treatment provided to the issues listed above. Policy space for agricultural domestic support should remain unchanged for countries that do not have AMS commitments, but will most likely be constrained for countries that do have AMS commitments. The impact of this loss of policy flexibility will vary from country to country, and will depend on both the current status of domestic policies and expectations for future support to agriculture.

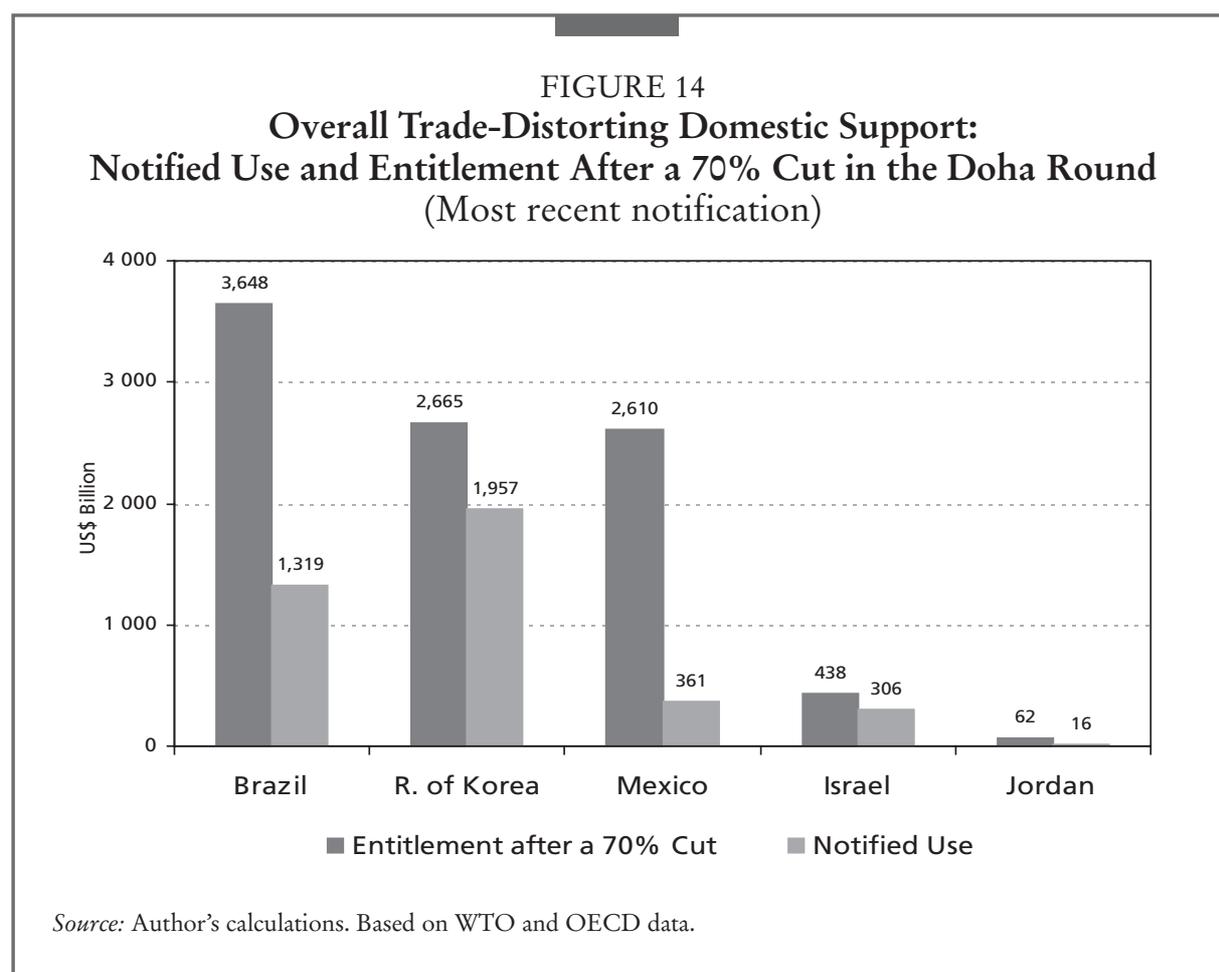
Developing countries that do not have AMS commitments will not have their policy space for agricultural domestic support reduced by the Doha Round. These countries will continue to have access to three types of support which they have provided since the establishment of the WTO: Green Box, Article 6.2 and *de minimis*. While the provisions on Article 6.2 and *de minimis* support should remain unchanged for these countries, the review envisaged for the Green Box should make it better tailored to meet the realities of developing country agriculture.¹⁷ Therefore, access to this type of support may be encouraged by the ongoing negotiations.

Developing countries that have AMS commitments will have to undertake reduction commitments on AMS and overall trade - distorting domestic support. According to the Hong Kong Ministerial Declaration, developing country members will be placed in the lowest of three bands for both cuts. Although reduction coefficients have not yet been agreed, post-July 2005 proposals for cuts in the bottom band of the tiered formula for AMS have varied from 37 to 60 percent. The most aggressive proposal (60 percent cut) would reduce policy flexibility for five of the 13 developing countries with notified AMS support (Argentina, Republic of Korea, Thailand, Jordan and Israel), and would leave one country (Morocco) barely untouched. The least aggressive proposal (37 percent cut) would only affect three countries (Argentina, Republic of Korea and Thailand). As indicated in section 2.2.4., developing countries will have their policy flexibility further restricted if they are required to implement product-specific caps in AMS support.

Proposals for cuts in the bottom band of the tiered formula for overall trade-distorting domestic support have varied between 31 and 70 percent. To accurately simulate the results of such cuts, data on total agricultural production value are needed. Official data were only obtained for Brazil, Israel, Jordan, the Republic of Korea and

¹⁷ WTO, *Report by the Chairman of the Special Session of the Committee on Agriculture to the TNC* (WT/MIN(05)/DEC, Annex A, 22 December 2005), A-4.

Mexico. Even the most aggressive proposal (70 percent cut) would have no effect on current domestic support as notified by these five developing countries (see Figure 14). Therefore, no additional cut on AMS, *de minimis* or the Blue Box would be necessary. This is because the starting point for the cut on overall trade-distorting support in developing countries consists of AMS commitments plus 25 percent of the value of total agricultural production (10 percent for product-specific *de minimis*, 10 percent for non-product-specific *de minimis*, and 5 percent for the “new” Blue Box).



Developing countries with AMS commitments may also have to cut *de minimis*. Such reduction in *de minimis* would represent a major concession by developing countries. This is especially true for product-specific support and for countries that provide a large share of their total support under the *de minimis* provision. In the long run, a reduction in the threshold level for *de minimis* support could significantly reduce future policy flexibility for developing countries. While AMS commitments are set in nominal terms and tend to correspond to decreasing shares of total agricultural production value over the years, the *de minimis* exemption is a dynamic provision that indirectly accounts for factors such as inflation and increased value of agricultural production.

Developed countries are pushing for *de minimis* cuts in developing countries with AMS commitments. The level of 8.5 percent of the total value of agricultural production, which was the *de minimis* level established for China upon accession to the WTO in 2001, is a figure envisaged as a target for the final *de minimis* for developing countries. The adoption of a lower *de minimis* threshold would adversely impact countries where product-specific support as a percentage of the production value of a given product is close to the 10 percent threshold level. This was the case for garlic and maize in Thailand (9.83 and 9.33 percent of the value of production in 2001 respectively), and beef in the Republic of Korea (9.28 percent of the value of production in 1997). If the *de minimis* threshold level had been established at 8.5 percent of the production value (instead of 10 percent), support for garlic and maize in Thailand and beef in the Republic of Korea would have counted towards Total Current AMS and would have resulted in the violation of these countries' AMS commitment levels in 2001 and 1997 respectively.

The potential outcome of the Doha Round for developing countries in terms of their own domestic support commitments provides a mixed picture. For 85 percent of all developing country members, including large countries such as China, India and Indonesia, no flexibility will be lost in terms of Green Box, Article 6.2 and *de minimis* support. While the review of Green Box criteria may make it more development-friendly, the expansion of the Blue Box will not serve the interests of developing countries. For the 17 developing countries that have AMS commitments, the required reduction in the levels of such commitments may be accompanied by the introduction of AMS product-specific caps and reductions in *de minimis*. Depending on these countries' current record on domestic support and on their envisaged development needs, the new disciplines established in the Doha Round will require different degrees of adjustment efforts.

Developing countries are not the source of most trade-distorting domestic support among WTO members. In fact, they suffer significantly from the drastic effects of subsidies applied in the developed world. The developing country contribution to the reform process in the domestic support pillar should reflect both this reality and need for special and differential treatment to address their development concerns. However, even more important is that developed countries effectively reduce their applied levels of trade-distorting domestic support.

ANNEX A

DEVELOPING COUNTRY MEMBERS OF THE WTO (Total = 111)

Albania	Chile	Guatemala	Malawi	Papua New Guinea	Togo
Angola	China	Guinea	Malaysia	Paraguay	Trinidad & Tobago
Antigua & Barbuda	Colombia	Guinea-Bissau	Maldives	Peru	Tunisia
Argentina	Congo	Guyana	Mali	Philippines	Turkey
Armenia	Congo, Dem. R.	Haiti	Mauritania	Qatar	Uganda
Bahrain	Costa Rica	Honduras	Mauritius	Rwanda	United Arab Emirates
Bangladesh	Côte d'Ivoire	Hong Kong, China	Mexico	St Kitts & Nevis	Uruguay
Barbados	Cuba	India	Moldova	St Lucia	Venezuela
Belize	Djibouti	Indonesia	Mongolia	St Vincent & Grenadines	Zambia
Benin	Dominica	Israel	Morocco	Saudi Arabia	Zimbabwe
Bolivia	Dominican R.	Jamaica	Mozambique	Senegal	
Botswana	Ecuador	Jordan	Myanmar	Sierra Leone	
Brazil	Egypt	Kenya	Namibia	Singapore	PLUS:
Brunei Darussalam	El Salvador	Korea, R.	Nepal	Solomon Is.	South Africa ¹
Burkina Faso	Fiji	Kuwait	Nicaragua	Sri Lanka	
Burundi	Gabon	Kyrgyz R.	Niger	Suriname	
Cambodia	Gambia	Lesotho	Nigeria	Swaziland	NOT INCLUDING:
Cameroon	Georgia	Macao, China	Oman	Taipei, Chinese	Cyprus ²
Central African R.	Ghana	Macedonia, FYR	Pakistan	Tanzania, U.R.	Malta ²
Chad	Grenada	Madagascar	Panama	Thailand	Romania ³

¹ South Africa is seeking to be recognized as a developing country in the Doha Round.

² Cyprus and Malta are considered developed countries due to their entry into the EU.

³ Romania is considered a developed country due to the advanced stage of its EU entry negotiations.

ANNEX B

LEAST-DEVELOPED COUNTRY MEMBERS OF THE WTO (Total = 32)

Angola	Central African R.	Guinea-Bissau	Mali	Rwanda	Uganda
Bangladesh	Chad	Haiti	Mauritania	Senegal	Zambia
Benin	Congo, Dem. R.	Lesotho	Mozambique	Sierra Leone	
Burkina Faso	Djibouti	Madagascar	Myanmar	Solomon Is.	
Burundi	Gambia	Malawi	Nepal	Tanzania, U.R.	
Cambodia	Guinea	Maldives	Niger	Togo	

ANNEX C

DEVELOPED COUNTRY MEMBERS OF THE WTO (Total = 37)⁴

Australia	New Zealand	Czech R.	Hungary	Poland	PLUS:
Bulgaria	Norway	Denmark	Ireland	Portugal	Cyprus ¹
Canada	Switzerland	Estonia	Italy	Slovenia	Malta ¹
Croatia	United States	Finland	Latvia	Slovak R.	Romania ²
Iceland	EU MEMBERS:	France	Lithuania	Spain	
Japan	Austria	Germany	Luxembourg	Sweden	NOT INCLUDING:
Liechtenstein	Belgium	Greece	Netherlands	United Kingdom	South Africa ³

¹ Cyprus and Malta are considered developed countries due to their entry into the EU.

² Romania is considered a developed country due to the advanced stage of its EU entry negotiations.

³ South Africa is seeking to be recognized as a developing country in the Doha Round.

⁴ The WTO has 38 developed members if the European Union is counted as a separate entity from its own member countries.

Roles and status of state supported trading enterprises in developing countries

Lamon Rutten

1. Introduction

In a recent informal expert consultation on export competition held at the Food and Agriculture Organization¹, it was suggested that the potentially positive roles that State-supported Trading Enterprises (STEs) can play in supporting developing country producers, given the incidence of both domestic and international market failures, could be put at risk in the attempt to discipline aspects of their status and actions.

While concerns on the trade-distorting effects of STEs have been expressed in various quarters in the WTO context the efforts towards reform have been spearheaded by the United States (Ingco and Ng, 2002). For example, in 2002, the US Trade Representative announced that “the United States will aggressively seek in the WTO:

- To end exclusive export rights to ensure private sector competition in markets controlled by "single desk", monopoly exporters;
- To eliminate the use of government funds or guarantees to support or ensure the financial viability of single desk exporters; and,
- To establish WTO requirements for notifying acquisition costs, export pricing, and other sales information for single desk exporters.” (Office of the United States Trade Representative, 2002)

This US policy is primarily in response to the operations of the Australian and Canadian Wheat Boards, which are seen as unfairly competing with US exporters. This paper will not discuss whether this response is justified or not. In any case, even if the US is fully successful in its efforts, the private sector and the institutional support systems for commodity trade (for logistics, financing, grading etc.) in Australia and Canada are well developed, and producers and (new) exporters in

¹ See FAO, 2005.

these countries will be able to adapt. Rather, this paper focuses on the agricultural sector STEs of developing countries, which even if they are not specifically targeted, may be negatively affected by broadly drawn measures in the framework of WTO negotiations. These countries' private sectors and trade institutions are much less developed, and without capacity- and institution-building support, and sufficient time to build up private sector capacity, they may suffer unnecessarily.

On thin evidence, State-supported Trading Enterprises (STEs) have at times been maligned for their role in distorting trade. Given their bundled roles and exclusive powers, and their multiple services as economic agents, public servants and managers of transition, the potential for trade distortion indeed exists. But is the existence of this potential enough of a reason to advocate the termination of these institutions? After all, they have not been created as a tool to distort international markets, but rather to respond to the necessities of internal markets. A meaningful assessment of what should be done with STEs in the context of the WTO negotiations is only possible in the light of their overall contributions to the sectors in which they are active, and the underlying factors which define their *raison d'être* and guide their heterogeneous activities. The objective of this paper on agricultural STEs of developing countries is to make such an assessment.

The broad position of this paper is that commodity trade should in principle be undertaken by private sector or cooperative organizations. As a rule state enterprises are overly exposed to non-commercial pressures - in terms of management, operational procedures, objectives etc. - and tend to have insufficient checks and balances, with the result that they become inefficient and act as a burden to the government. However, one should be realistic since commodity trade is complex, and, faced with a poorly developed institutional framework for trade, in many countries the private sector and cooperatives may not have the wherewithal to compete in the global market, or to provide sufficient security of supply to domestic consumers. Moreover, for countries with poorly developed quality control systems, it may be necessary to strictly regulate exports, to prevent irresponsible or poorly organized exporters from spoiling the country's reputation in international markets. Even if such regulation is delegated to a private sector association, the result may be a STE in the sense of GATT. If developed countries want developing countries to give up their STEs, but wish to avoid negative effects, they should seriously consider supporting the development of the capacities, institutions and infrastructure for trade in these countries.

This paper provides an overview of the prevalence of agricultural sector STEs in developing countries. It discusses the critical functions that they may perform, and examines whether STEs have a comparative advantage in performing these functions, and reviews the arguments for and against monopoly status of such STEs. For example, the extent to which enterprises with monopoly status can exert control on domestic markets (procurement) and international markets (sales), whether state supported trading enterprises and private operators could coexist in the absence of monopoly rights, and the consequences of the inability of state supported trading enterprises to coexist. On the basis of the review and arguments developed, it

draws conclusions with respect to the reform of STEs, as currently discussed in the framework of the WTO.

The legal definition of state trading enterprises or state supported trading enterprises (used interchangeably in this report and further referred as STEs) implies that they are entities who influence trade. STEs are essentially institutions in the agriculture markets that can perform multiple roles as economic agents, regulators, public policy conduits, industry development bodies, etc. It has been argued that their exclusive powers, influencing trade, make them vehicles of protectionism, often distorting trade. On the other hand their role in improving export competitiveness (which particularly developed country STEs have done with great effect) and as providers of critical infrastructure rendering important public services is also known. For instance, in Asia the public distribution system has contributed in reducing the percentage of under-nourished from almost 40 percent to 16 percent (FAO, 2004), while the procurement operations of state enterprises provided the market security necessary to enable farmers to adopt new crop technologies (Rashid, Cummings and Gulati, 2005).

In order to move the debate towards less politicized grounds, this paper seeks to understand the roles played by STEs in developing countries. Section 1 further describes what is meant with STEs and what key roles they can play. Section 2 provides an overview of the major STEs in developing countries, discussing their current status, economic and regulatory functions, and exclusive controls. The relevance of economies' food security position and the size of domestic markets is discussed, as are commodity-specific drivers of these STEs' functioning. Based on this discussion, section 3 explores the options that are before policy makers. To provide a better perspective, the experiences of some of the STEs in developed countries are described. The concluding section stresses the need for a phased transition, with market-based alternatives to the STEs' critical functions developed alongside any programme of reform of STEs.

2. State-supported trading enterprises

2.1 Meaning

Classifications of STEs have included criteria of ownership and scope of operations as well as the ability of an STE to impact trade through its monopolistic powers or otherwise. In practice they could be engaged in any part of the agriculture supply chain, engaging in activities like production, processing, domestic or foreign trade, directly or indirectly. In form they could be government agencies, statutory marketing boards, export marketing boards, regulatory marketing boards, fiscal monopolies, canalizing agencies, foreign trade enterprises, and boards and corporations resulting from nationalized agencies.

GATT defines STEs for the purpose of notifying the Council for Trade in Goods as "Governmental and non-governmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through

their purchases or sales the level or direction of imports or exports.”² Thus, STEs need not be state-owned, nor need they be monopolies. In recent years, several state-owned STEs have been restructured into cooperatives - and they may or may not lose their STE status in the process. One notable case in kind is New Zealand’s Fonterra, which replaced its Dairy Board, a STE. After this change, New Zealand did not notify Fonterra as a STE. Fonterra is the world’s largest dairy exporter, and accounts for virtually all of the country’s exports. But it does not have “exclusive rights” and according to the government, its management of European Community (EC), Japanese and United States (US) import quota is just for practical purposes - so this does not amount to special rights or privileges.³ WTO rules require notification every three years, and separate notifications of any change in status, but many members ignore this obligation. Even those who do notify may provide statistical data that are years out of date.⁴

Broader definitions have been proposed. For example, some have noted that the EC’s export tender system as well as the United States exports under the Export Enhancement Programme (EEP), food aid, and export credit guarantee programmes have a similar impact to state trading because, in these cases, decisions are made on a case-by-case basis (by the government) whether to export more or less, whether to influence the price, or in other ways to affect the terms of sale (Sorenson, 1991). However, this has remained a minority opinion. The WTO Working Party on State Trading Enterprises is currently trying to develop a more elaborated methodology to help governments determine whether a certain company is a STE or not.⁵

2.2 Significance of STEs in developing countries

The GATT definition of STEs focuses on their ability to influence the level or direction of imports or exports. The concern was two-fold: STEs’ exclusive rights can allow them to engage in non-competitive behaviour that contributes to trade distortions; and the lack of transparency in their pricing or operations can conceal violations of countries’ GATT obligations and commitments. Against this background, Article XVII of GATT required that contracting parties operate their STEs “in a manner consistent with the general principles of non-discriminatory treatment”, making purchases or sales based purely on commercial considerations and allowing other businesses to compete. It also introduced reporting requirements.

In developing countries, creating the ability to influence the level or direction of imports or exports played little or no role in the establishment of STEs. Rather, STEs were meant to remedy perceived or real market inefficiencies, in sectors

² Understanding on the Interpretation of Article XVII of the General Agreement on Tariffs and Trade, 1994.

³ In the Hong Kong WTO negotiations in December 2005, the EC Agricultural Trade Commissioner referred to Fonterra as a STE, but New Zealand denied that this was the case. Given the way that Fonterra has tied up New Zealand’s dairy producers (who, if they want to deliver to Fonterra, have to deliver all of their milk), there are question marks about the validity of the New Zealand position.

⁴ For further discussion on the definition of STEs under GATT/WTO see Xie, 2003.

⁵ The WTO website provides considerable information on STEs: see www.wto.org/english/tratop_e/statra_e/statra_e.htm.

deemed critical by the Government. If they influence the level or direction of trade, this is a secondary effect of their operations. While this does not imply that other countries need not be concerned about these STEs, it does imply that when trying to impose new disciplines on STEs, or arguing for their abolition, one needs to consider these STEs' primary functions. The major ones are the following:

1. Food security: targeted assistance in providing affordable food supplies through public distribution systems and welfare schemes are an important means of improving food security and living standards. The role of the public distribution system (PDS) in reducing poverty and malnutrition has been documented in the Asia-Pacific region. Another stabilizing function is the role STEs play in preparing for emergencies by stocking food reserves and intervening in times of crisis.
2. Food self-sufficiency: domestic procurement operations are used by STEs to incentivise production of crops critical for domestic security. Through input and market support many countries have been successful in achieving food sufficiency. As a secondary function, measures in sustaining producer income also provide an impetus for higher investment in agriculture.
3. Market functions: through a framework of institutions and policies, STEs constitute a cornerstone of the agro-industry. By engaging in domestic procurement, they can provide a ready market and price for producers. As aggregators achieving economies of scale in trading operations, improving terms of trade, and fulfilling international commitments on quantity, price, and credit requirements they can lead export competitiveness - as large entities, they can afford to invest in market expertise, can negotiate better prices, more competitively-priced loans, better freight rates, and longer-term forward contracts. They have the means to set up robust agricultural infrastructure facilities for warehousing, scientific preservation, grading, weighing, transportation, distribution, etc. In all these cases, they have an unbiased reach (indeed, those with procurement operations often are obliged to have a pan-regional presence, buying even in remote areas), which in turn is an important means for ensuring accessibility to marginalized participants.

In all these cases, the relevance of these functions is hard to criticize. However, there is a large scope for exploring modalities. STEs may provide these functions at a cost higher than that of alternative arrangements, and some of their operations may have counterproductive effects, in particular by weakening the private sector. For example, STEs that try to stabilize food prices for consumers across the year discourage private-sector food storage; and stabilizing food prices across the country creates major disincentives for private food sellers in remote areas. But in any case, merely abolishing a STE will not automatically lead to another (private) entity filling the gap. After describing in more detail in section 2 what STEs in developing countries do, section 3 discusses policy options that do not “throw out the baby with the bath water”.

3. Overview of major STEs in developing countries

This section presents an overview of the major STEs in developing countries, providing information on (i) their economic and policy functions, and the special privileges granted to the STEs; and (ii) the significance of the STE. For the purpose of this study, the major agricultural STEs of developing countries which were reported to the WTO, as well as those of Vietnam and Kazakhstan (which at time of writing were not yet WTO members), and a few other significant STEs of WTO-member countries which were not reported are considered.

3.1 China: COFCO - National Cereals, Oil and Foodstuff Import and Export Co (rice)

Overview: COFCO has in recent years transformed itself from a trade-only company into a transnational conglomerate covering grain purchasing, processing and marketing. “COFCO Grain & Oil” is the subsidiary engaged in policy-related trading of grain (rice, wheat, maize), oil and sugar. As China’s largest trading company of agricultural commodities it is engaged as a government-licensed agency for state trading.

Economic activities: procurement (from domestic traders and cooperatives), processing, exports and imports.

Policy functions: policy counsel for the government on agricultural issues.

Special privileges: sole STE designated to import grains (rice, wheat and maize).

Significance of STE: China is the world’s largest rice consumer, with 60 percent of its population or more than 700 million people living on rice as their staple food (Xubo, 2004). Self-sufficiency is an established policy and the government has been successful in this regard. In 2002, imports by COFCO comprised only 8.4 percent and 1 percent of the total production of maize and rice respectively (WTO notification, 2003), and in many years China is a net grain exporter. COFCO works more like an agent in the institutional network of marketing organizations. As the conduit of the trade policy, it has, to a large extent, control over grain stocks, domestic marketing, and the mechanisms to manage grain imports and exports; all this traditionally determined the level and direction of its foreign grain trade (Crook, 1999). A corollary to this achievement of self-sufficiency has been China’s emergence as a top five rice exporter. COFCO, with the flexibility it has in its domestic operations and its growing investments in state-of-the-art rice processing plants, is well-positioned to respond to international demand. On the other hand, its role in world grain markets is not so large that it can exercise much influence.

Another state-owned entity, the Jilin Grain Group Import and Export Co., is the only other licensed exporter of grains (rice and maize), but it is not notified as an STE to WTO.

3.2 India: FCI - Food Corporation of India (foodgrains)⁶

Overview: FCI is the major agricultural STE in India. In 2001, India notified the WTO of 11 agricultural import STEs, and three agricultural export STEs, and it was estimated that about 40 percent of agricultural GDP was accounted for by these STEs (McCorriston and MacLaren, 2006). FCI is structured as a Public Service Undertaking under the administrative control of the Federal Government's Department of Public Distribution. It was set up under the Food Corporation Act 1964.

Economic activities: procurement both from the rice mills and directly from the farmers; distribution of the grains in deficit areas. In doing so it undertakes the storage and transportation of grains.

Policy functions: guaranteeing procurement prices for a certain amount of the production; managing the targeted Public Distribution System (PDS); maintaining the country's buffer stock for foodgrains; market intervention for price stabilisation.

Special privileges: import of some commodities (wheat, coarse grains, basmati rice⁷) is permitted (though on commercial considerations) only through FCI. Exports are free except in the cases of rice in husk, which requires a licence, and basmati rice which requires the registration of the contract. The Government of India provides funds to FCI to meet the cost of fixed assets like offices, godowns (warehouses), silos, railway sidings and weighbridges. Working capital is provided under a revolving facility by a consortium of 44 banks at the maximum lending rates prescribed by the Central Bank. Private enterprises exist for domestic and international trade.

Significance of STE: with grain production concentrated in a few states, some government intervention is required to ensure the availability of grains at reasonable prices in remote areas. Over 12 000 FCI collection centres assure that the farmer does not have to travel more than 10 km to sell his grains. Given India's self-sufficiency in grains, FCI has only limited participation in international trade. Restrictions over imports are seen as a tool to control supplies and in this way, ensure a fair return for the over 85 million small and marginal farmers. The FCI's assured procurement⁸ accounts for only 15-20 percent of India's wheat production and 12-15 percent of rice production, and all of it serves to meet the commitments of PDS and buffer stocks (it is not sold on the "commercial" market). Moreover, the FCI's price works only as a floor price as farmers are permitted to sell in the open market. About ten states (in India, agricultural policy is a state responsibility, not a federal one) have initiated agricultural reforms, including legal and administrative action, permitting "direct marketing" and "contract farming".

⁶ Wheat, rice and coarse grains. Rice and wheat comprise roughly 80 percent of grain production.

⁷ Import and export of coarse and certain broken varieties of rice is permitted freely.

⁸ A separate body of the Ministry of Agriculture, the Commission for Agriculture Costs and Prices, sets these floor prices.

However, while FCI has performed important functions, it has generally done so inefficiently. The presence of food mountains around its warehouses (when it ran out of space inside them) amidst hunger, and its burgeoning operational costs have been contentious. Its modalities for transporting grain are expensive and have caused large losses. Recently, the government has taken some positive steps towards making FCI a leaner organization. For instance, the national policy on handling storage and transportation of foodgrains (2004) aims to build warehouses and field depots through private sector participation on a Build-Own & Operate (BOO) basis.

3.3 Indonesia: Perum Bulog⁹ (Rice)

Overview: Bulog, the state logistics agency, changed its status from a non-profit to a profit-oriented state-owned company, becoming a full-fledged professional commercial enterprise, in 2003. *Economic activities:* domestic procurement, distribution, import, export of rice.

Government policy functions: assured rice procurement (1.75 to 2.0 million tonnes annually in milled rice equivalent, which amounts to approximately 6-7 percent of the total rice production); targeted rice distribution system (Raskin programme) - the Government feels that supplying rice to all of the dispersed islands of the large Indonesian archipelago cannot be left to pure commercial considerations; maintenance of national reserve stocks; trading activities of various strategic commodities on profit making terms (on a government mandate).

Special privileges: control over rice imports. Private enterprises exist for domestic and international trade.

Significance of STE: the case of Indonesia is interesting as the existing control over rice imports (imposed in 2004) is partially a reaction to prior import liberalization policies. Post 1986, import monopolies over rice and other food imports were relinquished to private importers. Import deregulation (zero percent tariff) resulted in a supply imbalance which led to increased imports and consequently decreased domestic prices. It should be noted that this liberalization was subsequent to the economic crisis and droughts of El Nino which had already stymied production. After having been self-sufficient in rice for years, Indonesia declared itself a net importer in 1998.¹⁰

In exercising discretionary control over the import volumes necessary to strengthen the national stock and in ensuring that excessive surges do not dampen prices, BULOG's role had been critical in managing volumes. This role has now been much weakened. In 2003, BULOG's procurements comprised only 6.7 percent of the national production, so they conferred only limited price assurance (WTO notification, 2004). BULOG is no longer responsible for improving farmers' welfare (except by way of providing farm gate floor prices, but this should be seen in the

⁹ This section benefited from a paper presented by Mulyo Sidik, at the FAO Rice conference (February 2004). Also see, WTO notification (2004).

¹⁰ The quantity of rice imports doubled from an average of 1.5 MMT per year in 1995-1997 to more than 3.0 MMT in 1998-2001. In 2003, Bulog's rice imports (655 126 tonnes) were 24% of the total rice imported in the country and consisted approximately 8 percent of the consumption (WTO notification, 2004)

context of its limited procurement operations). After the restructuring of 2003, the special credit line (Central Bank Liquidity Credit) supporting Bulog's procurement activities was abolished. Support to consumer prices has also been restrained: price stabilization strategies were rationalized from a general price subsidy to a targeted policy for the poor (a programme called Raskin which reaches some 9 million people). Financial transparency in Bulog's operations has been much improved.

3.4 Kazakhstan: FCC - Food Contract Corporation¹¹ (wheat)

Overview: The Food Contract Corporation (1997), the successor in title of the State Production Contract Corporation, is a Joint-Stock Company with 100 percent state control.

Economic activities: procurement of grain from (large) private producers, exports, and raising pre-export and post-shipment finance.

Policy functions: stabilizing fund to manage price fluctuations, enhancing the country's food security.

Special privileges: FCC is the sole export agency, but opened trade to private firms in the 1990s, and became the authorizing agent for managing grain exports.

Significance of STE: Prior to independence, Kazakhstan was one of the main exporters of cereals to the other republics of the former Soviet Union, but now that the other countries have adopted a food self-sufficiency policy, Kazakhstan has reduced the amount of wheat it produces in order to grow other crops to meet its own food needs. Nevertheless, while Kazakhstan has reduced its grain production, it also has had to find new export markets, primarily for wheat (Babu and Rhoe, 2001). In the process of developing new markets, FCC played a large role in quality control. Kazakh wheat is not of the highest quality, and without FCC's proactive management of what is actually exported, there would have been a strong risk of wheat being refused entry into importing countries.

The FCC continues to handle government-to-government transactions, which account for about 60 percent of Kazakhstan's wheat exports, while large private grain producers and traders handle the remaining 40 percent (Ackerman and Dixit, 1999). Given its large volume and the track record it has built up over the years, FCC has been able to raise considerable amounts of pre-export and post-shipment finance in international markets, at very competitive rates.

3.5 Kenya: NCPB - Kenya National Cereals and Produce Board (maize, beans and wheat)

Overview: With the onset of grain market liberalization in 1993, NCPB was exempted from the State Corporations Act and its activities commercialized in 1996. NCPB now competes with private traders.

Economic activities: trade in maize, beans and wheat; provide competitive rates for services like drying, grain grading and cleaning, fumigation, storage, weighing, warehousing, provision of inputs.

¹¹ As of date, Kazakhstan is not a WTO member.

Policy functions: monitor procurement, distribution, storage, processing and licensing of grain dealers; undertaking some redefined market and food supply functions on behalf of the government, including the management of strategic grain reserves, relief distribution, market intervention for the benefit of grain producers and consumers.

Special privileges: possibility to control exports if food security concerns make this necessary.

Significance of STE: NCPB undertakes famine relief not only in Kenya but also in neighbouring countries. It has initiated schemes meant to enhance producer welfare, for example the “in kind” payment system for small scale maize farmers where they receive seed, fuel and fertiliser in lieu of cash (of course, many farmers would prefer to receive cash on time).

3.6 Malaysia: BERNAS - Padiberas Nasional Berhad (rice)

Overview: In January 1996, BERNAS replaced Lembaga Padi dan Beras Negara (LPN) as the custodian of Malaysia’s paddy and rice industry. Contrary to its predecessor, BERNAS is a private entity, listed on the Kuala Lumpur Stock Exchange.

Economic activities: domestic procurement; managing the Bumiputera Rice Miller Scheme; distribution through 29 warehouses and 17 000 retail outlets; managing imports; joint ventures in Thailand and Pakistan for exports (note that its rice exports have been marginal); manufacture and market value-added products through downstream ventures; sale and distribution of certified rice seeds; non-rice businesses include a domestic joint venture for the international trade of onions, garlic, dried chillies, potatoes, shallots, and an integrated joint venture for rice and eggs in Indonesia.

Policy functions: purchasing paddy from farmers at a guaranteed minimum price; acting as the buyer of last resort; conserving, maintaining and managing the national paddy/rice stockpile; representing the government on the management and disbursement of subsidies to paddy farmers.

Special privileges: BERNAS is the sole importer of rice (its mandate is until 2010) and manages its distribution.

Significance of STE: with rice imports averaging about 25 percent of the production over the last decade Malaysia’s dependency on rice imports has been area of political concern.¹² Enforcing import controls has been suggested as a measure to curb rice smuggling activities in the country.¹³ BERNAS’ role is to reduce import dependence, but its performance in this regard has not met expectations. Rather, BERNAS, in addition to benefiting from the rents on its monopoly position in imports, is transforming itself into a consumer goods company, building up operations in a diversified range of food products.

¹² Calculated from the statistics of the Food Security Information.

¹³ Press Statement by DAP Member of Parliament for Kota Melaka, Kerk Kim Hock in Petaling Jaya, July 2000.

3.7 Myanmar: MAPT - Myanmar Agricultural Produce Trading (rice)

Myanmar Agricultural Produce Trading (MAPT) is a government organization under the Ministry of Commerce. Its activities have changed in the light of the New Rice Trading Policy adopted in April 2003 which scrapped the country's 30-year-old state rice procurement policy (The Irrawaddy, 2003).

With this reform, the State ended direct purchases of paddy. Farmers can sell at market prices instead of (as was previously the case) a discounted price which will boost their motivation to increase yields.

Also, rice exports were liberalized. Exports now follow three guidelines set by the newly formed Myanmar Rice Trading Leading Committee (MRTLTC): rice will only be exported when it is in surplus, exporters must pay a ten percent export tax, and the net export earnings after taxes will be shared between the government and rice exporters on a 50-50 basis. Rice trading associations will buy rice directly from farmers and then sell to MAPT. Myanmar has not notified WTO of its STEs.

3.8 Philippines: NFA - National Food Authority (rice, corn, other grains)

Overview: NFA is an agency attached to the Department of Agriculture.

Economic activities: procurement (domestic as well as imports) of various agricultural commodities (including maize, rice and sugar), processing, distributing paddy and milled rice to strategic locations, provision of post harvest facilities.

Policy functions: providing government support prices to farmers, maintaining consumer rice prices at affordable levels, buffer stocking, licensing and registration of activities¹⁴, monitoring and enforcement of rules and regulations.

Special privileges: monopoly control over international rice trade.

Significance of STE: similar to other Asia-Pacific countries, rice is the staple food of about 80 percent of Filipinos. The growing reliance on rice imports (Philippines was a marginal exporter until early 1990) and the higher price of domestic rice as compared to imported rice has made the economy sensitive to the rice supply situation.¹⁵

In the Philippines, food trade has a crisis-stricken history, and many of NFA's functions came into being as a response to a specific crisis. Regularly, NFA has offered emergency support by providing various services (such as drying and hauling facilities) at nominal charges. NFA's pick-up and delivery schemes are a boon for farmers who have limited means of transportation. The "e-Trade Project", launched in 1999 as part of an overall effort to liberalize grain trading, has been an efficient solution in moving grains from farmers to the market.

NFA is playing a crucial industry developmental role by:

- providing information and technical services;
- running programmes to increase producer returns, for example the Palay/Rice Swap (PRS) and the Farmers Grains Exchange Programme (FGEP) - where

¹⁴ Activities requiring licensing: retailing, wholesaling, milling, warehousing, exporting, importing, indenting, packaging, processing, threshing, corn shelling, mechanical drying.

¹⁵ Rice imports increased at an average rate of 27.5 percent, from a thousand tons in 1970 to 1.2 million tonnes in 2002, peaking at approximately 13.9 percent of domestic production.

farmers deposit their new paddy harvest in a designated NFA warehouse and withdraw its rice equivalent at an opportune time¹⁶;

- structuring innovative financing solutions, for example the Grains Inventory Financing Technique (GIFT)¹⁷ and the Farmers Option To Buy-Back (FOBB)¹⁸ programmes;
- the introduction of the Philippines Grains Standardization Program (PGSP) - a multisectoral effort spearheaded by the NFA to implement the National Grains Standards through continuing advocacy campaigns.

In the 1990s, the NFA was operated rather inefficiently. NFA's losses were higher than the government's investments in agricultural R&D or irrigation (Intal and Garcia, 2005). Since the late 1990s, NFA's management has been improved, but its losses remain relatively large: P7.585 billion in 2003 (US\$ 130 million), and P14.552 billion in 2004 (US\$ 260 million).

3.9 Thailand: PWO - Public Warehouse Organization (agricultural goods and consumer products)

Overview: PWO is a state enterprise attached to the Ministry of Commerce of Thailand.

Economic activities: exports and imports of several commodities (no monopoly powers).

Policy functions: manages Thailand's import obligations under WTO; manage garlic market.

Special privileges: none.

Objectives: Thailand abandoned rice price stabilization in the 1990s, thereby allowing the domestic price of rice to be determined by international supply/demand conditions. To provide stability and predictability of prices and quantities of agricultural goods and consumer products, PWO ensures that domestic production will not create an oversupply situation for the product.

It conducts agricultural exports in the two trading forms: government to government contracts and direct negotiation. It engages in the export of various commodities according to foreign customers' requirements and is in charge of sourcing foreign markets for selling surplus agricultural products purchased from Thai farmers.

¹⁶ Another scheme is the Farmers Incentive Rice Purchase Programme (FAIR). This is a procurement incentive designed to encourage farmers to sell to NFA a larger portion of their harvest. Under FAIR, farmers are entitled to buy from NFA up to 10 percent of rice recovery from palay (paddy) stocks they sold the previous year, for their consumption during the lean months when prices are relatively high.

¹⁷ Farmers deposit their new harvest in NFA warehouses and with a NFA certificate of custodianship, use the stocks as collateral to secure loans to meet their immediate production and domestic needs while waiting or hedging for better prices.

¹⁸ FOBB is NFA's response to farmers' immediate need for cash. In a manner of functioning similar to that of the Commodity Credit Corporation in the United States, farmers are provided the opportunity to buy back the same volume of grains sold to the agency within a maximum period of 6 months or one cropping cycle when palay (paddy) prices in the market increase significantly above the support price, thereby maximizing their income potentials.

With regard to imports, the organization is responsible for importing agricultural products according to the country's WTO's obligations, and also imports commodities according to local customer demand. PWO maintains control over the garlic market by allocating quantities to import under in-quota tariff.

3.10 Vietnam: Vinafood I - Vietnam Northern Food Corporation and Vinafood II - Southern Food Corporation

Overview: state-controlled Vietnam Central Food Corporation (Vinafood) was established in 1989, after the removal of the Central Government's monopoly on foreign trade. Until 1999, when private players were permitted to export, contracts were executed by a range of state-owned enterprises.

Economic activities: manage government-to-government trade.

Policy functions: supervise private sector exporters.

Special privileges : rice export licensing was converted to contract reporting in June 2004.

Significance of STE: over time, Vietnam turned from an importer to a leading exporter of rice. Its rice marketing system has been adapted accordingly. The government gradually loosened the rules, first allowing more state-owned exporters, and then permitting private firms to export rice directly. A number of the new state-owned enterprises which became exporters were inexperienced and undercapitalized, and proved unable to fulfill some of the orders they received from foreign buyers, significantly damaging the country's reputation as a reliable supplier of rice. The government reacted by limiting the number of firms allowed to export, and in 1994, allocated 70 percent of the export quota to Vinafood.

With respect to rice exports, Vinafood has kept this dominant position, and indeed, given its preferential access to finance, as well as its volume of trade and its large logistics and storage facilities, it is in a good position to negotiate large transactions. Furthermore, Vinafood and other STEs at times act as a mostly nominal intermediary for deals arranged between private exporters and foreign buyers: this makes it possible for the exporter to obtain access to post-shipment finance. With respect to domestic procurement, though, local traders buy rice from the farmers, and given the fact that they can sell either to Vinafood or to private exporters, Vinafood's power to determine procurement prices is limited (Haughton and Fetzer, 2004).

In the initial years, the lack of domestic food security, and the need to ensure efficient rice distribution (selling at affordable prices) throughout the country, made the management of the rice sector a politically sensitive issue. Vietnam's STEs played a critical role in this time, responding to local conditions, transporting grain to mountainous districts in times of shortages, and stocking for emergencies. But when conditions improved, the government opened up trade to the private sector and to new "public" rice export-ventures; and when these new players proved unable to meet the exigencies of the market place, Vinafood was able to step in again to protect the country's reputation as a rice exporter. Given these pragmatic policies, it seems likely that with Vietnam's entry into WTO and the ongoing development of its economy, the roles of Vinafood will continue evolving to meet the country's changing conditions.

STEs in developing countries' food sectors: summary table

Country	STE (controlled commodity)	Status, privileges	Operations of the STE Exports (export % of production) Imports (import % of production)
China	COFCO-China National Cereals, Oil and Foodstuffs Import and Export Corporation (rice)	Status: govt controlled corporation Privileges: sole importer of rice	International operations: Exports - marginal(2.5 million tonnes) Imports - marginal Domestic operations: procurement, processing
India	FCI-Food Corporation of India	Status: statutory body of the government (Food Corporations Act, 1964) Privileges: sole importer of certain commodities	International operations: Exports (wheat) - marginal (4 million tonnes) Exports (rice) - marginal (3.4 million tonnes) Imports (rice) - marginal Domestic operations: procurement, (15-20% of production)
Indonesia	BULOG-Badan Urusan Logistik (rice)	Status: converted to a state controlled corporate from a governmental body (2003) Privileges: sole importer of rice	International operations: Exports - marginal Imports - (6%) Domestic operations: procurement (6-7%)
Malaysia	BERNAS-Padiberas Nasional Berhad (rice)	Status: privatized in 1996 Privileges: sole importer of rice till 2010. JV with existing wholesalers for distributing imported rice	International operations: Exports - marginal Imports - (15%) Domestic operations: paddy procurement
Philippines	NFA-National Food Authority	Status: established by decree of the govt Privileges: sole importer and exporter	International operations: Exports - marginal Imports - (6%) Domestic operations: procurement of paddy 1997 (0.9%)
Thailand	PWO-Public Warehouse Organization	Status: state controlled Privileges: does not exercise control over rice	International operations: Exports - (30%) Imports - nil Domestic operations: no direct procurement
Vietnam	Vinafood I and Vinafood II (rice)	Status: state controlled Privileges: administers exports (export contracts need to be reported)	International operations: Exports - (11%) Imports - marginal Domestic operations: no direct procurement

Source: information compiled from STE websites and notifications made to the WTO. Figures for export % production and import % production for rice refer to milled rice for 2003. Data from IRRI.

4. Conclusions and policy implications

4.1 Observations on developing country agricultural STEs

Developing country agricultural STEs have different objectives from their major current developed country counterparts, such as the Australian and Canadian Wheat Boards (AWB and CWB) or New Zealand's Zespri. They are either focused on meeting domestic objectives - in particular, food security, including management of security stocks - or on providing a practical means to organize exports in the face of a weakly organized private sector. It is not the rationale of developing country STEs to provide the ability to compete on an equal footing with large multinational trading firms (as is the case for AWB and CWB), or the critical mass necessary to undertake generic market promotion for a unique product (as is the case of Zespri). Even the STEs with the largest weight in international markets - China's COFCO and Vietnam's Vinafood I & II - are very different in scope and operations from the developed country STEs.

A number of points are worth underlining:

- In grains, in developing countries with STEs most farmers produce for domestic markets - in Vietnam, for example, rice exports account for only around 10 percent of production, and in China for less than 2 percent. This is different from developed countries where, if STEs exist, production primarily enters international markets. For instance in Australia, the New South Wales Rice Board exports approximately 80 percent of the rice produced in New South Wales. AWB and CWB export between half and three quarters of their countries' wheat production.
- In Australia and Canada, and except for exports to Australia also in New Zealand, STEs work as single desk exporters, with as a major objective to improve the bargaining power of the producers.¹⁹ Most export-oriented STEs in developing countries (e.g. Thailand and Vietnam) operate alongside private sector exporters.
- Most agricultural STEs in developing countries are in effect meant as tools for managing domestic food sectors, and for this purpose may have been given control over rice imports. State control over grain imports once was common: in the early 1970s, STEs controlled around 90 percent of wheat imports and the vast majority of rice imports (Young, 1999). Since the mid-1990s, though, there have been major reforms, and now significant STEs controlling imports (for rice) only exist in Indonesia, Malaysia and the Philippines. But these countries have been successful in approaching rice self-sufficiency, and as a result, their international procurement activities are not large enough to artificially raise prices on international markets or otherwise distort such markets. When advocating the abolition of these STEs, one has to keep in mind that rice storage requires significant funds, and that world rice markets are rather thin and as a result, volatile: local private sector traders are not necessarily able to cope with the related requirements, in particular if the local financial sector is weakly developed.

¹⁹ Until 1 August 1995, the CWB was also responsible for licensing wheat imports into Canada. This only changed in 1995, post the Uruguay Round.

- Developing country STEs have frequently been innovative in developing new instruments, often using market-based instruments such as warehouse receipts to meet farmers' needs - consider for example the various programmes introduced by the NFA in the Philippines to improve farmers' marketing and financing opportunities.
- Developing country STEs have also frequently been successful in building up a good reputation for themselves and for their countries, enabling them not just to open up new marketing opportunities, but also better access to finance. FCC in Kazakhstan is a case in kind, but one may also mention the Ghana Cocoa Board. There are few borrowers in Africa who receive international bank finance more cheaply.
- When the monopoly powers of a developing country STE are abolished, the STE may not be able to survive alongside private sector importers and exporters if it is has predominantly trading functions. An exception is if the STE has build up a good international reputation in terms of export quality and performance, and has a good track record for international loans. It would be unrealistic for governments to believe they can abolish a monopoly and still achieve various social or political objectives "for free". Such objectives, such as maintaining food security stocks, acting as a buyer of last resort, or protecting consumers from the risks of large food price increases, have a cost, and governments need to budget for these.

4.2 Experiences of STEs in providing services to consumers and the agricultural sector

Experiences of STEs of developed countries

STEs in developing countries were generally set up both as a policy tool and as a way to overcome perceived market failures. STEs in developed countries generally had a more restricted objective: some were set up as a tool for enhancing domestic food security, others to improve export competitiveness and improve the welfare of farmers, by enhancing their earnings, and reducing their exposure to price risk.

The Japanese and Korean STEs provided useful services not just in the economic sense, but also, by providing political comfort in the face of the process of trade liberalization. They ensured that minimum import obligations could be met without disrupting domestic markets. The STEs were responsible for importing many of the agricultural commodities for which the countries accepted tariff rate quota, but with a gradual transfer (over a ten-year period) of import responsibilities to the private sector. In the Republic of Korea, where in the mid-1990s there were seven STEs importing 17 agricultural products, their objectives were 1) to stabilize domestic markets in the face of low-priced imports; 2) to ensure the implementation of UR agreements by fulfilling the committed market access quantities; and 3) to use the revenue from price difference for public objectives. In Japan, there were six STEs, of which the largest was the Food Agency, which had a monopoly on imports and domestic markets of rice, wheat and barley, and whose purpose was "to stabilize supply and demand situations of prices for such staple foods and for promoting

stability of national life and economy” (Choi, Sumner and Song, 1998). The Food Agency was closed in mid-2003, and its responsibilities transferred to the Food Department in the Ministry of Agriculture, Forestry and Fisheries.

The Australian and Canadian Wheat Boards assure that farmers receive the same total payment for the same grade of grain, regardless of when the grain is actually delivered during the crop year. This reduces farmers’ risk, and indirectly, reduces waste and unnecessary overcapacity in grain transport and processing. Both Wheat Boards are also seen by their defenders as a tool for competing with the major transnational grain trading companies.²⁰ Another example is New Zealand, where a cooperatively-owned exporter, Fonterra, has taken over the assets and roles of the New Zealand Dairy Board, the world’s largest dedicated dairy marketing network owned by the country’s dairy cooperatives. The Founding Chairman of Fonterra described its rationale as follows: “We are organized as a co-operative not because we espouse a sort of vague collectivism. It is firstly because this suits the long-term nature of our dairy farming business and secondly, most importantly, because it gives us market power. Market power has always been exercised by those who have it over those who do not. By having market power, Fonterra gives the farmers the only viable means by which they can move more of their milk towards the higher end of the value chain and utilize the value creation potential of the business itself.”²¹

The developed country STEs active in the horticultural sector often had as an important objective to secure the quality of the country’s exports and thus defend and strengthen the country’s image in international markets. Most of these boards have now been abolished²², but one that is still operating is New Zealand’s Zespri Group Limited. In the late 1990s, the New Zealand Kiwifruit Marketing Board (NZKMB) separated its regulatory and commercial functions. NZKMB became Kiwifruit NZ with responsibility for statutory functions, and the Zespri Group Ltd was established as the sole authorised exporter of kiwifruit outside Australia. Shares in Zespri Group were distributed to kiwifruit growers. About 90 percent of

²⁰ For example, in 2004, the chief operating officer of the Grain Council of Australia, David Ginns, said that the single desk system “comes under a lot of unwarranted criticism from people with commercial interests in seeing the system dismantled and from policy fundamentalists who will stop at nothing to have their version of the world imposed. Globally Australia is a small producer, our global share of wheat is about 4.5 percent and six percent of barley and our single desk arrangements allow us to even-up unfair competition we struggle against. Our competitors in the global market are transnational corporations, four of which control close to 75 percent of the world’s grain trade.” (4 November 2004) In this light, these countries may resist calls for greater transparency of STEs: the large multinational trading companies are even less transparent than STEs, as most are privately-held, and therefore provide less information about their operations than do most STEs (they are not subject to the reporting requirements of the Securities Exchange Commission or the European stock exchange regulators).

²¹ Address by Andrew Ferrier, CEO, Fonterra Co-operative Group, to The University of Auckland Business School’s “New Hemisphere” Speaker Series, 10 June 2004.

²² For example, the New Zealand Apple and Pear Marketing Board, which had a monopoly export licence, was engaged in strategic marketing, new variety development and quality control measures. In particular, the Board was able to keep sub-standard fruits off the international market, thus maintaining the reputation of the country’s fruit exports.

the country's kiwifruit production is exported, and Zespri is responsible for over 98 percent of the exports. Zespri's marketing muscle has enabled it to develop new markets both for "traditional" kiwifruits, and for new "golden" varieties.

Exploring developing country STEs in the light of their objectives and their countries' conditions

Many of the activities of STEs that have attracted criticism have (also) legitimate purposes:

- Export monopoly combined with measures to protect domestic markets allows STEs, for example, to keep domestic consumer prices relatively high while underbidding competitors on international markets (remarkably like the result of EC or US agricultural policies, although they achieve this without STEs). In effect, it is normal for any type of company in any sector that the prices offered to buyers depend on the specific conditions in each market. This practice of price discrimination is not illegal under WTO, and indeed, it is hard to imagine that anyone would want to regulate trade in order to prevent it from happening, given how central it is to the idea of price competition. On the other hand, in 2001, WTO decided that in the case of the Canadian Dairy Commission, its policy of market segmentation between domestic and export markets resulted in an export subsidy, and this was subject to subsidy reduction commitments. Much of the discussion on this issue in the WTO has been characterized by a lack of understanding of the realities of world commodity trade. One example is the part of the so-called Harbinson proposal (2003) which dealt with export STEs, in which it was suggested to introduce as a new rule that export of a product cannot take place at a price less than the price paid by the enterprise to the domestic producers of the product. Given the way that commodity prices fluctuate, this proposal, if it had been accepted and applied not just to STEs but also to private exporters, would have made much of world commodity trade illegal under WTO rules.²³
- Control over production and exports gives the STE security of supply, which allows it to enter into long-term contracts; such long-term contracts provide security to both buyers and sellers. Multinational companies have similar abilities to offer long-term contracts, laying off the resultant risks through their well-diversified trading books.
- Price pooling (the payment to producers off a price based on average revenue from different markets) distorts pricing signals to producers. They may continue adding production even if the additional production, in reality, is sold at a below-cost price in international markets; and as a result, supply to the world market is distorted. However, many producers prefer this kind of pricing, as it avoids price

²³ A common practice in commodity trade is to hedge price risks on futures markets, so an exporter who sees world prices fall after he has made his domestic purchases will be compensated for the losses on his physical transaction by profits on his futures transaction; it defies understanding why the Harbinson proposal sought to ban this normal industry practice.

discrimination. They know they will all get the same price, irrespective of when they sell. Indirectly, this will also make trading operations more efficient and reduce the risks of supply chain bottlenecks, as transporting and processing are more effectively spread over the year. For the STE, it reduces the risks of holding stocks as sales price changes are passed on to producers.

- Revenue pooling can allow the STE to expand into other commercial activities, and thus cross-subsidize its export operations. Again, this is normal commercial behaviour, and problems only arise if STEs have artificial advantages in some of these other commercial activities. In developing countries, however, it is more likely that they have to engage in other activities to meet social or political objectives, and such engagements generate losses.
- Preferential financing: the STE is able to borrow from the government, banks or capital market at a favourable rate relative to “the private sector”. If STE funding comes from the government, there may indeed be a problem. In the past, STEs proved considerable burdens on public finance. But if they are funded by banks or on the capital market, it is more difficult to see why there should be an issue. Financing costs depend on the perception of risk. Developing country STEs are generally deemed less risky by the international financial markets than developing country private sector exporters or importers. For example, Ghana’s Cocoa Marketing Board is able to borrow at rates 2 percent better than those paid by Côte d’Ivoire’s largest private sector cocoa exporter. When Zimbabwe abolished its single desk cotton exporter in the mid-1990s, none of the successor private export companies managed to get access to western bank finance at rates even remotely comparable to what the monopoly exporter was used to paying. In Indonesia, when Bulog gave up its monopoly on rice imports, private importers were “unable to obtain import letters of credit” (USDA, 1998). Western multinationals often have direct access to the capital market, and as a result, their financing costs are even lower. For those exporting from the United States, they also have access to cheap, government-provided export credits. It is evidently preferable for a developing country to pay lower financing costs, and if this can be achieved by centralizing exports or imports into one entity (whether controlled by the Government or not), it is difficult to see why, in itself, this should constitute a problem.

In all of these areas, STEs can provide valuable services that, in the environment of many developing countries, cannot or would not readily be supplied by the private sector. The long-term approach should indeed be to transfer responsibilities for commodity trading, and all related functions, from the government to the private sector. But this requires considerable capacity and institution-building, and deliberate programmes towards these objectives should be formulated and implemented.

4.3 Making policy choices: the real and present dangers of failing service provision, versus the potential threats of state control over commodity trading

State-supported trading enterprises are in many instances a second-best approach to organizing commodity trade. However, a first-best solution would require that their essential functions can be transferred to other entities. It is worth quoting, in this respect, the main findings of a paper by Australia's Productivity Commission:

- “Most of the potential benefits of single-desk arrangements can be achieved without the compulsion of a single desk.
- In export markets where premiums might be obtained, for example, due to quotas imposed by importing nations, targeted export licences can be used to control exports. Monopoly marketing of all exports is not required.
- Economies of scale and scope in marketing can be captured without monopoly selling, while premiums could still be ‘earned’ for high quality and customized service.
- Activities which deliver industry-wide benefits such as research and development and quality control can be delivered and funded by more targeted mechanisms.
- Whereas the potential benefits of single-desk marketing are likely to be small, or could be achieved in a more competitive marketing framework, the costs of single desk arrangements have the potential to be large. Because single-desk arrangements inevitably discourage product and marketing innovations, costs may be especially large in markets where product variety and value-adding are essential for success.
- Importantly, statutory marketing authorities can be reconstituted to operate on a commercial basis in a competitive environment, continuing to offer services to producers and providing a vehicle for continued grower ownership of marketing functions. Voluntary producer organizations can continue to give producers a voice.” (Gropp, Hallam and Manion, 2000)

All of this, of course, would pose rather heavy demands on a country's trade-related institutions and on its private and public sectors. Among other things, producers need to be able to organize themselves and defend their interests. And government bodies dealing with commodity trade would have to be able to design and implement targeted mechanisms.

In the case of developing country STEs, alternative arrangements for assuring the services as spelled out above by Australia's Productivity Commission are not evident, given the weakness of their private sectors, and their weak institutional supports for commodity trade. These STEs are in principle able to distort international trade, but in practice, they are not set up for this purpose, and any trade distorting effects that they may have are small, given their limited roles in world markets. It would thus be rather perverse to try to abolish developing country STEs because of concerns about their international trading practices without considering how this would impact on service levels to their domestic economies.

As some have observed, “If WTO reforms were to eliminate STEs or contribute to their demise, they may be replaced by imperfectly competitive private actors, a common outcome following structural adjustment reforms. In addition, to the

extent that market power exists, if STEs are eliminated, then the rents will be captured by private oligopolistic firms instead of being funneled to producers through public entities.”(Abbott and Young, 2003).

If the commodity trade and finance infrastructure in developing countries were stronger, there would be serious alternatives to STEs. For example, the nature of the STE could perhaps be changed from that of an agent stabilizing prices to that of an agent providing instruments through which individuals themselves can stabilize or at least, better plan the prices that they will receive. Thailand’s rice pledging programme is one example of such an instrument. The various programmes initiated by NFA in the Philippines are another. Yet another example is ASERCA in Mexico - a government department established in 1994 to accompany the programme of agricultural policy reform by giving farmers and millers, who previously were able to rely on price guarantees from an STE, access to futures and option markets. Such programmes act as safety nets, essential complements to any agricultural policy reform (Kajisa and Akiyama, 2003).

Another possibility would be to strengthen domestic marketing and price discovery institutions in developing countries. In the early 1990s, the United States objected to producer price stabilization as an excuse for the existence of STEs, and recommended that instead, countries set up futures and options commodity exchanges to be used by private traders. At that time, this was not a realistic recommendation for developing countries. But in recent years, commodity exchange technology and relevant information and communications technology has much improved, and successful commodity exchanges have emerged in countries like China and India. They have also become commercially feasible in Africa, although a large capacity- and institution-building effort would be necessary to overcome lack of awareness among government policy-makers and the private sector. If the United States and others were to support the development of new commodity exchanges and related institutions, in particular in Africa (and for the time being, no such support is being provided), this would indeed create an alternative to STEs’ price stabilization functions, and they could then argue more convincingly that such functions should be gradually removed.

Similarly, if the capacity of the domestic banking system is strengthened, private sector exporters could more easily meet the demands of the international market place in which they would often have to sell on credit. However, governments cannot just leave all financing responsibilities to the private sector. A significant part of the infrastructure necessary for efficient trade has a long life - warehouses, cold chains or port facilities, for example, can be used for decades - and investments in them are not likely to give fast returns. Public-private partnerships can overcome the obstacles to private investment, not by governments or multilateral organizations making the investments, but through targeted support that changes the risk premium and discount rates applied by private investors,²⁴ and through technical assistance that reduces the upfront costs of investments (e.g. feasibility studies; work

²⁴ For example, by making available long-term capital, or by providing sovereign risk insurance.

with government authorities to ensure supportive legal and regulatory regimes).

Developing a robust infrastructure of accreditation agencies can replace the operations of STEs in ensuring the quality of agricultural exports. But as such agencies are now mostly absent, this will require investments - probably through a public-private partnership approach, with international support.

International support for all the above-mentioned trade capacity building efforts has traditionally been very weak. However, current discussions in the framework of the WTO include calls for increased “aid for trade” and organizations such as the World Bank and some bilateral donors have been increasing their aid levels in this area. Unfortunately, and somewhat ironically, much of the approach of the international community corresponds to the traditional model of development assistance which assumes a central role for governments; there is no focus on strengthening the private sector. In effect, it is the private sector that is confronted with weaknesses in supply capacity, and the time that governments took responsibility for investing in the required warehouses, cold chains, grading systems, marketing and promotion bodies, credit systems, or even road and port infrastructure is long since over. If the international community genuinely wishes to remedy supply side weaknesses in the trading systems of developing countries, it needs to adapt modes of operation which reflect this reality. Similarly, with respect to food imports, the structure of trade is such that, to help Net Food Importing Developing Countries cope with the risk of rising import bills for key food commodities and to provide a realistic alternative to an importing STE’s food security operations, a new kind of financing facility is necessary, one that can reach the private sector entities that are actually exposed to rising food import prices.²⁵

It may be in the interests of those who seek genuine agricultural policy reform to recognize that STEs can be valuable tools to facilitate the transition from a state-dominated agricultural sector to a liberalized system. In December 2004, a group chaired by former GATT Director-General Peter Sutherland pointed at the experience of the US and the EU, where assistance programmes and social safety nets played a crucial role as they opened up to trade and reduced subsidies, and stressed that budget constraints prevent many developing countries from adopting similar mechanisms. It then argued that “international development agencies, chiefly the World Bank, should have, or should improve, programmes to fund adjustment assistance for developing countries”, and continued “we would argue that the ability of the Doha Round to deliver worthwhile results depends critically on such action.” In effect, in Japan and the Republic of Korea, STEs acted as tools for adjustment, and in a developing country, they could have the same function, leveraging any international adjustment support that the country may receive. The Public Warehouse Organization in Thailand, which is responsible for meeting Thailand’s minimum import requirements under WTO, plays a similar role. Although some observers distrust the management of minimum import quota by STEs, in effect

²⁵ See UNCTAD/FAO (2005). IMF research on the impact of low cotton prices in West Africa similarly shows that much of the burden is borne by the local private sector - see IMF (2005).

such controls can help make governments more comfortable with any minimum import obligations for essential foodstuffs that they may have to assume under ongoing WTO negotiations (Sutherland *et al*, 2004).

In conclusion, one has to be practical with respect to STEs. They can be valuable tools for developing country governments, and in the absence of a strong private sector and a strong trade support infrastructure, there may be few, if any, alternative tools available. Capacity- and institution-building for trade can change this situation, but it will take time for the results of this to become visible. Meanwhile, STEs can actually be tools to facilitate agricultural liberalization, ensuring that the government's social objectives do not come into conflict with its economic ones.

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WTO Negotiations on Agriculture: a compromise on food aid is possible¹

Panos Konandreas

1. Introduction

Among the issues on agriculture negotiated in the WTO under the Doha Development Agenda (DDA), food aid remains one of the most controversial. While progress on a number of issues under the market access and domestic support pillars has also been slow, resolving the food aid issue has been considered of pivotal importance in making progress in the agricultural negotiations overall.

Because of the humanitarian nature of food aid, there has been general support by the entire WTO membership to preserve and enhance that important role. At one side of the spectrum are those Members that consider that the maximum degree of flexibility should be allowed in the provision of food aid so that humanitarian considerations are not compromised. At the same time, those that advocate a reform of the present food aid regime are motivated by the same objective, i.e. that streamlining food aid disciplines in a way that minimizes its possible adverse market effects, both on world markets and on the market of the recipient countries, actually enhances the humanitarian effectiveness of this type of assistance. Hence both sides of the spectrum have the same objective in mind. This presents an opportunity to resolve this component of the negotiations by clarifying some of the issues involved and building on the common commitment of the WTO membership on the positive contribution of food aid to the food security of vulnerable countries.

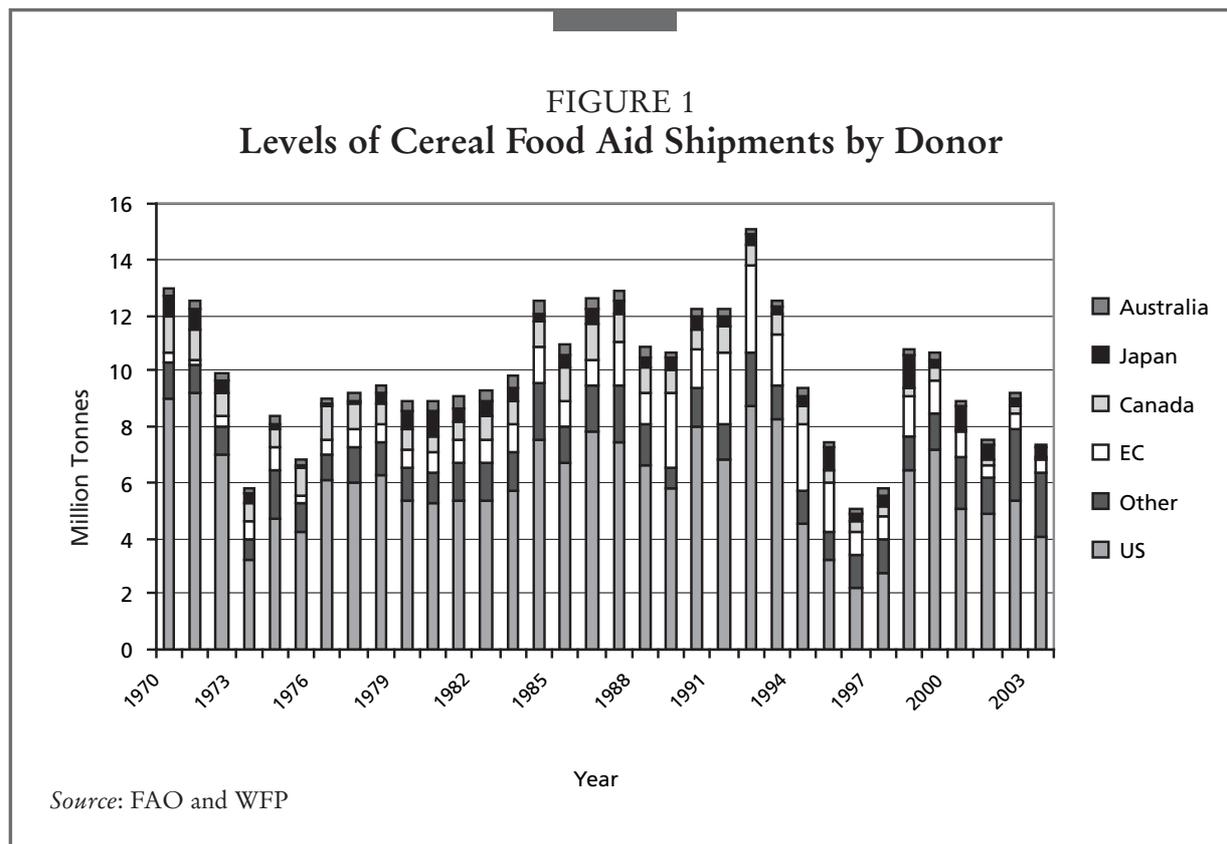
The paper first provides some relevant statistics on food aid trends as well as the changing importance of this resource for the recipient countries. The second part of the paper summarizes the origins of the present disciplines on food aid as they have been adopted under the Uruguay Round Agreement on Agriculture (AoA).

¹ The views expressed in this paper are those of the author and do not necessarily reflect official policy of the Food and Agriculture Organization.

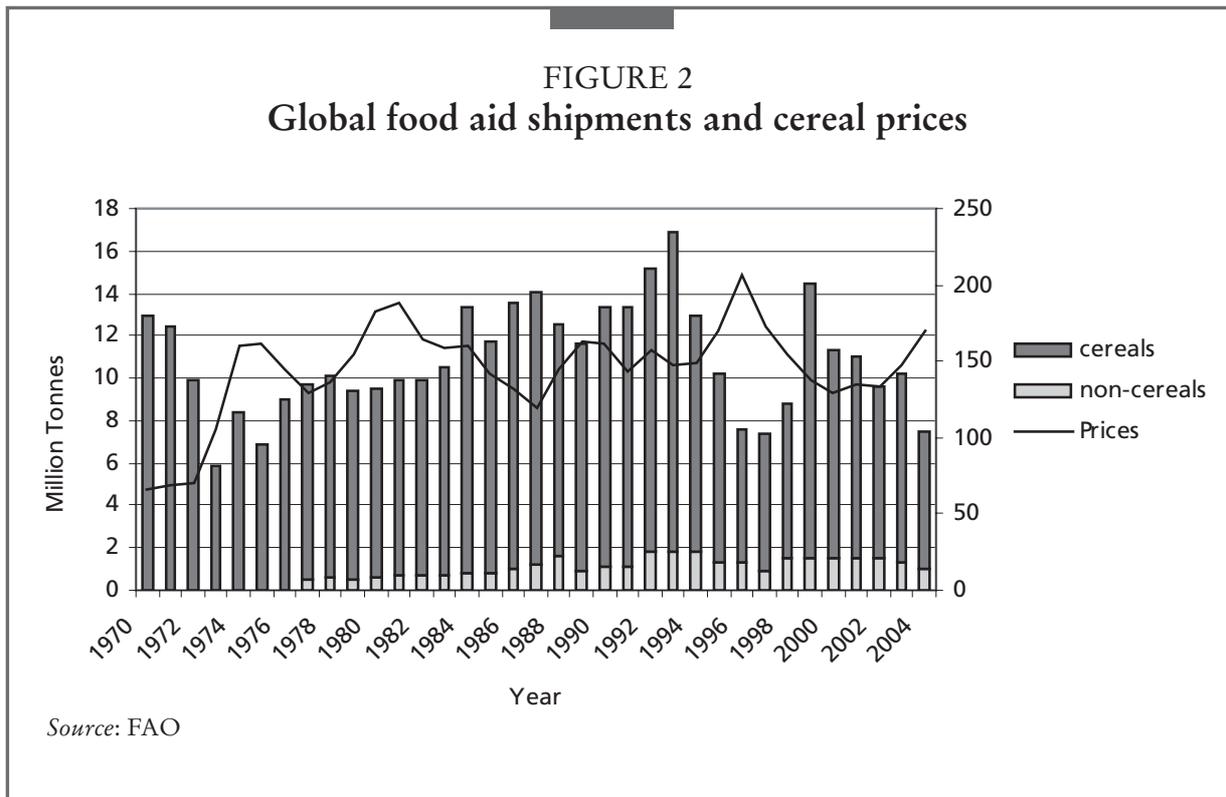
The paper then turns to the current debate on food aid under the DDA and the evolution of thinking as regards possible new disciplines on food aid. It then highlights some of the main contentious issues and remaining controversies and offers some ideas on how these could be resolved. The paper concludes with some observations on the scope of reforming food aid in the context of the overall objective in the negotiations on agriculture.

2. Food aid trends

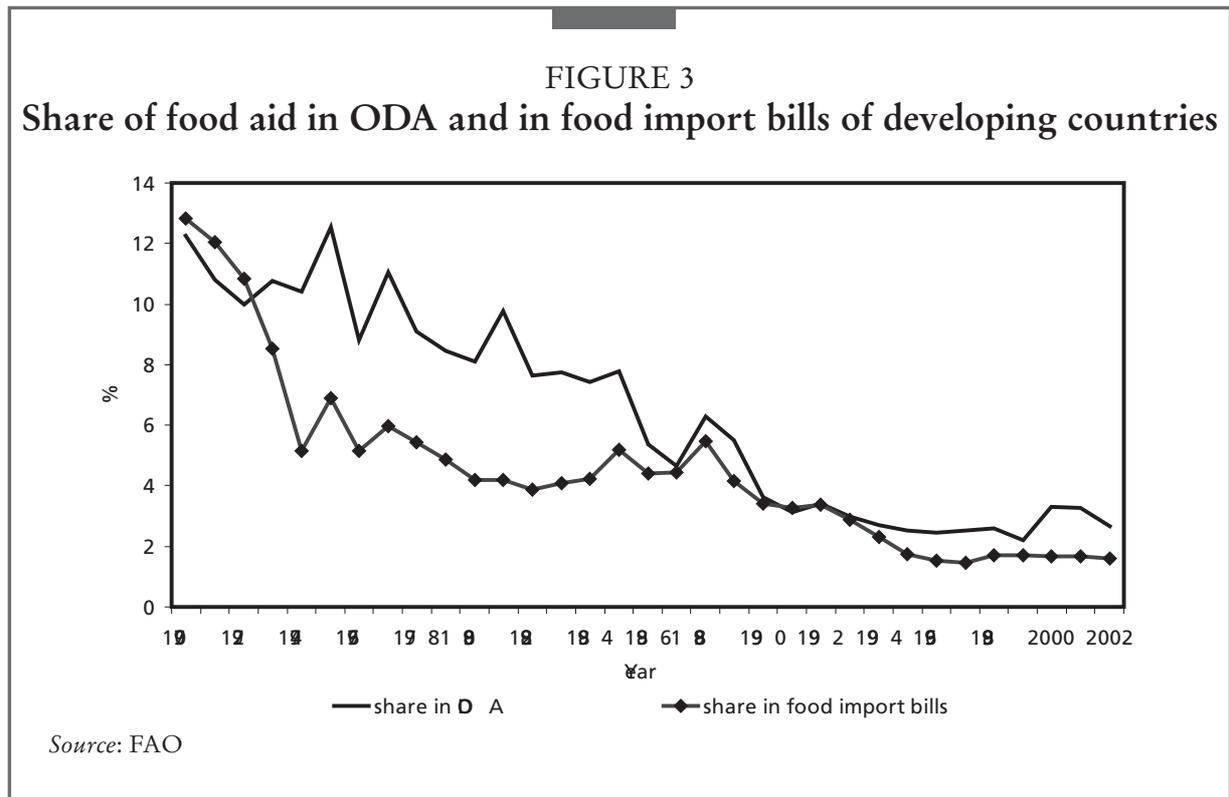
Over 90 percent of all food aid is provided by five donors (The United States (US), European Union (EU), Canada, Japan and Australia). The largest donor has traditionally been the US, which usually accounts for over 60 percent of total food aid (Figure 1). Food aid has ranged from 7 percent up to 20 percent of US wheat exports and more than 50 percent of US dried skim milk exports in recent years. Rice is a significant proportion of the export market for highly subsidized US, Japanese and EU rice.



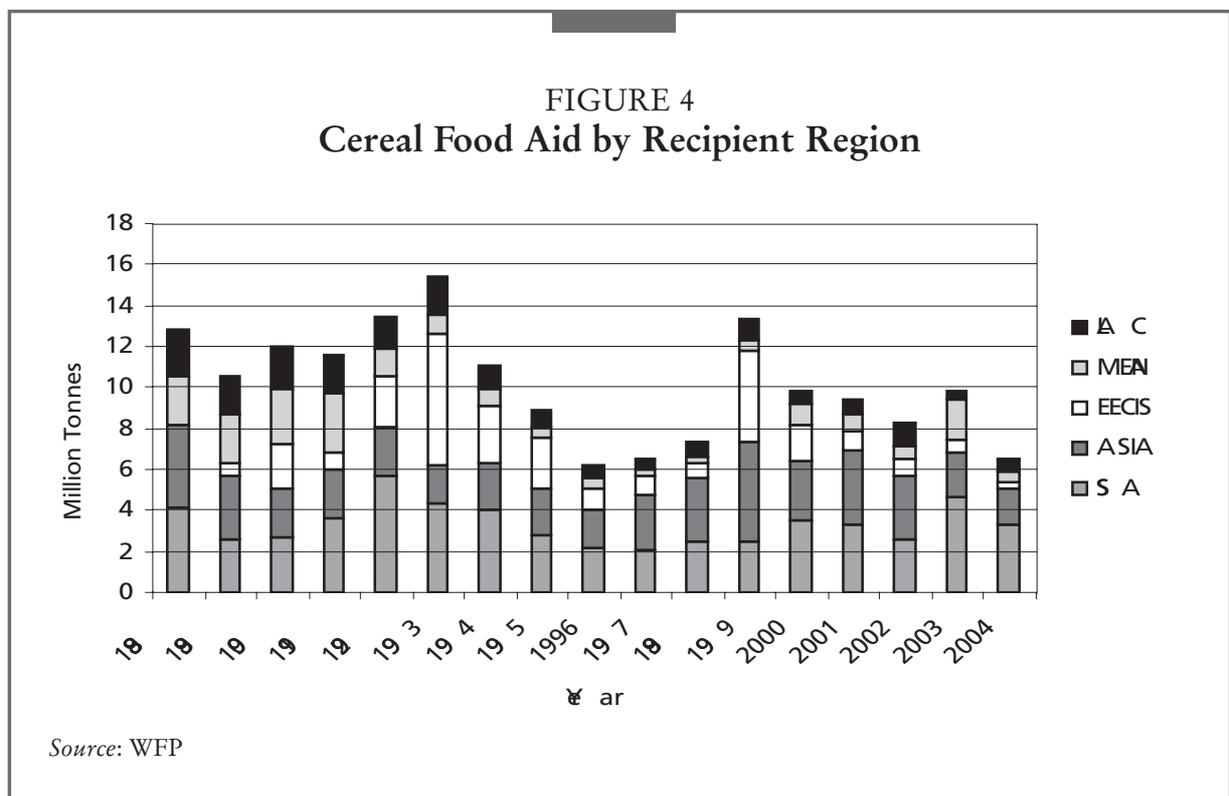
Cereals account for 80 to 90 percent of total food aid shipments in volume terms. Cereal food aid has declined over the past two decades, especially since the mid-1990s, due mainly to falling apparent surpluses among the major donors. Non-cereals donations have also declined somewhat in recent years (Figure 2).



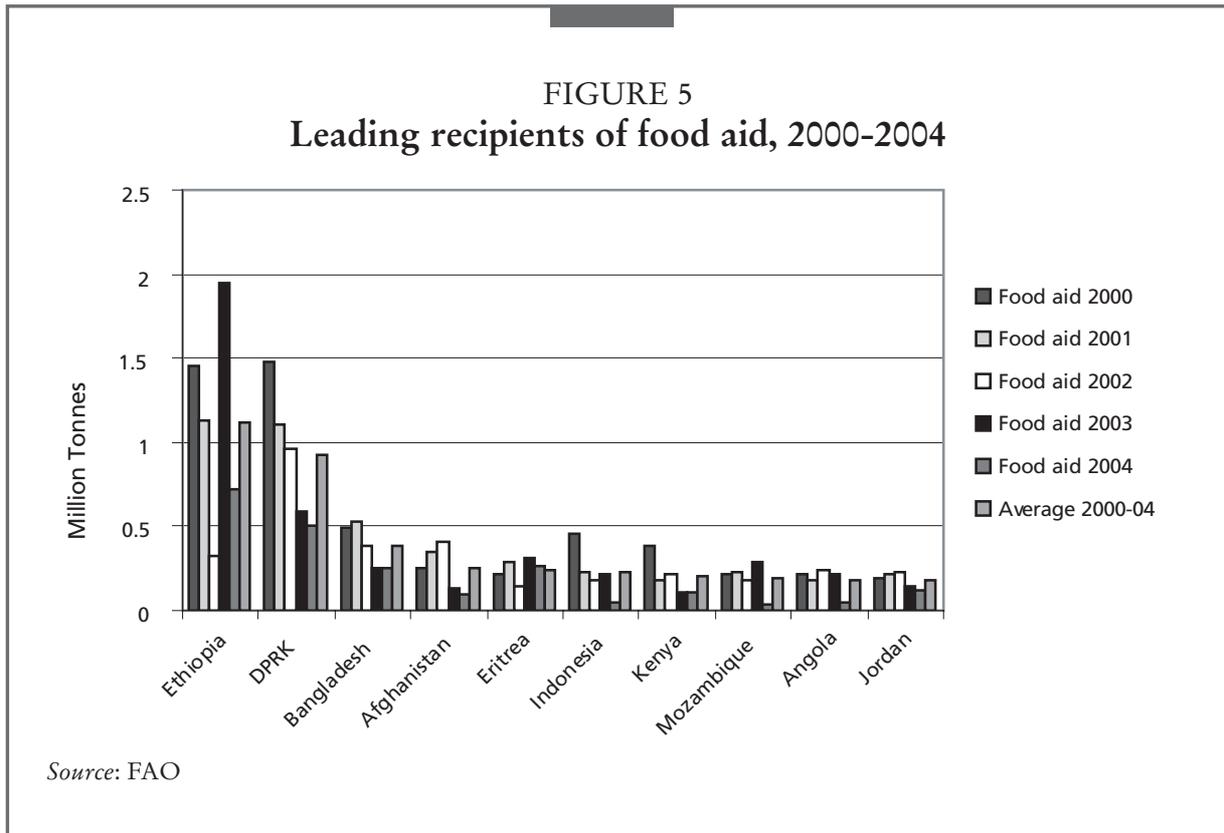
The value of food aid shipments expressed as a share of the food import bills of the developing countries as well as a share of the OECD Official Development Assistance (ODA) has also declined considerably over the past decade (Figure 3). This suggests that food aid has lost its importance both as an indirect price support in donor countries and as a policy instrument in development assistance. Food aid is no longer a major part of aid and agricultural trade, being less than 5 percent of all ODA and under 2 percent of total developing country food imports in 2004. However, this masks some country situations where the share of food aid is of considerably greater importance both as a share of their total resource inflows and their food imports.



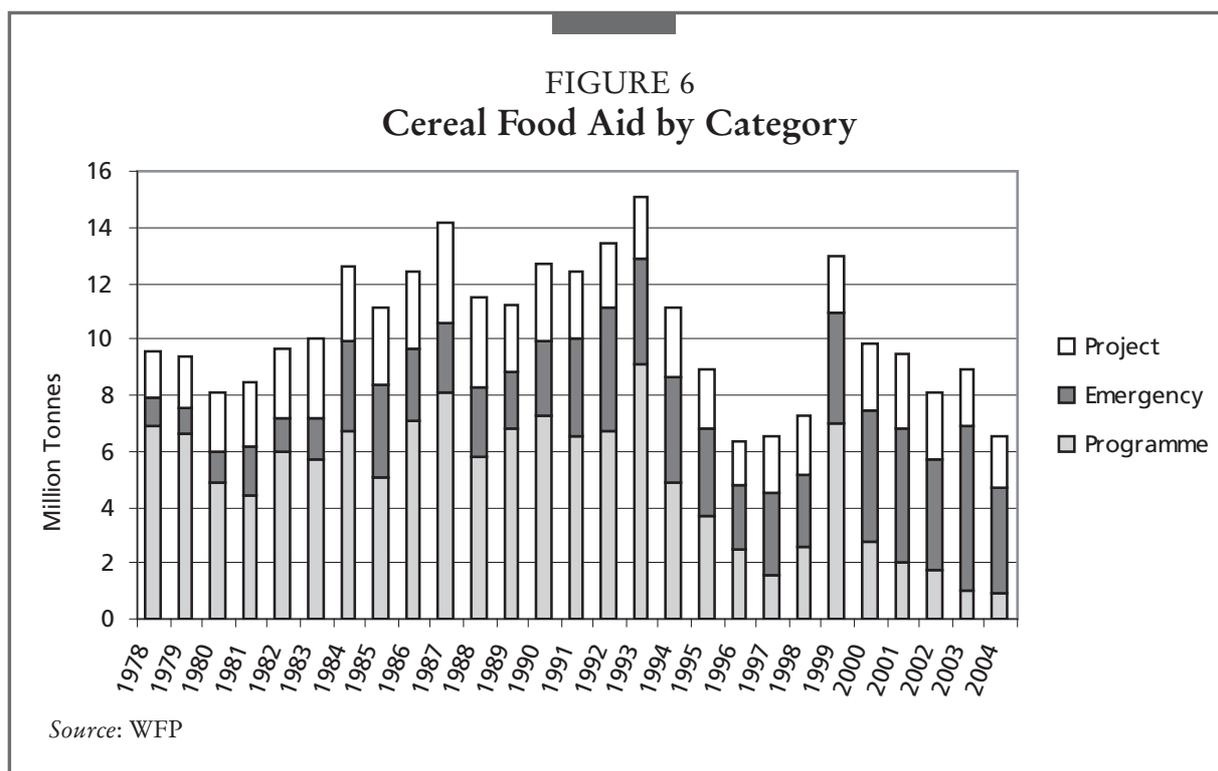
Within this overall trend of a declining role of food aid, several important trends are evident. The first has to do with the destination of food aid (Figure 4).



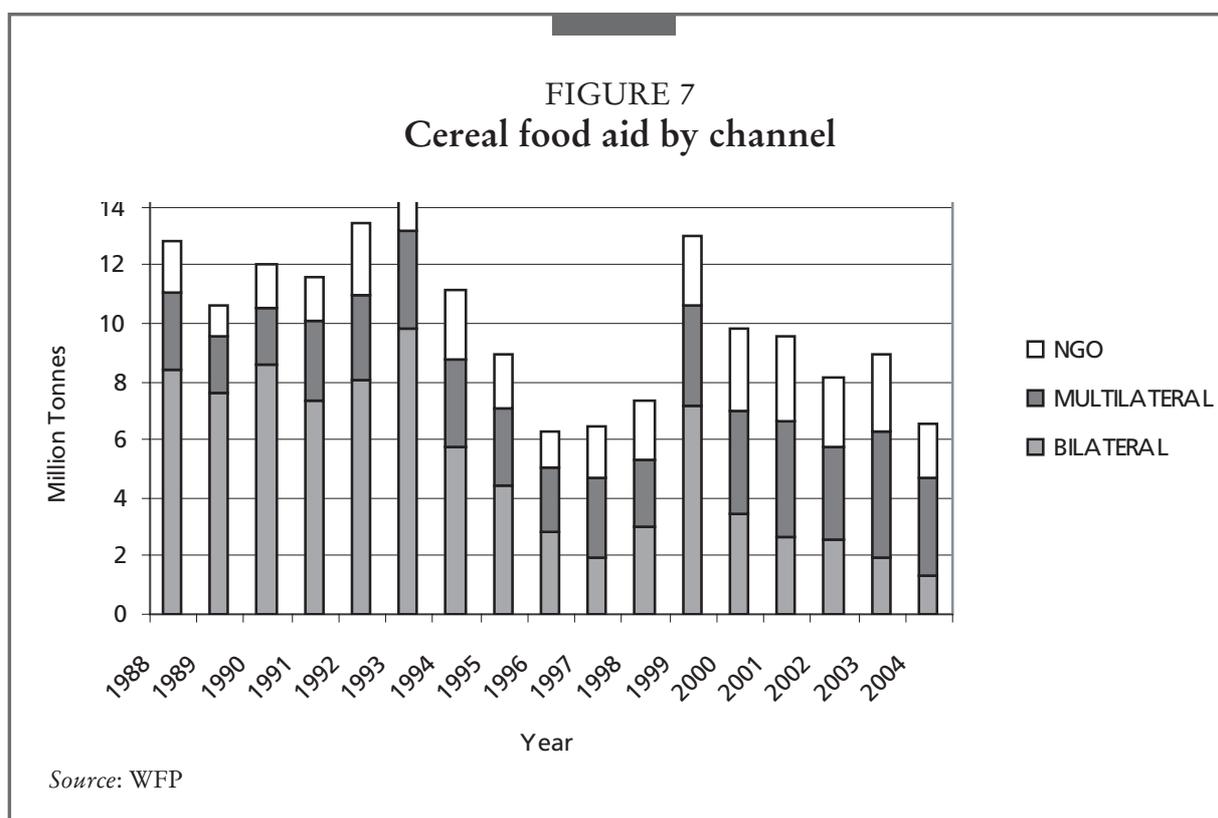
The largest part of food aid has, in most years, been destined to the developing countries, particularly to the food deficit countries, many of which rely on food aid to meet their food needs. Regionally, 50 percent of food aid is now destined to Sub-Saharan Africa. For the poorest of the developing countries, the Least Developed Countries (LDCs), food aid ranged between 15 percent and 20 percent of food imports during 1994-2003. Ethiopia, the Democratic People's Republic of Korea and Bangladesh are the most dominant recipient countries (Figure 5).



The second trend concerns the use made of the bulk of food aid. Emergency food aid, which is defined as food aid provided for direct distribution at times of severe food shortages, now constitutes nearly two-thirds of total food aid (Figure 6). Programme food aid, which in large part represents balance of payments support, has fallen to 15-20 percent of total food aid flows from a high of 60-70 percent at the beginning of the 1990s. The remaining portion of food aid is used in support of project activities, either for distribution to targeted groups for development purposes or for monetization to fund other food security-related work, and channelled through the UN World Food Programme (WFP), non-governmental organizations (NGOs) and other charitable bodies.



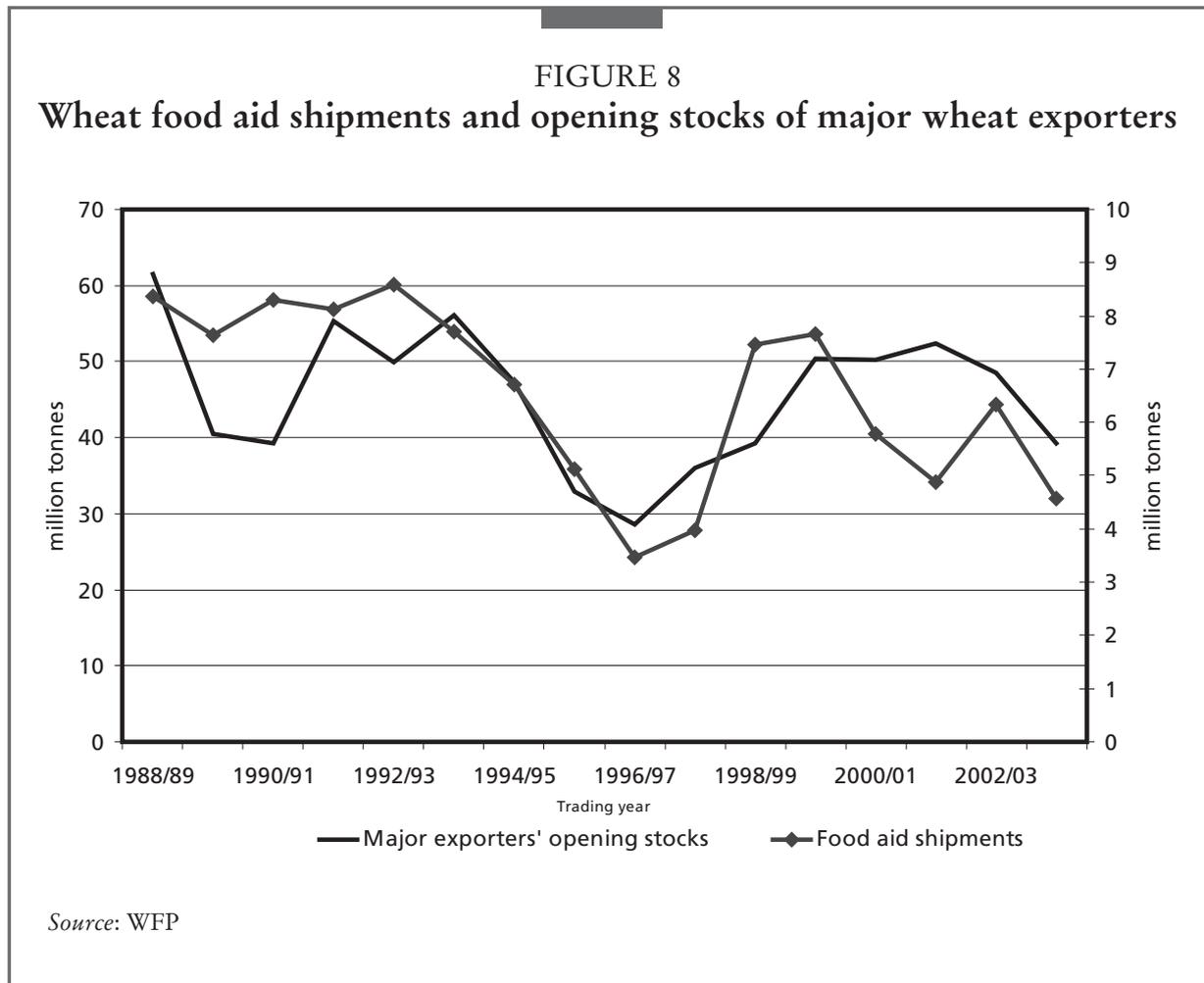
Yet another trend concerns the channelling of food aid. Largely because of the changed nature in the use of food aid (for emergencies, as discussed above) an increasing share of total food aid is now channelled multilaterally (through WFP) and NGOs and a much reduced share bilaterally.



Emergency food aid is considered to have the least market distorting impact, because it is usually delivered directly to those who would not otherwise be able to have access to food. They are most likely to consume the food aid they receive rather than sell it in the market. The same can be said about project food aid, to the extent that adequate care is taken for identifying the beneficiaries and having in place effective mechanisms for targeting them. Programme food aid, on the other hand, is considered to be the most market distorting, since all of it is monetized in the open market, augmenting the supply in the recipient countries.

The above categories of food aid overlap in practice. For example, NGOs monetize in some cases the whole of multi-year US development project assistance to provide local currency support, (Clay, 2006 and Clay, Riley and Urey, 2005). Consequently, all forms of tied food aid have potential trade displacing impacts and internal market distorting effects.

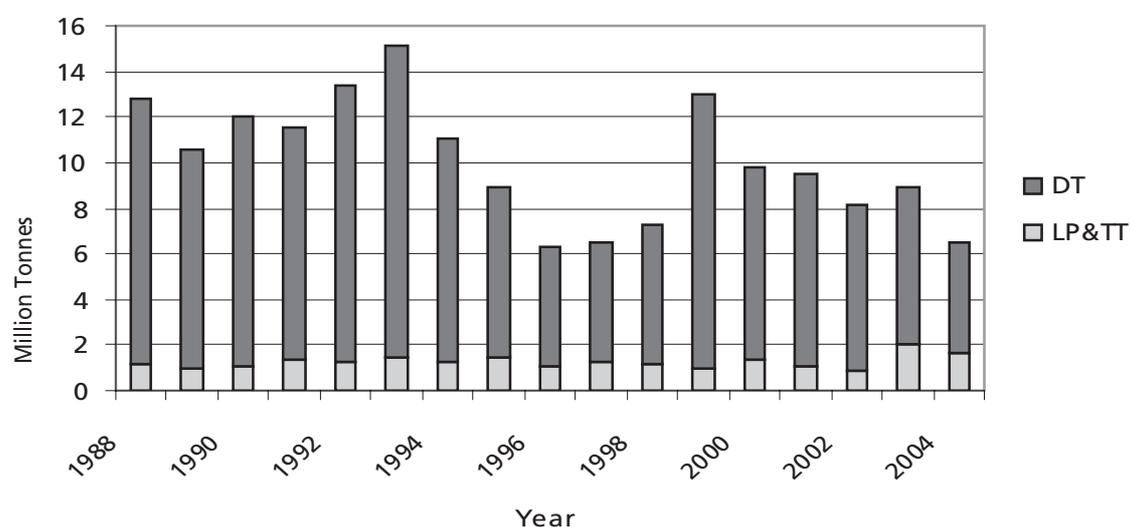
Overall, over time there have been considerable improvements in the food aid system in terms of assessing more precisely the specific needs of recipient countries and responding to them with more flexibility as regards the resources needed and the complementary measures to be taken. However, the system is yet to be free from its legacy dating back to almost five decades ago when the notion of “surplus disposal” was first introduced and when food aid policies were driven, by and large, by the supply availabilities in donor countries. While this has changed considerably since then, complete de-linking has yet to be attained (Figure 8 and Figure 1). As a consequence, food aid still remains highly variable and an uncertain resource, with commodity prices, stock levels and shipping costs playing a key role.



The continuing link of food aid to the availability of surpluses in donor countries implies that a large part of food aid is tied aid, in contrast to the wider move of other development assistance towards untying. Only 12 percent of OECD Development Cooperation Directorate (DAC) member food aid was fully untied during 2001-03. However, the partial untying of food aid funds is becoming much more extensive, indicating growing donor flexibility over procurement in developing countries.² As a result, nearly a quarter of food aid deliveries were purchased in developing countries in 2004 including a record 1.1 million tonnes of local purchases (Figure 9).

² All DAC members with the sole exception of the US (less than 1 percent) funded significant developing country procurement, 56 percent of their food aid in 2004 (Clay, op cit).

FIGURE 9
Cereal food aid by mode of procurement



Source: WFP. Direct Transfers (DT) = ; Local Purchases (LP) & Triangular Transactions (TT)

3. The FAO principles of surplus disposal and other institutional mechanisms³

A milestone in the history of food aid was the Seventh FAO Conference in November 1953, which addressed the growing difficulties, encountered for the first time since the end of the Second World War, in absorbing surpluses of certain commodities (notably cereals), rapidly accumulating in North America. The FAO Conference concluded that the absorption of excess supplies was to be sought by adopting policies for increasing consumption in the developing countries. At the same time it recognized that the movement of surpluses into consumption required consideration of the possible international repercussions of such measures, including their effects not only on the commercial exports of similar products of competitors, but also on production and economic development within receiving countries themselves.

³ For a more detailed discussion on these, see Konandreas, Panos, "Multilateral mechanisms governing food aid and the need for an enhanced role of the CSSD in the context of the new WTO disciplines on agriculture", FAO 2005.

Accordingly, the Conference instructed the FAO Committee on Commodity Problems (CCP) to consider: (i) the most suitable means of disposing of surpluses including proposals for setting up consultative machinery through which the disposal of agricultural surpluses can be facilitated⁴; and (ii) the principles which should be observed by Member Nations in order that the disposal of surpluses be made without harmful interference with normal patterns of production and international trade. Soon thereafter, a CCP Working Party drafted the FAO “Principles of Surplus Disposal and Guiding Lines for Dealing with Agricultural Surpluses”⁵ and the Consultative Subcommittee on Surplus Disposal (CSSD) was established in July 1954 as a subsidiary body of the FAO Committee on Commodity Problems.⁶

As several countries moved from a net-importing position to a net-exporting position of basic foodstuffs in the 1960s, certain concerns about previous understandings and arrangements on food aid started to come to the surface. In response to such concerns, a CCP Working Party developed, in 1969, a Catalogue of Transactions, as an internationally accepted basis for classifying concessional transactions, distinct from commercial transactions. Along the same lines, the CCP adopted in October 1970 procedures for the establishment of Usual Marketing Requirements (UMRs), as a mechanism for avoiding commercial displacement.

The next milestone in the institutional evolution of food aid was the establishment of the World Food Programme (WFP) in 1962, under the joint auspices of FAO and the United Nations, which marked the beginning of the multilateral food aid system.⁷ The establishment of the WFP was also an attempt of the traditional food aid donors to broaden the food aid donor base beyond North America, especially in Western Europe and Japan, which until then had given little or no food aid.

⁴ “*Disposal of Agricultural Surpluses*”, FAO Commodity Policy Studies No. 5, 1954. This major study pioneered some very creative ways in making appropriate uses of food aid to address humanitarian needs in developing countries and was the first major step in the conceptual evolution of food aid towards its eventual food security role. That study had profound implications both at the conceptual and institutional level. It launched new ideas for utilizing food surpluses in food-for-work projects, for food stabilization purposes, in special feeding programmes for the most vulnerable target groups, and in support of government programmes to subsidize consumption.

Another FAO study (“*Uses of Agricultural Surpluses to Finance Economic Development in Under-Developed Countries*”, FAO Commodity Policy Studies No. 6, 1955) concerned the possible contribution of food aid to economic development. A clear distinction was made for the first time between food assistance for welfare and support for general development programmes. That study stressed the role of food aid as an additional capital to finance economic development, including its balance of payments and budgetary support roles.

⁵ Subsequently revised under the title of *FAO Principles of Surplus Disposal and Consultative Obligations (see Reporting procedures and consultative obligations under the FAO principles of surplus disposal: A guide to members of the FAO Consultative Subcommittee on Surplus Disposal, Rome 2001)*.

⁶ The acronym of the sub-Committee was changed from CSD to CSSD in October 1995 in order to avoid confusion with another UN body, the Commission on Sustainable Development created at that time.

⁷ The first move in this direction was UN General Assembly Resolution 1496 (XV) in 1960 on the ‘Provision of Food Surpluses to Food Deficient Peoples through the United Nation System’; (ECOSOC Resolution 832 (XXXII) requesting the UN and FAO to formulate more detailed proposals regarding procedures and arrangements for a multilateral programme; FAO Resolution No. 1/61 on ‘Utilization of Food Surpluses - World Food Programme’; and UN General Assembly Resolution 1714 (XVI) on ‘World Food Programme’.

A more formal arrangement, along these lines, was the signing of the first Food Aid Convention (FAC) in 1967 as one of the two instruments - the other being the Wheat Trade Convention - which constituted the 1967 International Grains Agreement.

The FAC is a treaty that was intended to enhance the capacity of the international community to respond to food aid needs by guaranteeing a predictable flow of food aid per year, irrespective of price or supply fluctuations. Under the FAC 1967, an aggregate annual minimum guaranteed volume of 4.2 million tonnes of food aid in cereals (in wheat equivalent) was committed by nineteen donors.⁸ The Convention was renegotiated in 1971 maintaining the same minimum commitment, and again in 1980, when the minimum guaranteed level was raised to 7.6 million tonnes of cereals. The number of donors also rose to twenty two and the cereal coverage was extended to rice.

The FAC was renewed and renegotiated a number of times through the 1980s and early 1990s, with the aggregate minimum commitment essentially being maintained at about 7.6 million tonnes until the 1995 Convention, when donors lowered their minimum commitment by more than a quarter to about 5.5 million tonnes. The Convention presently in effect is the 1999 FAC.

Together with the minimum guaranteed volume of food aid, a set of guidelines forms part of the FAC, related to the provision of food aid to ensure that it is targeted effectively and directed towards the neediest countries. The Convention also cross-references donors' obligations to the CSSD by stating that food aid should be provided in a manner consistent with the FAO Principles of Surplus Disposal and Consultative Obligations. While the FAC, as a treaty, is a legal instrument and as such goes beyond the CSSD, it, like the CSSD, lacks a binding enforcement mechanism whereby donors not meeting their commitments and/or not observing agreed guidelines and principles could face discomfiture and possible penalties under a WTO-like dispute settlement/resolution mechanism.

Another major step in the evolution of food aid was the decisions and recommendations of the World Food Conference in 1974. In particular, the Conference established the WFP Committee on Food Aid Policies and Programmes (CFA)⁹, and the FAO Committee on World Food Security (CFS). Both of these Committees promoted innovative approaches in the use of food aid to support food security and economic development in vulnerable countries.

In addition, the World Food Conference recommended the acceptance by all donor countries of the concept of forward planning of food aid and a global food aid target of 10 million tonnes of cereals. It also suggested the need for raising the share of food aid channelled through WFP, the grant component of the bilateral food aid programmes, and the cash resources available for commodity purchases from developing countries. The Conference recommended measures for meeting

⁸ Individual donor shares were negotiated in the GATT Kennedy Round of trade negotiations. The nineteen participants in the 1967 Convention included grain-importing countries as food aid donors.

⁹ At its Seventh Session in May 1979, the CFA adopted Guidelines and Criteria for Food Aid to guide food aid programmes and policies of bilateral as well as multilateral donors.

international food emergency requirements in order particularly to enhance WFP's capacity to render speedy assistance in emergencies.

The latter recommendation led to the establishment of the International Emergency Food Reserve (IEFR) by the UN General Assembly in September 1975, with a minimum target of 500 000 tonnes of cereals, placed at the disposal of WFP, additional to regular WFP pledges, and subject to the existing WFP procedures for approval of emergency requests.¹⁰

4. WTO negotiations on food aid under the DDA

The existing WTO disciplines on food aid came into force in 1995 under the export competition pillar of the Uruguay Round Agreement on Agriculture (AoA) and were intended to prevent food aid being used to circumvent commitments on export subsidies. The AoA states that food aid should not be tied to commercial exports, that all food aid transactions should be carried out in accordance with the FAO "Principles of Surplus Disposal and Consultative Obligations", and that such aid should be provided to the extent possible in fully grant form or on terms no less concessional than those provided for in the 1986 Food Aid Convention (FAC).¹¹ The explicit referencing in the AoA of the FAO Principles and the FAC was significant in the sense that, in principle, they became part of Members' rights and obligations under the legal framework of the WTO. However, adherence to these disciplines has not always been in line with expectations, mainly because there has not been a formal reporting obligation by FAO and FAC to the WTO Committee on Agriculture on donors' compliance with their respective obligations and no corresponding remedy in the WTO legal framework in cases of partial compliance. It is partly for these reasons that new enhanced disciplines on food aid have been considered necessary by the WTO Membership under the DDA.

Food aid is being discussed in the DDA along with other aspects of export competition such as export subsidies, export credits and state trading enterprises, because of the possible danger that some forms of food aid transactions could act like other forms of export subsidization. The main preoccupation at the WTO has been with unintended effects of food aid, in particular, its possible interference with commercial trade and misallocation of food aid to countries and people not in genuine need of assistance. If present, such effects occur simultaneously, i.e. to the extent that one takes place the other is also inevitable. Hence, the two inter-related preoccupations at the WTO: how to avoid commercial displacement, and at the same time, how to ensure that genuine food aid is not compromised.

¹⁰ The CFA approved modalities for the operation of the IEFR at its First Session in 1976.

¹¹ In addition, the Marrakesh *Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on Least-developed and Net Food-Importing Developing Countries* (which is an integral part of the Uruguay Round Agreement) sought to ensure that agricultural reforms would not adversely affect the availability of food aid at a level which is sufficient to continue to provide assistance in meeting the food needs of developing countries, especially Least Developed and Net Food-Importing Developing Countries.

The thinking of the WTO membership on both of these issues has evolved considerably since the attempted draft modalities in March 2003 “the Harbinson text”, (WTO, 2003). As regards commercial displacement, that text basically reiterated existing language in the AoA whereby Members shall ensure that their food aid transactions are carried out in accordance with the procedures under the FAO Principles of Surplus Disposal and Consultative Obligations, including, where appropriate, the system of Usual Marketing Requirements (UMRs). There were no links being made to other forms of export competition.

The next step in the process was the July 2004 Framework Agreement which was the first real departure from existing mechanisms (WTO, 2004). The objective of the new disciplines is now spelled out in more direct and specific language, i.e. to prevent commercial displacement through operationally effective disciplines to be developed.¹² Also, the notion of parallelism is introduced, whereby all forms of export subsidization (not in conformity with the disciplines to be developed) are to be eliminated in a parallel fashion and by a date to be agreed.

Yet more explicit language on commercial displacement was introduced in the Hong Kong Ministerial Declaration, whereby commercial displacement is to be eliminated through “effective disciplines on in-kind food aid, monetization and re-exports so that there can be no loop-hole for continuing export subsidization,” (WTO, 2005). Also, parallelism becomes more concrete with the agreement to eliminate all forms of export subsidies and all export measures with equivalent effect by the end of 2013 in a “progressive and parallel manner”.

In a similar fashion, there has been an evolution of the WTO thinking on what constitutes genuine food aid. The 2003 draft modalities text made a distinction between emergency and non-emergency food aid, with the former provided in response to appeals from UN food aid agencies, other relevant regional or intergovernmental agencies, humanitarian NGOs and private charitable bodies and urgent government to government requests. However, for all practical purposes, these provisions essentially reiterated existing practices.

The July 2004 Framework text, although not addressing genuine food aid directly, was an attempt to limit the role of the above possible actors in emergency situations by recognizing explicitly the role of international organizations as regards the provision of food aid by Members, including related humanitarian and developmental issues. Of significance is that the Framework text made no reference to other possible actors in the food aid system as had been the case in the earlier draft modalities text.

As in the case of commercial displacement, the Hong Kong Ministerial Declaration text was more explicit on what would constitute emergency food aid. It calls for the creation of a “safe box” for bona fide food aid to ensure that there is no unintended impediment to dealing with emergency situations. The explicit reference to bona

¹² There is no longer mention of the FAO Principles of Surplus Disposal and UMRs, which suggests that the weaknesses of those instruments had been recognized by the WTO membership by then and more explicit disciplines were considered necessary.

bona fide food aid is important as it implicitly recognizes the problem of lack of clear definition of what constitutes emergency food aid and related concerns having to do with declaration of such situations and assessing emergency needs.

While prior to the Hong Kong Ministerial Conference there was considerable debate in the negotiations on how much of the food aid specifics should be internalized in the WTO machinery itself, there is now a clear recognition that the WTO disciplines would cover the broader picture, i.e. the general definition of the “safe box” and how disciplines on other types of food aid would effectively prevent commercial displacement. Inevitably, the specifics on what food aid is to achieve and what mechanisms are necessary on the ground to effectively ensure its humanitarian goal would continue to depend on expertise and institutions outside the WTO.

As with other parts of the negotiations, many issues on food aid remained unresolved at the time the Chair’s consolidated text on agriculture was submitted to the WTO mini-Ministerial meeting in Geneva on 30 June 2006.¹³ The definition of the “safe box” for bona fide food aid remains one of the contentious issues, and specifically what would be the characteristics of emergency situations and who should have authority to trigger an appeal for food aid that would be provided under the “safe box”. While some Members have argued for an explicit definition of what would constitute an emergency situation, the mainstream view on this matter supports the notion of a “multilateral” trigger, on the basis of an appeal by the relevant multilateral or international agencies that are best placed to determine and assess an emergency situation, in collaboration with the recipient country concerned. There are also some differences of view as regards the role of other actors in the emergency response, including charitable bodies and bilateral government-to-government arrangements, as well as the duration of assistance under emergency situations.

Issues on possible disciplines for in-kind food aid in non-emergency situations have been more intractable. One view is for the complete phasing out of this type of assistance by the end of the implementation period (2013) and its replacement with untied cash-based donations. Another view is that both in-kind food aid and associated monetization should remain permissible subject to certain conditions, essentially when such donations are based on assessed needs and are targeted to an identified vulnerable population group to address specific developmental objectives or nutritional requirements.

¹³ However, there has been all along general support by the WTO membership on several general principles that should apply to all food aid transactions and these are reflected in the Chair’s consolidated text. These include: food aid should be needs-driven and result in additional consumption; is provided in fully grant form; is not tied directly or indirectly to commercial exports of agricultural products or of other goods and services; is not linked to market development objectives of donor Members; and is not re-exported. In addition, there is also general support of the notion that donors should take fully into account local market conditions of the same or substitute products and procure food aid from local or regional sources to the extent possible.

5. Towards a compromise

While eliminating in-kind food aid outside the strictly emergency response, and having it replaced with cash donations is desirable for many reasons, it seems unattainable at the present time. By and large, in-kind food aid outside emergencies is largely an additional resource and is not likely to be substituted by cash if in-kind donations are banned. Considering also that there is hardly a scarcity of situations where people suffer from chronic food insecurity,¹⁴ the issue is how to make effective use of an additional resource with the minimum distorting effect on production and trade.

Identifying the vulnerable households and putting in place effective mechanisms to target them with food and other essential assistance has long been recognised as the only sure way of attaining the humanitarian goal of food aid and minimizing its possible adverse effects.¹⁵ Yet, another key ingredient in making good use of in-kind food aid in such circumstances is the availability of cash resources necessary for an effective implementation of the nutritional intervention and developmental activities (e.g. for purchase of utensils in school feeding projects, implements for food-for-work projects, fuel and transport costs, enumerators for monitoring, etc.)

Often, in order to meet such cash needs, part of the food aid has been sold in the local market to generate the necessary cash. It is these types of transactions that are the most objectionable under the current negotiations at the WTO. This is because of the undisputed distorting effects of monetization on commercial trade.¹⁶ This is more so the case, as some monetization already takes place by the recipients themselves (they may have other needs in addition to food, prefer other commodities, etc.) and therefore an institutional monetization on top of that could be too disruptive for the local market.

Monetization is the main stumbling block in the negotiations on food aid. However, it is clear from the perspective of the proponents of this instrument, that monetization is not the objective per se but the means to better achieve the humanitarian goal of in-kind food aid. At the same time, it is also clear that the opponents of in-kind food aid do not object to the rationale and the objective of this kind of assistance but to the means used in deploying this resource (i.e. the associated monetization). An impartial consideration of these points of view would suggest that we have a case whereby the monetized food aid (a small part of the total) discredits the whole of in-kind food aid and we run the risk of “throwing out the baby with the bathwater”. If the sole rationale of monetization is to generate

¹⁴ There are an estimated 850 million under-nourished people in the world, the bulk of them chronically food insecure.

¹⁵ See, for example, Barrett, C.B. “*Food Aid Effectiveness: It’s the targeting, stupid!*” Policy Service, Strategy and Policy Division, WFP working paper, Rome 2003.

¹⁶ See, for example, Clay, E., Dhiri, S., Benson, C. *Joint evaluation of European Union programme food aid: Synthesis report*. Overseas Development Institute, London, 1996; Barrett, C.B. and Maxwell, D.G. *Food aid after fifty years: Recasting its role*. Routledge, New York, 2005.

the cash needed for an effective use of in-kind food aid, then the search should be for such cash from sources other than by monetizing food aid. One possible approach could be to stipulate in the new disciplines that donors providing in-kind food aid should also provide the necessary cash needed to make effective use of that assistance.

It is conceivable that such an additional obligation could create problems for some donors that are in a position to provide in-kind food aid but lack the necessary cash (this applies generally to the occasional developing country donors). Those donors could be accommodated by channelling their donations multilaterally (e.g. through the WFP) which could make good use of such donations within the overall pool of cash and commodity resources at its disposal. The cash obligation, in addition to commodity in-kind, would apply strictly to those donors that implement their food aid programmes bilaterally or use national charitable bodies to channel resources through them. Instead of resorting to monetization, these donors should also have the obligation to make available the necessary cash needed to make effective use of their in-kind donations. If they are unable to do so, then the only option available to them would be to channel in-kind food aid multilaterally, as stated above, so that effective use of it can possibly be made by combining it with cash resources available from other donors.

Beyond phasing out monetization as suggested above, the WTO disciplines for in-kind food aid should also include specific provisions on how this assistance should be provided and used to minimize possible distorting effects on commercial trade and domestic production. In broad terms the rationale of the criteria suggested below is to ensure that in-kind food aid results in additional consumption at both national and individual household levels. Additionality in consumption would imply that possible adverse effects of in-kind food aid on production and trade are largely subdued.

The first prerequisite for in-kind food aid in non-emergency situations is the existence of a well-defined vulnerable population group in the recipient country in need of nutritional intervention. This can be a whole community composed of largely destitute people with chronic food deficiency, or it can be a specific group of the community, such as school children, the elderly, mothers in need of medical and nutritional attention, chronically unemployed willing to work for food rations, etc. The idea is that targeting food aid to this group would largely lead to additional consumption.

The second prerequisite is the prevalence of a food deficit situation at the local community level where the vulnerable group is located. Clearly, if the local community and the neighbouring region is not a food deficit area, then bringing in food from outside would displace food from the market and adversely effect local food production. The logical response to assist the identified vulnerable people in this case is through cash resources, either by purchasing the food and making it available to them, or by paying them in cash (food coupons) for addressing their needs on their own. The specific modality would depend on practical considerations and assessment of effectiveness of each option.

The third prerequisite, cumulative to those above, is that the country has an overall food deficit necessitating outside assistance. Evidence of needs at national level shall arise when domestic production plus normal commercial imports fall consistently short of meeting aggregate national requirements for a normal diet for the whole population. Again, the aim here is to avoid the undesirable effects of adding to the national supplies food commodities in excess of national needs. In the cases when aggregate supplies at the national level (production plus normal commercial imports) are at par with assessed aggregate national needs, cash resources for purchasing food locally would be the appropriate response to assisting the vulnerable population group.

6. Concluding remarks

International food aid mechanisms and institutions have evolved considerably since the early 1950s when food aid became part of the assistance package of donor countries in their efforts to reduce hunger and promote development. Donors, international organizations, NGOs and associated institutions are now in a much better position to know what works and what does not and also they have better information to guide them in identifying the vulnerable and target them effectively. Yet, partly because of not questioning enough the rationale and urgency of calls for humanitarian assistance, partly because of vested interests and political considerations along the whole food aid chain from donors to the final beneficiaries, often the mechanisms that have been put in place do not function as they ought to. The primary victim of such malfunctioning is food aid itself and specifically the vulnerable people that food aid was supposed to help.

There is plenty of room for improving the food aid system. Better disciplines are necessary and the negotiations under the DDA present a unique opportunity to build upon the common commitment of the WTO membership on the positive contribution of food aid to food security and to try to fix what needs fixing.

Often, those that wish to see more stringent disciplines on food aid are accused of being against food aid. That latter assertion sometimes also comes from poor recipient countries, fearing that more stringent disciplines would necessarily imply less food aid for them. That is far from the truth. Better disciplines imply, first and foremost, that less food aid would be diverted to better-off countries and better-off households and, consequently, more food aid would go to those countries and those population groups with genuine needs for this assistance. It follows that the poorest countries have nothing to lose from more stringent disciplines but much to gain.

Improved food aid disciplines would also raise the efficiency in the deployment of this resource with an immediate impact that a larger share of donors' resources devoted to food aid would reach the intended beneficiaries instead of intermediaries and people not in real need. The main element in the disciplines to achieve that would be an obligation to allocate food aid to the poorest countries with a chronic unmet food deficit at the national level, and that well-identified vulnerable population groups in these countries are the target of this assistance. Provided also

that, in addition to in-kind food aid, the necessary cash resources are made available, a large part of the food aid provided would result in additional consumption, thus muting concerns about commercial displacement.

Related to the above is the elimination of monetization of food aid, a practice which has often been responsible for giving food aid a bad name and has been in the centre of the controversy in the DDA negotiations. Besides legitimate concerns about its commercial displacement effects, monetization often harms local markets in the recipient countries, creates undesirable vested interests and perpetuates dependency on outside assistance.

As a final thought, it may be worth reiterating that any resource transfer, especially in the form of a commodity, cannot be free from some distorting effects, internationally and/or locally. As in all other parts of the negotiations in agriculture (and the other sectors as well) the absolute is not possible. The aim is always to limit the policy space to those policies and instruments that have a minimal distorting effect on production and trade. That overall objective of the negotiations should always be kept in mind in the effort being made under the DDA to reform the food aid system, considering also the largely humanitarian motives of providing this type of assistance.

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Part 3

Regional experience and outstanding issues

Emerging issues and concerns of African countries in the WTO negotiations on agriculture and the Doha Round¹

Patrick N. Osakwe

1. Introduction

Up until the Seattle Ministerial Conference of the World Trade Organization (WTO) in 1999, African countries were relatively passive participants in the trade negotiation process. Since the Seattle Meeting, countries in the region have been showing more interest in international trade negotiations. This new interest stems largely from two sources. The first is the growing realization that trade has a vital role to play in the economic development of the region. There is also the understanding that the extremely inward-looking development strategy adopted by several countries in the 1970s and 1980s discouraged trade and foreign direct investment and had deleterious effects on growth and living conditions in the region (Rodrik, 1998; Dupasquier and Osakwe, 2006a). The second reason for the new interest in trade negotiations is the recognition that globalization is now an inevitable feature of the world economy and that countries have to participate in the process if they are to protect their interests, minimize any potential risks, and maximize gains. Consequently, unlike in the 1970s and 1980s, the key trade policy question or controversy in the region is no longer whether or not countries should participate in multilateral trade reforms. Rather it is how to participate as well as mechanisms or complementary policies that are needed to ensure that participation does not jeopardize important development goals in the region.

¹ The author thanks discussants and participants at the FAO workshop on “WTO Rules for Agriculture Compatible with Development” held in Rome February 2-3, 2006, for useful comments. The views expressed here are those of the author and should not be attributed to the UN Economic Commission for Africa.

As a result of Africa's enhanced interest in trade negotiations and the human and financial resources countries are devoting to them, the region is relatively more organized in the negotiations now compared to the situation during the Uruguay Round and has also made progress in arriving at common African positions on some of the key issues under the Doha Development Agenda. The Africa Group (AG) in Geneva has played a key role in this area. The AG is an informal group of Geneva-based African trade negotiators established at the end of the Uruguay Round to enable African countries to pool their limited human resources and protect their common interests in multilateral trade negotiations. The formation of the AG has increased the bargaining power of African countries in the negotiations and made it possible for countries in the region to discuss and speak with one voice on issues of importance to them. The group under the leadership of the African Union has also been quite effective in forming alliances to protect Africa's interests in specific aspects of the negotiations. For example, during the Fifth and Sixth WTO Ministerial Conferences in Cancun and Hong Kong respectively, the AG formed an alliance with the Least Developed Countries (LDCs) group and the African, Caribbean and Pacific (ACP) countries in what is now popularly known as the G-90. As a result of this new alliance, developing countries successfully opposed the launching of negotiations on the Singapore Issues during the Cancun Ministerial Conference.

This paper takes a critical look at Africa's concerns in the WTO negotiations on agriculture and the Doha round. It also examines the extent to which the region's demands were met by the commitments made in the draft declaration issued at the end of the Sixth WTO Ministerial Conference in Hong Kong. Finally, it outlines essential elements of any new trade agreements that would ensure a fair outcome for Africa in the agriculture negotiations.

The rest of the paper is organized as follows. Section 2 provides a critical evaluation of reasons for Africa's reservations about trade reforms. Section 3 explains why the agriculture negotiations are important for Africa. Section 4 outlines Africa's concerns in the Doha Round and the multilateral trading system. Section 5 focuses on what Africa wants from the agriculture negotiations. Section 6 outlines how to ensure a fair outcome for Africa in the agriculture negotiations. The last section contains concluding remarks.

2. Understanding Africa's reservations about trade reforms

Several African countries rely on trade taxes for government revenue and are concerned that trade liberalization would erode the fiscal base with potential negative consequences for the provision of infrastructure and social programmes. Table 1 presents information on the number of countries in the region for which trade taxes represent a given percentage of total revenue.

TABLE 1
Dependence on trade taxes in Sub-Saharan Africa

Trade tax revenue (as percentage of total revenue)	Number of Countries	
	1985-1994	2000-2003
0-10.9	5	7
11-20.9	11	8
21-30.9	5	10
31-40.9	11	10
41-50.9	7	7
51-100	3	2
Total	42	44

Source: Computed using data from African Development Indicators 2005.

As is obvious from the table, over the period 1985-1994, taxes on international trade and transactions represented more than 20 percent of total revenue in twenty-six of the forty-two countries in Sub-Saharan Africa for which there is data. Although more recently there has been a decrease in dependence on trade taxes in some countries there has also been an increase in others. Consequently trade taxes still account for a significant percentage of total revenue in several countries. For example, over the period 2000-2003, trade taxes represented more than fifty percent of total revenue in Comoros, Gambia, and Niger. In countries such as Benin, Lesotho, Madagascar, Mali, Sierra Leone, Togo, and Uganda the figure was more than 40 percent over the same period.

In the public finance literature it is typically argued that the revenue consequences of trade reform are likely to be small in the early stages of liberalization. The idea is that the early stage of trade reform involves tariffication of quotas and reduction of prohibitively high tariffs which are likely to raise imports and hence revenue. While it is generally acknowledged that the second stage of reform might lead to a reduction in trade tax revenue, the general argument is that developing countries should not worry about this as they can recover the lost revenue by switching from trade to domestic taxes (Ebrill, Stotsky and Gropp, 1999). This assumes that institutions are efficient and that governments can administer the tax system effectively thereby mobilizing substantial amounts of revenue to compensate for the revenue loss due to liberalization. Emran and Stiglitz (2005) present a theoretical model showing that liberalization may lead to a reduction in government revenue. The idea is that in developing economies with large informal sectors, tax evasion and avoidance are pervasive and these have implications for the ability of governments to derive significant revenue from domestic taxes. Furthermore, Khattry and Rao (2002) provide econometric evidence indicating that trade liberalization had substantial fiscal costs in low and upper middle-income countries. New empirical evidence also suggests that poor countries that switched from trade to domestic taxes did not recover the lost revenue from liberalization (Baunsgaard and Keen, 2005). While these findings do not imply that countries dependent on trade taxes should not embark on trade reforms, they do suggest that the fiscal implications of trade liberalization should be taken into account in multilateral trade negotiations.

African countries are also concerned that liberalization may increase macroeconomic volatility with potential consequences for output and poverty reduction efforts. The idea being that liberalization may increase terms of trade volatility and hence output volatility. This is particularly an issue for African countries because they export a relatively small number of products and so are more vulnerable to terms of trade shocks. Although this view is widespread, it is very difficult to find strong empirical evidence that supports it. If one looks at output volatility in the region during the period 1986-90 compared to volatility in the period 1996-2000 when the region had relatively more open economies, it is very difficult to find any clear relationship between trade liberalization and output volatility. Table 2 presents data on output volatility and average unweighted tariffs in African countries for the periods 1986-90 and 1996-2000.

TABLE 2
Output volatility and average tariffs in Africa (1986-2000)

Country	1986-1990 Volatility	Tariff	Country	1996-2000 Volatility	Tariff
Swaziland	13.7	-	Guinea-Bissau	18.4	24.4
Gabon	12.1	-	Sierra Leone	10.3	18.3
Mozambique	6.3	15.6**	Rwanda	7.6	21.4
Ethiopia	6.1	29.6 ***	Lesotho	5.8	13.6
Cameroon	5.7	32.0**	Morocco	5.7	33.1
Mali	5.7	-	Zimbabwe	5.5	22.3
Sierra Leone	5.3	30.9	Togo	4.9	15.0
Morocco	4.9	23.4	Gabon	4.7	20.1
Burkina Faso	4.5	60.8**	Congo, Rep.	4.3	16.2
Botswana	4.4	-	Ethiopia	4.3	25.5
Nigeria	4.2	29.7	Mozambique	4.1	15.5
Côte d'Ivoire	4.2	26.1	Côte d'Ivoire	3.7	18.5
Tunisia	4.1	26.0	Zambia	3.1	14.0
Lesotho	3.9	-	Burkina Faso	2.8	25.4
Congo, Rep.	3.9	32.0*	Comoros	2.3	33.4
Guinea-Bissau	3.7	-	Malawi	2.0	18.9
Comoros	3.0	-	Uganda	1.8	10.9
Rwanda	3.0	33.0**	Algeria	1.5	24.9
Zimbabwe	3.0	9.2	Mali	1.5	15.2
Zambia	2.9	29.9**	Kenya	1.4	17.1
Mauritania	2.9	22.3	Gambia	1.4	13.2
Togo	2.7	-	South Africa	1.4	7.9
Uganda	2.6	25.0	Nigeria	1.3	24.1
Senegal	2.6	13.5	Botswana	1.1	-
Malawi	2.2	18.0	Madagascar	1.0	6.6
Algeria	2.2	24.6	Mauritania	0.9	15.9
South Africa	1.7	15.2	Tunisia	0.8	30.9
Egypt	1.5	39.7	Mauritius	0.7	25.6
Mauritius	1.5	36.3	Swaziland	0.4	14.0
Gambia	1.1	-	Egypt	0.4	26.2
Madagascar	1.1	6.0	Ghana	0.3	14.6
Kenya	1.0	40.3	Senegal	0.3	19.3
Ghana	0.7	18.8	Cameroon	0.3	18.5

Notes: * refers to data for 1986; ** refers to 1987 and; *** refers to 1988.

Two points can be made from this table:

- Relative to the 1986-90 period, a number of countries had a reduction of trade barriers in 1996-2000 but also experienced an increase in volatility. Sierra Leone, Kenya, Rwanda and the Republic of Congo are in this category.
- There are also several countries that had a reduction in trade barriers as well as a decrease in output volatility. See for example, Mauritius, Nigeria, Côte d'Ivoire, Mauritania, Uganda, South Africa, and Egypt.

Clearly, the data suggests that the impact of liberalization on output volatility differs across countries. This is consistent with recent econometric evidence on the issue. For example, Dupasquier and Osakwe (2006b) examined the relationship between trade regimes and macroeconomic volatility using econometric techniques and found no evidence of any systematic relationship between the two variables. The study found that factors such as the volatility of inflation, climatic disasters, terms-of-trade volatility, the nature of fiscal policy, and the severity of debt are more robust determinants of macroeconomic volatility in the region.

Another major issue of concern to African countries is how to deal with the costs of adjustment to trade reforms. There is some understanding amongst economists that reforms may have long-term benefits (McCalla 2001). However, it is also generally acknowledged that they have short-term costs. These costs arise from the fact that reforms require reallocation of factors of production from protected sectors to areas where a country is more competitive in production. This reallocation of factors may lead to the displacement of workers as well as output losses in the short run. Given the fact that this issue is of concern to several countries in the current round of multilateral trade negotiations, it is surprising that not much research has been done on estimating the costs of adjusting to trade reforms in developing countries. Most existing studies focus on reform in advanced countries and the general conclusion is that the costs are small in relation to the benefits of reform (Anderson, 2004; McCulloch, Winters and Cirera, 2001; Matusz and Tarr, 1999). Of the few studies that have been conducted for developing countries the evidence is mixed, although several studies conclude that in the presence of rigid labour markets the gains from trade liberalization are often less than the adjustment costs (Laird and Fernandez de Cordoba, 2005). For African countries, the existence of adjustment costs is of concern because they often have relatively rigid labour markets and no social safety nets. Davidson and Matusz (2000) have shown that in economies with rigid labour markets, the costs of adjustment to trade reforms might offset the benefits.

3. Why the agriculture negotiations are important for Africa

African countries have a predominantly large rural population with agriculture accounting for a high proportion of employment. Therefore the agricultural sector plays a critical role in the development of African economies. In this regard, improved market access for Africa's agricultural exports through multilateral trade liberalization would have important consequences for economies in the region. In contrast, in developed countries as well as Latin American and Caribbean very few people make their living through agriculture. In the United States and Canada, for example, in 2000 the share of agriculture in total employment was roughly 2 percent. In the European Union it was about 4 percent and in Latin America and the Caribbean it was 20 percent. This contrasts with 66 percent for Sub-Saharan Africa and 56 percent for Asia (Table 3).

TABLE 3
Share of agriculture in employment (%)

Region/Group	1970	2000
Africa	76	58
Sub-Saharan Africa	82	66
Asia	71	56
Latin America and Caribbean	42	20
European Union (15)	13	4
Canada	8	2
United States	4	2
Japan	20	4
Developed Countries	18	7

Source: Computed using data from FAO database

Another reason the agricultural negotiations are important for Africa is that in the early stages of development the rural and agricultural sectors play a key role in economic development (Nurkse 1953; Rostow, 1960). This role is particularly important in African economies characterized by low growth and a high incidence of poverty. Africa's growth rate has been consistently low relative to the world as well as developing countries average. For example, over the period 1990–2001 the average annual growth rate of per capita GDP in Africa was 0.2 percent compared to 1.5 percent for the world, 1.3 percent for Latin America, and 3.1 percent for Asia (Cooper, 2005). Poverty statistics also show that Africa's performance is not as good as those of other developing countries (Table 4). Clearly, raising agricultural productivity and diversification into dynamic agricultural and manufactured exports are critical to the achievement of sustained growth and poverty reduction on the continent. Given the current factor endowments of the continent it is highly unlikely that the region would be able to diversify its economy into manufactured goods in the short run. Successful diversification of African economies requires upgrading of the skills base through education and training and this takes time.

Therefore, in the short run, increasing agricultural productivity seems to be the most viable and promising approach to reducing poverty in the region. However, whether or not the continent can boost agricultural productivity in the future depends in part on the agricultural policy choices of African governments and the outcomes of the agriculture negotiations are likely to influence these policy choices and decisions.

TABLE 4
Poverty in the world, 1950-2000*

Region and Measure	1950	1960	1970	1980	1990	2000
Head count ratio (percent)						
East Asia	86.6	77.5	71.1	67.2	31.3	6.0
South Asia	44.3	37.2	32.1	34.4	18.5	7.8
Sub-Saharan Africa	59.3	53.2	52.2	49.9	55.3	54.8
Middle East and North Africa	26.3	24.3	13.4	4.3	5.2	7.8
Latin America	22.0	16.0	9.4	3.6	5.3	5.2
Eastern Europe	17.8	9.2	3.3	1.7	0.	0
Developing world	63.2	52.5	46.4	43.5	25.4	13.1
Number of poor people (millions)						
East Asia	830	729	833	955	521	114
South Asia	208	209	229	310	207	105
Sub-Saharan Africa	104	118	150	188	278	362
Middle East and North Africa	27	32	23	10	16	29
Latin America	36	35	27	13	23	27
Eastern Europe	49	29	12	7	0	0
Developing world	1223	1131	1262	1479	1056	647

* Based on Poverty line (PPP, \$1.50 a day).

Source: Cooper (2005).

The agriculture negotiations are also important for African countries because they tend to export primary commodities and current levels of protection in agriculture in the Organization for Economic Cooperation and Development (OECD) countries are quite high. Therefore, there are potential gains from agricultural liberalization (Aksoy and Beghin, 2005; Anderson *et al.*, 2005; Anderson and Martin, 2006). Clearly not all African countries are likely to gain from agricultural liberalization in OECD countries. In general, in the short run, countries that are exporters of protected products are likely to gain and those that are importers are

likely to lose from the potential increase in prices resulting from liberalization. Table 5 presents the 2000-2004 average net trade positions of African countries in food and agricultural products. Given the region's factor endowments and comparative advantages, it is striking to note that only 9 of the 53 countries in the region were net food exporters over the period 2000-2004. In addition, 18 of the 53 countries were net exporters of agricultural products. This stylized fact explains why some analysts and policymakers are worried that the withdrawal of OECD subsidies may lead to an increase in food prices and therefore undermine the food security of several countries in Africa. This is however not a good reason for not eliminating OECD subsidies. A country that is currently a net importer of food may become a net exporter after the elimination of subsidies if the removal of such barriers makes food production more attractive and hence boosts domestic production. In other words, production and export patterns depend on the current and future global trade policy environment and are likely to change as the environment changes. Consequently, although the withdrawal of subsidies arising from multilateral trade reforms may increase food prices and have negative short-term effects on food importing countries, in the long run there is likely to be an adjustment that would reduce the vulnerability of some of these countries to such shocks.

TABLE 5
Average net trade position of Africa for 2000-2004

COUNTRY	Value of Net Exports (in thousand dollars)	
	Food (excluding fish)	Agricultural Products
Algeria	-2687520	-3027900
Angola	-479741	-669448
Benin	-138064	-21410
Botswana	-171683	-228212
Burkina Faso	-60416	63879
Burundi	-24018	848
Cameroon	26580	219451
Cape Verde	-69222	-88706
Central African Republic	-7543	-5324
Chad	7487	57739
Comoros	-6323	-9300
Congo, Democratic Republic	-235656	-235757
Congo, Republic	-143520	-166249
Côte d'Ivoire	1709005	2118996
Djibouti	-93199	-137405
Egypt	-2014638	-2380043
Equatorial Guinea	-10276	-25998
Eritrea	-86192	-87409
Ethiopia	-244596	-24659
Gabon	-135034	-158300
Gambia	-56265	-70989
Ghana	268019	170296
Guinea	-117495	-139984

Guinea-Bissau	15869	10153
Kenya	-108691	571859
Lesotho	-81957	-97558
Liberia	-74968	-10202
Libya	-926698	-1127155
Madagascar	53348	55934
Malawi	-3412	304460
Mali	-6878	147428
Mauritania	-173291	-238629
Mauritius	53312	11803
Morocco	-653455	-930946
Mozambique	-203259	-204842
Namibia	-50587	-20914
Niger	-52960	-74705
Nigeria	-1276223	-1385695
Rwanda	-53107	-25948
Sao Tome and Principe	-5791	-10453
Senegal	-440057	-450124
Seychelles	-43994	-53872
Sierra Leone	-112474	-133199
South Africa	695706	888718
Sudan	-129645	-107864
Swaziland	112014	86704
Tanzania	-114999	83111
Togo	-25524	27731
Tunisia	-242991	-412503
Uganda	-115503	54097
Zambia	-41699	7638
Zimbabwe	-40341	599881

Source: Computed using data from FAO database

4. Key concerns of African countries in the Doha round

African countries are concerned that they are yet to realize the gains promised in the Uruguay Round. In the early 1990s there were several studies indicating that the potential gains from the Uruguay Round reforms are high. In particular, it was stressed that a large share of the global gains would accrue to developing countries. Safadi and Laird (1996) present and discuss some of the results of these studies. Several studies estimated that Africa would incur losses as a result of the implementation of the Uruguay Round reforms (see Table 6). For example, Harrison, Rutherford and Tarr (1996) show that Sub-Saharan Africa would lose US\$418 million from Uruguay Round reforms. Hertel, Masters and Elbehri (1998) also show that Africa is the only region of the world that was likely to lose from the implementation of Uruguay Round reforms.

TABLE 6
Gains and losses from Uruguay round reforms (1992 US\$ billion)

Region	Base-model impacts on welfare gains and losses annually		Static IRTS model impacts on welfare gains and losses	
	Complete reform package	As % of GDP	Complete reform package	As % of GDP
Sub-Saharan Africa	-0.418	-0.2	-0.3	-0.2
South Asia	3.286	1.0	3.7	1.1
Argentina	0.645	0.3	0.7	1.3
Brazil	1.310	0.3	1.4	0.4
Mexico	0.145	0	0.2	0
Rest of Latin America	1.198	0.4	1.3	0.5
Developing countries	17.651	0.4	19.4	0.4
Industrialized countries	75.208	0.4	76.6	0.4
World	92.859	0.4	96.0	0.4

Source: Harrison, Rutherford and Tarr (1996).

Added to the unfair outcome of the Uruguay Round (UR) reforms is the growing realization that Africa may be vulnerable to the partial reforms under the Doha round (see for example, Lippoldt and Kowalski, 2005; OECD, 2005). Using a CGE model that incorporates preference erosion, variable employment and binding overhang, Achterbosch *et al* (2004) find that under full liberalization of global trade global gains are about 0.3 percent of GDP. For Sub-Saharan Africa the gains are also about 0.3 percent of GDP. However under modest reforms, as is likely under the Doha round, sub-Saharan Africa incurs losses of about 2 percent of GDP while the global gains are 0.1 percent of GDP. Apart from terms of trade effects, the losses incurred by sub-Saharan Africa under partial liberalization are due to the combined effects of preference erosion and binding overhang. Several countries in the sub-region have preferential market access to key OECD markets and partial reforms increase the degree of competition they face from other developing countries in these export markets without offsetting improvements in market access for African products in developing countries due to binding overhang. Bouet *et al* (2004) have also shown that recent results of applied general equilibrium model simulations are excessively optimistic in terms of projected welfare gains for developing countries. In particular, their results show that sub-Saharan Africa would lose from the types of partial agricultural trade liberalization likely to take place in the Doha round. They attribute this to preference erosion. Given these vulnerabilities and the unrealized expectations from the UR, it is not surprising that African countries are wary about making further commitments in the Doha Round.

As in most developing countries, the rules and procedures of the multilateral trading system are regarded as unfair by African countries. They view the rules and procedures as favouring the developed countries. For example, although the WTO is supposed to be a member-driven organization, important issues and decisions are taken in "Green Room" meetings and African countries do not have

proportionate and adequate representation at these meetings. In addition, because of their relatively low bargaining power, countries in the region have difficulties setting and influencing the agenda and pace of negotiations. The lop-sided power structure of the multilateral trading system is evident in the fact that developed countries managed to get the Singapore Issues on the agenda of the Doha Work Programme at the WTO Ministerial Conference in Doha despite mounting opposition from developing countries, who comprise more than two-thirds of the membership of the WTO. The Singapore Issues contributed to the failure of the 2003 WTO Ministerial Conference in Cancun and three of the four issues were eventually taken out of the Doha Agenda.

Africa is also concerned about the incoherence between the trade and aid policies of OECD countries. On the one hand, they offer aid to African countries to help fight poverty. On the other hand they adopt unfair agricultural support and trade policies that make it difficult for the region to reap and maximize the benefits of trade. United States support to cotton and the devastating effect it has on African cotton producers, through depressed world prices, is a classic example of the harm done to African countries by unfair agricultural policies of OECD countries. Available empirical evidence suggests that the elimination of trade barriers facing Africa's exports in the QUAD countries, the United States, the European Union, Japan and Canada, would result in a 14 percent increase in non-oil exports and a 1 percent increase in real income in Sub-Saharan Africa (Ianchovichina *et al*, 2001). More importantly, the evidence suggests that the costs of the removal of these barriers to the QUAD countries would be insignificant given Africa's low share of international trade.

The lack of commitments and concrete mechanisms for finding effective solutions to the problem of preference erosion is also another major concern that African countries have in the Doha round negotiations. Several countries in the region participate in preferential trading schemes and are worried that the Doha reforms may erode these preferences. It is often argued that trade preferences should not be encouraged because in several recipient countries the value is small. In addition, some analysts argue that they are inconsistent with the long-term interests of developing countries (Topp, 2003). It is indeed true that the value of preferences is small for several countries in the region. However this is not a good reason for not taking the issue seriously in the negotiations because an effective solution needs to be found for the limited number of countries in which the value of preferences is high if they are to support the reform effort.

TABLE 7
Value of preferences under EU schemes (as % of exports to the EU)

Range	Country
0 to 10 percent	Sudan, Mali, Niger, Chad, Gambia, Guinea-Bissau, Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, Togo, Benin, Nigeria, Central African Republic, Equatorial Guinea, Sao Tome and Principe, Democratic Republic of Congo, Rwanda, Burundi, Ethiopia, Eritrea, Djibouti, Somalia, Kenya, Uganda, Tanzania, Madagascar, Comoros, Zambia, and Zimbabwe
Greater than 10 but less than 30 percent	Lesotho, Botswana, Namibia, Malawi, Mozambique, Seychelles, Angola, Gabon, Cameroon, Senegal, Cape Verde, Burkina Faso, and Mauritania
Greater than 30 percent	Swaziland, Mauritius and Republic of Congo

Source: Compiled using data from Brenton and Ikezuki (2005)

Table 7 classifies African countries in terms of the value of preferences received in 2002 under the Cotonou and GSP schemes of the EU as a share of agricultural exports to the EU. It shows that there are at least 16 countries in the sub-region for which the value of preferences received under EU schemes is more than 10 percent of agricultural exports to the EU. For these countries preference erosion has real consequences (see for example, Lippoldt and Kowalski, 2005).

Another concern of African countries is the lack of capacity to analyse the implications of the various proposals made in the negotiations for their economies. The international community has recognized this problem by setting up trade capacity building programmes for developing countries. However, it is becoming clear that these programmes suffer from serious shortcomings that undermine their effectiveness (Dupasquier and Osakwe, 2006c). One of the problems with existing programs is that they tend to be biased towards donor-driven priorities and economic interests. This is reflected in the fact that resources tend to be channelled to activities that further donor interests (UNDP, 2005). For example, although developing countries were against launching negotiations on the Singapore Issues, 36 percent of the annual average spending on trade policy and regulation over the period 2001-2004 went to these issues (see Table 8).

TABLE 8
Assistance to trade policy and regulation (US\$ million)

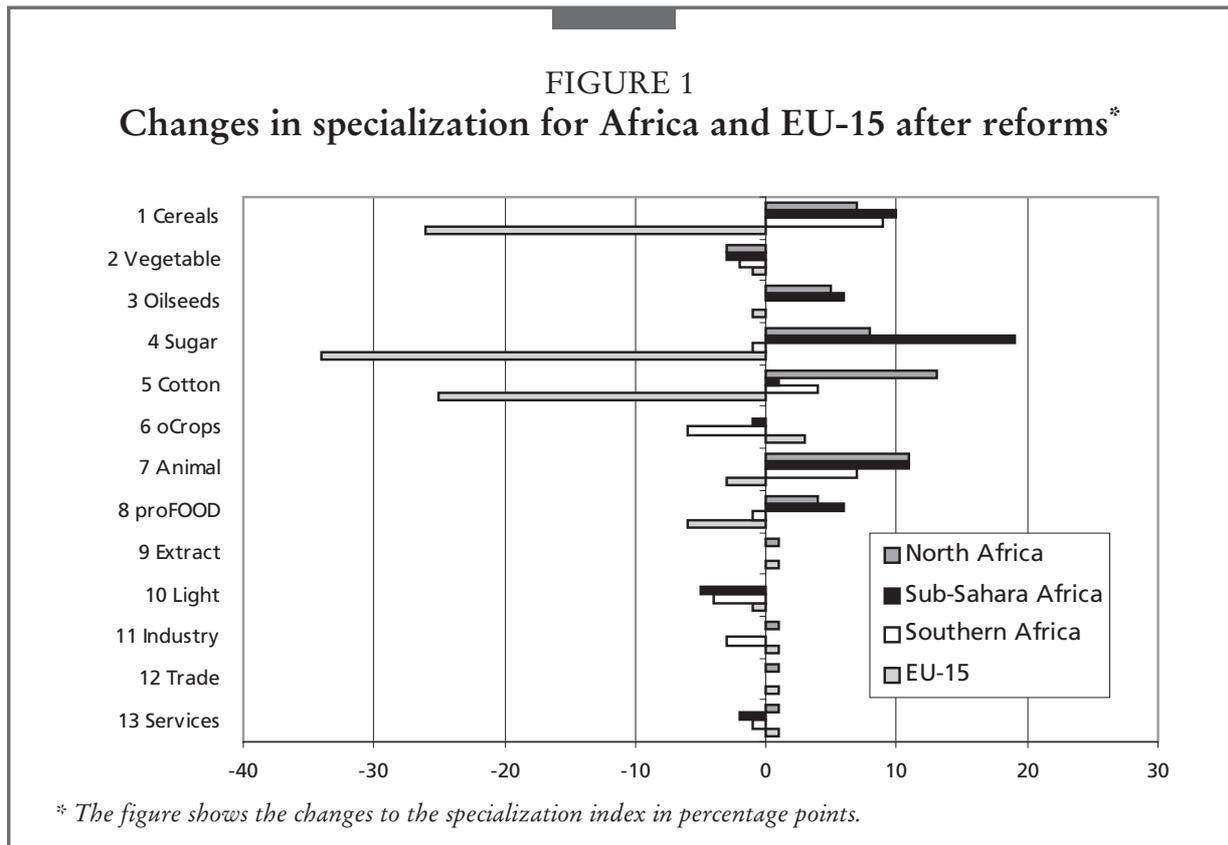
Area	Total for 2001-2004	Annual average	% of total
Singapore Issues			
Trade facilitation	911	228	29.9
Trade and competition	137	34	4.5
Trade and investment	31	8.0	1.0
Transparency and govt. procurement	18	5.0	0.7
Agriculture	37	9.0	1.2
Trade mainstreaming	463	116	15.2
Technical Barriers to trade and SPS	376	94	12.3
Regional trade agreements	480	120	15.7
Accession	73	18	2.4
Dispute settlement	11	3.0	0.4
Trade-related intellectual property rights	48	12	1.6
Services	32	8.0	1.0
Non-agricultural market access	15	4.0	0.5
Rules	13	3.0	0.4
Training in trade negotiation techniques	31	8.0	1.0
Trade and environment	172	43	5.6
Trade education/training	203	51	6.7
Total	3052	763	100

Source: Computed using data from WTO-OECD (2005).

In contrast, training in trade negotiation techniques, which is necessary to increase the ability of developing countries to defend their interests in multilateral negotiations, accounted for about 1 percent. Furthermore, agriculture received only 1 percent even though it is deemed as the most important issue for developing countries in the Doha round. Added to this is the fact that the key capacity building programs, the Joint Integrated Technical Assistance Programme and the Integrated Framework, are generally under funded. There is also weak support for local capacity building as donors frequently favour their consultants over professionals in recipient countries (Deere, 2005; Aryeetey *et al*, 2003).

There is also the concern that the Doha round reforms will lead to de-industrialization in the region and force African countries to specialize more in commodities. Is this fear justified? Achterbosch *et al* (2004) examined this issue using a computable general equilibrium model that takes account of trade preferences received by several African countries. They found that as a result of potential Doha trade reforms Africa would specialize more in cereals, sugar, and cotton and this is driven mostly by policy changes towards these programme commodities in OECD countries. In addition there would be less specialization in commodities such as vegetables, fruits and flowers, and a contraction of activities in light and heavy industries.

Figure 1 shows the changes in specialization patterns in the model for Africa and the EU-15 (initial members of the European Union before accession of countries in Eastern Europe) when moving from modest to full reform. Although these changes in specialization patterns are dictated by current comparative advantage they are worrisome because commodity prices are highly volatile and volatility has consequences for macroeconomic performance (Bleaney and Greenaway, 2001).



5. What Africa wants from the agriculture negotiations

In multilateral trade negotiations, it is often difficult to articulate Africa's demands or positions on the key issues because the continent is made up of heterogeneous groups of countries. This heterogeneity arises from different sources. The first is that several countries in the region are least developed countries (LDCs) and so are not required to make the type of commitments that are required of other WTO members. The second is that some are net food exporters while others are net food importers. To the extent that this characteristic has implications for the potential impact of multilateral trade reforms on participating countries, it affects and determines the positions they adopt in the negotiations. The third source of heterogeneity in the region is that some countries (for example, Mauritius) rely heavily on trade preferences and are concerned about the possible loss of export markets that may result from trade reforms. Consequently, they have a more

cautious approach to multilateral trade reforms than those that are not major beneficiaries of nonreciprocal trade preference (such as South Africa).

Despite these differences, African countries have in recent years been able to adopt common positions on trade issues in an attempt to increase their bargaining power. This is reflected in the series of declarations made by African leaders at the WTO meetings in Seattle, Doha, Cancun and Hong Kong. The official positions and demands of African countries on various issues under the Doha Development Agenda are contained in a series of declarations made by African countries after the launch of the Doha Round in November 2001. These include:

- The Grand Baie Declaration issued at the conference of the African Union's Ministers of Trade held in Grand Baie, Mauritius, from 19-20 June 2003;
- The Kigali Consensus issued at the conference of the African Union's Ministers of Trade held in Kigali, Rwanda, from 27-28 May 2004;
- The Cairo Declaration issued at the conference of the African Union's Ministers of Trade held in Cairo, Egypt, from 5-9 June 2005; and
- The Arusha Development Benchmarks issued at the conference of the African Union's Ministers of Trade held in Arusha, Tanzania, from 22-24 November 2005.

In this section the extent to which the outcome of the agricultural negotiations, as reflected in the draft declaration issued at the end of the Sixth WTO Ministerial Conference, meets the demands and requests of African countries is assessed. Since the Arusha Benchmarks contain the main positions of African countries in the run-up to the Sixth Ministerial Conference in Hong Kong the assessment will focus on this document. At a recent meeting of African Ministers of Trade held in Nairobi from 12-14 April, 2006, African governments re-affirmed their commitment to the common African positions contained in the Arusha Benchmarks. Annex 1 presents Africa's demands on agriculture relative to the agreement in the Hong Kong draft ministerial declaration.

One of the important decisions made at the Hong Kong meeting was to set an end date for the elimination of export subsidies. Trade Ministers agreed that all forms of export subsidies will be eliminated by the end of 2013. African countries as well as most WTO Members wanted these subsidies eliminated by 2010. However, the EU was unwilling to commit to this deadline and in an attempt to avoid a repeat of the experience in Cancun, Members agreed to the date preferred by the EU. The EU has a preference for the 2013 deadline because under the 2003 reform of its Common Agricultural Policy (CAP) it is expected to eliminate most export subsidies by 2013. Concerns were expressed by several developing countries that the new deadline would allow the EU to delay cuts in subsidies until the last moment. To address this concern the draft declaration includes language that the elimination of subsidies "will be achieved in a progressive and parallel manner so that a substantial part is realized by the end of the first half of the implementation period." Although African countries were not happy with the new deadline they welcomed the fact that an end date has been set.

Food aid is another aspect of export competition where Africa's demands were addressed. In prescribing disciplines on food aid the draft declaration makes

provision for the establishment of a Safe Box to ensure that there is no disruption of emergency food aid. The other demands made by African countries were not really addressed in the declaration. For example, they called for State Trading Enterprises in Africa to be exempted from disciplines on export competition but there was no commitment on this in the declaration.

On the domestic support pillar of the agriculture negotiations, there are two commitments in favour of African countries. The first is the idea that the criteria for the Green Box will be reviewed to ensure that developing country Members that cause not more than minimal trade-distortion are effectively covered. The second is the provision that developing country Members with no Aggregate Measurement of Support (AMS) commitments will be exempt from reductions in *de minimis* and the overall cut in trade-distorting domestic support. The other demands of African countries under this pillar were not really addressed in the declaration.

With regard to the market access pillar, it was agreed that there will be four bands but it is not yet clear what the relevant thresholds will be for developed and developing countries. The draft declaration addressed two key demands of African countries in this pillar. The first is that it gives flexibility to developing countries to self-designate an appropriate number of tariff lines as Special Products that are exempt from reduction commitments. These are to be guided by indicators based on the criteria of food security, livelihood security, and rural development. The second is that the declaration gives developing countries the right to have recourse to a Special Safeguard Mechanism (SSM) based on import and price triggers to protect farmers from import surges. On the other demands of African countries under this pillar, there was no significant progress.

African countries were really disappointed and frustrated with the outcome of the negotiations on cotton as reflected in the draft declaration. Given the political significance of this issue and the role it played in the collapse of the Fifth WTO Ministerial Conference in Cancun, African countries expected the United States to make serious efforts to address the concerns of the cotton producing and exporting countries in the region. African countries called for the elimination of all forms of export subsidies on cotton by the end of December 2005. This request was not honoured in the draft declaration although there was an agreement that the subsidies will be eliminated in 2006. On market access, the declaration also responded to the request by African countries. There was the commitment that developed countries will give duty and quota free access for cotton exports from LDCs from the commencement of the implementation period. On domestic support, which is the most important pillar of the cotton issue, there was no specific or real commitment in the declaration except the understanding by Members that reduction of barriers in this area will be more ambitious and the implementation period shorter than for agriculture. African countries were disappointed with this aspect of the declaration because domestic subsidies on cotton make up more than two-thirds of the US support on cotton and the draft declaration did not impose any serious discipline in this area. In the run-up to the Hong Kong Ministerial Conference, African countries made a proposal with specific time-frame on reduction of domestic support on cotton. They asked for support to be reduced

by 80 percent by 31 December 2006; 10 percent by 1 January 2008; and 10 percent by 1 January 2009. In Hong Kong African countries made changes to the proposal to increase the likelihood of an agreement in this area. Under the revised proposal, 60 percent of the trade-distorting domestic support on cotton will be eliminated by 2008; 20 percent by 2009; and 20 percent by 2010. However, this compromise on the part of African countries did not change the position of the United States on the issue.

Another aspect of the cotton negotiation where there was not much progress is the issue of compensation. African countries had asked for the setting up of an Emergency Fund to help cotton exporters deal with the declines in revenue resulting from depressed cotton prices. The draft declaration contains no new commitment in this area but urges the Director General of the WTO to explore the possibility of establishing a mechanism to deal with income declines in the cotton sector.

6. Ensuring a fair outcome for Africa in the agriculture negotiations

Given the crises that have marked WTO Ministerial conferences since Seattle, it is clear that a successful completion of the agriculture negotiations and the Doha Round will depend largely on the extent to which there are tangible benefits for developing countries in any proposed deals. It is therefore important that the key players in the negotiation process, the EU and the US, bear this in mind and also take bold steps to ensure that this is indeed the case. Failure to ensure that there are tangible benefits for developing countries in the negotiations will confirm the widely held view that developed countries preach free trade only when it suits their interests. It will also weaken the intellectual arguments or case for free trade and increase the alienation of developing countries from the global trading system with grave consequences for poverty and world security. Therefore, there is the urgent need to address the concerns of developing countries in the negotiations. In this regard, the following elements are necessary in any agreement to ensure a fair outcome for Africa in the agriculture negotiations.

- Quick resolution of the cotton issue;
- Granting duty and quota free access to OECD countries for all products emanating from the LDCs;
- Elimination of tariff peaks, tariff escalation and non-tariff barriers limiting Africa's incentives and ability to export processed agricultural products;
- Granting flexibility or policy space to African countries to deal effectively with poverty reduction, food security, and rural development needs;
- Finding concrete mechanisms and solutions to the problem of preference erosion;
- More meaningful and effective trade capacity building programmes; and
- Binding commitments on provision of financial assistance to help developing countries cushion the burden and short-term costs of adjustment to trade reforms.

These elements, whilst modest, would address some of the concerns of African countries in the negotiations, increase their confidence in the multilateral trading system and ensure that the continent is not left out in the globalization process. In this

regard, it is important that in the modalities phase of the Doha negotiations developed countries show leadership and make more meaningful commitments that would create an opportunity for African countries to derive more gains from the multilateral trading system. That said, the responsibility to make trade work for Africa does not rest only with developed countries. African countries also have a vital role to play because the benefits of trade are not automatic. They accrue to countries that have taken steps to exploit them. Therefore, African countries should adopt complementary domestic policies that would enable them to take advantage of the potential trading opportunities that could arise from the Doha round reforms. This requires lifting supply-side constraints, reducing transactions costs, putting in place domestic policies that would create an incentive for production of dynamic export products, and intensifying regional integration efforts in areas such as infrastructure, education, governance and conflict prevention and resolution.

7. Concluding remarks

Several promises were made to developing countries at the launch of the Fourth WTO Ministerial Conference in 2001. These include: improving market access for agricultural goods of developing countries as well as the reduction of export subsidies and other domestic support measures used by developed countries; dealing with tariff peaks, tariff escalation, and non-tariff barriers to products of export interest to developing countries; reviewing all Special and Differential Treatment (S&D) provisions to make them more effective and allow developing countries to take care of food security and rural development needs; putting in place better and balanced rules to protect developing countries' rights and interests in the trading system; providing more technical assistance and capacity building programmes to developing countries; and finding appropriate solutions to implementation concerns as well as addressing outstanding issues as a matter of priority.

Translating these promises into binding commitments continues to pose serious challenges for both developed and developing countries. For the developed countries the challenge is how to fulfill these Doha promises without undermining the trade liberalization objectives of the WTO. For developing countries, however, the key challenge is how to participate in the Doha reforms without jeopardizing important national development goals.

Responding to this challenge would require vigilance on the part of African countries. It would also require a strategic approach to trade and a clear assessment of the benefits and costs of multilateral trade negotiations to the region. This is particularly important given the enormous human and financial resources currently expended on trade negotiations by several countries in the region. It is also important because recent studies suggest that under the most optimistic scenario the gains to Africa from multilateral trade reforms are likely to be about 1-2 percent of GDP and this is far below what is need to enable the region to meet the Millennium Development Goals (MDGs). For example, Sachs *et al* (2004) show that African countries would require aid flows equivalent to 20-30 percent of their

GDP over the course of a decade in order to finance the public investments needed to meet the MDGs. In addition, the report of the Millennium Project suggests that a typical low income country with an average per capita income of \$300 in 2005 would require external financing of about 10-20 percent of GNP to meet the MDGs (United Nations 2005). Consequently, it is very important that efforts at liberalization by countries in the region do not put poverty reduction and other national development goals at risk.

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ANNEX 1

Africa's demands and the outcomes of the Hong Kong meeting

Issue	Africa's Positions and Demands in Agriculture	Hong Kong Ministerial Declaration
Export Competition	<p>Elimination of all forms of export subsidies on agricultural products by 2010</p> <p>Disciplines on food aid must take into account the interests of food aid recipients</p> <p>Immediate implementation of the Marrakech decision on Net Food Importing Developing Countries (NFIDCs) and LDCs, in accordance with paragraph 4 of the decision.</p> <p>State Trading Enterprises (STEs) in Africa should be exempted from disciplines on export competition.</p>	<p>Parallel elimination of all forms of export subsidies by the end of 2013</p> <p>Interests of food aid recipients to be taken into account. A Safe Box for bona fide food aid will be provided.</p> <p>Disciplines on export measures will incorporate appropriate provision in favor of LDCs and NFIDCs as provided for in paragraph 4 of the Marrakesh decision.</p> <p>Disciplines on exporting STEs will extend to the future use of monopoly powers. However, there will be provision in favor of LDCs and NFIDCs as provided for in paragraph 4 of the Marrakesh decision.</p>
Domestic Support	<p>Review of the Green Box criteria to provide policy space for developing countries</p> <p>Review and tighten the Green Box criteria for developed countries to ensure that it is non or minimally trade distorting.</p> <p>Tightening of the criteria for the Blue Box and the inclusion of disciplines to prevent box shifting</p> <p>Exemption of African countries from <i>de minimis</i> and AMS reduction commitments</p> <p>Allowing African countries policy space for the development of farming communities</p> <p>Need for real reductions in trade distorting domestic support</p>	<p>The Green Box criteria will be reviewed in line with paragraph 16 of the July Framework to ensure that developing country Members that cause not more than minimal trade-distortion are effectively covered.</p> <p>No specific statement on this in the declaration</p> <p>No specific statement on these in the declaration. However, it is stated that cuts to overall trade-distorting support must be at least equal to the sum of reductions in Amber Box, Blue Box, and <i>de minimis</i> support.</p> <p>Developing country Members with no AMS commitments will be exempt from reductions in <i>de minimis</i> and the overall cut in trade-distorting domestic support.</p> <p>No specific statement on this in the declaration</p> <p>Disciplines will be developed to achieve effective cuts in trade-distorting domestic support consistent with the July Framework</p>

Issue	Africa's Positions and Demands in Agriculture	Hong Kong Ministerial Declaration
Market Access	<p>Application of the principle of proportionality in the reduction of tariffs and the need to take into account the differences in tariff structures across Members</p> <p>Provision of policy space to allow African countries pursue agricultural policies that are supportive of their development goals.</p> <p>An improvement in market access for products of export interest to African countries with special attention given to tariff escalation, tariff peaks and non-tariff barriers.</p> <p>Treatment of Special Products must provide flexibility for African countries and reflect domestic circumstances and development needs.</p> <p>Special Safeguard Mechanisms (SSM) must be operationally effective to address the specific circumstances of African countries</p> <p>Concrete mechanisms and solutions to the problems of preference erosion.</p>	<p>No specific statement on this in the declaration.</p> <p>No specific statement on this in the declaration</p> <p>No specific statement on this in the declaration</p> <p>Developing country Members will have flexibility to self-designate an appropriate number of tariff lines as Special Products guided by indicators based on the criteria of food security, livelihood security and rural development.</p> <p>Developing country Members will have right to have recourse to a Special Safeguard Mechanism based on import quantity and price triggers</p> <p>No new provisions were made on this issue in the declaration.</p>
Cotton	<p>Total elimination of export subsidies on cotton by 31 December 2005.</p> <p>Reduction of domestic support on Cotton under the following time frame: 80% by 31 December 2006 10% by 1 January 2008 10% by 1 January 2009</p> <p>Setting up of an Emergency Fund to address cotton revenue deficits resulting from depression of world cotton prices.</p> <p>Mobilization of technical and financial assistance to aid cotton exporters to add value to their products.</p> <p>Provision of duty and quota free access for cotton and its by-products for the LDC cotton producers and net exporters.</p>	<p>All forms of export subsidies for cotton will be eliminated by developed countries in 2006</p> <p>Trade distorting domestic subsidies for cotton production should be reduced more ambitiously than under whatever general formula is agreed and should be implemented over a shorter period of time than generally applicable to agriculture</p> <p>Director General of the WTO urged to intensify his consultative efforts with bilateral donors as well as multilateral and regional institutions on the development assistance aspects of cotton. He is also to explore the possibility of establishing a mechanism to deal with income declines in the cotton sector.</p> <p>Urged the development community to further scale up its cotton-specific assistance and to support the efforts of the WTO Director General in this area.</p> <p>Developed countries will give duty and quota free access for cotton exports from LDCs from the commencement of the implementation period</p>

ANNEX 2

Taxes on international trade and transactions (% of revenue)

Country	Period	
	1985-1994	2000-2003
Angola	4.2	4.8
Benin	59.2	47.5
Botswana	13.3	--
Burkina Faso	42.7	16.4
Burundi	25.6	21.3
Cameroon	17.0	12.9
Cape Verde	43.5	39.8
Central African Republic	35.5	36.8
Chad	20.8	23.6
Comoros	38.9	56.6
Congo, Dem Republic of	--	36
Congo, Republic of	11.0	7
Côte d'Ivoire	31.9	35.7
Djibouti	22.1	38.1
Equatorial Guinea	26.9	3.1
Eritrea	45.6	39.7
Ethiopia	19.6	30.1
Gabon	19.4	21.4
Gambia, The	50.1	51.9
Ghana	29.7	21.9
Guinea	9.9	18.8
Guinea-Bissau	9.1	36.2
Kenya	8.8	28
Lesotho	51.5	46.6
Liberia	--	--
Madagascar	39.2	48.1
Malawi	19.4	11.2
Mali	33.7	44.6
Mauritania	34.3	9.2
Mauritius	49.8	25.8
Mozambique	18.2	15.8
Namibia	32.0	30.1
Niger	37.0	50.2

WTO rules for agriculture compatible with development

Country	Period	
	1985-1994	2000-2003
Nigeria	--	8.2
Rwanda	37.8	17
Sao Tomé and Príncipe	15.8	36.7
Senegal	27.0	16.5
Seychelles	44.9	23.6
Sierra Leone	42.7	42.6
Somalia	--	--
South Africa	4.1	3.4
Sudan	14.6	19.6
Swaziland	--	--
Tanzania	18.7	36
Togo	36.2	41.9
Uganda	54.4	40.2
Zambia	31.5	30.2
Zimbabwe	--	9.6

Source: Computed using data from African Development Indicators 2005.

Major issues and concerns of the Near East countries in the context of the WTO negotiations on agriculture

Nasredin Elamin

1. Introduction

The Near East (NE) countries are highly diverse in terms of their economic and geographical size, natural resource endowments and standards of living.¹ Although all countries in the region are classified as developing, some fundamental differences exist among them in terms of level of development, resource base and other basic indicators (Annex Table 1). The region includes countries which are mainly dependent on oil resources as well as countries entirely dependent on agriculture. Some countries have per capita income as high US\$20 000, while other have per caput income lower than US\$350. Some are exporters of temperate products, some export tropical products, while others have virtually no agricultural exports. There is also considerable diversity in the way these countries manage their economies. Nonetheless, these countries share several common characteristics that necessitate their joint action to establish common positions in WTO negotiations on agriculture.

At present only 16 of the NE countries are members of the WTO. Eight more countries are in the process of accession to the WTO. Four of these (Algeria, Lebanon, Sudan, Yemen) have their working parties established and negotiations are currently underway, while the other four (Afghanistan, Libya, Iran and Iraq) have their working parties established but negotiations have not started as yet. The two other countries (Somalia and Syria) have not yet joined the WTO.

¹ The Near East, as defined in this paper, is the FAO Near East region excluding countries from Central Asia. Thus it includes Afghanistan, Algeria, Bahrain, Cyprus, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Libya, Malta, Mauritania, Morocco, Oman, Pakistan, Qatar, Saudi Arabia, Somalia, Sudan, Syria, Tunisia, Turkey, United Arab Emirates (UAE) and Yemen.

This paper examines the major issues and concerns of the NE countries relating to the WTO negotiations on agriculture. Section 2 examines the salient features of food and agriculture in the NE region that mean that countries share similar concerns about the multilateral negotiations on agriculture. Section 3 briefly describes the major commitments made by the NE countries in the context of the WTO Agreement on Agriculture (AoA), while section 4 addresses some of the issues at stake relating to the AoA and the multilateral negotiations on agriculture.

2. Major food and agriculture trade-related issues in the Near East

On the basis of agricultural trade structure, the NE countries can broadly be categorized into three groups: oil exporters (OEs); diversified exporters (DEs) and non-oil commodity exporters (CEs).²

Despite the wide diversity in the structure of agriculture production and trade among countries in the region, they share several common characteristics. The following are common issues faced by countries in the region, though there are some differences in significance for each of them.

2.1 High dependence on food imports

Almost all of the Near East countries are net food importers with high dependence on food imports. For example, the ratio of cereal imports to total food supply for the region as a whole has increased from 29 percent in 1980-83 to 39 percent in 1990-93 and reached 44 percent 1999-2002.³ For 14 out of the 20 countries for which comparable data are available for 1999-2002 the ratio exceeded 55 percent, with eight of them having a ratio of more than 90 percent. Such dependence was disquieting to policy makers, who feared that reliance on foreign supplies is “too risky” whether economically or politically. Thus, the multilateral trade reforms on agriculture and the consequent possible increases in world food prices have prompted widespread concern in the region.

In economic terms, a high dependence on food imports should not be a problem if a country does not have the comparative advantage to produce food and/or when there is sufficient foreign exchange to finance food import requirements. However, many countries in the region are concerned not only with high dependence on food imports, but mainly with its progressively rising trend, high short-term fluctuations and the increasingly reduced capacity to pay for the required food imports.

² The oil exporters are countries that derive 70 percent or more of their export earnings from exports of hydrocarbons; commodity exporters are those countries that derive two thirds or more of their export earnings from the export of 1-3 non-fuel primary commodities; while diversified exporters are those in between the two.

³ No data on total food supplies is currently available for these countries beyond 2002.

- *Rising trend of food import dependence.* Trends in production, consumption and trade amply demonstrate the increasing dependence of the region on external sources for food supply. Over the last three decades, food imports of the Near East region as a whole grew at an average annual rate of 11 percent, while per capita food imports grew at 7 percent per annum for the same period (Figure 1). The per capita food imports increased in 19 of the 26 NE countries. FAO projections for 2015 suggest that ever-widening food gap in these countries will have to be filled by commercial imports.

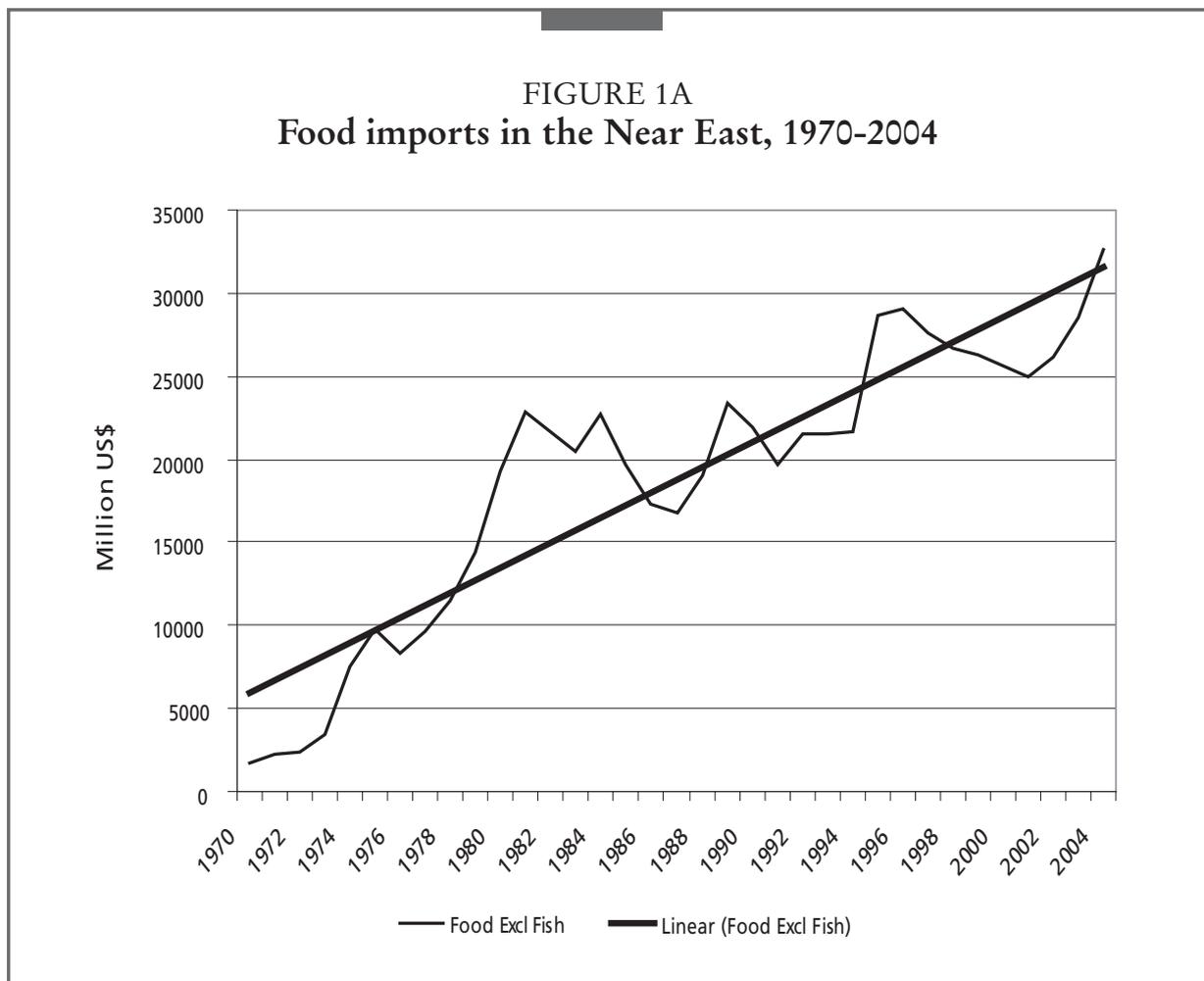
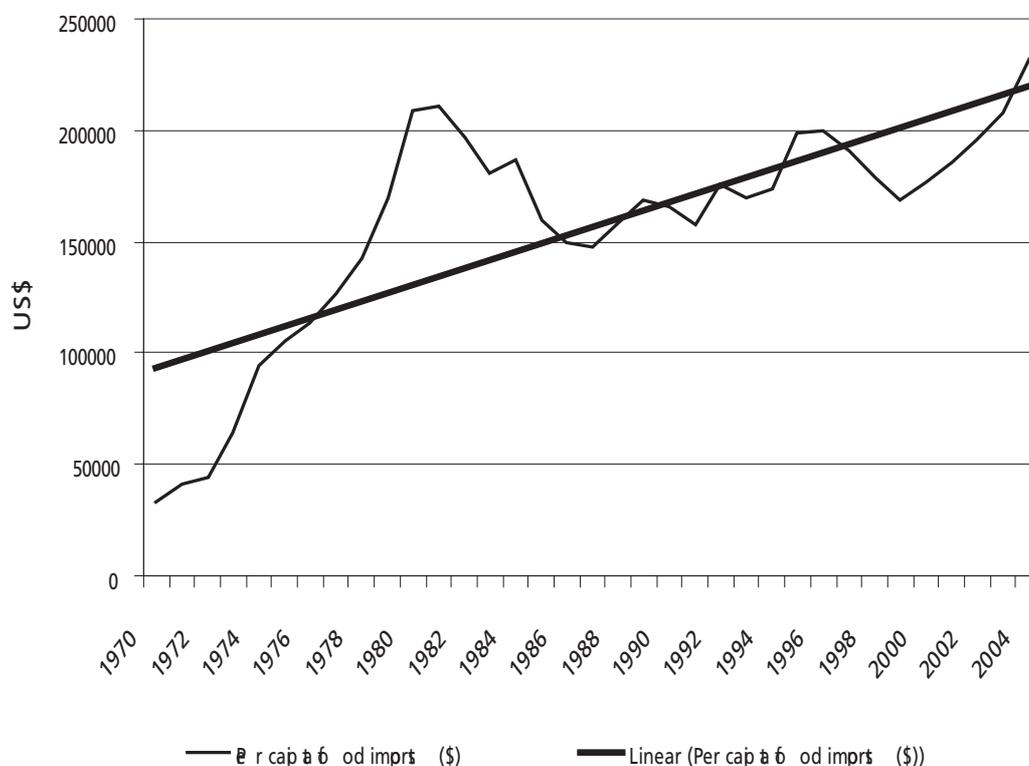


FIGURE 1B
Average per capita food imports in the Near East, 1970-2004



Source: calculations based on FAOSTAT data (2006).

- *Rising ratio of food import bill to total merchandise export earnings.* Ability to import is an essential component of sustainable food security at the national level. For the NE as a whole food imports accounted for a high and growing share in total merchandise exports (Table 1). Although oil exporters do not seem to be faced with significant challenges to their ability to import food, the diversified exporters and commodity exporters are facing greater challenges. In 2000-04, for instance, the ratio of food imports to total merchandise exports averaged 6 percent for OEs, 24 percent for DEs and above 100 percent for CEs. For several countries in the last two groups (e.g. Djibouti, Lebanon and Mauritania) this ratio exceeded 50 percent.
- *Fluctuating food imports.* Fluctuations in food import volumes and values are caused by both internal and external factors. Given the high dependency on rainfed agriculture in the region (70 percent) and the high variability in rainfall, many countries in the NE experience heavy fluctuations in food production. The coefficient of variation of total cereal production in 18 out of 22 countries in NE for which data is available was higher than 25 percent during the period 1990-2004. In certain countries the fluctuations exceeded 50 percent. Such magnitude of fluctuations is too high for countries that rely heavily on food production.

Dealing with food imports therefore requires a wider policy space in order to cope with the long-term increasing trends and the heavy short-term fluctuations. For many countries, the multilateral liberalization of agriculture carries the risk of both increasing food import bills and reducing the policy space for these countries in dealing with short-term fluctuations.

TABLE 1

Ratio of food imports to total merchandise export earnings and total merchandise imports

	Ratio (%) of food imports to merchandise export earnings				Share of food imports in total merchandise imports, 2000-04
	1970-79	1980-89	1990-99	2000-04	
Oil Exporters	7	11	19	6	16
Iraq	8	18	106		55
Algeria	17	19	21	12	22
Iran	5	14	11	6	8
Libya	6	9	11	10	21
Oman	6	8	9	6	11
Kuwait	4	9	11	5	10
Bahrain	7	7	6	6	8
Saudi Arabia	4	9	7	6	14
Qatar	5	6	7	3	10
United Arab Emirates	4	7	6	3	5
Yemen	82	86	74	21	26
Diversified Exporters	44	38	33	24	11
Lebanon	52	69	116	87	13
Jordan	142	67	46	29	14
Egypt	44	92	61	34	16
Cyprus	36	25	23	37	8
Malta	60	23	13	11	8
Syria	41	31	19	12	15
Morocco	29	23	19	16	10
Tunisia	25	19	11	9	2
Pakistan	24	15	12	6	5
Turkey	9	3	5	3	2
Commodity Exporters	47	97	114	136	38
Djibouti	67	300	385	454	44
Somalia	54	85	68		37
Afghanistan	29	25	80		27
Mauritania	25	34	33	49	43
Sudan	24	49	42	21	21

Source: Calculations based on data from FAOSTAT (2006).

2.2 Scarcity of water supplies

Scarcity of water constitutes the most formidable challenge to agriculture in the NE region as the region is the most water-scarce in the world. The World Bank reported that, by 2025 renewable water supplies in almost all the countries in the Middle East and North Africa will fall below 700 m³ per capita, compared with a world-wide per caput of more than 5 000 m³. Scarcity of water means limited scope for expansion in food production, particularly cereals, a shift in the cropping mix in favour of high value products such as horticultural crops, and as a result increasing dependence on the international market for supply of basic food commodities. Therefore, increases in world market prices for agriculture and food products, as a result of multilateral trade liberalization or otherwise, may imply an increased drain on water resources.

In addition, commitments in the context of the WTO imply a reduction in subsidies for irrigation water. Reducing the water subsidy is, however, extremely sensitive because of the complicated political, religious and social constraints surrounding the issue of water pricing in the region. Trade liberalization in the context of the WTO, therefore, needs to be taken in tandem with a reform of water and other environmental resource prices. What is required is a judicious mix of reforms to prices of agricultural commodities, water and land.

Thus, with the severe scarcity of water the only options available to increase agricultural production in many of the NE countries are through i) changing the cropping pattern in favour of high value crops such as horticultural products; and ii) increasing productivity per unit of water use. The experience in the region suggests that diversifying production into high value crops and raising productivity through water saving technology are not easily achievable without government support and intervention, at least in the initial stages of these processes.

2.3 Trade preferences

Many of the NE countries receive preferential treatment from the developed countries (primarily from European Union (EU), the United States (US) and Japan) under the Generalised System of Preferences (GSP) and other preferential trade agreements. The most important of these are preferences in the context of the Euro-Mediterranean Agreements (EMAs). EMAs are currently in force with Tunisia (1998), Morocco (2000), Jordan (2002), Lebanon (2002) and Egypt (2004). An Association Agreement was signed with Algeria in 2001, but has not yet entered into force. Negotiations with Syria were concluded in October 2004.

Other countries such as Egypt, Mauritania and Tunisia receive GSP from the US. In addition, Djibouti, Mauritania, Somalia and Sudan receive special treatment from the EU because of their status as ACP countries in the context of the Cotonou Agreement and as LDCs in the context of the "Everything but Arms (EBA)". One of the major consequences of the WTO reforms in agriculture is the erosion of the value of these preferences.

In general, EMAs' agricultural preferences receive greater attention in the region compared with other preferential trade agreements in the region. EMAs' product coverage (PC) of agricultural products, i.e. the share of products covered by

preferences in total agricultural exports from the respective countries to the EU, averaged more than 67 percent for the Mediterranean countries in the region in 2001-03. The PC varies from about 17 percent for Syria to more than 80 percent for Morocco. In addition, the value of preference margin (VPM), which measures the value of trade resulting from preferences, totals about €225 million for the Mediterranean countries of the region, varying between €0.3 million for Syria and €120 million for Morocco. In relation to the total value of agricultural exports to the EU, the VPM varies from 2.7 percent for Lebanon to almost 16 percent for Tunisia. For the Mediterranean countries in the region as a whole this share is 7.4 percent. These preferences are bound to diminish in the context of the ongoing tariff cuts in the context of the WTO negotiations on agriculture.

TABLE 2
Product coverage and the value of preference margin under the EMA, 2001-2003

	Algeria	Egypt	Jordan	Lebanon	Morocco	Palestine	Syria	Tunisia	Total
Agric export value (mil €)	40.4	781.1	392.9	196.6	1 125.9	62.1	794.4	445.3	4 940.5
Agric exports to the EU (mil €)	39.9	306.7	7.2	32.8	1 384.3	5.1	137.3	293.8	3 068.0
Product coverage (%)	52.7	44.1	52.0	22.0	84.2	79.9	17.4	76.0	67.2
VPM (mil €)	1.8	11	0.3	0.9	122.3	0.4	5.7	46.6	225.5
As % of agric export value	4.5	1.4	0.1	0.5	10.9	0.6	0.7	10.5	4.6
As % of agric exports to the EU	4.5	3.6	4.2	2.7	8.8	7.8	4.2	15.9	7.4

Sources: Grethe, Nolte & Tangermann (2005); Grethe (2005).

2.4 Regional integration

Regional integration in agriculture continues to be an issue of great concern to many of the NE countries. The present interest in regional agreements has its origin in the belief that close regional cooperation will provide an economic defence against shifting patterns of trade and investment, particularly after the conclusion of the Uruguay Round and the establishment of huge regional economic blocks such as the North America Free Trade Agreement (NAFTA) and the European Union (EU).

The Near East countries have been parties to a large number of regional trade agreements (RTAs), the majority of which are between Arab countries. Most important of these RTAs are the Pan-Arab Free Trade Area (PAFTA), the Economic Co-operation Organisation (ECO), the Gulf Cooperation Council (GCC) and the Arab Maghreb Union (AMU). All these RTAs have in common the objective of promoting intra-regional agricultural trade and cooperation within member countries.

Most of the RTAs in the Near East have recently witnessed increased efforts to deepen their integration schemes. In PAFTA, 17 member countries have agreed to liberalize trade fully in all products between them (including agricultural products)

between 1998 and 2007. They committed themselves to reduce all customs duties gradually between them on annual basis, so that by 2005 duties would be eradicated. By the end of 2003, tariffs on trade between participating countries were reduced, on average, by 80 percent compared with those of 1997 (Arab Monetary Fund, 2004). The Economic Cooperation Organization (ECO) has also undertaken significant steps in deepening economic integration among its members. The ECO member states have agreed to establish a Free Trade Agreement (FTA) between them in 2006. The GCC has also recently established a custom union and is planning to establish a common market. The EMAs are gradually moving into fully reciprocal trade agreements. They are now entering into a new phase of focus on trade liberalization in the context of the recently launched European Neighbourhood Policy (ENP). Despite all these regional and sub-regional integration agreements, the performance of intra-regional trade in food and agriculture remained low.

Most of these RTAs have not been notified to the WTO as yet. It also seems that most of these RTAs are undergoing some changes in an attempt to comply with Article XXIV of GATT 1947 and the Uruguay Round Understanding on the interpretation of the same Article, which only permit customs unions and free trade areas satisfying strict criteria.

3. Main features of commitments made by the NE countries in the context of the AoA: magnitude and flexibility

This section examines actual commitments made by the NE countries in the context of the AoA in the areas of market access, domestic support and export subsidies and provides some initial assessment of the possible implications of the further multilateral reforms.

3.1 Market access

The market access provisions of the Uruguay Round Agreement on Agriculture (UR AoA) include i) tariffication; ii) binding and reduction of tariffs; iii) the special agricultural safeguard (SSG) provisions, where tariffication has been carried out; and iv) the introduction of tariff quotas to protect current access arrangements and to open up new import possibilities under the minimum access arrangements.

- *Bound tariffs.* As several of the WTO Members of the region had already removed many of the non-tariff barriers (NTBs) to trade as part of their domestic policy reforms, these countries did not face much difficulty in complying with the requirement of converting NTBs into tariffs. During the UR negotiations developing countries had a choice to bind tariffs at their tariff equivalents or to offer “ceiling” tariffs without regard to tariff equivalents. All the NE countries, apart from Morocco and Tunisia, have chosen the second option, setting their tariffs at relatively high ceiling bindings.

As can be seen from Tables 4 and 5, three features on tariffs commitments (bound tariffs) made by the NE members of the WTO are worth noting: For the NE countries as a group, average bound tariffs are generally high, though they are low compared with tariffs for several other developing countries.

Bound tariffs for individual products vary considerably across the region (see Annex Table 4). Tariffs for wheat, for instance, range from as low as 5 percent in Egypt to as high as 170 percent in Morocco. Generally, bound tariffs are relatively low for Jordan, Oman and Egypt. For Jordan and Oman, which are among the newly-acceded countries in the region, this was basically because of the hard negotiations they faced on their tariff offers.

With the exception of Jordan, bound tariffs are generally high compared with applied tariffs. In most of the countries and for most of the commodities bound tariffs are more than double the applied tariffs.

TABLE 3
Near East WTO Members - average bound and applied tariffs

	Final Bound Tariffs (simple average)	Applied Tariffs (simple average)
Oil Exporters		
Bahrain	39	12
Kuwait	100	4
Qatar	31	7
Oman	32	15
Saudi Arabia	12	10
Diversified Exporters		
Egypt	30	24
Cyprus	64	20
Jordan	29	22
Morocco	53	45
Malta	23	5
Pakistan	101	21
Tunisia	115	62
Turkey	64	36
Commodity Exporters		
Djibouti	49	21
Mauritania	40	12

Source: Calculations based on data from FAOSTAT (2006).

- *Special safeguards (SSGs)*. Only two of the NE countries have access to the SSGs. By virtue of their tariffication, Morocco and Tunisia, and in accordance with Article 5 of the WTO Agreement on Agriculture, have reserved the right to invoke the Special Safeguard clause for selected agricultural products. None of these countries have invoked SSG provisions since 1995.

Many countries have now realized the great importance of access to SSGs, given their relevance and ease of use. The use of other trade remedy measures (anti-dumping, emergency safeguards, countervailing measures, etc.) in the region has been fairly limited (Table 4). For the period 1995-2005, general safeguards in agriculture have been used by only three countries in the region (Egypt, Jordan and Morocco). Because of their low bound tariffs, countries such as Egypt and Jordan are increasing resorting to the use of general safeguards in dealing with surges in their agricultural imports. Jordan in particular, being a small and highly open economy, has suffered numerous and increasing occurrences of import surges in such sectors as olive oil, eggs and tomatoes during 2002-05. Out of the 16 initiations of safeguards in agriculture by all WTO members during 2002-05, three were raised by Jordan alone. The use of emergency safeguards by Jordan in agricultural products is one of the rare cases of using general safeguards in agriculture in the Near East. Egypt has also initiated four cases of countervailing duties relating to agricultural products.

TABLE 4
Use of trade remedy measures in agricultural products by Near East countries, 1995 - 2005

	Initiations of measure by reporting country			
	All WTO Members		WTO members from Near East	
	All products	Agricultural products	All products	Agricultural products
Anti-dumping measures	2840	140	163 (used by only 3 countries)	0
Countervailing duties	182	48	4 (1 country)	4 (1 country)
Safeguards	148	45	26 (5 countries)	5 (3 countries)
Price-based SSGs ^{/a}		946		0
Volume-based SSGs ^{/a}		516		0

Source: 1) WTO. 2006b. Documents on anti-dumping, safeguards and countervailing duties available at www.wto.org; and 2) WTO. 2004. Special Agricultural Safeguards (TN/AG/S/12).

Note: ^{/a} Data available up to 2004.

- *Tariff rate quotas.* Morocco and Tunisia undertook to introduce tariff quotas on certain agricultural products. Tariff quotas in Morocco (16 tariff quotas) are planned mainly for meat, milk, cereals, oil seeds, sugar and oil cake, while in Tunisia (13 tariff quotas) they cover meat, milk powder, cereals, sugar and tomato concentrate. The NE countries faced considerable questioning at the WTO Committee on Agriculture (CoA) on their market access commitment under its respective tariff and other commitments. Almost all questions on market access were directed to countries that have a bigger weight in world trade of the specific product(s). The bulk of the questions on tariffs were related to what can be considered sensitive food products in the region which are also of interest to the exporting countries (mainly US, EU and Cairns States). For instance, Egypt was frequently questioned on its restrictions on beef and poultry meat and Morocco on its tariff rate quota (TRQ) on wheat and oilseeds.

3.2 Domestic support

Countries of the NE region differ widely in their submissions to the WTO on domestic support. Most of the countries did not provide detailed information on domestic policy measures in their accession Schedules. Annex Table 3 shows that only eight countries from the region have notified outlays on one or more support measures. Of the 16 WTO members from the region 11 reported zero or less than *de minimis* total base AMS levels. Thus, these countries have no rights to use Amber Box support in excess of the *de minimis* level in the future.

The countries with Total AMS reduction commitments include Cyprus, Jordan, Morocco, Tunisia and Saudi Arabia. The experience over the period 1995-2003, suggests that these countries are not significantly constrained by their AMS commitments. As indicated in Table 5, the use of the NE countries of their allowed AMS support varies significantly over the years but remained overall moderate. Jordan used little AMS in 2000 and 2001, but the ratio shot up to 51 percent in 2002. With only \$2 million as the limit, this shows that even a small increase in the AMS could take Jordan to the limit. Thus, the risk of AMS limiting support programmes seems real. For Morocco, the AMS utilization ratio was in the 10-30 percent range until 2001 before it rose to 402 percent in 2003 and 2003. By contrast, Tunisia's case is somewhat different. While AMS utilization rates were high (in the 50-90 percent range) in the first five years, actual AMS levels were zero (i.e. within *de minimis* levels) for the last two years. It is not obvious if this signals a marked departure in some policies from the past. If that is not the case, Tunisia is likely to face constraints on the AMS side in the future when Total AMS limit is further reduced.

Although many of the NE countries are not currently constrained by the domestic support provisions of the Agreement, they may find their policy options in domestic support limited in the future.

TABLE 5
Use of Bound Total AMS commitment by Near East countries, 1995 - 2003

Country	Final Bound AMS Million US\$	Current Total AMS as a Percentage of Bound Total AMS					
		1995	1997	1999	2000	2001	2002
Cyprus	107.4	63	45	53	43	54	63
Jordan	1.9	-	-	-	2	0	51
Morocco	76.8	12	12	24	21	42	39
Tunisia	47.5	87	81	46	0		
Saudi Arabia	858.0	-	-	-	-	-	-

Source: WTO (2002); WTO (2005a) and WTO (2005b).

Two observations on the experience of the region with the use of domestic support measures are worth noting:

Sector-wide support in areas such as agricultural credit, transport, irrigation and fuel are important aspects of the agricultural development strategies of many of the NE countries. The support provided to agriculture through these forms is quite significant in many of these countries, and has been instrumental in promoting productivity. It is surprising that most of the NE countries did not report positive support in these areas in their base year schedules. An FAO assessment of support in some non-WTO members during 1999-2005 have indicated that support to diesel, which is heavily used in agriculture, exceeded 30 percent in countries such as Sudan, Syria and Yemen. This support amounted to more than 10 percent of the total value of agricultural products in these countries.

The bulk of the product-specific support is devoted to the production of basic foodstuffs. On average, more than 70 percent of the Current Total AMS notified by the WTO members from the region was allocated to the production of cereals (Elamin, 1999). In some cases, such support is near the allowed product-specific *de minimis* level. This suggests that some of these countries may face some difficulties if product-specific support is capped.

3.3 Export subsidies

While export subsidies are used by a number of the developing regions, it does not seem to be a significant one in the NE Region. Only Tunisia of the NE WTO members had made commitments on the reduction of export subsidies. The rest of the countries in the region declared that they had no export subsidy in their base year. These countries are, therefore, restricted in what they can do in this area in the future. They can only provide support to reduce costs of marketing and internal transport of agricultural exports under the general exemption for developing countries on this issue. It is of note that one of the newly-acceded countries from the region (Oman) did not obtain this exemption of export support to marketing and transport.

4. Key concerns of the Near East countries in the context of the WTO negotiations on agriculture

The major challenge facing the NE countries in the multilateral reforms on agriculture is their ability to exercise their rights and meet their obligations in the context of the AoA. Given the importance of agriculture for many of them for food supplies, jobs (particularly in rural areas), national income and export earnings, they have a large stake in the current and future trade negotiations on agriculture. Multilateral agricultural reforms undertaken in the context of the WTO both expand their opportunities and amplify the costs of their inherent structural weaknesses and policy failures.

Despite their diversity, the Near East countries share several common concerns about the WTO negotiations on agriculture, though they do not have major groups representing a common position for them in WTO. Concerns raised by these countries can generally be grouped into five main areas: managing food imports;

access to developed country markets (particularly the EU); agricultural terms of accession to the WTO; developing domestic capacities in agriculture; and stability in domestic markets.

4.1 Managing food imports

Financing the increasing food imports and dealing with the short-term surges in food imports are major concerns for the NE countries. Assessing these concerns in the context of the AoA requires a careful analysis of the nature of the food import problem, and the extent to which this problem has been addressed by the AoA.

Nature of the problem

The challenges facing the NE countries in the area of food imports are of two types: the significant long-term increases in import bills and the short-term fluctuations in food import volumes and values.

The long-term dependence on food imports reflects the inherent structural constraints facing the majority of the countries in the region, including the physical constraints to production and the changing consumption patterns. The ability of many countries in the NE region to increase food production is constrained by scarcity of arable land and water. As discussed in Section I, scarcity of water supplies is severe in the majority of the NE countries. Arable and permanent cropland in the region is also limited constituting less than 7 percent of the total area. Excessive economic demands and mismanagement of natural resources are destroying cropland through desertification, erosion, water logging and salinization of irrigated land. Desertification is affecting to some degree 40 percent of the irrigated land, 70-85 percent of rainfed cropland and 85 percent of rangeland. The area of irrigated land in the region witnessed only modest expansion during the last two decades. FAO projections indicate that water shortage will remain a major constraint for the expansion of irrigated land in the next decade.

The rising food imports are also driven by the changing consumption pattern in the region as many countries in the region are consuming more and more of what they do not produce sufficiently and consuming less of what they have good potential to produce. Wheat and rice are increasingly replacing coarse grains in domestic human consumption. The share of rice and wheat in domestic food consumption increased from less than 70 percent in the 1960s to about 80 percent in the 1980s and over 85 percent in the 1990s.

The changes in border and domestic support measures in these countries since the early 1980s, as a result of economic reforms at the national level, have also played a role in reducing domestic production and increasing reliance on external food supplies.

Relevance of the AoA to the food import problem of the region

The AoA recognises the food import problem facing many of the developing countries in the context of the multilateral reforms of agriculture and addresses it mainly through the Marrakesh Decision (*Marrakesh Ministerial Decision on Measures Concerning the Possible Negative Effects of the Reform Programme on*

LDCs and NFIDCs). Other major instruments in the AoA that may, directly or indirectly, affect the management of food imports are the binding and reduction of tariffs and agricultural safeguards.

The Marrakesh Decision

Of the current WTO Members from the region, two (Djibouti and Mauritania) are among the least developed countries (LDCs) while four others (Egypt, Morocco, Pakistan and Tunisia) are net food-importing developing countries (NFIDCs), and thus, they are eligible to receive such financial, technical and food assistance as envisaged in the Marrakesh Ministerial Decision on LDCs and NFIDCs. These countries have not been able to make use of this Decision so far.

While the Marrakesh Decision could, in principle, be useful to the NE countries in dealing with increased food import bills as a result of multilateral reforms of agriculture, it actually does not address the main problem these countries are facing. The basic consideration is that the Decision addresses a short-term transitional problem relating to increases in world food prices as a result of the multilateral trade reforms, whereas the problem facing these countries is more of a long-term nature encompassing broader development issues that go beyond trade. The structural constraints facing these countries, including the severe scarcity of water resources in the majority of them, limit the opportunities for expanding production of basic food commodities.

Thus, addressing the food import concerns of these countries seem to lie beyond what the Marrakesh Decision can do in its present form.

Border tariffs

Border tariffs help countries to protect domestic production and regulate imports. As shown in section 3, bound tariffs on food products in the majority of the countries in the region are relatively high. But, how useful are these high bound tariffs as tools for achieving the countries' objectives in protecting their domestic production and dealing with import surges? Three interrelated issues are important to consider in this respect. First, high tariffs, it is argued, would allow these countries to have something to bargain with in future negotiations, which can be used to obtain improved access to other WTO members' markets and thus enhancing opportunities to secure the necessary foreign exchange earnings to import their food needs. Individually, however, countries of the region have little leverage in market access negotiations and the benefit of using such high tariffs, as a negotiating chip, may be quite small, if any. Second, high tariffs can provide protection to the production of sensitive food products. While high tariffs could be used to support domestic food production in the NE countries, their overall impact may not be significant in view of the structural impediments constraining domestic food production in these countries. To be effective, tariffs need to be part of a package that emphasizes enhancing productivity through technological advancement. Third, high tariffs, if applied, imply higher domestic prices not only for producers but for consumers as well. Given the large number of poor households in several

of the NE countries, higher applied tariffs may not be a sensible option in most of the cases. It may be argued that customs revenues generated from higher tariffs could be used to target food insecure households, but targeting the food insecure is a rather difficult and costly strategy to adopt.

In the Near East context, flexibility to apply high bound tariffs seems more useful to countries in insulating their domestic markets from world price instability than in effectively promoting domestic food production. Several countries in the region have adjusted their applied tariffs in response to movements in agricultural imports over the last ten years. Morocco has a system of variable levies on imports of foodstuffs such as cereals, oilseeds, sugar beet and cane and their derivatives.⁴

Table 6 summarizes the results of the possible impact on bound tariffs in a sample of 6 NE countries of two of the tariff cutting proposals in the context of the ongoing WTO negotiations on agriculture. The selected proposals are those of the G-20 and the US. The G-20 proposal gives tariff cuts in the range of 27-36 percent for the selected countries, while the corresponding range for the US proposal is 46-58 percent.

The results suggest that the selected countries, apart from Pakistan, will have a large number of their agricultural tariff lines affected by these cuts, where the new bound tariffs will be below the currently applied rates. In case of the G-20, the affected tariff lines represent about 77 percent of the all agricultural tariffs in Morocco, 60 percent in Turkey and around 40-45 percent in Egypt and Tunisia. The US proposal, on the other hand, results in deeper cuts and affects more than two thirds of the tariff lines in the four countries selected save Pakistan.

Thus, many of the NE countries are expected to gradually lose the flexibility they are currently enjoying in adjusting tariffs for food products in response to movements in food imports. Thus, the issues of securing special treatments for sensitive and special products, in the context of the ongoing WTO negotiations, are of particular interest to them.

TABLE 6
Implications of Doha Round proposals of tariff cutting formulae on tariff structure of selected NE countries

	End UR bound rates	Applied rates	New bound rates		Affected lines	
			G20 prop	US prop	G-20	US
Egypt	30	24	23	16	41	76
Morocco	53	45	36	26	77	82
Pakistan	101	21	65	42	1	1
Tunisia	115	62	75	49	45	66
Turkey	64	36	41	28	60	68

Source: Sharma, 2005.

⁴ WTO. 1996.

4.2 Access to the agricultural markets of the developed countries

Challenges facing the WTO Members in the region originate not only from meeting their own commitments but mainly from the way developed countries implement their commitments. The general expectation has been that implementation of the UR AoA in the developed countries will improve market access for agricultural products from the region. However, for several reasons, the implementation of the AoA so far has not created tangible and visible improvement in access opportunities for agricultural exports originating from the Near East. This is partly because of the nature of these export products, being predominantly temperate zone products such fruit and vegetables.

Tariff peaks and tariff escalation

The phenomenon of tariff peaks in agricultural markets in the post-Uruguay Round period is well documented (see for example, UNCTAD, 2000; FAO, 2001). Choice of the base year 1986-88, a period of particularly low world price levels, in addition to the simple average formula adopted in the Uruguay Round allowed countries to make smaller effective tariff cuts on commodities that were most directly in competition with their own domestic production. Among these commodities are fruit and vegetables, olive oil and pulses, which are among the major exports of the Near East region. In addition, the Special Safeguards (SSGs) for products of fruit and vegetables, both price-triggered and quantity-triggered versions, have been used.⁵

Tariff escalation also remained a barrier to many of the processed food exports of developing countries (Elamin and Khaira, 2004). Many countries such as Cyprus, Turkey, Lebanon, Egypt and the Maghreb countries (Algeria, Libya, Morocco and Tunisia) have good export potential for processed food products, but they are still constrained by high trade barriers in many OECD countries. Although tariff escalation in the fruit and vegetables sector is reduced in the EU post-Uruguay Round, it still remains considerable.⁶ In addition, difficulties and high costs in complying with SPS standards in the EU markets remain a barrier to exports from the Near East.

The EU entry price system for fruit and vegetables

Fruit and vegetables are the major export items of the NE and they are destined primarily to the EU market. In 17 out of the 26 NE countries, exports of fruit and vegetables account for over 20 percent of the total agricultural exports, and in six countries they reach above 50 percent (Annex Table 2). Fruit and vegetables in the EU are typically protected by ad valorem tariffs of up to 20 percent. Beside these tariffs, a system of entry price system is applied to a subset of fruit and vegetables considered particularly “sensitive” in the EU. The entry price system effectively establishes a minimum import prices for these products. If the c.i.f. import price of a shipment is below the entry price, the entry price system provides the opportunity

⁵ The EC has declared price based Special Safeguards for fresh fruit and vegetables, but the EC indicated that these SSG shall not apply when entry prices are respected. Therefore, in most cases entry prices were also the actual trigger prices. Some WTO members questioned the necessity of the SSG for fresh fruit and vegetables in the EC given that the EC entry price system itself operated as a special safeguard measure.

⁶ See for example: i) OECD. 1997, page 35; and Elamin and Khaira 2004.

to invoke specific tariffs gradually, in addition to ad valorem tariffs. The entry price additional specific duties charged range from 14.7 to 78.6 percent.

Table 7 shows the fruit and vegetables concerned as well as MFN import policies applying to them. All these are of particular export interest to the majority of the NE countries.

Would the entry price system be affected by the outcome of the Doha negotiations on agriculture? This depends on three aspects. First, given the Hong Kong agreement on establishing tariff bands for agricultural products, the question is in which tariff band would fruit and vegetables fall? Taking the EU proposal as a reference, fruit and vegetables not covered by the entry price system would generally fall in the lowest tariff band (up to 30 percent) and tariffs would thus be reduced at the lowest rates to be proposed. For those products to which the entry price system is applied, the tariff equivalents of the special tariffs would have to be added to the ad valorem tariffs and as such they may fall at a higher tariff bands, hence be subjected to relative higher cuts. Second, to what extent would the EU be able and willing to declare tariff lines for fresh fruit and vegetables receiving entry price treatment as “sensitive”. In case these products are treated as sensitive, then the chances of a significant reduction in their bound tariffs would be fairly limited. Third, would the existing SSG for fruit and vegetables be continued?

TABLE 7
Fruit and vegetables covered by the EU entry price system

	MFN ad valorem tariff (%)	MFN entry price		Specific tariff of the entry price system	
		Level	Period of application	(€/tonne)	In % of MFN entry price
Tomatoes	8.8 - 14.4	526 - 1 126	01.01. - 31.12.	298	26.5 - 56.7
Cucumbers	12.8 - 16.0	481 - 1 105	01.01. - 31.12.	378	34.2 - 78.6
Artichokes	10.4	654 - 826	01.11. - 30.06.	229	27.7 - 35.0
Courgettes	12.8	413 - 692	01.01. - 31.12.	152	22.0 - 36.8
Oranges	3.2 - 16.0	354	01.12. - 31.05.	71	20.1
Clementines/mandarins	16.0	286 - 649	01.11. - 28.02.	106	16.3 - 37.1
Lemons	6.4	462 - 558	01.01. - 31.12.	256	45.9 - 55.4
Table grapes	8.0 - 17.6	476 - 546	21.07. - 20.11.	96	17.6 - 20.2
Apples	4.8 - 11.2	457 - 568	01.01.- 31.12.	238	41.9 - 52.1
Pears	4.0 - 10.4	388 - 510	01.07.- 30.04.	238	46.7 - 61.3
Apricots	20.0	771 - 1 071	01.06.- 31.07.	227	21.2 - 29.4
Cherries	12.0	916 - 1 494	21.05.- 10.08.	274	18.3 - 29.9
Peaches	17.6	600 - 883	11.06. - 30.09.	130	14.7 - 21.7
Plums	6.4 - 12.0	696	11.06. - 30.09.	103	14.8

Source: Grethe, 2005.

Tariff rate quotas and quota administration

The minimum and current access commitments made by the developed countries also do not benefit the major agricultural exports of the region. In the EU, the biggest market for the Near East, minimum and current access commitments were set for cuts of “high quality” beef, pig meat, poultry meat, eggs, butter, specified cheeses and “quality” wheat, products which are generally not exported by countries of the region. In its minimum access commitments, the EU has aggregated all vegetables into one category and all fruit into another. As a result of this aggregation, the quantities of imports of the EU from each of the two categories during 1986-88 were more than 5 percent of its base year internal consumption and as such the minimum access commitment was not applicable to these categories. The situation could have been different if a product by product approach had been followed. The EU market for fruit and vegetables has been complicated further by the EC’s import licensing scheme for fruit and vegetables introduced to administer the Special Safeguard clause, which was seen by some WTO members⁷ as constituting a discouragement to trade because of the increased administrative burden and costs involved.⁸

In the United States, on the other hand, minimum access commitments were set for dairy products, sugar, beef and peanuts. None of these products are of interest to the Near East as exports. The significant minimum access commitment made by Japan and the Republic of Korea to allow imports of rice is of relevance to only two countries in the region (Pakistan and Egypt).

Trade preferences

Erosion of the value of trade preferences constitutes another problem for the region. To the extent that tariff reductions in the developed countries are effective they will erode the countries’ margins of preference and cause their competitive position to deteriorate *vis-à-vis* other suppliers. Most of the countries of the region have bilateral trade agreements with the EU, in the context of the Euro-Mediterranean Agreements (EMA), which give their products duty free access up to certain quantity limits. An example of the preference erosion is the case of asparagus where Morocco can export duty free to the EU, while exports of the same product from the US and Chile must pay 16 percent tariff. With a reduction in MFN tariff of this product from 16 percent to 10 percent, as a result of the UR AoA, the advantage that Morocco enjoys is cut by 6 percent.

Trade preferences, from a WTO point of view, are a deviation from the most favoured nation (MFN) principle. Some of these preferences, which are granted to developing countries in a non-discriminatory and non-reciprocal manner, are covered by the Enabling Clause. But preferences that the EU grants to the Mediterranean countries from the NE are clearly not covered by this provision because they are

⁷ These include the United States, Australia, Israel, Canada, Chile, Mexico, New Zealand and South Africa.

⁸ It was reported that in some cases traders were asked to provide automatic licences in one day. Egypt has also been complaining about the lengthy inspection procedures of potatoes in the EU where a sample of 200 specimens is needed from each 25-tonne lot.

discriminatory in nature as they only apply to a subset of developing countries which is solely defined by its historical ties to the EU.

Therefore, the preferences granted under the EMA are subject to the conditions defined in GATT Article XXIV on the formation of customs unions and free trade areas. But the legal WTO status of the EMA is unclear, mainly because of the lack of clarification of the requirement of the same Article that free trade areas or customs unions should include “substantially all the trade” between the members, which raises the question of whether the exclusion of large parts of agricultural sectors is in conformance.⁹ This is perhaps one of the reasons that the EU is starting to include agriculture, in a broader spectrum, in its Free Trade Agreements with Mediterranean countries under the new European Neighbourhood Policy (ENP).

The above mentioned problem areas of tariff peaks, tariff escalation, entry price system, TRQs and trade preferences are of particular concern to the Near East countries, for they directly affect the translation of the AoA commitments into real trading opportunities, and they are likely to constitute issues of interest for these countries in future negotiations.

4.3 The terms of accession to the WTO and treatment of the newly-acceded countries

The overwhelming concern for the non-WTO members has been the terms of accession to the WTO. Three countries (Jordan, Oman and Saudi Arabia) have recently joined the WTO, while eight others are at various stages of the process of accession. These countries are facing some considerable institutional challenges in their accession process. Governments from the region, at the various WTO Ministerial Conferences, recommended that the accession process for applicants to the WTO be simplified, expedited and made fairer.

Countries in the process of accession are concerned about the setting of the terms of accession post-Uruguay Round. Treating countries on the basis of the most recent three years for which data were available, hard negotiations on tariff bindings and difficulties in obtaining S&D treatments in several areas were seen as being tighter conditions than previous negotiations. Saudi Arabia, at some stages of its negotiations of accession, also faced the possibility of not being treated as a developing country, which if applied would deprive Saudi Arabia of all the flexibilities offered to developing countries in the context of the special and differential treatment.

The newly-acceded countries are concerned that the concessions they made in the context of the AoA put them at a disadvantage *vis-à-vis* other WTO members. Table 8 summarizes major commitments made by the newly-acceded countries from the Near East compared with other newly-acceded countries. Like most other newly-acceded countries, newly-acceded countries from the Near East bound their tariffs at relatively low levels. The average bound tariffs for agricultural products range from 31 percent

⁹ For a detailed discussion of the WTO-conformance of EU free trade agreements with Article XXIV see Grethe and Tangermann. 1999.

(Oman) to 15 percent for Jordan. This is rather modest compared with the average agricultural tariff of 62 percent for Members who joined before 1995.

Unlike many of the newly-acceded countries, particularly the economies in transition, Oman, Jordan and Saudi Arabia have scheduled non-ad valorem tariffs nor have they established commitment on TRQs. In addition, no new Member has made any commitment to “other duties and charges” (ODCs). Unlike bound tariffs, ODCs do not have to be reduced. In many cases ODCs for original Members are set very high, even exceeding bound tariffs. The absence of ODCs in newly-acceded country schedules may reflect the negotiated desire of original Members ensuring that this experience is not repeated. These countries also bound their export subsidies at zero. In addition, Oman committed itself not to provide any form of export subsidies upon accession.

On domestic support, newly-acceded NE countries used base periods from fairly recent years such as the three-year period ending two to three years before the year of accession and they have carried out reductions of Total AMS over shorter periods than in the UR. The longest implementation period is six years, for Jordan.

TABLE 8
Commitments made by the recently-acceded countries in market access, domestic support and export subsidies

Member	Year of accession	Average tariff %	Final Total AMS (million US\$)	<i>de minimis</i> (in %)	Access to Art. 6.2	Bound export commitment
Countries from the NE						
Oman	2000	31	0	10	yes	0
Jordan	2000	25	1.9	10	yes	0
Saudi Arabia	2005	12.2	858	na	na	na
Other developing countries:						
Nepal	2003	42	0	10	yes	0
Cambodia	2003	n.a.	0	10	yes	0
Taiwan	2002	18	14,165	5		0
China	2001	15	0	8.5	yes, but included as <i>de minimis</i>	0
Panama	1997	26-30	0	10	yes	0 from 2003
Mongolia	1997	18-20	0	10	yes	0
Ecuador	1996	26	0	10	yes	0
Economies in transition:						
Macedonia	2003	15	16	5		0
Armenia	2003	15	0	10 to 5		0
Moldova	2001	12	13	5		0
Lithuania	2001	16	95	5 included in Base Total AMS		0

Member	Year of accession	Average tariff %	Final Total AMS (million US\$)	<i>de minimis</i> (in %)	Access to Art. 6.2	Bound export commitment
Croatia	2000	10	134	5		0
Albania	2000	11	0	5		0
Georgia	2000	12	0	5		0
Estonia	1999	18	0	5		0
Latvia	1999	34	0	8 reduced to 5 in 2002		0
Kyrgyz Rep.	1998	12	0	5		0
Bulgaria	1996	35	520	5		on 43 products

Source: WTO, 2006a.

4.4 Developing domestic capacities in agriculture

In most of the NE countries, developing agricultural production is vital for rural development and food security. Thus, enhancing the domestic capacities of the sector is crucial for the socio-economic development in these countries. Diversifying production and export into high value crops and raising productivity are the key elements of agricultural development strategies of almost all the NE countries given the severe scarcity of water resources in these countries. Thus, a degree of support and protection is considered necessary.

In general, two forms of domestic support measures are critical for agricultural development in the Near East:

- *Support under Article 6.2 and the de minimis exemption* - While many of the NE countries have at present some flexibility in policy areas such as support through the various forms of exempt support, they still face great limitation, particularly in the long run, for providing direct support to diversification in production and exports. The policy space these countries are currently enjoying could be significantly eroded with further reduction as proposed in the context of the Doha Round. The *de minimis* exemption and the exemptions under Article 6.2, in particular, are important for the NE countries as the majority of these countries do not have sufficient resources for supporting agriculture beyond these exemptions.
- *Non-product specific support* - Non-product specific support is the predominant form of support to agriculture in the region, with subsidies (direct and indirect) focused on agricultural credit, irrigation, fuel and transport. Among these, support to irrigation is very important given the scarcity of water, erratic rainfall and the frequent incidence of droughts. Aside from capital investment in irrigation, the issue of the full recovery of the O&M costs of irrigation services has attracted some attention at the WTO CoA. The current rule is that the gap between O&M costs and recovery from users is defined as subsidy (and included in the AMS). Although this is the standard approach to measure irrigation subsidies, many NE countries run large deficits on this. Given the overriding importance of irrigation

for agricultural development, it would be desirable that irrigation subsidies are exempted for these countries. That would be a worthwhile SDT for them, and a concrete measure for food security and rural development.

4.5 Trade-related institutional and human capacities

There is a high demand for trade-related technical assistance in almost all the NE countries. Little effort has been exerted to take advantage of the existing technical assistance opportunities in the context of the WTO Agreements. As in many other developing countries, agricultural institutions in the Near East are not accustomed to working on trade issues. At present, the ministries of agriculture in the majority of these countries are facing a number of difficulties in their efforts to cope with the AoA: 1) lack of a permanent institutional arrangement to deal with the requirements of the agriculture-related WTO Agreements; 2) shortage of qualified professional expertise and analytical capacities to deal with issues relating to the preparation for negotiations, assessing impact of various agreements on agriculture, trade and food security and the economy as a whole; and 3) lack of action plans to implement and follow-up the WTO Agreements and multilateral trade negotiations.

Technical assistance is desperately needed in two key areas.

1. *Strengthening the analytical capacities of the agriculture-related institutions.* Necessary capacities need to be established and maintained in the agriculture-related institutions in a number of inter-related areas: developing a statistical/reporting system for meeting WTO notification obligations on a periodic basis; monitoring policy changes and other measures of trading partners and defending own policies; and undertaking analytical studies on agricultural and trade policy issues.
2. *Strengthening capacities in formulating and implementing the appropriate actions and strategies to take advantage of current and potential trading opportunities.* Taking advantage of existing and potential trade opportunities to produce competitively and to export the resulting goods and services requires strengthening supply-side capacities including promoting knowledge, skills and access to finance. It is generally acknowledged that supply-side problems have historically played a dominant role in limiting export diversification into non-traditional commodities and processed products. The increasing importance of trade requirements such as sanitary and phytosanitary standards and other technical requirements represent a major challenge for these countries.

A wide range of cross-cutting actions are needed to strengthen trade-related supply-side capacities, including improvement in infrastructure, strengthening institutional capabilities, improving technology, land reform and promoting effective participation of the private sector in production, marketing and trade activities.

5. Concluding remarks

The multilateral trade liberalization in agriculture is crucial for the NE countries, as a whole, in view of their high dependence on food imports, the increasing scarcity in water supplies they are facing, the high importance of the EU trade preferences for their exports and the vital importance they attach to agriculture in their regional trade agreements (RTAs). Only 16 out of the 26 NE countries are currently members of the WTO. The commitments made by these countries in the context of the AoA seem to provide sufficient flexibility at present, but are likely to constitute some limitation in designing agricultural policies in the future, particularly in the areas of border tariffs and domestic support.

Among the major concerns of the NE countries in the ongoing and future multilateral negotiations on agriculture are i) dealing with the increasing trend in food imports; ii) improving access to developed country markets, particularly the EU market; iii) ensuring fair terms of accession to the WTO; iv) securing enough policy space to develop their domestic capacities in agriculture; and v) stabilising domestic agriculture and food markets.

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Annexes

ANNEX TABLE 1

Near East countries: some basic indicators

Country	Per capita GDP (constant 2000 US\$)	Population (million)	Population growth rate	Share (%) of agriculture in GDP	Trade as percentage of GDP
	2000-03			2000-03	2000-03
Algeria	1 819	32.4	1.5	9.9	61.6
Bahrain	12 457	0.7	1.7		145.9
Iraq	-	-	-	-	-
Iran	1 600	67.0	1.3	12.5	45.8
Kuwait	16 345	2.5	2.5		88.2
Libya	6 870	5.7	2.0		62.4
Oman	8 533	2.5	1.1		91.2
Qatar		0.8	5.9		
Saudi Arabia	8 932	24.0	2.7	4.9	67.1
United Arab Emirates	20 733	4.3	7.1		
Yemen	547	20.3	3.1	14.9	73.6
Cyprus	12 545	0.8	1.3		
Egypt	1 589	72.6	1.9	16.6	40.7
Jordan	1 776	5.4	2.8	2.2	111.9
Lebanon	3 984	3.5	1.0	12.0	52.5
Morocco	1 222	29.8	1.6	15.6	69.4
Pakistan	534	152.1	2.4	24.6	37.5
Syria	1 127	18.6	2.5	23.2	72.0
Tunisia	2 121	9.9	1.0	11.6	93.7
Turkey	2 870	71.7	1.6	13.6	59.8
Afghanistan		0.8	2.3	54.1	145.6
Djibouti	835	0.4	0.7	3.7	107.4
Mauritania	362	3.0	3.0	20.7	102.6
Somalia	1 127	8.0	3.1		
Sudan	411	35.5	2.0	39.7	28.1

Source: i) World Bank. 2006. World Development Indicators; and ii) FAO. 2006. FAOSTAT.

ANNEX TABLE 2

Share of fruit and vegetables in total agricultural exports

	1991-2000	20001-04		1991-2000	20001-04
Morocco	78	72	Bahrain	20	24
Iran	71		Syria	19	28
Algeria	69	43	UAE	19	23
Turkey	63	65	Qatar	11	4
Jordan	55		Oman	8	12
Lebanon	48	54	Malta	8	5
Cyprus	42	39	Libya	7	
Egypt	41	22	Mauritania	6	4
Pakistan	36	4	Djibouti	4	19
Kuwait	35	36	Iraq	3	7
Saudi Arabia	33	25	Afghanistan	1	7
Tunisia	23	32	Somalia	0	1
Sudan	22	16			

Source: FAOSTAT, 2006

ANNEX TABLE 3

Domestic support information available in WTO notifications

Country	Green Box	----- AMS -----		Article 6.2 measures	Latest notification for
		PS-AMS	NPS-AMS		
Bahrain	√	-	-	√	1997
Djibouti	-	-	-	-	n.n.
Egypt	√	-	-	√	1998
Jordan	√	√	√	√	2002
Kuwait	-	-	-	-	n.n.
Mauritania	-	-	-	-	n.n.
Morocco	√	√	-	√	2001
Oman	√	-	-	-	2002
Pakistan	√	√	√	√	1999
Qatar	-	-	-	-	n.n.
Tunisia	√	√	√	√	2001
U.A. Emirates	√	-	-	√	2001

Source: Sharma (2004)

ANNEX TABLE 4
Near East WTO Members: bound and applied tariffs for selected agricultural commodities¹

	Bahrain		Djibouti		Egypt		Kuwait		Jordan		Mauritania		Morocco		Oman		Tunisia		
	bound	applied	bound	applied	bound	applied	bound	applied	bound	applied	bound	applied	bound	applied	bound	applied	bound	applied	
Wheat	35	5	40	5	5	1	100	0	0	0	0	75	0	170	56	5	0	98	66
Rice	35	5	40	30	30	20	100	0	5	5	75	20	155	91	5	5	60	35	35
Barley	35	5	40	10	10	5	100	0	9	0	75	0	50	27	5	5	75	73	73
Beef	35	5	40	10	10	5	100	0	5	17.4	50	20	239	189	5	0	75	73	73
Live sheep	35	5	40	10	10	5	100	0	5.1	5	25	na	62	329	5	na	180	180	180
Sheep & goat meat	35	5	40	5	5	5	100	0	5.5	5.1			289		7	0	100	115	115
Poultry meat	35	5	40	60	60		100	0					101				75	75	75
Tomatoes	35	5	40	20	20	0	100	0	30	30	50	13	34	40	64	5	150	150	150
Potatoes	35	3.8	40	10	10	5.3	100	0	30.8	17.9	50	5	34	50	54	5	150	69	69
Citrus fruit	35	5	40	60	60	40	100	0	32.4	32.1	30	20	34		15	5	200	200	200
Olive oil	35	5	40	20	20	12.5	100	0	30	na	30	5	34		14	8	120	115	115
Milk	35	5	45	60.3	60.3	25	100	0	20	30	7	5	87	109	75	0	180	180	180
Sugar	35	5	40	21.3	21.3	8.5	100	0	13.6	19	50	5.2	164	36	7	2	100	18.2	18.2

Notes:

¹ Applied tariffs are for the year 2004 for Tunisia, 2003 for Jordan and Morocco, 2002 for Djibouti, Egypt, Kuwait, Oman and Qatar, and 2001 for Bahrain and Mauritania; na = not available

Source: World Bank, 2005. World Integrated Trade Solution, 2005.

China's agricultural trade and policy under WTO Rules¹

Bingsheng Ke

1. Introduction

With the largest total population and the largest agricultural population in the world, China is one of the top producers, consumers and importers of many major agricultural commodities. In terms of production, China is ranked by far the first for rice, wheat, meat and cotton and is also the fifth largest agricultural exporter after the US, EU, Canada and Brazil and the fourth largest importer following EU, US and Japan (WTO, 2005). Its agricultural trade represents 3-4 percent of the world total.

China's agricultural trade has soared since its entry into the WTO in 2001, with a 22 percent growth in exports (46 percent if fishery is included) and 136 percent in imports (137 percent if fishery is included) over the three-year period of 2001-2004 (MOA, 2005). For some commodities, such as soybean and cotton, China's imports account for one third of the world's total export.

China is in many ways highly representative of developing countries in Asia with characteristics such as small farm size, limited arable land, intensive farming, high share of agricultural employment, and weak agricultural and rural infrastructure. As a result, China shares many concerns with other Asian developing countries in the Doha Round.

China has also been actively participating in the regional and bilateral trade talks. For example, the "10 plus 3" initiative (China, Japan and the Republic of Korea with 10 ASEAN members), the "1 plus 10" (China and ASEAN), and the China-Australia FTA talks. The precise implications of those regional and bilateral negotiations for the Doha round of WTO still remain to be seen, but their impacts on the agricultural sector are beyond any doubt.

¹ Views and opinions in this paper are of the author's own responsibility and do not necessarily represent those of the Ministry of Agriculture of China.

This paper presents an updated analysis of China's agricultural trade and policy development under WTO rules, and a discussion of the factors affecting China's future policy orientation and its position in the remaining process of the Doha Round. An overview is provided first to discuss the policy adjustment and agricultural trade developments since China's WTO entry in 2001. More thorough analyses on China's agricultural trade issues follow, with the analyses focused on the agricultural trade structure of the country in terms of regional structure, commodity perspective and domestic impacts. The next section is devoted to the main agricultural policy goals and major concerns for the new round of WTO agricultural talks. Concluding remarks follow.

2. Agricultural trade and policy developments under current WTO rules

China finally acceded to the WTO in November 2001 after 14 years of hard negotiations, with commitments being effective from 2002. While there is a three-year transition period for most commitments on market access, there is no such grace period for all commitments on export subsidy and domestic support. Both agricultural trade and domestic policy have been adjusted to be in line with those commitments. China's WTO entry has had significant impacts on agricultural trade of the country. Both exports and imports have risen dramatically over the past three years. As the growth pace of imports has been greater than that of exports, China has changed from a net agricultural exporter to a net importer.

2.1 Accession commitments and their implementation

The commitments on market access consist of tariff reduction for all commodities and TRQ regimes for some special commodities. The tariff rate quota (TRQ) system applies to wheat, rice, corn, cotton, sugar, wool, soybean oil, rapeseed oil and palm oil.

China has fully implemented those commitments in the past four years. By 2004, the average tariff for all agricultural commodities, a total of 977 tariff lines in the reduction schedule, was reduced to 15 percent. The reductions for major commodities are illustrated in Table 1.

TABLE 1
Tariff rates for major commodities in China (percent)

	2001	2002	2004
Chicken and offal	20	16	10
Beef	39	31.8	12
Pork	20	16.8	12
Sausage	23	21	15
Yogurt	42	34	10
Butter	44	36.7	10
Cheese	43	34.8	12
Ice cream	40	34.6	19
Apple	30	22	10
Banana	25	19	10
Orange	35	28.8	12
Fresh grapes	40	29.2	13
Dried grapes	35	28	10
Shelled cashew	27	23.3	10
Shelled hazelnut	25	22	10
Pistachios	30	25	10
Beer	47	42	0
Liquor*	56	46.7	19.2
Wine	65	44.6	14
Roasted coffee	31	27	15
Tea	27	24	15
Orange juice	35	7.5	7.5
Tobacco	34	28	10
Cigarettes	57	49	25

* Further reduced to 10% in 2005.

Source: Legal text for China's accession to the WTO, Press for Law, 2001; China's Custom Information Service website: www.china-customs.com

Due to the fact that China's actual imports were mainly those with lower tariff rates, including those under TRQ with very low in-quota tariff rates, the weighted average tariff rate is much lower than the 15 percent simple average. For example, the imports of cereals, cotton and wool under TRQ regime accounted for about 25 percent of the total import value, but were only subject to a tariff of 1 percent. For soybean imports, which accounted for another 25 percent of the total import value, the tariff was only 3 percent. Calculated with the actual import volume and values, the actual (weighted) tariff of China's agricultural import in 2004 was under 8 percent, as indicated in Table 2.

TABLE 2
Calculation of weighted average tariff for agricultural commodities in China, 2004

	Import, Billion US\$	Share in total, %	Tariff rate (%)	Tariff value Million US\$
Cereals	2.21	7.9	1	22.1
Edible oils	3.89	13.9	9	350.1
Cotton	3.20	11.4	1	32.0
Sugar	0.28	1.0	15	42.0
Soybean	6.98	24.9	3	209.4
Vegetables	0.09	0.3	13	11.7
Fruits	0.59	2.1	12	70.8
Livestock	4.04	14.4	12	48.48
Others	6.75	24.1	14	945.0
Total/Average	28.03	100.0	7.7	2167.9

Sources: Import value is provided by the Information Center of the Ministry of Agriculture of China; Tariff rates for “other livestock” and “others” are estimated averages based on the tariff schedule.

The TRQ regime applies to wheat, corn, rice, cotton, rapeseed oil, soybean oil, palm oil, sugar and wool. Several points should be noted about China’s TRQs for agricultural production. First, the TRQ amounts are very large by any measure (Table 3). When measured by trade volume, China’s TRQ accounts for about 10 percent of world total for wheat and corn, nearly 20 percent for rice and cotton, and about 25 percent for rice and wool. Compared to past imports, TRQs for all products are several times larger than the actual import amount in the base year period (1996-1998). For example, the TRQ for corn is larger than the total imported amount in the 1980s or 1990s, and TRQ for cotton exceeds the highest level in the past. For sugar, it is twice as much as the historical import record. The TRQ for rice is over 5 million tonnes, or more than the total rice production in the Republic of Korea. When measured by domestic commercial consumption, the TRQs also represent a large proportion, ranging from 8 percent to 50 percent. Those numbers far exceeded the minimum market access level of 5 percent of domestic consumption required by WTO rules. Thus it has had a significant impact on market prices and farmers’ incomes. Secondly, China’s agricultural TRQs have very low in-quota tariff rates, only 1 percent for wheat, corn, rice and cotton. This means that in-quota import is almost free of tariff. The huge TRQ amount combined with the nearly nil tariff protection has integrated the Chinese domestic market with the world market very closely for those products. This implies that China’s domestic market and the world market for those commodities are highly correlated. Before China officially became a WTO member, the world market prices for many of the TRQ products were lower than China’s domestic market prices. Pressures from the world market after China’s WTO entry had triggered, or more precisely, accelerated the pace of domestic marketing reform for grain and cotton.

TABLE 3
China's TRQ for agriculture products

	China TRQ 2004 (million tonnes)	World Trade (million tonnes)	China Imports 1996-1998 (million tonnes)	China TRQ in % of			
				World trade	China import 1996-1998	Domestic Total Consumption	Domestic Commercial Consumption
Wheat	9.64	101.25	3.89	10	248	8	20
Corn	7.20	75.88	0.23	9	3130	5	8
Rice	5.32	23.04	0.44	23	1201	3	15
Cotton	0.89	4.99	0.35	18	254	19	19
Sugar	1.95	47.07	0.85	4	230	22	22
Oil	8.00	42.30	2.52	19	318	50	50
Wool	0.29	1.06	0.20	27	144	40	40

Source: Same as Table 2.

With respect to export competition, China has made the commitment of not providing export subsidies once in the WTO. China announced the abolition of export subsidies as early as 1994, when the two-tier exchange rate system was reformed into a single one. Only in the few years prior to China's WTO entry did China subsidize corn and cotton exports in order to reduce the huge surplus. The abolition of export subsidy is also in the interests of Chinese farmers. They will benefit from the abolition if the valuable subsidy money is used for other agricultural support purposes.

Domestic support has been one of the most contentious issues in the negotiations. China insisted that it should enjoy the same treatment as other developing countries and asked for a *de minimis* of 10 percent for Amber Box measures, while the US and other parties were reluctant to accept this. They demanded China follow the standard for developed countries, i.e, a *de minimis* of 5 percent. The parties finally agreed on an 8.5 percent *de minimis* for China. China has also forfeited the right to exempt the domestic support reduction commitments indicated in Article 6.2 of the Agreement of Agriculture. That article stipulates that domestic supports for three special purposes are exempted from reduction commitments. Those supports include investment subsidy, input subsidy, and support for production replacing illicit narcotic crops in developing countries.

The disputes over setting the *de minimis* level for China during the entry negotiation were more symbolic than real. According to the AoA rules and calculation method, the real domestic support level for China's agricultural sector was in fact far below the zero value since an 8.4 percent special agricultural tax was applied until 2003. Only in 2004 did China begin to reduce and abolish this special agricultural tax nationwide.

The Chinese government has adopted a policy placing agricultural and rural development on the top priority in its national development agenda in the past

two years. The intention is to address the ever-widening gap between rural and urban sectors. The gap has become especially clear in the process of rapid national economic growth and increasing living standards for urban residents. With the greater awareness of the significance of the rural sector and the fast expanding state budget income (at a growth of over 20 percent for both the central government and local governments), financial support for agricultural and rural sectors have expanded. However, the support applied is much smaller than believed by many, or suggested by reports in the media.

Three subsidies have been introduced recently: a subsidy to grain growers, a seed subsidy for good grain varieties, and a subsidy for farm machinery purchase. The total values in 2005 were only RMB 13.5 billion (US\$ 1.67 billion), RMB 3.7 billion (US\$ 0.46 billion) and RMB 0.3 billion (US\$ 0.04 billion) respectively (State Council, 2006a), which represented only about 0.6 percent of the agricultural production value and was far below the 8.5 percent line.

2.2 Agricultural trade development under WTO rules

The overall development of China's agricultural trade since its WTO entry has been largely along the path that many had projected earlier. Both exports and imports have been on the rise. But import growth is faster than that of export growth. This has resulted in the agricultural trade position changing in the world market from a net exporter to a net importer.

Traditionally, fishery products are also included in China's agricultural trade statistics. China's total agricultural trade data under both WTO definition (fishery excluded) and the Chinese definition (fishery included) are displayed in Table 4.

TABLE 4

Agricultural trade in China since its WTO entry, billion US\$

	Including fishery			Excluding fishery		
	Export	Import	Balance	Export	Import	Balance
2001	16.07	11.84	4.23	13.42	10.50	2.93
2002	18.15	12.45	5.70	15.21	10.87	4.33
2003	21.43	18.93	2.50	18.00	17.05	0.94
2004	23.39	28.03	-4.64	16.42	24.79	-8.37

Source: The Information Center of the Ministry of Agriculture of China, based on China Custom Statistics.

China has become a net importer for almost all land-intensive products, including cereals, soybean, cotton, edible oils and sugar. China is now a net exporter for labour-intensive products, mainly vegetables and livestock products (Table 5). For livestock products, China is both a large importer and a large exporter. The major livestock products exported are poultry and pork, while the largest shares of import are industrial materials such as wool, animal skin and hides.

TABLE 5
Major commodity trade in China, billion US \$

	Cereals	Soybean	Cotton	Edible oils	Sugar	Vegetables	Fruits	Livestock	Fishery
Import									
2001	0.64	2.81	0.07	0.49	0.31	0.08	0.34	2.02	1.88
2002	0.50	2.48	0.18	1.32	0.24	0.07	0.38	2.18	2.27
2003	0.46	5.42	1.19	2.74	0.17	0.07	0.50	3.36	2.48
2004	2.21	6.98	3.20	3.89	0.27	0.09	0.59	4.04	3.24
Export									
2001	1.10	0.08	0.08	0.07	0.06	2.34	0.79	2.64	4.19
2002	1.72	0.09	0.17	0.06	0.08	2.63	0.98	2.57	4.69
2003	2.67	0.10	0.14	0.09	0.03	3.07	1.37	2.72	5.49
2004	0.66	0.15	0.02	0.10	0.03	3.80	1.65	3.19	6.97
2004 Balance	-1.55	-6.83	-3.18	-3.79	-0.24	3.71	1.06	-0.85	3.73

Source: Same as Table 4.

The surge of agricultural imports in recent years could be attributed to a number of reasons. The most important one is that with China's WTO commitments as discussed above, the Chinese domestic agricultural market has become highly open to the world market. The import barriers have been significantly lowered due to the low tariff rates and large volume of TRQs. The second major reason is the high subsidies in exporting countries. Those subsidies substantially lowered the world market prices. This is especially the case for soybean and cotton exports from the US. The third major reason is on the domestic market demand side. Though domestic production has been improving, it still cannot meet the fast growth in demand. Again the cases of soybean and cotton are the most striking ones. For cotton, China issued a large amount of additional import quota to the TRQ in 2004, resulting in an actual import amount more than twice that of the TRQ, all at in-quota tariff rate. This was mainly caused by the rapidly growing demand for cotton in the textile industry, which in turn is a result of the rapid expansion of textile exports largely arising from China's WTO membership. Another example is edible oils. The soaring imports of soybean are a combined result of all three reasons mentioned above.

As a result of this development, China's filling rates of TRQ are rather high, as indicated in Table 6. In practice, the TRQ seems not to be a real restriction to import. This is best illustrated in the case of cotton. China's cotton imports in the last two years were more than double the amount of the TRQ. This will probably happen also with wheat and wool in the near future.

TABLE 6
Imports of TRQ commodities and their fill rates in China (million tonnes)

	Wheat	Corn	Rice	Sugar	Cotton	Soy oil	Palm oil	Canola oil
2001	0.74	0.04	0.29	1.20	0.11	0.07	1.52	0.05
2002	0.63	0.01	0.24	1.18	0.21	0.87	2.22	0.08
2003	0/42	0	0.26	0.78	0.95	1.88	2.33	0.15
2004	7.23	0	0.76	1.21	1.98	2.52	2.39	0.35
TRQ 2004	9.636	7.20	532	1.945	0.894	3.118	2.70	1.127
Filing rate 2004	75	0	14	62	221	81	89	31

Source: Compilations of legal instruments on China's Accession to the World Trade Organization; China's Custom Statistics.

3. Agricultural trade: destinations and origins (regional perspective)

China's agricultural trade is characterized by distinct regional patterns. While most of the export goes to neighbouring countries, major imported commodities are from distant regions such as North America, South America and Oceania. The most important reason for this regional trade pattern is that China predominantly imports bulk products such as cotton, wheat and soybean from land-rich countries, and exports labour-intensive products such as vegetables and fruits to East and Southeast Asian markets.

3.1 Export destinations

Asian countries are the dominant destinations of China's agricultural exports, accounting for two thirds of the total. One third of China's agricultural export goes to Japan, making Japan by far the largest overseas agricultural market for China. The next three important destinations are Hong Kong, the United States and the Republic of Korea, each with a share of about 10 percent.

TABLE 7
Major destinations of China's agricultural exports, % of the total

	1999	2000	2001	2002	2003	2004
Japan	34.9	34.6	35.7	31.5	28.2	31.6
Hong Kong	13.9	12.3	11.8	11.5	10.6	11.6
US	6.9	7.6	7.8	9.3	9.8	10.2
Korea, Republic	7.8	10.7	10.2	11.3	12.0	9.1
Germany	3.1	2.8	3.1	2.7	2.9	2.9
Malaysia	2.6	2.9	2.3	3.1	3.1	2.3
Indonesia	3.0	2.6	1.8	2.9	2.5	1.9
Others	27.8	26.6	27.3	27.7	30.9	30.3

Source: Same as Table 4.

3.2 Import origins: current situation and future trend

TABLE 8

Major suppliers of China's agricultural import, in % of the total

	1999	2000	2001	2002	2003	2004
US	21.2	23.0	23.6	23.6	26.5	27.4
Brazil	4.0	5.2	5.2	9.2	11.2	10.1
Argentina	5.7	6.9	8.9	7.2	11.9	9.6
Australia	10.6	12.2	11.5	11.6	6.5	8.7
Canada	6.2	6.8	6.3	3.9	2.8	5.1
Malaysia	5.8	3.8	3.4	5.8	6.1	5.1
Russia	4.1	3.9	4.7	4.7	3.8	3.0
Others	42.4	38.2	36.5	34.0	31.4	30.8

Source: Same as Table 4.

3.3 FTAs: "Early harvest", negotiations and implications

In November 2002, China and ASEAN countries signed an agreement on economic cooperation and the establishment of a free trade agreement (FTA). According to the agreement, China will establish an FTA with ASEAN(6) (six old ASEAN members: Brunei, Indonesia, Malaysia, Philippines, Singapore and Thailand) by 2010, and with ASEAN(4) (the four new ASEAN members: Vietnam, the Lao People's Democratic Republic, Myanmar, Cambodia) by 2015.

An "early harvest" arrangement was agreed for some 500 tariff lines of agricultural products (HS Chapters 1-8, namely live animals, meat and edible offal, fish, dairy, other animal products, live trees, vegetables, fruits and nuts). Free trading of those "early harvest" products will be achieved by 2006 between China and ASEAN(6), and by 2010 between China and the other four ASEAN members. Thailand and China had led the process as they initiated a zero-tariff rate trade for vegetables, fruits and nuts as early as October 2003 (CAFTE, 2003).

Another "early harvest" effort toward FTA was the one between China and Pakistan. In April 2005, China and Pakistan signed an agreement to eliminate tariffs for 53 lines of fruits and vegetables, including garlic, lettuce, beans, mushrooms, mango, orange, pineapple, figs, avocado and guava. China will unilaterally provide market access for import of lac, gum and ethanol from Pakistan, while Pakistan will apply zero-tariff to imports of organic chemicals and machinery products from China. Reduction/elimination of tariffs for products covered in the agreements will start from 2006 and be complete by 2008 (CAFTE, 2005).

China concluded negotiations on FTA with Chile in November 2005, with the agreement effective from July 2006. Within one year, import tariffs for 63 percent of Chinese tariff lines and 75 percent of Chilean tariff lines for trade between the two countries will be reduced to zero. Within ten years, apart from a small number

of tariff lines which were agreed as exceptions, all commodities traded between the two countries will be subject to zero tariff. The exceptions on the Chinese side include 214 lines, accounting for 2.8 percent of the total tariff lines, while on the Chilean side, 152 lines or 1.9 percent of the total lines are made as exceptions. Some agricultural commodities fall into the exception category. This includes 25 lines such as wheat, wheat flour and sugar on the Chilean side. On the Chinese side, the exception category includes 58 tariff lines of agricultural commodities, such as rice, wheat, corn, cotton, oilseeds and sugar (MOFCOM, 2005).

China has also started FTA negotiations with Australia, New Zealand, and South African Customs Union countries. Agricultural trade is one of the most important issues in all those negotiations. There are both opportunities and challenges for the Chinese agricultural sector from those existing and potential FTAs. There is no doubt that the establishment of FTAs will promote and enlarge the agricultural trade between China and FTA partners. However, it seems that the Chinese agricultural sector is often perceived as a net loser in the regional trade liberalization process because most of those trading partners have comparative advantages in agricultural products, such as Thailand in rice and tropical fruits, Australia in wool, wheat and sugar, and New Zealand in dairy products. On the other hand, the establishment of FTAs will also have direct impacts on China's regional structure of agricultural trade, i.e., a higher share from the FTA members and a lower share from other countries.

3.4 Conflicts and complementarities between China and other Asian countries in agricultural trade

Asian countries are characterized by high population density, low farmland/population ratio and large numbers of very small-scale farms. On the import side, many countries are net importers of land-intensive commodities such as wheat, soybeans, corn and cotton. On the export side, labour-intensive and high-valued products such as horticultural products, pork and poultry have been and will be the dominant components. China has performed relatively well in increasing export of vegetables and fruits over the past few years since its accession to the WTO. However, because of the improvements in infrastructure and processing technology in other developing countries and increasing labour costs in China (especially in coastal areas), the competition from other Asian developing countries will become stronger.

On the other hand, there are also some complementarities in agricultural trade between China and other Asian developing countries. For example, China has been importing jasmine rice from Thailand and other ASEAN countries. Rice imports in China will continue to increase in the future as China's rice fields shrink due to rapid urbanization in major rice producing areas, namely the southern and eastern provinces of the country (Ke, 2006).

4. Agricultural trade: commodity perspective

The trade liberalization process affects agricultural and rural development in two ways: directly and indirectly. Indirect impacts could be caused by changes in macro-economy and policy, which in turn create more employment opportunities for the rural labour force and stronger raw material demand for products of farm origin. Direct impacts are changes in the trade of each individual commodity. This section reviews the trade in major products in the past few years and analyses the trend in the future in order to shed some light on the relevance of WTO rules in each of the agricultural sub-sectors.

4.1 Soybeans

China is the fourth largest soybean grower in the world after the US, Brazil and Argentina, and is by far the largest soybean importer (Table 9). Soybean accounts for one quarter of the total agricultural import value of China. Soybean imported to China has increased rapidly since China's WTO entry. Soybean imports exceeded domestic production in 2003 and continued to rise thereafter. China's imports account for nearly 40 percent of the world total, more than the sum of that for the next 10 largest importers together. The US is the largest supplier of China's soybean imports with a 40 percent share at present (down from 80 percent in the 1990s), followed by Brazil with 35 percent and Argentina with 25 percent.

The increase in imports is mainly caused by the rapid growth in demand for edible oil and livestock feed. The demand for protein feed is so strong that soybean cake price is as high as that for soybean (Zhang, 2005). According to China's WTO commitment, soybean imports are subjected to only a 3 percent tariff. On the other hand, though there are still areas in the country where natural conditions are favourable for soybean production expansion, the yield and price relationship favours corn production. For example, corn yields in Jilin Province, a major potential region for expanding soybean production, are more than three times that of soybean, while the soybean price is only twice that of corn. It is therefore more beneficial for local farmers to grow corn than soybeans. Due to the constraint of land resources and the growth in demand, China's soybean imports will be maintained at the currently high level, with the possibility of rising further in the coming years.

TABLE 9
China's soybean production and import

	Production		Imports	
	million tonnes	World share, %	million tonnes	World share, %
2001	15.4	8.7	13.9	24.5
2002	16.5	9.1	11.3	20.7
2003	15.4	8.1	20.7	31.9
2004	17.9	8.8	20.2	35.1

Source: Statistical Yearbook of China, China Custom Statistics, FAOSTAT.

4.2 Edible oils

Edible oils rank second in China's agricultural imports and have shown a dramatic increase since China's WTO entry, as indicated in Table 10. China's palm oil imports are dominantly from Malaysia, soybean oil from Brazil and Argentina, and rapeseed oil from Canada.

The TRQ regime was applied for the first four years of China's WTO entry. The in-quota tariff is 9 percent. Starting from 2006, the quantity restriction on import was removed as the TRQ system terminated, and a single tariff of 9 percent is used on all import of edible oils.

TABLE 10
China's edible oils imports, million tonnes

	Soybean oil	Palm oil	Rapeseed oil	Total
2001	0.07	1.52	0.05	1.64
2002	0.87	2.22	0.08	3.17
2003	1.88	2.33	0.15	4.36
2004	2.52	2.39	0.35	5.26
TRQ 2005	3.118	2.7	1.127	6.945

Source: Same as Table 9.

4.3 Cotton

With a share of over 10 percent of the total agricultural import, cotton is the third most important commodity in China's agricultural imports. China is the world's largest cotton producer, importer and consumer (Table 11). After four years of rapid increase, China's cotton imports reached 2.2 million tonnes in 2005, or over 30 percent of the world total. China's cotton imports were larger than the total imports of the next five largest importing countries. The US is the predominant supplier of China's cotton imports, accounting for 55 percent, followed by Western African countries with 15 percent, Uzbekistan with 10 percent and Australia with 5 percent.

The cotton market was strictly controlled by the government in the form of market monopoly until 1999. A private cotton market has been developing quickly since then. Cotton Futures trading was even introduced in the Zhengzhou Commodity Exchange in 2004.

The author pointed out as early as at the beginning of 2002 that cotton would be the most adversely affected sub-sector of agriculture in China (Ke, 2002). This seems to be proven by the actual development in the past four years since China's accession to the WTO. Strong fluctuations of cotton production have been observed in China, partially due to weather changes, partially due to volatile price changes caused by a number of factors, including weather, cotton import, price of chemical fibres and export demand for textiles. China's textile export has been expanding at two digit rates for the past years, resulting a rising demand for cotton. However, cotton growers in China have not harvested much from this market growth as cotton imports soared.

The TRQ regime applies to cotton imports according to China's WTO commitments. The TRQ amount is set at 0.894 million tonnes and the in-quota tariff is only 1 percent. The bound tariff outside the TRQ is 40 percent. In reality, China applied the same 1 percent tariff for all cotton imports including amounts exceeding the TRQ in 2004. The actual tariff for over-quota cotton import was adjusted to 5 percent. If this low tariff rate continues to be used and the US cotton subsidy regime continues to exist, China's cotton imports will rise further to new high levels in the coming years.

China has to balance different interests within the country and this can be best illustrated with the case of cotton. The textile sector is very important not just for foreign trade but also for farmers. It supplies about 19 million jobs, most of them are farmers or children of farmers. It has already become clear that the domestic cotton production in China cannot meet the need of textile industry, and imports are not avoidable. The question, for the Chinese policy makers, is how to better balance the domestic production and the import. The cotton prices have shown volatile fluctuations in the past years in the range of 30-50 percent, and have caused all participants difficulty in their decision making.

TABLE 11
China's cotton production and import

	Production		Imports	
	Million tonnes	World share, %	Million tonnes	World share, %
2001	5.32	24.9	0.11	1.9
2002	4.92	25.7	0.21	3.4
2003	4.87	23.8	0.95	13.8
2004	6.32	24.7	1.98	29.1

Source: Same as Table 9.

4.4 Sugar

China is ranked as the fourth largest sugar producer in the world after Brazil, India and the EU. The composition of sugar production in China has shown the same trend as the rest of the world. The share of sugar produced from sugarcane has been rising while that from beet has been declining. Now nearly 95 percent of China's sugar is extracted from sugarcane. Guangxi Province alone provides about 60 percent of sugarcane and sugar in the country.

Sugar imports in China have been more or less stable at about 1.2 million tonnes in recent years (Table 12). Major suppliers of China's sugar imports are Cuba, Thailand, Guatemala and Australia. China's sugar imports have not increased nearly as much as most other field crops. The most important reason is the rapid improvement in domestic production. The remarkable growth of production is to be attributed to the introduction of new sugarcane varieties, which have much higher yields and sugar extraction rates. A number of those new varieties were introduced from Taiwan (Ke & Zhao, 2003).

Another reason is that China has relatively high tariff rates for sugar imports. Sugar is also subjected to the TRQ, which is now 1.945 million tonnes. The in-quota tariff has been reduced from 20 percent in the first three years of WTO accession to 15 percent since 2005, and the bound tariff for over-quota import is 50 percent. Looking to the future, the sugar sector, including sugarcane growers and processors, will face increasing pressure from the world market, not only in the context of the new round of WTO agricultural talks, but also from the possible FTA agreements with Australia, Thailand and other major sugar producing countries. Similar to cotton, sugarcane production is highly concentrated geographically in regions where farmers' income level is among the lowest in the country. The income and poverty reduction implications of sugar sector reform in China is very important.

TABLE 12
China's sugar production and import

	Production		Imports	
	Million tonnes	World share, %	Million tonnes	World share, %
2001	6.53	4.8	1.20	2.8
2002	9.26	6.3	1.18	2.6
2003	10.84	7.5	0.78	1.8
2004	10.17	7.0	1.21	2.7

Source: Same as Table 9.

4.5 Wheat

China is the largest wheat producer in the world. It used to be a large wheat importer in the 1980s with a record of 15 million tonnes in late 1980s. The import amount has since declined, to half a million tonnes in 2003 (Table 13). However, as domestic production had fallen continuously since 1997 and demand had risen, the governmental reserve of wheat reached a record low level in 2003. This led to the wheat price hike in late 2003 and early 2004, and a sharp rise of wheat imports to 7.3 million tonnes in 2004, making China the top wheat importing country in that year. In 2005, China's imports were down to about 4 million tonnes, which was still among the leading importers. The US, Canada and Australia are the main suppliers of wheat to China.

Wheat imports are subjected to the TRQ regime in China's WTO accession commitments. The TRQ amount is 9.636 million tonnes and an in-quota tariff of 1 percent is applied. The tariff for imports outside the TRQ is 65 percent. China's wheat imports in the coming years are expected to increase further due to limited possibility of an expansion in production and a slow increase in yield. It is most likely that China will become the world's top importer of wheat again before long.

TABLE 13
China's wheat production and import

	Production		Imports	
	Million tonnes	World share, %	Million tonnes	World share, %
2001	93.9	15.9	0.74	0.6
2002	90.3	15.7	0.63	0.5
2003	86.5	15.4	0.45	0.4
2004	92.0	14.7	7.32	5.7

Source: Same as Table 9.

4.6 Rice

As the world's largest producer, China has been a net rice exporter in the past few decades. Rice exports reached a peak in 1998 of nearly 4 million tonnes. China's rice export is mainly japonica rice that goes to eastern Asian countries including Indonesia, Japan, the Republic of Korea and Philippines. Exports to Asian countries account for about 60 percent of the total. The second main destination of China's rice exports is Africa, accounting for 30 percent. Russia is another major buyer of Chinese rice (Wu, 2005).

At the same time, China also imported about a quarter of a million tonnes of rice in most years of the past decade, mainly jasmine rice from Thailand. There are signs that China is coming close to a turning point with rice trade, from a net exporter to a net importer. In 2004, the import amount was very close to that of exports (Table 14). The same relationship was maintained in 2005. Many believe that demand for rice, especially the high quality japonica rice, is on the rise in China and that its domestic production cannot keep up with the pace. China will import more rice than it exports in the near future. China's rice land has been declining during the last two decades due to the urbanization effect. More and more rice fields have been taken away for non-agricultural purposes. This is particularly the case in the most developed southeastern coastal provinces such as Guangzhou, Zhejiang and Jiangsu. Rice areas have shrunk by more than 35 percent since 1990 for all three provinces. There is no hope for China to explore new rice land due to constraints in soil quality and irrigation availability.

The author shares the view that China will become a net rice importer in the near future. This is opposite to projections or assumptions in model based analyses by many international research institutions such as IFPRI and by some Chinese modelers.

According to the existing WTO commitments of China, a TRQ regime applies to rice imports. The TRQ amount is 5.32 million tonnes. The in-quota and out-quota tariffs are the same as that for wheat.

TABLE 14
China's rice production and trade

	Paddy Production		Rice Imports	Rice Exports
	Million tonnes	World share, %	Million tonnes	Million tonnes
2001	177.58	29.7	0.29	1.87
2002	174.54	30.2	0.24	1.99
2003	160.66	27.6	0.26	2.62
2004	179.09	29.6	0.76	0.88

Source: Same as Table 9.

4.7 Corn

China is world's second largest corn producer next to the US, and has been a net exporter for almost all years in the past two decades except 1995. The export amount is usually in the range of 5-10 million tonnes, with the peak of 16 million tonnes registered in 2003 (Table 15).

This actual development of corn trade in China is opposite to projections made by many overseas and domestic scholars in the early 1990s. Those scholars projected that China would import corn in an amount as large as 50 to 90 million tonnes by the beginning of this century. One of the main reasons that those projections did not come true is that China's domestic corn production has increased substantially and nearly doubled over the past two decades. On the other hand, livestock production has gained substantially from technical progress as feed-product conversion ratios have risen significantly.

The same TRQ regime applies to corn imported to China. The TRQ amount is 7.2 million tonnes. However, as domestic supply will continue to be sufficient to meet the demand in the foreseeable future, it is unlikely that the TRQ import will take place in the coming years, though the in-quota tariff is only 1 percent.

TABLE 15
China's corn production and export

	Production		Export	
	Million tonnes	World share, %	Million tonnes	World share, %
2001	114.1	18.6	6.00	7.2
2002	121.3	20.1	11.68	13.3
2003	115.8	18.1	16.39	18.0
2004	130.3	18.1	2.32	2.8

Source: Same as Table 9.

4.8 Livestock

As indicated in Table 5, China has been a net importer of livestock products. However, a more detailed analysis reveals that most of the imported products are raw industrial materials. The import and export structure of China's livestock trade is presented in Table 16.

China is a net exporter of live swine, poultry and their products, mostly to Hong Kong, Japan and other eastern Asian countries. Hides and skin are the most important livestock products imported to China. There are no other import restrictions on livestock products other than tariffs, which range from 5 percent to 9 percent.

China has large potential to increase meat exports, as the production cost is low compared with most developed countries both in and outside Asia. However, the SPS issues create a major barrier. There is no sign that the SPS barrier can be removed in the near future.

TABLE 16
Composition of China's livestock trade, 2003, million US\$

	Exports	Imports	Balance
Swine and products	655	197	458
Poultry and products	852	478	373
Cattle and products	87	136	-49
Sheep and products	21	51	-30
Animal hair	102	778	-676
Wool	28	755	-727
Hides and skins	5	903	-898
Total	2716	3356	-640

Source: Custom Statistics of China.

Wool is another very important livestock product imported to China. China is the world's second largest wool producer next to Australia and is the top importer. Nearly 40 percent of the world's wool exports go to China (Table 17). World wool production has been declining continuously over the past ten years while China's imports have shown a rising trend. Australia provides over two thirds of China's wool imports. Other suppliers include New Zealand, Uruguay and Argentina.

TABLE 17
China's wool production and import

	Production		Imports	
	Million tonnes	World share, %	Million tonnes	World share, %
2001	0.343	15.1	0.317	26.0
2002	0.355	16.0	0.262	23.5
2003	0.388	17.7	0.224	22.3
2004	0.426	19.7	0.426	37.5

Source: Same as Table 9.

4.9 Vegetables and fruits

Vegetables and fruits of various processing forms are the main earners in China's agricultural trade. Production of both groups needs a large input of labour. Farm labour supply is abundant and very inexpensive. Most of the exports of those two categories go to Japan, the Republic of Korea and other Asian countries. An increasing share of the exports is conducted by joint ventures or companies with foreign capital. A highly integrated marketing chain has been formed, which consists of the supply of farm inputs including selection of farmland and seeds, production technology and quality control including usage of chemicals, and processing and exportation.

The most important barriers for China to increase its exports in vegetables and fruits are the ones arising from the SPS issues. In recent years, major destination countries for China's vegetable exports such as Japan and the Republic of Korea have not only substantially raised the standard of chemical residues, but also greatly increased the number of items or varieties of factors to be inspected.

Apart from the SPS barriers, anti-dumping is also a frequent threat to China's exports of those two product categories. An example would be the case of garlic and apple juice with the US in the past few years. The key factor is that most developed countries do not recognize China as a market economy, resulting in unfair production cost calculations. It is expected that some improvements in this regard will be achieved, but the problem will most likely remain as a key factor for many years to come.

5. Agricultural trade: domestic implications

Issues associated with agriculture, rural areas and farmers have gained unprecedented attention from Chinese policy makers in recent years. They are frequently referred to as Three Nong issues in Chinese (Nong Ye for agriculture, Nong Chun for rural areas and Nong Min for farmers). The Three Nong issues are listed on the top of the national economic development plan and the government's work in recent years (State Council, 2006b).

There are two major concerns associated with issues of agricultural and rural development in China: food security and farmers' income. Food security is usually translated into a grain production issue in China. Grain production (including

soybeans according to Chinese definition) had fallen from 512 million tonnes to 431 million tonnes during the period 1998-2003, a sharp reduction of 81 million tonnes. This led to price hikes for all grain commodities in late 2003 and early 2004, setting off a nationwide alarm on food security. With all policy efforts including the introduction of a subsidy to grain growers and the reduction of agricultural tax, and with the help of very favourable weather conditions, grain production has recovered to 484 million tonnes in 2005. However, the 2005 grain production level is not only still lower than that in 1998, but also at least 10 million tonnes short of current demand. The deficit is bridged by imports, including soybean, wheat and barley. What worries Chinese policy makers more is the future trend, as the arable land resource has been declining and will continue to decline due to urbanization. Grain production growth in the future is largely uncertain, while the demand will beyond any doubt increase further.

The other key concern is farmers' income, or in a broader sense, the living standards and welfare of rural population. After almost three decades of reform and development, the share of agriculture in GDP has declined to only 13 percent. However, there is still a very large proportion of the population depending on the agricultural sector for a living (Table 18). According to China's registration system, the rural population still accounts for 72 percent of the total. If the rural migrants are excluded, the share is still 58 percent. China is striving to achieve a comparatively well-off society. This goal cannot be materialized without the huge agricultural and rural section of the people. The most daunting challenge is that the rural-urban gap is huge and still widening. The comparable rural-urban income per capita is 1: 3.2, i.e., the per capita income of agricultural and rural population is less than one third of that of the urban residents. The trend is an ever-widening income disparity between the urban and rural populations.

Agricultural trade is no longer as significant as it used to be in the early 1980s, with its share falling from 20 percent to 3 percent (4 percent if fishery included) for exports, and from 15 percent to 4 percent (5 percent if fishery included) for imports in the last 25 years. The traditional role of agricultural trade in earning foreign exchange to buy industrial goods has long abated.

TABLE 18
Agricultural share in the national economy in China, %

	1980	2004*
GDP	30	13
Population	81	58/72
Employment	69	47
Export	20	2.8 (3.9)
Import	15	4.4 (5.0)
Food expenditure, urban	57	38
Food expenditure, rural	62	47

* Figures in brackets represent agricultural trade including fishery.

As indicated in Table 4, the value of agricultural exports in 2004 was US\$ 16.42 billion (RMB 135.5 billion), while the import value was US \$24.79 billion (RMB 204.5 billion). The added value generated from agriculture was RMB 2 077 billion, and the total production value of agriculture was RMB 3 030 billion. When measured on domestic production value, both agricultural exports and imports represent only small percentages, seemingly having no significant impacts on domestic production. However, there are several points behind those overall figures that should be noted.

First, the impacts of imports on the domestic market and production are much more significant than suggested by the numbers in Table 19. On the import side, the dominant part is primary products such as soybean, wheat, cotton, wool and hides. These products compete directly with the products that farmers sell in the domestic market. As a rule of thumb, for the total imported products with a value equivalent to 6.7 percent of domestic production, the farm gate value should be an equivalent of around 5 percent of farmers' production value. In other words, at farm gate level, the imported goods have a market share of about 5 percent. On the export side, since most of the exported products are processed goods, the export value contained a large share of added value in the marketing and processing phases. Only a fraction of the total export value was received by farmers as raw material providers. The farmers' share cannot be more than half of the export value. This means that only about 2 percent of Chinese farm products have been produced for export. Exports do not contribute much to farmers' income.

TABLE 19
Agricultural trade and its relationship to domestic production

Production value(PV)RMB billion	Imports		Exports	
	RMB billion	% as PV	RMB billion	% as PV
3 030	204.5	6.7	135.5	4.5

Source: Statistical Yearbook of China; Custom Statistics of China.

Secondly, the impacts of trade on the domestic market vary significantly across different product groups. This can be easily drawn from the description and analysis in the previous section. For products such as soybean, edible oils, cotton and wool, the imported amount is as large as or more than that of the total domestic production. Therefore the impacts of imports are very significant. For other commodities, such as rice, the imports account for only a small fraction of domestic consumption, and do not have much direct impact.

Thirdly, the impacts of trade on the domestic market and income of farmers vary significantly among different regions in the country. The eight coastal provinces account for two-thirds of China's total agricultural exports. Shandong province, the lead agricultural exporter in the eastern region, alone accounted for 23 percent of China's total agricultural exports in 2004. Most of the growth in agricultural exports was achieved in those coastal regions since China's WTO accession. In the three year period of 2001-2004, China's agricultural exports increased by US\$ 4.5 billion,

of which US\$3.3 billion or three quarters were generated in those coastal provinces. Shandong Province contributed 30 percent of the total growth in this time period. In contrast to this, the vast low-income inland provinces have not gained much from the enlarged market opportunities with China's WTO membership. The total agricultural exports of ten western provinces together was US\$ 0.97 billion in 2004, or just 26 percent of that in Shandong province. The agricultural export gains during 2001-2004 was only US\$ 0.34 billion, or just 25 percent of that in Shandong province alone.

The combined effects of more challenges and less gains in the western regions brought about by China's WTO membership reinforced the regional disparity, which is already large, between the eastern and western regions in China. Due to constraints set by long transportation distances, unfavourable natural conditions and the generally low economic and social development level, it is unrealistic for the western regions to increase agricultural exports by large amounts. Most of the gains from a freer trade will remain in the eastern part of the country. For farmers in the western regions, the more important issue is how to protect them from the unfair competition from the distorted world market, and to mitigate the damages of soaring imports.

On the other hand, however, the increase of agricultural imports will be necessary and unavoidable considering the needs for industrial development, the protection of natural environment and the short-run food deficits. For example, China will continue to import soybean in large quantity due to weak domestic production capacity and strong feed demand from the rapid industrialization of the livestock sector and the rising demand for edible oil of household consumption and food processing industry. It is similar for cotton. The textile industry plays a crucial role in China's export growth and trade balance. In addition, the industry also provides employment to 19 million people. It is natural that securing cotton supply to the sector has a high priority in trade policy-making. A third example is the import of wool. Apart from the important role in supporting the rapid growth of the wool manufacturing industry, import of wool has also merit for environmental protection. China has long been facing overgrazing problems in wool production. The imported wool has greatly lessened the pressure in the vast grassland in the arid and semi-arid zones of western China.

The trade figures in 2004 can be used as an overall indication of the importance of imports to China: for the imported soybeans, cereals and cotton in that year to be produced domestically, additional farmland of 13 million ha would have been needed. That is 10 percent of the total existing arable land in China.

6. Major concerns on the existing and future WTO rules

All in all, as the largest agricultural producer, importer and exporter among developing countries, China often faces a dilemma in its agricultural trade policy making. It has to balance various interests of different sectors within the country. China is both a large importer and exporter, and has both a large traditional rural sector and a fast developing modern sector. This largely explains why China does not have a clear-cut position, as many other developing countries do.

In China's entry negotiations to the WTO, agriculture was generally seen as the biggest loser among all sectors of the country. In the ongoing Doha round, China's agriculture would be the biggest loser among all countries, developing and developed, according to a study released by the World Bank in October 2005 (Aksoy and Beghin, 2005). Though there might be disputes on the exact figures about gains and losses, the general trend is clear: China's agricultural sectors and farmers will feel increasing pressures from a more open market.

In spite of this, China has adopted a positive attitude towards the WTO process. On one hand, China hopes to expand its world market share for manufactured products. On the other hand, China wants a fairer trade regime, especially for agricultural commodities. The current world markets for most agricultural products are immensely distorted by subsidies, tariff and non-tariff barriers in the OECD countries. For example, the huge farm subsidy in various forms in the US explains to a large degree the large amount of soybean and cotton exports to China from that country. This has caused huge damage to Chinese soybean and cotton farmers.

In the following sections, the author provides some personal observations on China's concerns on each of the major issues in the ongoing WTO agricultural negotiations.

6.1 Market access

Market access is the key area of concern for Chinese policy makers in the Doha round of agricultural negotiations. As for most developing countries, the tariff is almost the only available means for China to protect its domestic farm sector from unfair world competition. Compared with the other two areas, i.e., domestic support and export competition, China will face more tariff reduction pressures in gaining market access. There are several factors causing this.

First, as discussed in the first section, the tariff level for China's agricultural and food import is already very low due to its entry commitments. The simple average tariff for the 977 lines covered in China's schedule in 2005 is only 15 percent. Secondly, the actual rate, i.e., the weighted average, was lower than 8 percent in 2004. Thirdly, China's applied tariff rates are the same as its bound tariff. Any new commitments will mean real cuts for China. Lastly, the appreciation of the Chinese currency RMB against major foreign currencies will also have adverse impacts on agriculture. The RMB has already appreciated by about 2.5 percent in the second half of 2005, and the trend seems to be continuing. This makes it even harder for Chinese farmers to absorb the effects of any further cut in tariffs.

As clearly shown in Table 20, China's tariff level is much lower than India and Mexico, the next two largest developing countries. Most of China's 977 tariff lines for agricultural products are in the lowest band of tariffs proposed by the US for example, while Mexico's majority is in the second and third band and that of India in the highest band.

TABLE 20
China's agricultural tariff lines in comparison with India and Mexico

Tariff Bands	China	India	Mexico
0-20%	823	23	94
20-40%	129	41	579
40-60%	6	33	222
60%-	19	574	7

*Assuming cut rates for developing countries at 2/3 of the average in Developed countries

Source: The author's calculation based on data from existing reduction schedule.

Results show that no matter which proposal is used, that of the G-20 and EU or the US one, China's agricultural tariff level is always only a fraction of that for the other two countries. In other words, even if China will be exempt from making any further reduction in this ongoing round, its agricultural tariff level will still be much lower than Mexico and India (Table 21).

TABLE 21
China's agricultural tariff cut under new proposals, in comparison with India and Mexico

	Current		After cut	
	Tariff lines	Average rate	G-20 and EU proposal	US proposal*
China	977	15.0%	11.1%	8.5%
India	671	114.4%	71.6%	46.3%
Mexico	902	34.3%	24.3%	17.6%

*Assuming at 2/3 reduction rate of the developed countries.

Source: The author's calculation based on data from existing reduction schedule.

The Ministerial Declaration in Hong Kong indicates that the special situation of recently-acceded Members who have undertaken extensive market access commitments at the time of accession will be taken into account in the negotiations. The case of China is the best example for the need to provide new members with special considerations to have a fairer trade system. This is why China has consistently insisted on this point.

Furthermore, China's market is even more open than the low tariff level suggests. The TRQ arrangements also offer "generous" market opportunities, due the huge TRQ amount and very low in-quota tariffs. China's TRQ amounts for all TRQ commodities, including wheat, rice, corn, cotton, sugar and wool are far above the 5 percent minimum market access opportunity. As indicated in Table 3, for all cash commodities, the TRQ amounts account for 20-50 percent of the domestic consumption. For wheat, rice and corn, the TRQ amounts also account for 8-20 percent of commercial consumption. In-quota tariff for wheat, corn, rice, cotton and wool is only 1 percent. The only relatively high tariff is for sugar, which is 15 percent. Taking this situation into account, it is not difficult to understand why China wishes to be granted the special consideration as a new member.

6.2 Domestic support

According to the results of China's entry negotiations, there are no AMS commitments for China. The *de minimis* was set at 8.5 percent, a level between that for developed countries and developing ones. When China joined the WTO in 2002, there was a special agricultural tax levy regime in China. The special tax and levy was set at 8.4 percent of crop production value. As a result, China's net subsidy to agriculture was a huge negative value. A move has been taken to gradually reduce the level and coverage of this agricultural tax over the past three years. Chinese legislators have just passed a resolution to abolish this tax completely starting from 2006. As indicated in the first section of this paper, the distorting subsidy is currently only about 0.6 percent, far below the allowed *de minimis* level of 8.5 percent. This 8.5 percent *de minimis* can be translated into RBM 255 billion (US\$ 32 billion), which can never be reached given China's budget capacity. Furthermore, the subsidies are commodity-specific, and should be linked to grain production. In practice, it is impossible to calculate or check grain production amounts for 250 million small farmers, each with only a half ha farmland on average. Local officials usually use the farmland area as the basis for subsidy calculation. Therefore the subsidy is of a "de-coupled" nature practically.

According to the Hong Kong ministerial declaration, "Developing country Members with no AMS commitments will be exempt from reductions in *de minimis* and the overall cut in trade-distorting domestic support". With this arrangement, China will not have any pressure in terms of domestic support reduction, like most other developing countries. Also from the perspective of domestic financial capability, it is unlikely that China and other developing countries will substantially increase trade-distorting domestic subsidies. Much of the existing subsidy is more of a political and symbolic nature.

On the other hand, heavy domestic subsidies are one major source of distortion and unfair agricultural trade systems. Chinese farmers suffered most of the damage caused by the subsidies and distortions, as suggested by the analysis in previous sections. That is why China has allied with other developing countries to strongly demand developed countries to substantially reduce their subsidies, particularly trade-distorting subsidies.

6.3 Export competition

According to China's WTO entry commitments, China should not provide direct export subsidy. There are also no other forms of exporting subsidy practiced in China, such as export credit systems. Therefore, any new agreement in this area will not pose any additional pressure on China.

Export subsidies by the EU and other developed countries are the most explicit trade-distorting measures. An early and complete elimination of all forms of export subsidies is in the interest of all developing countries including China. China welcomes the decision in the Hong Kong Ministerial Declaration that "the parallel elimination of all forms of export subsidies and disciplines on all export measures with equivalent effect to be completed by the end of 2013", although the timetable is not as aggressive as China and other developing countries hoped.

6.4 The cotton issue

China has no export subsidies on cotton. The domestic subsidy is minimal, mostly in the form of preferential loans to the state-owned cotton mills which have an ever declining market share (under 25 percent in 2003). The preferential interest was 1.45 percent lower than commercial loans. With a total preferential loan for purchasing 1.18 million tonnes of cotton, the subsidy is equivalent to RMB 170 million (US\$ 20 million). There is also a subsidy of RMB 20 million (US\$ 2.5 million). Adding those together, cotton subsidy was less than 0.4 percent of the total cotton production value in 2003 in China.

In terms of market access, China's actual cotton imports were more than twice those of the TRQ amount in 2004. China's cotton imports from African countries have risen dramatically from 3.8 thousand tonnes before China's WTO entry in 2001 to 38.0 thousand tonnes after China's WTO entry in 2002. It went up to 388.7 thousand tonnes in 2004 (Table 22). Cotton imports from African countries account for about 20 percent of China's total cotton imports. On the other hand, exports to China account for about 30 percent of Africa's total cotton exports. The four Western African Countries (Benin, Burkina Faso, Chad and Mali) exported 218.1 thousand tonnes of cotton to China in 2004, accounting for 40.4 percent of their total cotton exports, and 11.5 percent of China's total cotton imports.

As mentioned in the previous section, China's cotton farmers are also the victims of the trade-distorting subsidy policy in developed countries. Therefore, China welcomes the Hong Kong ministerial declaration to eliminate all forms of export subsidies for cottons in 2006. The declaration also gives duty and quota free access for cotton exports from least-developed countries (LDCs) starting from the commencement of the implementation period by developed countries. The declaration states that trade distorting domestic subsidies for cotton production should be reduced more aggressively.

TABLE 22

China's cotton imports before and after WTO entry by country, 1 000 tonnes

	2001	2002	2003	2004
Total	56.0	171.4	870.1	1901.1
US	33.8	90.5	510.9	1055.3
Uzbekistan	0.0	22.0	113.5	196.8
Australia	17.5	18.5	23.0	101.3
Africa	3.8	38.0	166.6	388.7
Others	0.9	2.4	56.1	159.0
Africa in %	6.8	22.2	19.1	20.4

Source: www.cottonchina.org. Total import figures are slightly different from those contained in Table 11, which may be due to the time difference between purchase and delivery.

6.5 Development policy to improve agricultural performance and rural livelihood

Though China pays much attention to the ongoing WTO agricultural talks, it has been well recognized that the trade policy reform is not all that matters. In other words, trade is important for agricultural and rural development but not the most important factor, in particular for a large country like China. Compared to the situation four years ago before China's accession, China's agricultural economic researchers, policy makers and the general public now have a more rational attitude towards the WTO negotiations and the possible impacts. The Chinese government has redoubled its efforts in recent years in reforming institutional and development policies to enhance agricultural productivity, to promote structural changes, to improve farmers' income and livelihood, and to advance overall rural development. However, detailed analyses of those issues are beyond the scope of this paper.

7. Concluding remarks

China is the largest agricultural trader among all developing countries in terms of both exports and imports. China's agricultural trade has nearly doubled since its entry into the WTO, with import growth exceeding that of exports. China has become a net agricultural importer since 2003. This is largely due to the fact that China has very low trade barriers and subsidies in the agriculture sector but many other exporting countries have very high domestic and export subsidies. Chinese farmers are among the greatest victims from the existing unfair world agricultural trade regime.

As both a large exporter and importer, China often faces a dilemma in its agricultural trade policy making. It has to balance the various interests of different sectors within the country. In spite of recognizing the losses in agriculture from the WTO entry and results of the ongoing round, China has adopted a positive attitude towards the Doha round agricultural negotiations, hoping to correct the heavy distortions of the existing regime and have a fairer world agricultural trade system.

In terms of the agricultural talks of the Doha round, China's major concerns are similar to those of most developing countries. In the area of market access, China is now in a very disadvantaged situation as its tariffs are amongst the lowest in developing countries with a 15 percent simple average and 8 percent if weighted. The unavoidable appreciation of RMB will make it even harder for Chinese farmers to absorb the effects of any further cut in tariffs. It is in this area that China most needs the special considerations to be given to recently acceded members.

In the fields of domestic support and export subsidy, no further pressure will be exerted on China as it does not have any forms of export subsidy and AMS. China will never be financially able to use up the current *de minimis* of 8.5 percent, which will be exempt from further reduction in the ongoing round. On the other hand, China is strongly allied with other developing countries to demand OECD countries to cut trade-distorting domestic support and export subsidies more aggressively.

On the cotton issue, as the largest importer in the world market and the most important buyer from African countries, China will continue to make significant contributions to the special goals concerning cotton, probably more than what the WTO rules require.

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Regional trade concerns in Latin America and the Caribbean and implications for WTO rules on agriculture

William Foster and Alberto Valdés

1. Introduction

Why might trade expansion, spurred by a successful Doha Round, be of importance for Latin American and Caribbean (LAC) agriculture? One reason is that trade can stimulate economic growth and create employment opportunities, with a resulting increase in incomes of workers and the poor. This, after all, is the theme of the Doha Round. And indeed, LAC has been a leader in trade liberalization in comparison to other regions, beginning with reforms and liberalization during the 1980s and 1990s. Much of this trade liberalization was a consequence of unilateral reforms, in several countries predating the Uruguay Round Agreement. Moreover LAC countries have also been active in trade negotiations under the current WTO negotiations. For example, there is the G20 led by Brazil, and the participation of Brazil, Chile and Argentina in other groups, such as the Cairns group.

The region has also seen advances in bilateral free trade agreements and the rise of a “new regionalism.” This new regionalism of like-minded countries has often gone beyond liberalization within the multilateral system, and appears to be at least in part an endogenous and complementary response to the integration with the world trading system more generally (IADB, 2002). But LAC regionalism, although complementary and serving as a laboratory for advances in multilateral negotiations, is not considered a substitute for improvements in the multilateral system. In fact, successful WTO negotiations should be an important stimulus for individual countries to continue reforms in domestic agricultural policy that have proven resistant to negotiation at the bilateral and regional level.

This paper will address three general issues with respect to agricultural trade concerns in the Latin American and Caribbean region in the context of on-going

WTO negotiations. First, what are the general trade policy questions currently under debate in LAC region? Second, what are some conflicts of interest with respect to trade between countries and within countries, and how have these conflicts been impacted by national policy reforms, intra-regional agreements, and agreements with countries outside the region? Finally, what can be said about the LAC's positions with respect to the formulation of rules within on-going WTO negotiations in light of current outstanding trade policy questions and conflicts of interest?

With respect to the trade policy questions and conflicts of interest, the next section reviews the importance and structure of agricultural trade to the economies in the region. The wide diversity of trading patterns across countries in the region has implications with regard to negotiating positions. The third section turns to how recent developments in LAC countries' domestic and trade policies have responded to these questions and conflicts. The fourth section also discusses an especially important issue for the future: the potential impacts of policy changes beyond the region. Unlike the impression one gets from the popular press and the discussions about the region in aggregate based on global modeling (where Brazil receives a great deal of weight), there is in fact wide diversity with regard to the impacts of the potential changes to OECD tariff and subsidy policy. This diversity would lead to a range of distinct negotiating positions across the many countries in the region. It is therefore more difficult to make broad characterizations both of the "interests" of Latin America and the Caribbean, and of the negotiating positions that individual countries would take. The fifth section addresses likely trends in (a) negotiating positions, (b) the emphasis on agro-food standards in developing country markets, and (c) in the development of domestic compensation and safety net schemes. The sixth section goes into more detail with regard to what is almost certainly the main point of conflict of interest in LAC: the significance of the diversity of agricultural production and exports in setting priorities for trade negotiations. Finally, drawing on lessons from past trade reforms and current trends relevant to LAC agricultural sector and trade, the paper concludes with some reflections on what might be priorities for domestic policies and WTO trade negotiations that could aid in the transition to freer trade.

2. The importance of agricultural trade in the LAC region

One question to address is the contribution to total national exports and imports of crop, livestock, and forestry products. Another issue is the distinction between the net overall agricultural trade position and the net food trade position, the latter being important for understanding domestic agricultural policy debates, especially with regard to the question of national food security and food import dependence. Agricultural trade should be examined not only with respect to primary agriculture - the size of which is reflected in sectoral GDPs - but also with respect to the agro-processing sector (not included in agricultural GDP). The agro-processing industry has grown significantly in terms of exports from the LAC region and largely depends on the performance of primary agriculture. A focus on processed agricultural

exports is motivated by the growing importance of non-farm employment and income in rural areas. And because much of agro-processing is not accounted for in agricultural GDP, the downstream links of the primary agricultural sector to the national economy should not be overlooked. This is especially important in a region that is relatively land abundant and where the growth of agriculture is constrained by domestic demand, leaving export markets as an avenue both for sectoral growth and, more generally, for growth in the rural economy.

2.1 Agro-forestry exports and imports

Table 1 reports the shares in total exports and imports of agricultural goods for 22 countries in the region. Agricultural exports represent more than 25 percent of total export revenue for nine countries, reaching as high as 40 percent for Argentina, Cuba, Guatemala, Honduras, Paraguay and Uruguay. Countries for which the share is relatively small are the oil-exporting countries of Mexico, Trinidad and Tobago, and Venezuela, and the Caribbean. On the import side, the shares of agricultural and forestry products are generally smaller, ranging between 8 and 20 percent. The only country with a share greater than 20 percent is Haiti (34 percent). Twelve of the twenty-two countries are net exporters of agro-forestry products, the net importers being the oil exporters, Mexico, Trinidad and Tobago, and Venezuela; the Caribbean countries; and El Salvador, Peru, Panama. In volume and total value, the region as a whole is clearly a net exporter of agricultural and forestry products, but in terms of number of countries, the region is almost evenly divided between net exporters and importers.

Crop and livestock products clearly predominate (see Appendix Table A, which also includes fisheries, important in some countries and included in agriculture GDP statistics). In terms of totals for crop, livestock and forestry, export products deriving from crops and livestock average more than 75 percent of total agro-forestry exports. Chile is notable for the size of share of exports due to forestry products (35 percent). The share of crop and livestock products averages around 80 percent for agro-forestry imports for the three sub regions. Unlike exports, forestry's share of imports is high for many countries. The highest shares for forestry imports are found in Argentina (40 percent), Costa Rica (33 percent), Ecuador (20 percent), the Dominican Republic (23 percent), and Trinidad and Tobago (22 percent).

TABLE 1
Export and import shares and trade balance for agriculture and forestry in LAC, 1999-2001 averages.

	Exports	Imports	Balance	
	Ag/ TOT (%)	Ag / TOT (%)	EXAg/ IMAg	
South America				
Argentina	40.4	7.8	7.73	NEX
Bolivia	31.9	14.7	1.57	NEX
Brazil	31.0	7.9	4.08	NEX
Chile	26.1	7.8	3.51	NEX
Colombia	23.1	14.9	1.56	NEX
Ecuador	32.2	10.8	2.79	NEX
Paraguay	45.2	12.5	1.59	NEX
Peru	10.9	16.2	0.66	NIM
Uruguay	50.2	16.0	2.31	NEX
Venezuela	1.3	14.2	0.18	NIM
Central America and Mexico				
Costa Rica	30.6	11.4	2.21	NEX
Guatemala	56.2	16.8	1.50	NEX
Honduras	47.9	18.2	1.21	NEX
Mexico	9.4	11.7	0.62	NIM
Nicaragua	45.7	15.4	1.34	NEX
Panama	35.1	14.9	0.66	NIM
El Salvador	17.9	18.5	0.56	NIM
Caribbean				
Cuba	47.9	17.9	0.90	NIM
Dominican Republic	10.1	13.7	0.66	NIM
Haiti	7.6	33.7	0.06	NIM
Jamaica	17.1	13.3	0.52	NIM
Trinidad & Tobago	5.8	12.0	0.57	NIM

Source: Authors' calculations from FAOSTAT.

Note: NEX represents a net exporting country, NIM a net importing country.

2.2 Net trade positions in food and agricultural products

Table 2 presents trade in agricultural products, distinguishing between the net overall agricultural trade position and the net food trade position. The broad agricultural group covers the products discussed above in reference to Table 1. The food group includes cereals, dairy products, eggs, vegetable oils, meats and sugar. The concept of food here is broader than that used by some international agencies, such as FAO, which often excludes sugar and vegetable oils, based on a definition of “essential foods.” One notable result of Table 2 is that only five of the 22 countries considered are net exporters of food, and all are in MERCOSUR or are associated members.¹

At odds with the common perception of Latin America as an agricultural continent, 16 of the 22 countries are net food importers, nine of which are also net importers of all agricultural products. But in contrast to food products only, for all agricultural products there are ten net importers and twelve net agricultural exporters compared to five net food exporters. Notably, there are seven countries that are both net agricultural exporters and net food importers: Chile, Colombia, Ecuador, Costa Rica, Guatemala, Honduras and Nicaragua.

These results are relevant for agricultural trade negotiations. The common perception is that there exists a high cost of agricultural protection in OECD countries for Latin America, based on the presumption that most countries in the region are net exporters. Only five countries are net food exporters, and they are losers with current OECD protectionism - and subsidy-induced lower world prices. The increase in world prices due to a reduction in the protection and subsidies in the OECD would be beneficial for nonfood agricultural exports, affecting many more countries (12). While it is clear why most LAC countries - seeking to expand their exports - would be enthusiastic for trade liberalization and subsidy reduction in the OECD, the case of net-food and net-agriculture importers is ambiguous. It is, however, important to note that there is hypothetical possibility that today's net food import position in some products could decline due to trade reversals arising from higher world prices that would result from trade liberalization in the OECD.

Industrial country trade liberalization would increase world prices, and thus would increase the food import bill and have a negative effect on terms of trade. It is also often claimed that multilateral liberalization would raise the domestic prices of food. But considering that OECD trade liberalization would require at least some degree of reciprocal liberalization in developing countries, reduced tariffs and greater market access in LAC countries would have a mitigating effect on domestic prices. The final result on domestic prices would be uncertain, and depend on the magnitude of world price changes relative to the degree of reduced border protection in LAC countries. This helps to anticipate where OECD reforms would have significant impacts, and where they would not. It is difficult to discuss price effects in the aggregate, but for a particular country and a particular product, one could estimate the potential price and find to what degree a country might have flexibility to mitigate price increases on sensitive products.

¹ Two countries, Bolivia and Guatemala are borderline cases of net food importation. Bolivia, particularly in the Santa Cruz area, produces soybeans, rice and other grains.

TABLE 2
Net trade position in food and agricultural products (excluding forestry and fisheries), averages 2000-2002 (million US\$)

	Food exports and imports				All agricultural exports and imports			
	Exports	Imports	Net Balance		Exports	Imports	Net Balance	
			EX-IM	EX/IM			EX-IM	EX/IM
South America								
Argentina	5 437.4	224.7	5 212.7	24.2	10 900.0	872.9	10 027.1	12.5
Bolivia	124.8	113.4	11.3	1.1	403.3	232.0	171.3	1.7
Brazil	5 769.0	2 076.9	3 692.1	2.8	16 000.0	3 768.2	12 231.8	4.2
Chile	359.0	577.3	-218.3	0.6	3 351.4	1 228.4	2 123.0	2.7
Colombia	388.8	724.8	-336.0	0.5	2 925.6	1 577.5	1 348.1	1.9
Ecuador	71.9	189.8	-117.9	0.4	1 592.1	475.2	1 116.9	3.4
Paraguay	131.5	58.7	72.9	2.2	519.3	310.1	209.3	1.7
Peru	54.5	616.1	-561.5	0.1	739.4	1 052.8	-313.3	0.7
Uruguay	733.5	112.2	621.2	6.5	998.0	387.3	610.6	2.6
Venezuela	64.1	858.0	-793.9	0.1	329.6	1 813.5	-1 483.9	0.2
Total South America	13 300.0	5 643.2	7 656.8	2.4	38 000.0	11 900.0	26 100.0	3.2
Central America and Mexico								
Costa Rica	178.8	205.4	-26.6	0.9	1 698.2	518.5	1 179.6	3.3
El Salvador	136.9	374.2	-237.3	0.4	539.3	822.0	-282.7	0.7
Guatemala	346.2	384.5	-38.3	0.9	1 434.7	793.0	641.7	1.8
Honduras	51.4	216.6	-165.3	0.2	630.8	491.1	139.7	1.3
Mexico	811.0	5 385.2	-4 574.2	0.2	8 191.1	11 200.0	-3 008.9	0.7
Nicaragua	152.0	146.9	5.1	1.0	404.4	294.2	110.2	1.4
Panama	51.5	180.8	-129.4	0.3	313.0	417.3	-104.3	0.8
Total Central America and Mexico	1 763.1	6 922.8	-5 159.6	0.3	13 300.0	14 700.0	-1 400.0	0.9
Caribbean								
Cuba	504.1	598.7	-94.5	0.8	812.8	848.2	-35.3	1.0
Dominican Republic	97.3	325.0	-227.7	0.3	595.0	691.9	-96.9	0.9
Haiti	0.0	259.3	-259.3	0.0	23.2	362.0	-338.8	0.1
Jamaica	96.1	283.3	-187.1	0.3	260.2	404.8	-144.6	0.6
Trinidad and Tobago	82.6	163.5	-80.9	0.5	248.8	344.5	-95.7	0.7
Total Caribbean	847.0	2 125.6	-1 278.6	0.4	2 310.2	3 746.4	-1 436.2	0.6
Latin America and Caribbean	15 900.0	14 700.0	1 200.0	1.1	53 600.0	30 300.0	23 300.0	1.8

+ Data for exports and imports are in millions of US dollars deflated by the World Bank's manufactures index (1990=100).
 ++ Fisheries are for 2000-2001. Agricultural exports (crops and animals) here comprise all primary and processed products.
 Source: authors' calculations from FAOSTAT.

What are the lessons from the importance of agricultural trade in the region? First, the primary sector contributes significantly to overall national trade: more than a third of export revenues in recent years are in agro-forestry exports, although this share has been declining. There is considerable interest in obtaining marketing access in world markets to expand these agro-forestry exports. But the share of agro-forestry export trade to total trade is quite heterogeneous across LAC countries. Second, this high degree of heterogeneity carries over to countries' net trade positions in both food and all agro-forestry products. In terms of the number of countries, there is a high degree of food import dependence, relevant for future WTO negotiations.

3. Trade policy developments in the LAC region

3.1 Past unilateral domestic and trade policy reforms

Predating the Uruguay Round, most countries implemented economy-wide policy reforms in the context of an ambitious programme of structural reforms, which included trade liberalization, deregulation, privatization and a redefinition of the role of the state. Reforms were introduced in conjunction with macroeconomic stabilization. Trade reforms were initially unilateral, and subsequently incorporated into bilateral and sub-regional agreements (MERCOSUR, NAFTA, the Andean Group, and CAFTA). These reforms were also entirely consistent with the later adoption of the results of the Uruguay Round, leaving LAC with few mandated policy changes. The unilateral approach was also consistent with what we know today from global simulation modelling about the expected gains of agricultural trade liberalization: the principal beneficiaries of trade reforms are the trade liberalizers themselves.

One of the primary goals of trade reforms during the 1980s and 1990s was to reverse the strong bias that had existed previously in favour of manufacturing and urban sectors and against export agriculture. With reforms, domestic terms of trade between agriculture and the rest of the economy were expected to change to the benefit of the farm sector, especially in the case of exportable goods. But in several cases, prior expectations with regard to relative prices at the farm level were not realized, due most notably to currency appreciations and to a fall in border prices. By focusing only on sectoral trade policy reforms, it was natural to conclude that agricultural producers should have experienced a significant increase in relative prices. But, the data show that real domestic prices of farm tradables fell after the initiation of reforms in several countries, primarily as result of a currency appreciation (reinforced by occasional declines in world prices). In terms of prices, the main forces behind the changes in agricultural incentives were beyond the control of sectoral policies: exchange rates, border prices and real interest rates (Valdés, 1996). Although the real price of tradables in several cases had episodes of decline, the relative price of exportables to importables and home goods increased. Real export prices fell relative to general costs of living (using the CPI as the numeraire).²

² That is, agricultural export prices can fall relative to the prices of home goods, P_{xa}/P_h . But this does not exclude the possibility that agricultural export prices increased relative to the price of agricultural imports, P_{xa}/P_{ma} , and in many cases in LAC this indeed happened. Moreover, in many cases agricultural export prices increased relative to non-agricultural tradables (primarily importables). That is, relative prices of exportables increased in many cases although the real prices (relative to the CPI) of tradables fell.

Given the above, there was a notably rapid overall expansion in agriculture-related exports in the 1990s, during the time of unilateral economic reforms, as shown in Table 3. The expansion of exports of primary agricultural products averaged around 5 percent per annum, but with a wide range from a high positive growth (Peru 10 percent, Brazil 9 percent, Mexico and Chile 7.5 percent) to a high negative growth (Bolivia, Colombia, the Caribbean in general, and Venezuela). Notable also are the growth rates in the exports of processed products, which are higher in most countries than the growth rates for primary products. This is especially true for Central America, Bolivia, Chile, and Mexico. The growth in forestry products is high in some countries, although one should remember that, beyond a few countries, the reference base is small. As an overall conclusion, in the LAC region generally the export agro-forestry sector has been dynamic over the past decade.

The growth in agro-processed products points to the importance of confronting the tariff escalation issue, both in FTAs with the US and in WTO negotiations. At least in terms of bilateralism with the US, reductions in tariffs on processed and storable commodities were left behind, with an eight to twelve year period before tariff reductions. Moreover, such products remain vulnerable to the application by the US of special safeguards. This was clearly the case of the US-Chile agreement, used as a template for CAFTA. What is remarkable from looking at Tables 3 and 4, is that there has been a fast growth in processed products despite high tariff escalation on the part of developed countries. This suggests that exports of this sector could expand even faster.

As a general rule for the LAC region, export agriculture did expand in spite of the unexpected and unfavourable changes in domestic terms of trade. Moreover, exports expanded faster for countries that had early and sustained reforms. The bias against export agriculture did indeed decline: not only were export taxes eliminated and protection to importables reduced, but also trade reforms were accompanied by other policy changes, such as deregulation and privatization, which reduced significantly the transactions costs of agricultural and agro-processing activities. That is, the opening of trade was a leading element of economic policy reorientation, but it was only part of the story. Trade reforms were made in the context of economy-wide structural reforms, macroeconomic adjustments, deregulation and privatization. Modernization of ports, the privatization of telecommunications, airline and shipping deregulation, cheaper equipment, machinery, and raw materials due to tariff reductions, greater flexibility in the foreign exchange regime and financial sector, and other changes, were influential in determining the response of agriculture.

One should recognize the difficulty of isolating the partial effects of trade liberalization from the myriad impacts that resulted from general economic reforms. Nevertheless, it is possible to discern a pattern from recent analyses. First, in most cases trade reforms did have a positive impact on agriculture, particularly exportables. Without trade reforms, other reforms probably would have had a limited impact on the sector. That is, the sequencing of reforms, and especially trade liberalization early on and the removal of distorted domestic prices, was very

important, although many tend to ignore the importance of initial and credible changes in incentives. Second, the breadth of the reform programme matters: there are complementarities between trade reforms and other economic policy changes. The positive impacts of trade liberalization on the performance of the agricultural sector - in terms of changes in product mix, investments, resource mobility and greater flexibility to adjust to changing conditions - were enhanced by improving infrastructure, deregulation and privatization, and more generally reorienting the economy toward markets.

TABLE 3

Annual (compounded) rate of change in exports 1990/1992 to 2000/2002, primary and processed agricultural products, forestry and fisheries

Country	Primary agriculture	Processed agricultural products	Forestry products	Fisheries	Agriculture, forestry and fisheries
Argentina	4.10	6.58	7.12	8.49	5.59
Brazil	8.92	4.72	6.06	6.80	6.59
Bolivia	-6.14	17.05	-5.16	-21.62	8.21
Chile	7.45	12.05	7.36	7.32	8.07
Colombia	-1.98	9.52	15.03	3.86	2.25
Costa Rica	4.40	13.09	6.65	10.30	6.77
Cuba	-11.41	-12.07	-18.55	-2.62	-11.46
Dominican Republic	1.50	7.60	4.72	9.98	5.49
Ecuador	3.92	13.97	9.03	2.16	4.75
Guatemala	5.47	7.66	3.69	3.83	6.13
Haiti	-1.37	-1.08	22.66	8.97	-0.37
Honduras	-0.01	13.21	8.35	5.98	1.86
Jamaica	0.65	1.45	-39.12	4.15	1.20
Mexico	7.39	16.25	3.02	8.30	10.17
Nicaragua	5.25	12.19	22.03	20.17	8.65
Panama	-0.09	3.64	9.27	13.74	4.20
Paraguay	-2.96	3.97	1.85	5.42	-1.66
Peru	10.27	9.26	33.38	11.05	10.30
El Salvador	0.39	15.97	11.73	6.66	6.12
Trinidad and Tabago	5.47	8.67	5.59	15.86	8.64
Uruguay	2.59	5.04	16.42	1.95	4.20
Venezuela	-6.33	5.33	9.25	6.76	3.43
South America	5.09	6.47	6.90	7.05	5.95
Central America	5.31	13.94	4.65	9.65	8.12
Caribbean	-5.29	-5.93	3.45	1.11	-5.37
LAC Region	4.88	5.80	6.73	7.25	5.56

Source: Authors' estimates based on FAOSTAT. Annual rates of change based on averages for the years from 1990 to 1992 and from 2000 to 2002. Fisheries based on 2000 to 2001. Nominal values in dollars deflated by the Manufacturers Unit Value index of the World Bank. Primary and processed agricultural products based on FAO definitions.

There has been over the last several years little consensus across the region with respect to the social impact of the reforms. This is in part due to the difficulty in isolating the effects of reforms from mismanagement and exogenous shocks. In any event, the emphasis of the policy debate over structural and sectoral reforms has shifted: from the productive and export potential of agriculture, to the difficulties posed by a liberalized economy for import-competing farmers; and from the impact on farmers and urban consumers (who are now nearly forgotten), to the rural poor and the small farm sector presumed excluded from the benefits of more open trade.

Did the benefits of reform not reach some sectors? Yes, part of the small farm sector was excluded. This subset includes those who farm in relatively low-productivity areas, but also, more generally, part of the small farm sector faces difficulties in adjusting to several changes in the economic environment: an open trade regime (higher price risk), the increasing demands of buyers for higher volumes and standards (associated with the increasing concentration of agribusiness and the development of supermarkets), the general trend toward greater capital intensity, and the overall reduction in subsidies to agriculture. But with respect to rural poverty, we conclude that, overall, reforms did not contribute to poverty, and in some cases contributed to the reduction of poverty.

Economic reforms toward open trade do not guarantee benefits for all agricultural sub sectors. The objective of such reforms should be to improve the use of resources generally, to permit all economic agents - and the agriculture sector specifically - to discover their comparative advantages. With the experience of the LAC region, one can draw a few lessons. First, that no country's farm sector as a whole was worse off as a result of the reforms. Second, for the countries that stayed on course with a coherent policy strategy, agriculture showed significant positive outcomes, primarily in the export-oriented sector. Third, a subset of farmers suffered as producers in import-competing activities, although not as consumers. Fourth, if there is fiscal flexibility, a government might well look both at targeted compensation schemes, and at exit strategies for uncompetitive sectors.

TABLE 4
Tariff escalation: average MFN applied out-of-quota duties (percent)

Product	EU	US	Japan	
Tropical	Coffee			
	Raw	7.3	0.1	6.0
	Final	12.1	10.1	18.8
	Cocoa			
	Raw	0.5	0.0	0.0
	Intermediate	9.7	0.2	7.0
Final	30.6	15.3	21.7	
Fast growing products	Fruits			
	Raw	9.2	4.6	8.7
	Intermediate	13.3	5.5	13.2
	Final	22.5	10.2	16.7
	Vegetables			
	Raw	9.9	4.6	8.7
	Intermediate	13.3	5.5	13.2
	Final	22.5	10.2	16.7
	Seafood			
	Raw	11.5	0.6	4.9
	Intermediate	5.1	3.2	4.3
	Final	16.2	3.5	9.1

Source: Aksoy and Beghin (2004) based on WTO IDB data.

Beyond world commodity market trends, there have been recent policy developments that present special opportunities and challenges to the region's agricultural sector. The most directly important (although perhaps not the most long-term significant) development has been the several bilateral and sub regional trade agreements. Following the earlier NAFTA, MERCOSUR, the Andean Group, and the Central American and Caribbean agreements, the most notable new initiatives have been with US participation: agreements with Chile, CAFTA (including the Dominican Republic), and negotiations with the Andean Group. Mexico and Chile already have agreements signed with the EU. There have also been agreements signed between Chile and both Canada and the Republic of Korea; and some countries are negotiating with China and India, Mexico with Japan; and MERCOSUR is negotiating with the EU. These concluded and future agreements will increase pressures on the competitiveness of national agricultural sectors and induce adjustments.

This trend toward regional integration has been an ongoing interest of the United States particularly. For example, the Caribbean Basin Initiative was configured to facilitate trade between the US and 24 countries in the Caribbean and Central America. It started in 1983 as the Caribbean Basin Economic Recovery Act (CBERA) and it was renewed in 2000 under the denomination of Caribbean Basin Trade Partnership Act (CBTPA), which will expire in September 2008. The agreement provides free duty treatment for member countries and quota free benefits in some cases. The beneficiaries are Antigua and Barbuda, Aruba, Bahamas, Barbados, Belize, British Virgin Islands, Costa Rica, Dominica, Dominican Republic, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Montserrat, Netherlands Antilles, Nicaragua, Panama, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, and Trinidad and Tobago.

In 1991, the US Andean Trade Preference Act (ATPA) was enacted to promote the eradication of drug production and trafficking in Colombia, Ecuador, Peru and Bolivia. It expired on December 2001 but ATPA was renewed in 2002 under the name of Andean Trade Promotion and Drug Eradication Act (ATPDEA) which, will expire on December 31, 2006. The preference benefits around 5 600 products to enter the American market with duty free access.

In addition to CAFTA (which eliminates 80 percent of tariffs immediately and the remainder over the next 10 years) and the US-Chile bilateral agreement (in which, 90 to 95 percent of tariffs were eliminated), the United States also signed in December 2005 an agreement with Peru, to promote a comprehensive opening. The Bush Administration strategy is to advance with a Andean regional agreement which includes also Ecuador and Colombia. Negotiations with the latter countries have not been resolved on topics related to agricultural subsidies, protection of biodiversity and rules of origin. Most controversial issues for agriculture typically will be domestic protection. For example, Peru has recently been more open with respect to market access for US goods, but this has caused heartburn in Colombia where farm lobbies and existing protection (including a wide use of quotas) are more extensive, such as for maize, rice, chicken parts and other potential imports from the United States.

It should be stressed that today, unlike the situation a decade ago, most countries in the LAC region appear to be putting more emphasis on trade agreements with the North and with large economies in Asia. This is due in part to the expected gains from access to large and more stable economies in the developed world and Asia, the low expectations about major reductions in agricultural support in the OECD under the Doha Round, and also to the perceived poor performance of sub-regional agreements.³

MERCOSUR is a notable example of an imperfect customs union,⁴ with its

³ Of course, Venezuela is currently in a distinct position, incorporating itself into MERCOSUR and searching for alliances in South America in opposition to the FTAA led by the United States. There is here perhaps less than meets the eye, in any event likely will not much influence agricultural trade. But it may have some impact on the supply of gas and oil. The present opposition to the FTAA by Argentina and Brazil does have some relation to the reluctance of the United States to discuss agricultural subsidies outside of the WTO.

⁴ There are four core members and six associates, the latter group is not subject to the common external tariff and not limited to trade negotiations within MERCOSUR as a unit. They also do not participate in the highest decision making bodies of the customs union.

members prone to economic crises in the recent past and large fluctuations in their currencies' exchange rates. MERCOSUR has a "common" external tariff with 800 exceptions, domestic policies are misaligned with members' stated common trade objectives, and countries maintain their individual systems of trade and investment incentives. Although MERCOSUR's objectives go beyond trade in goods (e.g. one aim is infrastructure integration), after ten years the four core members of the block have reduced their participation in world trade by a third. In this light of what can reasonably be expected from a sub-regional agreement, it is worth noting that Central America has already signed CAFTA and the Andean Group is in negotiations with the United States.

What can one say about this regional emphasis in trade agreements in regard to its compatibility with the multilateral framework of the WTO? Recently the Inter-American Development Bank (IADB, 2002) surveyed the New Regionalism in Latin America and concluded five points with respect to regionalism and the multilateral system:

- 1) Although there might be a conflict between preferential trade agreements and the multilateral system under some circumstances, in the case of LAC the two approaches appear complementary. The multilateral system treats a "hypermarket," establishing orderly world trade rules by consensus. Regionalism treats a neighbourhood where possible trade liberalizations beyond those feasible at the world level can be negotiated, and where extra-commercial policy considerations can be incorporated.
- 2) Regional integration is sometimes a worthy second best option, especially given the speed of the multilateral system's ability to advance and to respond to the asymmetries in countries' capacity to participate, negotiate and implement new rules.
- 3) LAC countries apparently do not view regionalism as a substitute for multilateral negotiations, and many LAC countries have been very active in the Doha Round and past multilateral negotiating rounds.
- 4) The negotiations that have led to the present new regionalism have served as a testing and training ground for introducing new rules into the multilateral system. NAFTA served as such a laboratory for the Uruguay Round. And, perhaps ironically, the very preferences that might arise from bilateral or regionalist agreements can serve as incentives from third parties to push multilateral negotiations in order to erode these preferences.
- 5) Finally, while bilateral and regional agreements tend to treat non-systemic trade issues alone (where direct effects on third parties are not an issue), the WTO is considered the necessary vehicle for reducing domestic supports and systemic questions related to third parties that cannot be dealt with at the bilateral level. As Jank and Jales (2004) point out, "Subsidies are best addressed through multilateral negotiations, such as the WTO negotiations, and by contrast market access is best addressed in a bilateral or regional framework" (p. 13).

3.2 What is the state of agricultural protection levels in Latin America and Caribbean today? Is there a trade policy bias for or against agricultural activities?

In the past, the policies of many developing countries, including a number in the LAC region, discriminated against their own agriculture. This was typically done by taxing agriculture directly (for example, controlled food prices and export taxes), but also and more importantly indirectly through industrial protection and macroeconomic policies. These implicit taxes (or indirect effects) on agriculture derived from overvalued exchange rates and policies protecting industrial sectors, which turned domestic terms of trade against the farm sector and raised input prices.⁵ In 2004, almost certainly the bias is considerably below what it was when measured for the 1970s and 1980s, although, unfortunately, a serious comparative analysis for the last decade and covering a number of countries has yet to be done to update the estimates of direct effects (since 1995) and of indirect effects (since 1985).⁶ During the 1990s, many of these interventions were indeed eliminated or reduced in scope. According to a study by the World Bank,⁷ tariffs on industrial products have been lowered more than those on agricultural products, and exchange rate overvaluation is less prevalent. Nevertheless, the broad perception remains that many developing countries still retain a policy bias against agriculture.

One measure of protection is found in the tariff schedules that countries report to the WTO. Tables 5 and 6 present a summary of regional MFN tariffs corresponding to the year 2000, and their tariff peaks (tariffs greater than 15 percent).⁸ Table 7 shows the FAO's estimates of regional agricultural tariffs between 2000 and 2002. Contrary to the widespread image of an unprotected, competitive, export-oriented agriculture in Latin America, one notes from the tariff schedules that MFN tariffs on the imports of agricultural and food products are relatively high for many countries. Across the countries presented, the average level of tariffs for livestock is 17 percent, for crops 12 percent, and for textiles 18 percent. Mexico has the highest MFN tariffs for agriculture and food products (categories I, II, and IV), followed by Peru. Chile has the lowest tariffs, and in 2004 the uniform MFN is even lower at 6 percent.

⁵ See for example the study by Krueger, Schiff and Valdés (1988).

⁶ The last major comparative study on the direct effects of agricultural was published by the World Bank for 1985-1995 covering eight countries (see Valdés, 1996). Ideally it is the relative effective rate of protection between tradable in RNR and tradables in non-RNR activities that would measure policy induced effects. These are rarely available. See Schiff and Valdés (2002) for a discussion of the various trade and exchange rate policy-induced effects on RNR incentive.

⁷ World Bank (2002). *Reaching the Rural Poor: Strategy and Business Plan*. Chapter 4.

⁸ Tariff schedule would only represent a part of total protection. Three additional adjustments would have to be included for a complete picture: tariff preferences, the effects of nontariff barriers (particularly important in the case of sanitary and phytosanitary regulations), and special surcharges (such as price bands in Colombia, Venezuela, Ecuador, Peru and Chile). MFN rates would understate the true levels of protection, due both to surcharges and to quantitative restrictions. Estimates of tariff equivalents in the past for Latin America have shown that MFN rates were considerably below true price wedge between border and domestic prices (Valdés, 1996). A tariff equivalent is the ad valorem equivalent of tariff and nontariff barriers as measured by direct price comparisons between border and domestic farm prices adjusted for quality differences, transport costs and other costs of marketing. Unfortunately, there is no up-to-date estimate of tariff equivalents that includes many countries and large proportion of the agricultural and forestry sector following a common methodology.

Overall, crops and the wood products sectors are protected comparably less than livestock. Processed food products also receive higher protection, demonstrating the widespread phenomenon in industrial and developing countries of tariff escalation. Of the various sectors, textiles are generally most protected, and industrial protection is similar to livestock and processed foods, but higher than crops.

TABLE 5
Average MFN tariff rates by product category, 2000

Categories	I	II	IV	X	XI	XXI.I	XXV	
Countries	Animals	Crops	Foodstuffs, Beverages and Tobacco	Wood Pulp, Paper	Textile	Machinery, Electrical Equipment	Miscellaneous Manufactured Articles	Total lines across categories
Argentina	17.0	10.2	18.5	15.8	21.0	17.2	21.8	1,449
Bolivia	9.4	10.0	10.0	10.0	10.0	8.7	9.9	1,554
Brazil	16.7	10.6	18.5	15.1	20.6	18.6	21.6	1,417
Chile	9.0	9.0	9.0	9.0	9.0	9.0	9.0	1,658
Colombia	19.5	12.7	19.0	14.0	18.6	11.0	17.8	1,586
Guatemala	15.5	10.6	12.9	4.8	18.8	4.0	11.4	1,628
Honduras	15.5	11.4	15.4	5.6	17.1	4.9	12.8	1,574
Mexico	27.1	19.7	23.1	13.2	24.8	16.7	24.1	1,750
Peru	24.5	17.2	21.7	12.0	18.0	12.0	12.0	1,462
Paraguay	15.8	10.4	17.8	15.2	20.9	13.1	19.0	1,536
Uruguay	14.7	9.8	17.8	14.1	20.1	15.3	19.9	1,494
Venezuela	19.5	12.8	19.1	13.9	18.8	11.8	18.3	1,586
Average tariff	17.0	12.0	16.9	11.9	18.1	11.9	16.5	
Average number of tariff lines	34	66	64	100	519	658	117	658

Source: Authors' calculations based on WTO.

Tariff averages by broad categories of products reflect the situation of many activities, some very small, and hide the protection to a few sensitive and generally larger subsectors. More relevant for understanding protection profiles is to examine tariff peaks. A tariff peak is defined as a high tariff value exceeding some threshold. In the context of industrial countries' tariff profiles, the commodities on which most tariff peaks apply are generally those of relatively greater importance for developing countries as exporters,⁹ accounting for large share of total developing country exports. From a political economy point of view this is where the "action" is, and in post-Cancun WTO discussions the question of tariff peaks is being explicitly addressed. Table 6 presents the proportions of tariff lines in LAC countries, by product category, that have tariff values exceeding 15 percent.

⁹ See Hoekman, Ng, and Olarreaga (2001)

TABLE 6
Proportion of tariff line by product category that have tariff values exceeding 15 percent

Categories	I	II	IV	X	XI	XXI.I	XXV	XXI.II
Countries	Livestock	Crops	Foodstuffs, Beverages and Tobacco	Wood Pulp, Paper	Textile	Machinery, Electrical Equipment	Miscellaneous Manufactured Articles	Machinery and mechanical appliances
Argentina	0.53	0.00	1.00	0.85	0.97	0.69	1.00	0.16
Bolivia	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Brazil	0.55	0.00	1.00	0.80	0.94	0.86	1.00	0.81
Chile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Colombia	1.00	0.61	0.95	0.74	0.95	0.37	0.92	0.03
Guatemala	0.71	0.47	0.72	0.15	0.77	0.14	0.54	0.00
Honduras	0.75	0.46	0.74	0.15	0.78	0.15	0.55	0.04
Mexico	0.66	0.65	0.75	0.16	0.94	0.69	0.97	0.34
Peru	0.85	0.44	0.78	0.00	0.76	0.00	0.00	0.07
Paraguay	0.61	0.01	0.91	0.81	0.93	0.46	0.85	0.07
Uruguay	0.43	0.00	0.97	0.72	0.91	0.65	0.92	0.14
Venezuela	1.00	0.64	0.94	0.71	0.97	0.45	0.94	0.04

Source: Authors' calculations based on WTO.

Except for Bolivia and Chile, where uniform (and low) tariffs are the rule, one notes that there are surprisingly high proportions of tariff peaks in all product categories, in many cases, more than 70 percent of all category lines. The highest proportion of tariff peaks is found in Brazil, Argentina, Venezuela, and Colombia. As in the case of average tariffs by product category, livestock and food products generally have a greater number of peaks as a proportion of tariff lines than do crops. Nevertheless, the proportion of tariff peaks for crops is noticeably high for Colombia, Guatemala, Honduras, Mexico, Peru, and Venezuela. Conspicuously, the six MERCOSUR countries (including associated members) have no tariff peaks for crops, although for forestry, livestock and processed food the incidence of tariff peaks is very high for this group of countries (excepting Bolivia and Chile). Although MERCOSUR has uniformly low protection for crops, in the other half of the countries, crops are protected by tariffs that exceed 15 percent in 45 percent or more of tariff lines in that category.

TABLE 7
Average Agricultural Tariffs in LAC: 2000-2002

	Simple average	Coefficient of variation	Weighted average
South America			
Argentina	12.1	41.3	13.7
Bolivia	10.0	8.0	9.9
Brazil	12.2	42.6	11.5
Chile	7.9	3.8	8.0
Colombia	14.8	35.1	14.6
Ecuador	14.6	36.3	14.3
Paraguay	11.6	39.7	16.2
Peru	17.2	38.4	16.5
Uruguay	12.3	39.8	13.9
Venezuela	14.8	35.1	16.2
Central America and Mexico			
Costa Rica	11.8	120.3	10.8
Guatemala	9.9	74.7	10.9
Honduras	10.2	72.5	10.6
Mexico	20.9	123.4	28.2
Nicaragua	8.1	87.7	11.1
Panama	12.8	103.1	11.7
El Salvador	10.8	83.3	12.5
Caribbean			
Cuba	9.8	77.6	10
Dominican Republic	15.7	61.1	12.5
Jamaica	15.5	109.0	16.4
Trinidad & Tobago	14.5	109.7	13.9

Source: FAO, 2005

What emerges from these tariff data is that, contrary to a general bias in trade policies against agriculture, there appears to be a bias in favour of at least livestock and processed foods across most countries. And in the case of crops, the evidence is heterogeneous, depending on the particular country. What is clear is that there is scope for tariff reductions that might counteract the negative effects on consumers of world price increases due to global trade liberalization. Given that there is room for tariff reductions on importables - and in the context of ongoing negotiations that will put further pressure on lower trade barriers - one can anticipate a strong political interest in possible compensation programmes to cushion the transition of those producers and consumers who are adversely affected by a freer trade regime.

4. Assessing the potential impacts of multilateral trade agreements

4.1 What might be in store from agricultural trade policy developments in the Doha Round?

Beyond the region, the most important trade policy development is connected to possible farm policy changes in the EU and the US, and the related current WTO negotiations under the Doha Round. Although the progress in agricultural policy reforms in OECD countries has been modest, as is made evident by continued high levels of support, there has been some movement toward greater market orientation. There has been a shift away from income supports based on maintaining artificially high farmer prices and output payments towards programmes relatively more “decoupled” from production decisions.¹⁰ The overall level of OECD farmer support has not significantly decreased following the Uruguay Round, but there has been a change in the mix of the types of policies used. As assessed by Tangermann (2003), the distortions between domestic producer prices and international market prices have lessened, as market price supports and output payments have decreased notably as a share of total support.

Importantly, the EU, the US and other major world market players have recently stated their willingness to discuss an eventual removal of export subsidies and a reduction in domestic subsidies. Although the policy debate is still fluid and yet to yield final results, one can anticipate a modest reduction in protection of agriculture in OECD countries, which will have consequences for increasing international prices to some degree. How important are the ongoing negotiations? What are the likely impacts on Latin America of these future international trade policy developments?

As summarized in Table 8, a number of recent studies have analysed the impact of full multilateral trade liberalization on global and regional welfare.¹¹ Global, multiregional, and multisector CGE studies apply a variety of models (GTAP, the World Bank’s LINKAGE, and MIRAGE), and apply differing specifications and policy simulations. There are also studies that use partial equilibrium frameworks, such as those by Hoekman and others (2002), Rosegrant and Meijer (2002), and Vanzetti and Sharma (2002). The FAO has applied its ATPSM model, and OECD (2002a) has used AGLINK. There also have been recent studies by Anderson, Martin and van der Mensbrugge (2006), Hertel and Winters (2006), and, focusing on poverty, Cline (2004). What can one conclude from these modelling efforts? In particular, what are the sources of welfare gains of trade policy changes and who are the main beneficiaries?

¹⁰ To be “decoupled” or delinked from production decisions, direct payments shall meet the following criteria: (1) Eligibility for such payments shall be determined by clearly-defined criteria such as income, status as a producer or landowner, factor use, or production level in a defined and fixed base period. (2) The amount of such payments in any given year shall not be related to, or based on, the type or volume of production (including livestock units) undertaken in any year after the base period. (3) The amount of such payment in any given year shall not be related to, or based on, the prices, domestic or international, applying to any production undertaken in any year after the base period. (4) The amount of such payment in any given year shall not be related to, or based on, the factors of production employed in any year after the base period. (5) No production shall be required in order to receive such payments. See WTO (1994) Green Box of direct payments for compensation.

¹¹ For a review of 15 recent modelling efforts, see Krivonos (2003).

The first observation that can be made regarding these studies is that all models predict that full trade liberalization leads to an expansion of trade flows, higher commodity prices, and welfare gains for the liberalizers. The models with varying degrees of success attempt to incorporate both the reduction in tariffs and the removal or expansion of import quotas in OECD countries. With respect to welfare gains to individual developing countries, most can be attributed to their own trade reforms. For example, the World Bank reports¹² that for developing countries, 83 percent of total welfare gains from global agricultural trade reform derive from their own trade liberalizations. There are, of course, differences in the details. The general equilibrium models, where economic sectors are interlinked, produce larger global welfare gains than those implying a partial equilibrium approach. Although one should not place too much confidence in dynamic, general equilibrium simulations of long-run outcomes, dynamic CGE models predict even greater welfare gains by incorporating endogenous productivity growth and capital accumulation related to trade openness.

The results regarding the distribution of gains among industrial and developing countries vary greatly. The static version of the World Bank's Linkage model predicts that low- and middle-income countries would capture half of the total gains from full liberalization. Other studies (Cline, 2004; Dimaranan, Hertel, and Keeney, 2002) estimate that these shares are closer to one third. The partial equilibrium models also differ: Rosegrant and Meijer estimate that over one half of total welfare gains are absorbed by developing countries, while Vanzetti and Sharma calculate that only one quarter go to developing countries. Moreover, the studies disagree as to the principal sources of welfare gains due to trade liberalization. The World Bank's LINKAGE simulations suggest that most of the welfare gains in developing countries stem from their own liberalization. This is reinforced by Vanzetti and Sharma's results showing that developing countries gain only from unilateral trade liberalization, but lose from liberalization in industrial countries. In Dimaranan *et al.*, considering all economic sectors, only one quarter of the welfare increase in low-middle income countries is due to their own liberalization.

One source of welfare losses for developing countries is that, especially for chronic net food importers, consumers suffer higher food costs with global agricultural policy reform, because many of the subsidies in richer countries are presently stimulating the production of food staples, such as wheat, and thus reducing world prices of these products. (For example, Tokarick (2003) notes that, if the OECD were to remove their subsidies but keep tariffs, Brazil and Argentina, both strong agricultural exporters, would gain substantially. But the rest of Latin America would lose 559 million a year in 1997 dollars.) Moreover, the wide differences in estimates for the gains to developing countries as a whole are due in part to how individual developing countries are treated in the models. In particular, there are some developing countries that now enjoy trade preferences that allow them to sell at the EU and US internal prices, which would fall from tariff reduction.

¹² World Bank (2002). *Reaching the rural poor: strategy and business plan*. Chapter 4.

The European Union began a system of preferences for former European colonies in the 1950s. In 1975, The Lome Convention was signed with 46 countries and included 73 by 2000, the year of its expiration. It basically benefited imports from low income countries, most of them African, Caribbean and Pacific (ACP) states. The European Union decided to establish a new arrangement to renew the previous preferences and the Cotonou Agreement was signed in 1998. The new agreement intended the creation of mutual trade liberalization, instead of the non-reciprocal preferential tariff schedules. The majority of former colonial territories in the Caribbean benefited from duty and quota free access, for bananas and sugar predominantly. The production of bananas alone accounts for almost 50 percent of the export earnings for some islands (St. Lucia, Dominica, St. Vincent) and also nearly 35 percent of its total employment.¹³ For many countries with trade preference, there would be a gain from world price increases, but losses from falling domestic prices in their preferred trading partners.

The large differences between the studies' results, with respect to who are winners and losers, also emphasizes that the simulations are sensitive to model specification and the choice of parameters. Differences in baseline scenarios and the year of the baseline, sectoral coverage, and regional decomposition are crucial, as are trade elasticities, which determine the substitution between domestic and the foreign goods. Nevertheless, there are certain general results in common in the case of LAC. The large agricultural producers, Argentina and Brazil, especially appear to be winners due to OECD liberalization. Some models show that the rest of LAC, treated as an aggregate (which is not very useful), does not fare so well. The dynamic models, as more recently confirmed by Anderson, Martin and van der Mensbrugge, do however tend to show large gains for the rest of LAC, beyond Argentina, Brazil and Mexico, in fact comparable to those gains for Brazil in value terms, and for Argentina in percentage terms. This study shows that the percentage gains for real income from full liberalization are 1.2 percent for Argentina, 1.5 percent for Brazil, 0.4 percent for Mexico, and 1.2 percent for the rest of LAC. There are, however, other studies, such as that of Tokarick, that find losses for several Latin American countries.

With reference to poverty, Cline finds that the greatest positive impacts on real income of the poor are in Central America and the Caribbean, due to the relative higher poverty elasticity with respect to national economic growth in comparison with other LAC subregions. (This elasticity is even higher in Asia, but lower in Africa.)

Finally, with respect to poverty reduction generally, the most recent studies of the World Bank, in contrast to previous results by the same institution, show that poverty reduction due to trade liberalization may be less than originally thought. The benefits in terms of poverty reduction were likely overstated in the past. Bhagwati (2005) warned some time ago against raising too high expectations for removing trade barriers: "But the claim that removing them will help the poorest countries is "dangerous nonsense" and a "pernicious fallacy" (The Economist, 23 May 2005).

¹³ For a quick discussion of trade preferences, see Wainio, *et al.* (2004)

TABLE 8
Summary of world price results for simulations of multilateral trade policy liberalization (percent)

Simulation	Model	Sector	Wheat	Rice/ Paddy rice	Sugar/ refined	Bovine meat/Beef	Processed dairy/Milk	Maize	Poultry
Full global liberalization									
Dimaranan and others (2002)	Static, GE	All merchandise	25.2	5.5	5.9	6.7	13.1		
Rosegrant and Meijer (2002)	Static, PE	Agriculture	8.1	13.1		18.0		9.6	11.9
Vanzetti (2002)	Static, PE	Agriculture	15.9	4.5		11.6		7.8	11.0
van der Mensbrugge and Beghin (2004)	Dynamic, GE	All merchandise	5-15		20-40		20-40		
Industrial country liberalization									
Dimaranan and others (2002)	Static, GE	All merchandise	23.0	5.0	6.7	6.5	11.9		
Rosegrant and Meijer (2002)	Static, PE	Agriculture	0.8	1.6		5.2		2.9	3.8
Vanzetti (2002)	Static, PE	Agriculture	11.5	1.9		7.2		3.1	2.6
Beghin and others (2002)	Static, GE	Agriculture	12.0	5.5	9.0	10.4	8.3		
Developing country liberalization									
Dimaranan and others (2002)	Static, GE	All merchandise	1.6	0.5	-0.6	0.2	0.7		
Rosegrant and Meijer (2002)	Static, PE	Agriculture	8.1	11.5		12.4	11.6	6.7	8.1
Vanzetti (2002)	Static, PE	Agriculture	4.1	2.1		4.1	4.2	4.7	7.9
Partial liberalization									
Dimaranan and others (2002)	Static, GE	All merchandise	12.6	2.3	2.8	2.8	5.8		
Bouet and others (2003)	Static, GE	All merchandise	10.1	14.5	10.0	6.0	31.3		
Fontagné and others (2003)	Dynamic GE	All merchandise	14.0	11.0	71.0	15.0	85.0		
Rosegrant and Meijer (2002)	Static, PE	Agriculture	4.1	6.0		8.1	14.0	4.8	5.6
Vanzetti (2002)	Static, PE	Agriculture	7.1	1.7		4.5	6.6	2.8	4.1
Thompson (2002)	Static, PE	Agriculture	-0.2	0.5		3.6	9.5	0.2	
Thompson (2002)	Static, PE	Agriculture	1.4	0.2		5.5	6.8	1.3	
Thompson (2002)	Static, GE	Agriculture	4.6			1.3	1.3		

Source: Krivonos (2004), prepared for the World Bank.

4.2 World price distortions: How much? The implications for domestic price determination

An argument is commonly made in political debates in Latin America that world prices are false guides for determining domestic prices of importables, because they are so distorted by high OECD subsidies on agriculture. This is less an argument about efficiency (and certainly not about consumer welfare) than it is about “fair trade” and treatment for domestic producers. Is this contention of highly distorted world commodity prices supported by research on the effects of trade liberalization? The predicted directions of effects on world prices are fairly uniform across studies, with most price increases occurring for commodities that are heavily protected in the baseline periods. Such commodities include wheat, sugar, rice, processed meat, and dairy products (Table 8), of which sugar and dairy product markets are the most distorted. In addition, several studies find that markets for processed foods are subject to significant tariff escalation, implying that reforms in the processed foods sectors could yield significant gains to developing countries beyond the benefits that might arise from reform in primary agriculture alone.

The magnitude of the price increases differ across products and across studies, but are in the order of 10 to 15 percent, although in some particular cases higher. For example, with the exception of the dynamic general equilibrium simulation of Fontagne, and van der Mensbrugghe and Beghin, the modelling efforts predict that prices for sugar (one of the most protected commodities) would increase between 0 and 10 percent. The dynamic GE models predict 20 to 40 percent increases, and as high as 71 percent. For wheat, again with the exception of one of the models, price increases run 12 percent or less. In general, global liberalization gives higher world price increases than partial liberalization. But the overall conclusion from these simulation studies is that trade liberalization in both industrial and developing countries would produce commodity price increases that would be small relative to what is generally perceived in the debate in Latin America over price supports to import competing producers as compensation for world price distortions. This misperception of what ought to be the world price effects of global liberalization is likely due to the confusion between PSEs (the total level of OECD agricultural support) and what is the final impact on world prices. What matters for LAC countries are world price effects, and not the levels of total support to farmers, no matter how high. In a more economically efficient world, effective decoupled payments would result in large PSEs but with very small world price distortions.

The political debates typically centre on the possibility of highly distorted levels of world prices rather than the price transmission of volatile world prices.¹⁴

¹⁴ Relevant to the question of how much lower are world prices relative to what they would otherwise be with trade liberalization is the unarguable observation that simulated world price changes are small relative to the standard deviation of year-to-year price volatility in primary commodity markets. Rodrik (2003) argues that the effects of trade liberalization are likely to be dwarfed by other sources of price variability, and is supported by Gilbert’s (2003) estimates of the yearly standard deviation of price changes for maize (15 percent), rice (23 percent), soybeans (16 percent), sugar (43 percent), and wheat (16 percent). This does not minimize the importance of a permanent increase in 10 to 15 percent in world prices.

There are instruments to deal with volatility without introducing higher levels of protection, but this is a subject beyond this paper. Nevertheless, it is interesting that, in the context of the WTO, there is much interest in creating new special safeguards for agriculture for developing countries that would deal with the concerns about price transmission and volatility. This is relevant for the LAC region because several countries have in place price bands, and variations on the price band theme, which are in effect safeguard mechanisms in terms of protecting a floor price, despite their stated objective of stabilization.

The large-scale modelling efforts do not effectively incorporate the political aspects of the impacts of price transmission: they are primarily aimed at price levels. The Uruguay Round was to enhance transmission (by removing QRs and variable levies), so one would expect that price transmission would have increased post-Uruguay-Round. But the domestic political concerns about the effects of low world prices on producers remain, and generate many internal political debates. Interestingly, the transmission question has recently re-attracted the interest of economists (Baffes and Gardner, and Conforti). Certainly several countries take negotiating positions implicitly based on the assumption that greater price transmission is better; but other countries propose instruments (e.g, special products) that would reduce price transmission. We raise the question to leave it open: To what extent does the price transmission issue underlie current negotiating proposals?

5. Trends in LAC agricultural and trade policy

5.1 Negotiating positions: Geneva, before and after Cancun, Mar del Plata and Hong Kong

The trend toward bilateral agreements, especially with the US, EU and large Asian economies has been discussed above. Latin American countries have mainly followed the guidelines established by the WTO. Five years ago, Valdés (2000) noted that one could distinguish between three negotiating sub-groups in the LAC region. The South America block was represented in the Cairns Group. Caribbean countries held an opposing position favouring a slower pace of trade liberalization. Central America and Mexico held an intermediate position, although closer to the Cairns Group. These three positions reflected to some extent the net trade situation of individual countries, which has been discussed above. The net-importers tended to favour the slower approach, the major exporters in the southern cone of South American tended to adopt the fast-track approach. The most sensitive political issue surrounding trade policy was, and continues to be, the question of import-competing agricultural sub sectors. And the concern over import-competing sub sectors is still reflected in the tariff structure in LAC, which was seen previously.

Today, the negotiating coalitions are more numerous. There does not exist a simple set of negotiating positions by which one can characterize LAC countries. Across the world there are now several coalitions, referred to as G-10 (net food importers), G-20 (seeking improved developed country market access), G-33 (another group of developing countries concerned about special concessions), and

the FIP (five interested parties - Australia, Brazil, the EU, India and the US). We are not in a position to assess whether or not these present coalitions would increase the probability of the completion of a successful Doha Round, especially with respect to individual LAC country interests.

Cancun 2003 was the fifth summit meeting supported by the World Trade Organization, which offered an opportunity to renew the initial proposals established within the Doha Round. The proposed agenda emphasized non-agricultural market access and, more significantly, the liberalization of agriculture. With regard to the latter, discussions - which did not reach an a consensus - centred on market access, primarily the elimination or reduction of tariffs, but also the reduction of domestic supports and subsidies of various kinds, and the reduction of export enhancements, including subsidies and credits for exports. Issues regarding special and differential treatments and also special safeguard mechanisms were part of the items to be discussed. Developing countries strengthened their demands by creating blocks, such as the G20 and G33 on agriculture and also the G90, representing the developing world.¹⁵ The Cancun Ministerial conference ended in disappointment and agriculture remained as one of the unsettled issues.

In August 2004, WTO members renewed negotiations in Geneva in order to address appropriate formulas to reduce import barriers and export subsidies. Discussions centred on state trading, special agricultural safeguards and, subsidies. Nevertheless, an official schedule for abolition of all forms of agricultural subsidies still was not established.

Within the last years, several attempts have been made to promote the agenda on trade liberalization in the Americas. In early November 2005 the summit of the Americas took place in Mar del Plata, Argentina, with the general theme of “creating jobs to fight poverty and strengthen democratic governance”. The participating countries, however, made explicit the relevance of trade negotiations, and stressed their concerns regarding market access, agricultural subsidies and trade-distorting domestic practices of their trading partners (which in this context means essentially the United States). Although the summit did not represent an official attempt at a trade agreement, it revealed a strong polarization and the discontent of the largest nations in South America: Argentina and Brazil.¹⁶ The position of Argentina, Brazil, Uruguay (and their new ally, Venezuela) was to decline negotiations on FTAA with the United States without including discussions on US agricultural subsidy reductions. On the other side were Mexico, the CAFTA countries, Chile, and other countries in negotiations with the US (Peru, Colombia and Ecuador), all of which pursue deepening their commercial relations with the US through bilateral FTAs

Negotiations took place in the Sixth Ministerial Conference in Hong Kong, to continue with the Doha Development Agenda, which deadlines at the end of 2006. Once again, the most critical issue is the definition of a scale of reductions in industrial tariffs and farm subsidies. The final Hong Kong draft promised the reduction of export subsidies by the year 2013 from countries in the European Union, as well

¹⁵ For further information, see Oxfam International (2005).

¹⁶ See Fourth Summit of the Americas, 2005.

as reductions in the levels of direct subsidies in OECD, although this latter is still to be determined in a last set of negotiations in 2006. This most recent Ministerial Conference was not an obvious success, but at least some form of consensus is taking shape, and it did not end in failure as some previous Doha round meetings.

Turning from the external environment to internal politics, recently, some countries in LAC have taken what might be termed an anti-globalization turn. Venezuela has left the Andean Group, accepting to join Mercosur, the government saying in part because Andean group countries were negotiating FTAs with the United States. (Venezuela, Cuba and Bolivia are at least gesturing toward a Bolivarian association of LAC states.) Internal politics has also complicated trade negotiations for Ecuador. Despite Peru's previous apparent willingness to come to an agreement with the United States, the recent presidential election raised doubts. One of the final candidates was strongly opposed to the FTA, and the winning candidate was in favour of the agreement but has indicated a desire to reexamine the terms. In broad terms, the current situation in the region is one of much bilateral FTA activity and ongoing negotiations, Mercosur despite its shortcomings continues (with a strong political impulse), and the larger scheme of a hemispheric agreement lies dormant.

5.2 The trend toward the emphasis on agro-food standards

Once trade agreements, such as with the US, are signed (and with the EU), the scope for direct trade interventions is far more limited, which emphasizes trade aspects beyond border measures. There is less flexibility - perhaps none - for quantitative restrictions, and there are bilateral commitments for tariff reductions. The new agenda that appears to be emerging for agricultural trade includes (a) the management of preferential quotas for exports (very important for Central America today in CAFTA), (b) the situation of agro-process products in terms of tariff escalation, and (c) the proliferation and tightening of agro-food standards

With respect to the latter item on the new agenda, the increase in perishable exports - fresh fruits, vegetables and meats - and processed foods has increased the importance of compliance with both the developed country sanitary and phytosanitary (SPS) rules and with the demands of private sector importers and retailers in OECD countries (which are often more stringent than official standards). This move toward new and processed products is generally overlooked in modelling efforts and further highlights the heterogeneity of LAC countries' agricultural sectors. In this context, there is little hope that health agencies and private sector actors will grant developing countries "special and differential treatment" or that there will be a slowing of the trend toward higher standards. The strengths and the weaknesses of the links in the agro-food supply chains in LAC become more prominent as countries become more export oriented in non-commodity products. There are high costs of compliance with tighter standards, which will burden poorer countries and those with weaker institutional capability for SPS and other agro-food standards. Signaling credibility to importers is now more a question of international and third-party accreditation, which adds significant fixed costs to doing business. One bad apple can ruin millions of dollars worth of lost export opportunities.

Developed world standards regarding good agricultural practices - hygiene, waste management, safe water, records and traceability - are becoming part of the trade agenda for many LAC products. Of course, this is less the case of commodities such as wheat, soybeans and corn. But in the products for which the trend toward stronger standard compliance is relevant, the requirements are influenced to a large extent by buyer demands in OECD countries, and compliance is relatively easier for commercial farmers and less so for smaller producers.

Turning to the issue of genetically modified crops (GMOs), in addition to financial and legal issues (such as intellectual property right enforcement), the international debate regarding potential health hazards of GM is also relevant when considering market access and biotechnology policies for some LAC exporters. This has been prominent in the case of soybeans. According to a recent assessment by FAO, there is a consensus among scientists that biotech products currently on the market are safe to consume, although new and complex products may require additional safety procedures. But an extensive global survey by Environics International found that nearly 50 percent of respondents in some European countries felt that the potential benefits of GM crops do not outweigh the risks of the technology.¹⁷ Furthermore, there is no consensus regarding the environmental dangers posed by GM crops (FAO 2004). The outcomes of the current debates regarding GM crop safety among scientists and policymakers will have a large impact on the future policy priorities and export potential. These issues go well beyond agricultural trade negotiations, and are the subject of a range of negotiating areas, although they will be highly important for LAC exports of primary and processed agricultural products.

5.3 The trend toward compensation and social safety nets¹⁸

Both direct income supports and conditional cash transfers are recognized as forms of compensation to farmers and other groups for their losses due to ending or reducing border protection and production subsidies associated with trade agreements and other reforms. Replacing dubious rural poverty alleviation schemes focused on agricultural protection, direct payments can be targeted to the poor as well as to the farmer of whatever income level. For farmers specifically, such income supports can ease the transition to a more efficient agricultural sector. Decoupled income support programmes (DIS programmes) and Conditional Cash Transfer (CCT) programmes have already been used successfully in OECD and LAC countries to compensate farmers for the reduction in protection, to smooth consumption during economic downturns, and to alleviate poverty directly in rural areas.¹⁹

¹⁷ *The State of Food and Agriculture 2003-2004: Agricultural Biotechnology: Meeting the needs of the poor?* Rome: Food and Agriculture Organization of the United Nations. Chapter 6.

¹⁸ Much of this section has been drawn from T. Castañeda (2004).

¹⁹ Of course, the adoption of income supports as compensation for once-protected farmers might even be unnecessary, if the reduction in protection is gradual, taking place over a large number of years (say, 10 to 20 years, as has been in the case of some products under bilateral and regional agreements in LAC). And it is possible that the introduction of these support programmes might be unwise in any case, if the institutional capacity of a

Decoupled payments: direct income supports for farmers

Permissible supports should be funded directly by the taxpayers (not indirectly by consumers), and they should leave producer prices unsupported.²⁰ In principle, such direct income supports could serve as compensation to ease the political resistance to reducing trade distortions. In the 1990s, OECD countries, particularly the EU and the US introduced decoupled payments explicitly to protect producers from the reduction of tariffs and other protections. The 1993 CAP and the US 1996 FAIR Act introduced direct income supports, although decoupled payments still are less than half of total support (30 to 40 percent). DIS programmes have been used in Mexico (when joining NAFTA in 1994), and in Turkey in 2001 as compensation for price support and input subsidy elimination, and tariff reductions.

OECD and developing countries' programmes have similar broad designs and implementation, but significant differences in payment basis, record keeping, and monitoring.²¹ Furthermore, OECD countries have had a long history of domestic support programmes, in addition to tariff and nontariff protection.²²

Poverty-focused payments: conditional cash transfers

Conditional cash transfers (CCT) in LAC have shown success as rural poverty safety-net programmes, sometimes offering significant cash support to poor families. As a condition for payments, families send their children to school and for regular health check-ups and vaccinations (for children under five years of age).²³ Apparently a key to the success of these programmes is a simultaneous investment in social infrastructure (better schools and health services).

CCT programmes provide income-based rather than farm-related support for rural families, but they may be also programmes for compensating rural farmers and landless workers for loss of employment or income due to lower sectoral protection. CCT programmes can be properly targeted to areas either producing certain import-competing crops that are more affected by tariff reductions, or where landless workers are more prevalent and there are few alternatives to

government is too weak and open to corruption to implement such programmes. Prior to adopting any income support programme, considerable attention ought to be paid to identifying the circumstances where those policies would in fact act to alleviate the poverty of rural household or to compensate farmers for real harm due to the reduction in price protection, and where successful implementation would be in fact possible. Moreover, although compensation should be temporary, experience has shown that transfer policies are usually difficult to terminate.

²⁰ For example, by the use of fixed yields and land area as basis of payment.

²¹ Information availability and payment details vary widely across countries. For a discussion of the criteria for payments under decoupled schemes, see Baffes and de Gorter (2003).

²² Decoupled programmes that provide transfers to farmers do not have as a primary objective the alleviation of poverty in rural areas. In OECD countries farmers are not the poor and are often better off than urban residents. Although in developing countries, many of the poor have benefited from decoupled payment programmes, the lion's share of programme expenditures has gone to large farmers. Payments are based on past production levels and areas planted, favouring large commercial farmers producing for the market. Most decoupled programmes have ignored landless workers who may also suffer from the reductions in agricultural production and in employment opportunity that result from the elimination of domestic price supports.

²³ The rationale is that poor rural families often do not have the resources to pay for the direct costs of school or going to health centres, and have high opportunity costs of sending children to school.

work outside farming.²⁴ By 2002 CCT programmes in Mexico, Brazil, Colombia, Nicaragua, and Honduras aided more than 10.5 million poor families, mostly rural. Fiscal costs totalled US\$3.2 billion (about 0.2 percent of the countries' combined GDPs). Most programmes were introduced in 2000-2001 (PROGRESA in 1997) after a major, region-wide crisis.

6. More on trade questions and conflicts of interest: the diversity across LAC in trade composition implies diverse negotiation priorities.

6.1 The heterogeneity of the effects of trade agreements on welfare in Latin America

Beyond the effect on world prices, much of the discussion of the potential benefits of trade reform centres on the impact of liberalization on increases in the value of exports. Most simulations of global trade liberalization project large increases in exports from Latin America. Similarly, the elimination of all tariffs (including tariff equivalents) in the Western Hemisphere due to the FTAA is estimated to lead to an increase in the exports of Latin American agricultural products by 14 percent.²⁵ The outcomes of such tariff reductions would differ of course, by product and country. The IDB estimates that exports would rise by over 10 percent for all subgroups of countries in the hemisphere, except Mexico and Canada. Exports from the Andean group rise about 12 percent, exports from Argentina and the Central American and Caribbean group rise by 15 percent, and from Brazil and Chile about 27 percent.

From a body of studies on global liberalization one can make three broad generalizations pertinent to the LAC region: (1) that agricultural prices will increase due to multilateral trade agreements by 10 percent or less, which is relatively small compared to the inherent volatility of world prices; (2) that exports will increase significantly; and (3) in absolute dollar terms the global welfare gains are large and captured primarily by trade liberalizing countries. But the results for welfare gains, while positive in the aggregate, are typically small for individual countries relative to national GDP, especially for large economies. For example, welfare gains are estimated to be between zero and 1.2 percent of GDP for countries like Argentina and Brazil, which are examples of countries that would be expected to benefit the most from global trade liberalization (Bianchi, Rozada and Sanguinetti, 2004).

²⁴ CCT programmes have been recently introduced in a number of LAC countries including Brazil, Colombia, Honduras, Nicaragua, Jamaica, and in other countries such as Turkey. Most programmes share a similar design, drawing on cross-country experiences and evaluations. They have three common features: (1) Implementation is focused on poor rural areas, producing basic foods for consumption or for the market in small plots. (2) Payments are based on the number of children in a household, which provides larger subsidies to poorer, typically larger families and establishes a basis of exit from the programme as children grow older and lose eligibility; and (3) they have the goal that any continuation of the programme should be contingent on its impact on the economic and human capital development of the poor.

²⁵ See IDB *Beyond Borders: The New Regionalism in Latin America* (2002), Appendix 3.2.

In addition, within each country, it is more difficult to say what would be the direction of the impact of more open agricultural trade for low-income, net-food-buying consumers in the region, living in both urban and rural areas. In terms of low-income households, the presumption is, as for example tentatively concluded by Anderson (2004), that a more liberal world trade regime would have the effects in developing countries of directly alleviating poverty by boosting the demand for unskilled labour and the exports of poor countries. Nevertheless, there is a concern that the recent trend toward trade liberalization in Latin America might have negative effects on the demand for unskilled labour, which would be translated into lower wages, unemployment, and poverty.

A recent study (Gasparini, Gutierrez, and Porto, 2005) investigated the potential links between trade and labour outcomes in LAC rural areas by estimating cross household regression models with micro-data from 60 LAC household surveys and country aggregate data.²⁶ The study finds a significant association between individual labour outcomes and some measures of trade, in particular exports, trade as a share of GDP, and the price of exports. The main result is that international trade has been associated with higher wages and labour income in rural areas. The benefits of trade in terms of labour income do not differ by groups of formal education. Instead, those workers located in the bottom quantiles of the conditional wage distribution appear to benefit more from increased trade openness. Higher export prices are also associated with higher wages, employment, and labour income; all individuals in rural areas benefit about the same due to higher export prices.²⁷ This study supports the view that a higher exposure to trade may bring about an expansion of the agricultural sector and benefits to those factors intensively utilized in rural areas, including labour, consistent with comparative advantages.²⁸ Under this interpretation, the results are consistent with models of trade and convergence, whereby economic activity relocates from large urban centres to smaller cities.

6.2 The heterogeneity of the effects of future reforms

Given their differing trade structure, one expects a variation across LAC countries of the impacts of global agricultural trade reform. Multilateral liberalization will most likely harm - in the short-term - large groups of people in the 17 net food importing countries. This is not to deny that from a longer-term perspective trade liberalization across all economic sectors would expand growth, and ultimately serve

²⁶ The study merges data for more than 4 million individuals surveyed in 17 Latin American and Caribbean (LAC) countries between 1989 and 2002 with measures and indicators of international trade, mostly drawn from the SIMA database at the World Bank.

²⁷ Interestingly, the results for urban areas are rarely statistically significant: total labour income in urban areas is not affected by trade as measured either by volumes or prices. Urban hourly wages do not seem to be affected by measures of trade, and employment appears to increase with trade (although this effect is sometimes only marginally significant).

²⁸ It should be noted that the LAC household surveys are not designed to capture the agricultural sector specifically, and that areas identified as rural may be small semi-urban centres connected to the rural economy, including agriculture.

to raise incomes and reduce poverty. Several studies have shown that more openness to all trade is correlated with faster national growth, but in the short and medium term there will be some losers. One way of anticipating the possible net effect of agricultural trade liberalization is to assess the net trade positions of LAC countries in relation to the various degrees of protection of farm products in the OECD. Tables 9 and 10 present net trade balances (in US\$ and percentages of exports and imports) by individual countries according to subsets of products receiving three distinct levels of protection and support (available data 1999-2001²⁹) in the OECD using average exports and imports during the period from 2000 to 2002. Protection is typically concentrated in a subset of products (for example, the coverage of the CAP in the EU), and so the higher the level of protection and support (defined by the nominal protection coefficient, NPC, and the Producer Subsidy Equivalent, PSE), the lower the number of products covered (and included in calculating the net trade balances in Table 2).

For example, in the case of Argentina from Table 9, only US\$125.5 million of its average annual agricultural exports for 2000-2002 are in the subset of agricultural goods that are very highly protected in the OECD (NPCs > 1.85 and PSEs > 50 percent), namely, sugar and rice. These exports represent only slightly more than 1 percent of its total agricultural exports. Argentina imports annually on average US\$3.6 million of those very highly protected products, giving a net trade balance ratio of exports to imports for this subset of agricultural goods of 34.5. Expanding the subset to include dairy and other products at the second level of support (NPCs > 1.20, PSEs > 40 percent), Argentina's exports increase to US\$429 million, but proportionally less than the increase in imports to US\$27.3 million ($X/M = 15.7$). By expanding the subset of products still further to include those that are at least moderately protected by the OECD (NPC > 1.15, PSEs > 28 percent), Argentina's exports rise dramatically to US\$ 4 337.3 million. Its imports increase to US\$112.1 million, giving it a net export trade balance of 38.7 for products that are at least moderately protected. It is worth noting that Argentina's total agricultural exports averaged US\$10.9 billion during 2000-2002, which implies that the country's exports are heavily oriented toward products with relatively lower levels of protection in the OECD.

What emerges as one of the striking results of Tables 9 and 10 is that by far most countries (15 of 22) are net importers (that is, $X/M < 1$) of products that are "at least moderately protected". Moreover, these moderate-to-highly protected products represent a significant share of total imports of agricultural goods, averaging 36 percent for the region. The notable net-exporters of these products are Argentina, Paraguay, and Uruguay and to a lesser extent Brazil, Nicaragua, Guatemala and Cuba. Due to the importance of sugar for several Central American and Caribbean countries, it is in the category of products with the highest levels of protection that one finds that most countries are net exporters: 16 of the 22 countries in Table 9. Considering both the level and composition of exports, some countries could potentially capture relatively

²⁹ OECD (2002b). *Agricultural policies in OECD countries: Monitoring and evaluation 2002, Highlights*.

greater returns to the reduction of the highest levels of OECD protection (sugar and rice), especially in the Caribbean and in Guatemala.

Looking at the absolute levels and their share in total exports, Argentina, Brazil, Paraguay and Nicaragua are clear cases where the largest gains would arise in reduction of protection for products that are moderately protected in the OECD. Nevertheless, approximately 60 percent of their agricultural exports face even lower levels of protection by OECD countries (that is, either NPC < 1.15 or PSEs < 28 percent). By contrast, for Cuba the bulk of benefits would come from the most highly protected group of products (namely, sugar), which accounts for nearly 60 percent of its exports of agricultural products.

TABLE 9
Trade balance of agricultural products for different levels of OECD protection
(in millions of current dollars), average 2000–2002

Product subset	Group 1			Groups 1 & 2			Groups 1, 2, & 3		
	Very highly protected NPC \geq 1.85 PSE \geq 50%			At least highly protected NPC \geq 1.20 PSE \geq 40%			At least moderately protected NPC \geq 1.15 PSE \geq 28%		
Country	Exports	Imports	Balance X/M	Exports	Imports	Balance X/M	Exports	Imports	Balance X/M
Argentina	125.2	3.6	34.5	429.0	27.3	15.7	4 337.3	112.1	38.7
Bolivia	11.5	3.7	3.2	18.4	17.5	1.1	64.8	131.8	0.5
Brazil	1 863.4	130.3	14.3	1 889.7	409.7	4.6	5 769.5	1 738.5	3.3
Chile	0.3	63.9	0.0	48.2	99.8	0.5	125.0	493.7	0.3
Colombia	207.4	39.2	5.3	256.4	74.2	3.5	269.0	605.6	0.4
Ecuador	24.6	7.2	3.4	25.7	11.6	2.2	49.0	117.9	0.4
Paraguay	7.6	2.2	3.5	7.8	12.4	0.6	329.2	34.6	9.5
Peru	16.5	64.1	0.3	23.0	128.3	0.2	30.3	468.2	0.1
Uruguay	160.9	17.7	9.1	313.1	20.1	15.6	626.6	65.7	9.5
Venezuela	13.8	67.7	0.2	15.4	235.1	0.1	59.9	600.2	0.1
Total South America	2 431.2	399.4	6.1	3 026.7	1,036.0	2.9	11 660.4	4 368.2	2.7
Costa Rica	31.6	12.8	2.5	52.4	28.3	1.8	92.9	188.7	0.5
El Salvador	59.3	13.7	4.3	61.5	93.7	0.7	80.7	241.5	0.3
Guatemala	210.9	11.6	18.2	211.6	79.0	2.7	251.3	227.2	1.1
Honduras	15.5	18.7	0.8	19.7	54.4	0.4	22.6	121.9	0.2
Mexico	70.5	114.4	0.6	116.6	843.9	0.1	270.8	4 569.1	0.1
Nicaragua	37.8	14.8	2.6	59.1	30.9	1.9	134.3	65.0	2.1
Panama	16.5	2.8	5.9	27.5	27.4	1.0	39.8	80.7	0.5
Total Central America and Mexico	442.0	188.9	2.3	548.4	1 157.5	0.5	892.4	5 494.0	0.2
Cuba	477.6	121.1	3.9	477.7	219.4	2.2	477.8	432.4	1.1
Dominican Rep	84.0	20.1	4.2	84.0	51.4	1.6	84.1	186.2	0.5
Haiti	—	106.3	—	0.0	135.1	0.0	0.0	175.2	0.0
Jamaica	69.5	42.6	1.6	78.5	83.6	0.9	79.1	159.8	0.5
Trinidad & Tobago	30.2	23.5	1.3	33.8	69.4	0.5	39.0	131.3	0.3
Total Caribbean	661.3	313.5	2.1	674.1	558.9	1.2	680.0	1 084.9	0.6
Total LAC	3 534.5	901.8	3.9	4 249.2	2 752.4	1.5	13 232.8	10 947.1	1.2

Note: Group 1, very highly protected: products with a Producer Nominal Protection Coefficient (NPC) \geq 1.85 and Producer Subsidy Equivalent (PSE) \geq 50 percent: rice, sugar. Group 2, highly protected: products with $1.20 \leq$ NPC $<$ 1.85 and 40 percent \leq PSE $<$ 50 percent; dairy, sheep and goat meat. Group 3, moderately protect: products with $1.15 \leq$ NPC $<$ 1.2 and 28 percent \leq PSE $<$ 40 percent; beef, wheat and nonmaize grains, maize and oilseeds.

Source: Authors' calculations based on FAOSTAT and OECD data, presented in World Bank. *Beyond the City: The Rural Contribution to Development*.

TABLE 10
Percent of trade in all agricultural products for different levels of OECD protection, average 2000–2002

Country	Total value		Group 1		Groups 1 & 2		Groups 1, 2 & 3	
	Exports	Imports	Very highly protected NPC ≥ 1.85 PSE ≥ 50%		At least highly protected NPC ≥ 1.20 PSE ≥ 40%		At least moderately protected NPC ≥ 1.15 PSE ≥ 28%	
			Exports	Imports	Exports	Imports	Exports	Imports
Argentina	10 900.0	872.9	0.01	0.00	0.04	0.03	0.40	0.13
Bolivia	403.3	232.0	0.03	0.02	0.05	0.08	0.16	0.57
Brazil	16 000.0	3 768.2	0.12	0.03	0.12	0.11	0.36	0.46
Chile	3 351.4	1 228.4	0.00	0.05	0.01	0.08	0.04	0.40
Colombia	2 925.6	1 577.5	0.07	0.02	0.09	0.05	0.09	0.38
Ecuador	1 592.1	475.2	0.02	0.02	0.02	0.02	0.03	0.25
Paraguay	519.3	310.1	0.01	0.01	0.02	0.04	0.63	0.11
Peru	739.4	1 052.8	0.02	0.06	0.03	0.12	0.04	0.44
Uruguay	998.0	387.3	0.16	0.05	0.31	0.05	0.63	0.17
Venezuela	329.6	1 813.5	0.04	0.04	0.05	-0.13	0.18	0.33
Total South America	38 000.0	11 900.0	0.06	0.03	0.08	0.09	0.31	0.37
Costa Rica	1 698.2	518.5	0.02	0.02	0.03	0.05	0.05	0.36
El Salvador	539.3	822.0	0.11	0.02	0.11	0.11	0.15	0.29
Guatemala	1 434.7	793.0	0.15	0.01	0.15	0.10	0.18	0.29
Honduras	630.8	491.1	0.02	0.04	0.03	0.11	0.04	0.25
Mexico	8 191.1	11 200.0	0.01	0.01	0.01	0.08	0.03	0.41
Nicaragua	404.4	294.2	0.09	0.05	0.15	0.11	0.33	0.22
Panama	313.0	417.3	0.05	0.01	0.09	0.07	0.13	0.19
Total Central America and Mexico	13 300.0	14 700.0	0.03	0.01	0.04	0.08	0.07	0.37
Cuba	812.8	848.2	0.59	0.14	0.59	0.26	0.59	0.51
Dominican Rep	595.0	691.9	0.14	0.03	0.14	0.07	0.14	0.27
Haiti	23.2	362.0	—	0.29	0.00	0.37	0.00	0.48
Jamaica	260.2	404.8	0.27	0.11	0.30	0.21	0.30	0.39
Trinidad & Tobago	248.8	344.5	0.12	0.07	0.14	0.20	0.16	0.38
Total Caribbean	2 310.2	3 746.4	0.29	0.08	0.29	0.15	0.29	0.29
Total LAC	53 600.0	30 300.0	0.07	0.03	0.08	0.09	0.25	0.36

Note: Group 1, very highly protected: products with a Producer Nominal Protection Coefficient (NPC) ≥ 1.85 and Producer Subsidy Equivalent (PSE) ≥ 50 percent; rice, sugar. Group 2, highly protected: products with 1.20 ≤ NPC < 1.85 and 40 percent ≤ PSE < 50 percent; dairy, sheep and goat meat. Group 3, moderately protect: products with 1.15 ≤ NPC < 1.2 and 28 percent ≤ PSE < 40 percent; beef, wheat and nonmaize grains, maize and oilseeds.

Source: Authors' calculations based on FAOSTAT and OECD data, presented in World Bank, *Beyond the City: The Rural Contribution to Development*.

Some countries that are notable net exporters of agricultural products are also net importers of products that receive moderate to very high protection in the OECD. For example, Colombia and Chile exported on average US\$2.9 and US\$3.3 billion annually in all agricultural products for the period 2000-2002 (Table 10). For the subset of products “at least moderately protected” in the OECD, Colombia and Chile were net importers, only exporting US\$269 and US\$125 million annually, representing 9 percent and 4 percent of their total agriculture-related exports. By contrast, these moderate-to-highly protected products represent approximately 40 percent of both countries’ total agriculture-related imports. For these two countries, a reduction in protection (and an increase in world price) of products with lower levels of OECD support would have greater impact in expanding exports than the reduction in supports for moderate to high protection.

One implication of the percentages of trade by protection category in Table 10 is that reducing the highest protection levels would be perceived to be of obvious benefit to a number of countries in the region from the point of view of their current agricultural trade patterns: Brazil (12 percent), Uruguay (16 percent), Guatemala (15 percent), and Cuba (59 percent). Considering a wider group of protected products (Groups 1 to 3), the majority of LAC countries are net food importers, whose exports are oriented to products with relatively lower protection rates. In the long run, without such protection in the OECD, LAC countries would increase their exports in some of these moderate-to-highly protected products, and perhaps some countries which are now net importers would become net exporters. But in the near term, tariff and subsidy reductions for products with moderate levels of protection (which would lead to higher world prices of those products) would be felt negatively by most (15 of 22) LAC countries, which are net importers of those goods. A strategic question for a country’s trade negotiation position is how to assess the possibilities for trade reversals, which is a task primarily for the private sector.

From the perspective of present trade balance patterns, most of LAC countries would recognize greater export-related benefits from a broad reduction in OECD protection on products with relatively low OECD support that affect the bulk of their agricultural exports. But one should keep in mind that protection as defined here considers both tariffs and subsidies in terms of NPRs and PSEs. There are, however, likely to be some products for which tariffs are relatively high but other government support is low or zero, such as in the case of tariff escalation for semi-processed and processed agricultural goods. These products are typically dealt with by governments beyond the scope of agricultural policy, and are perhaps outside of the focus of trade negotiations on “agriculture.” For this reason, simply because a country’s exports are oriented to products with relatively low OECD “protection” does not mean that it would not benefit from a reduction in high tariffs, although negotiations over such a reduction would be done in a non-agriculture forum.

6.3 What is more important for agricultural trade, tariffs or subsidies in rich countries?

A recent study using a gravity model of bilateral trade in agricultural products between the United States and LAC countries (Bianchi, Rozada, and Sanguinetti, 2004) found that the point estimate of the elasticity of US imports with respect to a tariff reduction is six times that of the elasticity with respect to the tariff-equivalent of “subsidies.” In the study, “subsidies” represent the wedge between domestic and world price attributable to non-tariff border measures and subsidies. This is consistent with other studies (e.g. Hoekman, Ng, and Olarreaga, 2002, and Tokarick, 2003, using a global modelling approach) that emphasize the importance of tariffs versus subsidies in determining import demand of agricultural goods. A decline in subsidies would reduce the incentives for US production (the reduction depending on the degree of decoupling of subsidies), but without a change in tariffs consumers would face the same price. Imports perhaps would increase as domestic production fell, but the total quantity bought by consumers would remain constant. A decline in tariffs, however, would increase the total quantity demanded. The empirical evidence shows the significance of the displacement effect on agricultural imports from non-tariff supports maintaining domestic producer prices above world prices, but the negative effect of higher tariffs on import demand is much greater.³⁰

This has implications for countries in the LAC region for both WTO and FTAs with the United States and Europe. In terms of market access, LAC countries would have greater returns to negotiating the reduction of tariffs and the expansion of import quotas relative to what certainly would be difficult and lengthy negotiations over total subsidy reduction. The current attention of LAC countries might be misdirected toward the appalling level of total expenditures of rich countries on their agricultural sectors. The evidence shows that focusing on the reduction of border protections (tariffs and quotas) in rich countries would yield significant gains in trade volume. Of course, for many countries, rich and not-so-rich, a tariff is a means of maintaining producer income that does not require government payments, yields revenues, and passes the costs of protection to consumers. Reducing tariffs may be all the more difficult if, in political terms, it would require an increase in government’s outlays aimed at farmers in the context of a cap on fiscal expenditures.

7. Conclusions: some reflections on future negotiations toward freer trade in LAC.

In the LAC region, the share of agriculture in total national exports is high, especially when considering the sector’s low participation in national GDP. And when analyzing agricultural trade, one should include not only primary agriculture but also agro-processed products, which have grown in significance and contribute

³⁰ The analysis for “bilateral” trade between the EU as a single entity and other countries is much less clear as to the relative effects on import demand of tariffs versus subsidies. The weaker results might be explained by the treatment of Europe as an aggregate and by the transient trade through Europe of agricultural goods to non-EU countries.

to non-farm rural income. Evidence from several countries in the region shows that the share in total rural household income of non-farm employment is large and growing. Being a land abundant region, with relatively low population densities, and where the growth of agriculture is constrained by domestic demand, the growth of the agro-food sector in LAC is highly dependent on exports.

Growth in primary agriculture and growth in the agro-industrial sector (dependent on the health of the primary sector) have been and will continue to be for most countries in the region engines to national and rural economic development. Evidence also suggests that the agro-food sector's growth contributes to the alleviation of poverty, certainly rural poverty and even national poverty in some countries.

Although it is difficult to make broad characterizations about the region, given both the diversity of trade patterns and the diversity of the impacts of future WTO results on individual countries, it is worth highlighting three findings directly relevant for the WTO negotiating positions. First, border protection versus domestic subsidies: LAC countries would have greater returns to negotiating the reduction of tariffs and the expansion of import quotas compared to the reduction in total OECD domestic subsidies. Second, most LAC countries would recognize greater export-related benefits from a broad reduction in OECD protection on products with relatively low OECD support compared to focusing on higher protected products. Third, although the region is, taken as one unit, very agro-export oriented, there are 16 (of 22) countries that are net-food importers and 10 (of 22) are net agro-forestry product importers.

This third finding complicates the question of trade negotiations by introducing the issue of the distribution of the benefits of freer trade. It would affect coalition formation. Net food importers benefit from the lower world prices induced by protectionism and subsidies on agriculture in OECD countries. Moreover, for many LAC countries the domestic policy debate is centred on the concerns of the import-competing sub-sectors. And in fact, contrary to the image of unprotected, competitive, export-oriented agricultural policies in LAC, the observed MFN tariff profiles on imports of agricultural and food products are relatively high.

Countries in the region implemented economy-wide and trade reforms before the Uruguay Round. Such reforms, entirely consistent with later WTO agreements, were initially unilateral and later incorporated into bilateral and sub-regional trade agreements. Without a base of unilateral reforms, particularly on trade, it is unlikely that bilateral and sub-regional agreements would have been effective in terms of trade integration. With early reforms, agro-food exports and imports expanded significantly, although exports of all agricultural products grew faster.

Recently there has been a trend toward bilateral agreements, with several bilaterals and sub-regionals having been signed by LAC countries during the last few years. Today, unlike the situation a decade ago, most LAC countries emphasize agreements with the North and with large economies in Asia, due in part to the expected gains from access to these countries, the low expectations about major reductions in OECD support under the Doha Round, and to the perceived poor performance of sub-regional agreements, such as MERCOSUR. Brazil and Argentina, however,

given their resistance to the FTAA and the difficulties with negotiations with the EU, still have much to gain from strong participation in the current WTO round. While negotiations are still being held within the WTO framework, the subsidies from OECD countries continue. At least, the Hong Kong summit confirmed the year 2013 as a deadline for the European Union to decrease its export subsidies.

With respect to the proliferation and tightening of agro-food standards, the increase in perishable exports and processed foods has increased the importance of compliance with the both developed country sanitary and phyto-sanitary (SPS) rules and with the demands of private sector importers and retailers in OECD countries. Health agencies and private sector actors in the developed world will grant no “special and differential treatment,” the trend toward higher standards will continue. The strengths and the weaknesses of the links in the agro-food supply chains in LAC become more prominent as countries become more export oriented in non-commodity products. There are high costs of compliance with tighter standards, and these will burden poorer countries, and those with weaker institutional capability for implementation of standards. Standards in the developed world regarding good agricultural practices are becoming part of the trade agenda for many LAC products.

This has been less the case for commodities, where the GMO issue has been the main non-trade-policy concern. With respect to GMOs, the dilemma for LAC comes from the tension between the productivity enhancement potential and the demand for GMO-free products in some countries. The largest producer of non-GMO soybeans, Brazil, for example, had wished to restrict GMOs due to its ability to export to GM-sensitive Europe. On the other hand, intra-western-hemispheric trade, including with the US and Canada, may generate welfare gain due to the ability to exchange biotechnological advances and the products that result (Jank, 2004). Brazil has recently adopted new biosafety legislation (March 2005) that has legalized the production and marketing of transgenic glyphosate-resistant soybeans, but the question of other crops remains sensitive. In November of 2005, the Brazilian President set in motion the bureaucratic mechanisms for the country’s National Biosafety Committee of experts, which will decide on the experimental and commercial release of GM products; but government agencies can appeal the committee’s decision to a Biosafety Council of government ministers for political resolution of disagreements. The Cartagena Protocol meetings have not clarified matters, and the question of GMO labelling goes unresolved. It is interesting to note that Brazil is a member of the protocol group, but Chile, Uruguay and Argentina are not (neither is the United States). With respect to future WTO negotiations, LAC is caught in a bind and must be very careful. Future WTO negotiations cannot deal with consumer perceptions.

The increasing importance of the agro-processing industry in expanding exports also highlights the need to confront the tariff escalation issue, both in the general context of the WTO, and in FTAs with the US and other developed countries. It should be emphasized that there is a move toward new and processed products. This trend is generally overlooked in modelling efforts and one would hope that the FAO

and other organizations would expand their attention to the diversity of agricultural sectors in the LAC. For example, in the Chile-US agreement reductions in tariffs on processed and storageable commodities were left behind, with an 8 to 12 year period before tariff reductions, and these products remain vulnerable to the application by the US of special safeguards. The fast growth in processed product exports from the LAC, despite high tariff escalation on the part of developed importers suggests that exports of this sector could expand even faster with further WTO reforms.

This is more of a WTO legal question, but one more thing that could be of special importance to LAC, and that might influence the impacts of the Doha Round, is the issue of WTO challenges to the price depressing effects of subsidies. Following the WTO ruling against US cotton subsidies (that exceeded the committed cap on Amber Box distorting measures), the door is open for legal action against other commodity subsidies. As a recent Financial Times article notes, “the same rules apply to all agricultural products” (Beattie, November 30, 2005). Potential cases against the United States could involve maize, rice, sorghum, and potatoes. (Even now, Uruguay is contemplating action on rice.) And the EU might not be immune in the cases of tomatoes, canned vegetables (tomatoes and peas), citrus fruit juices, tobacco, butter, skimmed milk, and wine and spirits. Further, some LAC exports such as wine, fruit and vegetables (the faster growing subsector in agricultural trade) are “leftovers” for reform, and some subsidies (such as those attached to the requirement that processors use European-grown farm produce) may be targets for WTO legal actions. The ramifications of the cotton case could be, even under existing rules, significant for a wide variety of LAC countries, not simply the large commodity producers usually considered the big winners of OECD trade and subsidy reforms.

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APPENDIX TABLE A

Shares RNR exports and imports by subsectors, 2000-2002

	Exports+ (million US\$)	Crops and animals (%)	Fisheries++ (%)	Forestry (%)	Imports+ (million US\$)	Crops and animals (%)	Fisheries++ (%)	Forestry (%)
South America								
Argentina	12 073	90.3	7.4	2.3	1 532	57.0	5.5	37.5
Bolivia	429	94.0	0.0	6.0	281	82.5	2.7	14.8
Brazil	19 188	83.4	1.4	15.2	4 950	76.1	6.3	17.6
Chile	7 091	47.3	27.5	25.3	1 524	80.6	4.0	15.5
Colombia	3 222	90.8	5.9	3.3	2 019	78.1	3.9	18.0
Ecuador	2 306	69.0	28.4	2.5	601	79.1	1.4	19.5
Paraguay	561	92.6	0.0	7.4	353	87.8	0.5	11.8
Peru	2 011	36.8	58.6	4.6	1 282	82.1	1.6	16.3
Uruguay	1 206	82.8	9.1	8.1	490	79.0	3.1	17.8
Venezuela	536	61.5	28.3	10.1	2 192	82.7	2.9	14.4
Total South America	49 026	77.5	11.3	11.2	15 421	77.2	4.2	18.6
Central America and Mexico								
Costa Rica	1 876	90.5	8.3	1.2	804	64.5	3.3	32.2
El Salvador	578	93.2	4.9	1.9	991	83.0	1.0	16.1
Guatemala	1 484	96.7	1.7	1.7	985	80.5	1.0	18.4
Honduras	751	84.1	9.7	6.2	577	85.1	2.7	12.2
Mexico	9 140	89.6	7.9	2.5	13 826	81.0	1.2	17.8
Nicaragua	511	79.1	17.3	3.6	323	91.2	2.2	6.6
Panama	554	56.5	41.8	1.7	499	83.6	2.4	14.0
Total Central America and Mexico	15 019	88.6	9.0	2.4	18 179	80.9	1.4	17.8
Caribbean								
Cuba	900	90.3	9.7	0.0	949	89.4	4.5	6.1
Dominican Republic	597	99.7	0.2	0.1	954	72.6	6.0	21.4
Haiti	27	84.9	15.0	0.1	382	94.7	1.8	3.5
Jamaica	269	96.6	3.4	0.0	546	74.2	7.6	18.3
Trinidad and Tobago	262	94.9	4.2	0.9	451	76.4	1.8	21.7
Total Caribbean	2 540	91.0	8.7	0.3	4 636	80.8	4.8	14.4
Latin American and Caribbean	66 575	80.5	10.7	8.8	38 190	79.3	3.0	17.7

+ Data for exports and imports are in millions of US dollars deflated by the World Bank's manufactures index (1990=100).

++ Fisheries are for 2000-2001. Crops and animals, and fisheries sectors here comprise all primary and processed products.

Source: authors' calculations from FAOSTAT, presented in World Bank. *Beyond the City: The Rural Contribution to Development*.