Part 1

Trade and development in the context of the WTO negotiations

2

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. Ardnt (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 partners[2]. 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 Africa[3] 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 maybe 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 in 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)

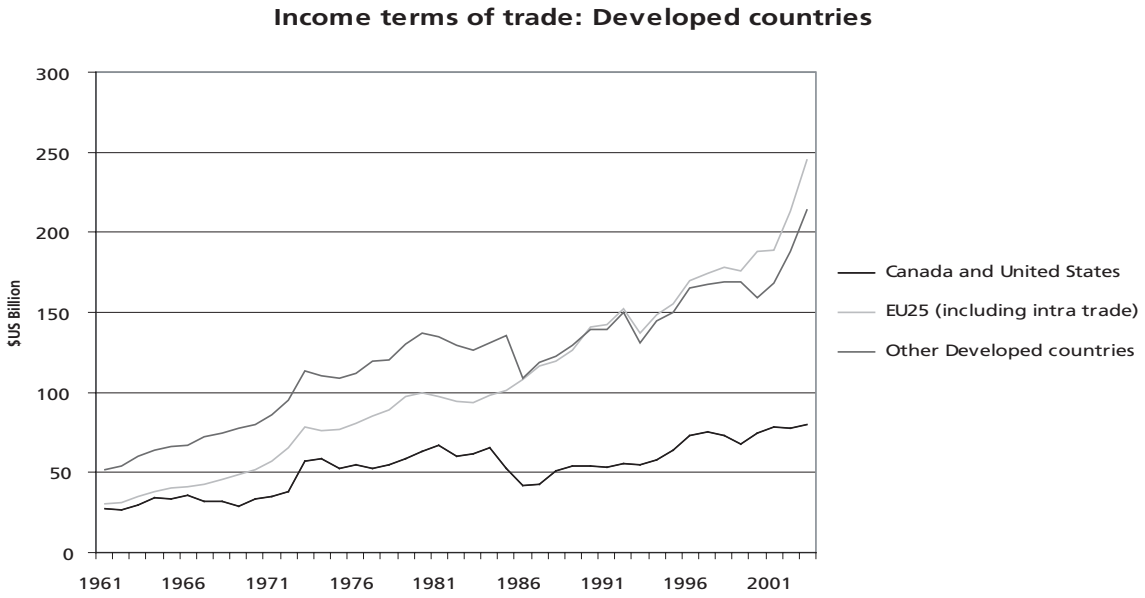
	East Africa	Southern Africa	West Africa	Total SSA
Traditional exports to non-Africa	2.2	2.4	4.0	8.6
Non-Traditional exports to non-Africa	1.3	2.8	2.0	6.1
Other exports to non Africa	0.5	0.7	0.7	1.2
Intra African trade	0.4	1.1	0.4	1.9
Domestic market for staples incl. self consumption)	17.6	12.1	20.1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

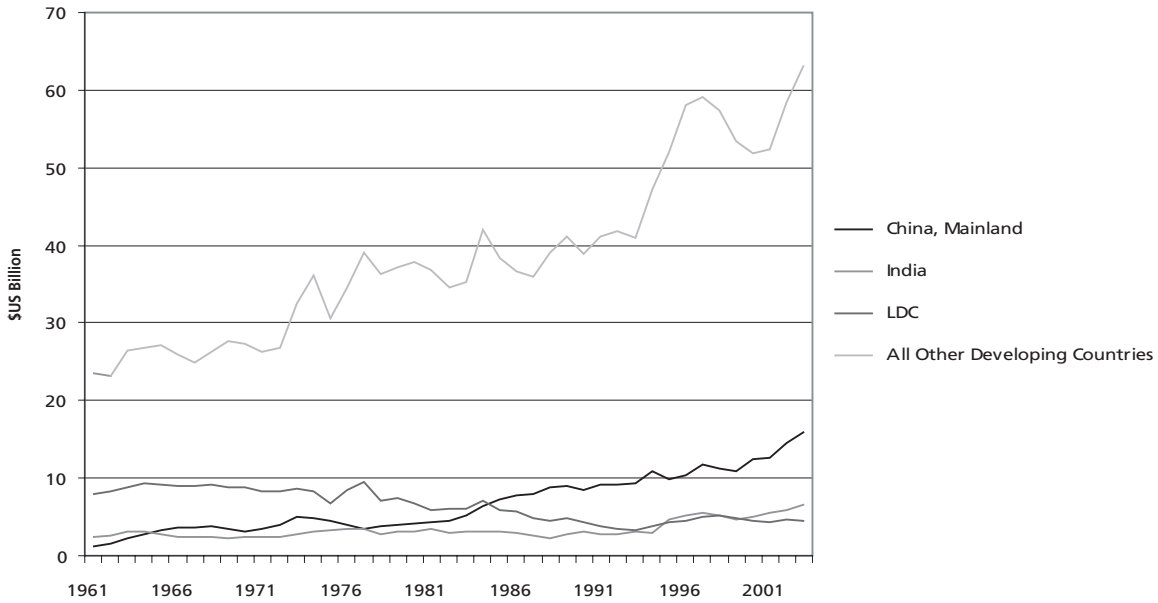
Figures 1 and 2 illustrate the differing patterns of income terms of trade of agricultural products among developed and developing countries. The figures indicate the values of agricultural exports deflated by a price index of manufactured imports, and suggest that while the developed countries and the 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

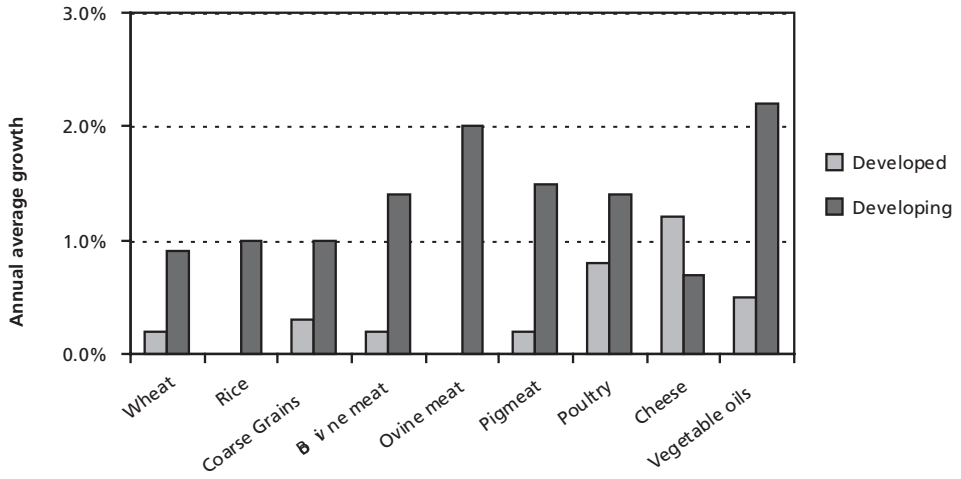


Source. Authors' calculations

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

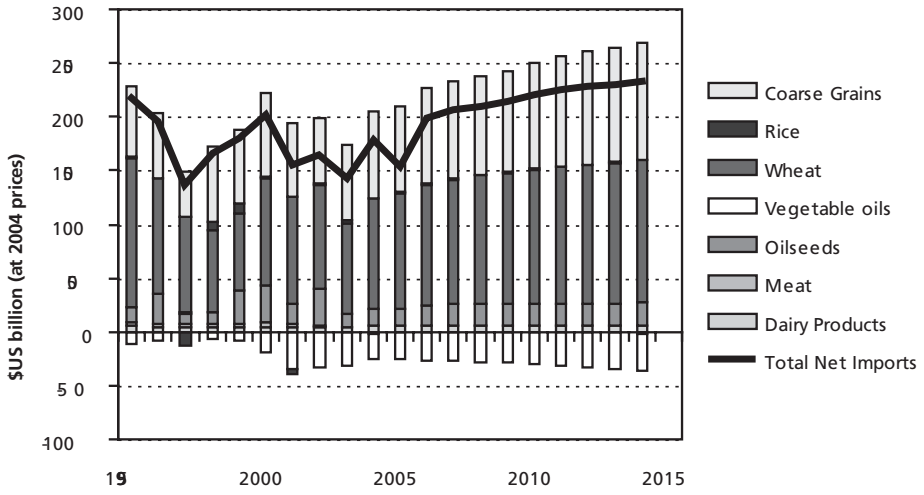
Projected annual growth rates in food demand by developed and developing countries 2001-14



Source. FAO projections

FIGURE 4

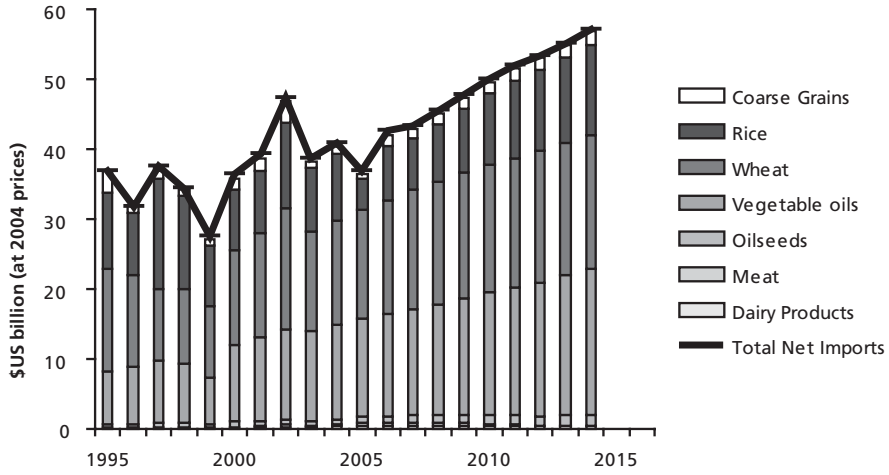
The increasing dependence of developing countries on food imports



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.

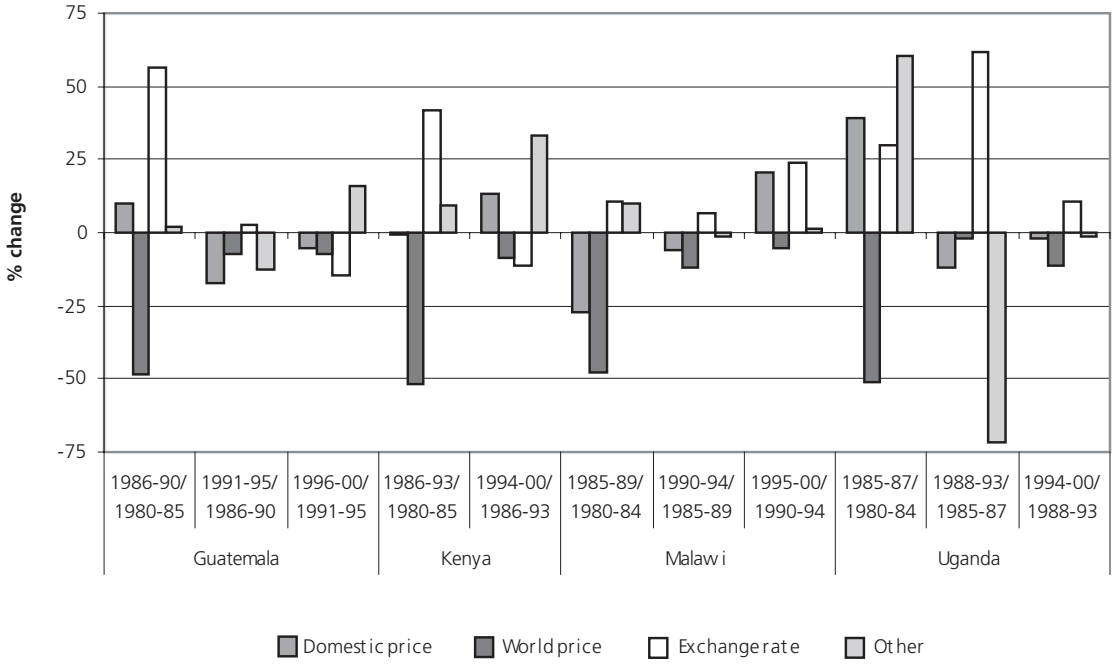
5.2 Limited productivity increases - a role for state intervention?

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.

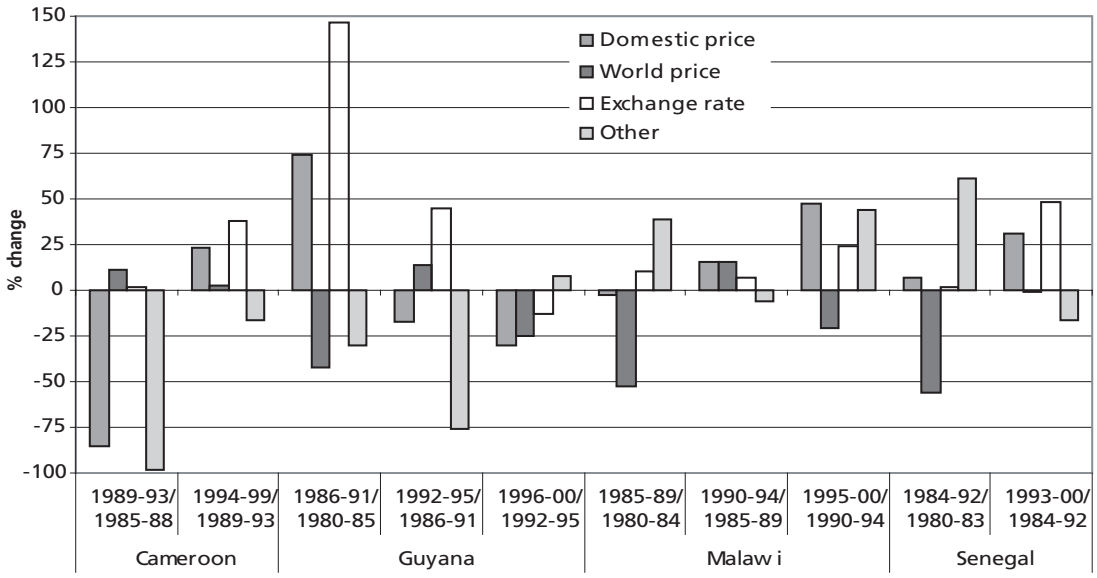
FIGURE 6

Decomposition of maize price changes by country and reform episode



Source. Thomas and Morrison 2006

FIGURE 7
Rice price decomposition by country and reform episode



Source: Thomas (2006)

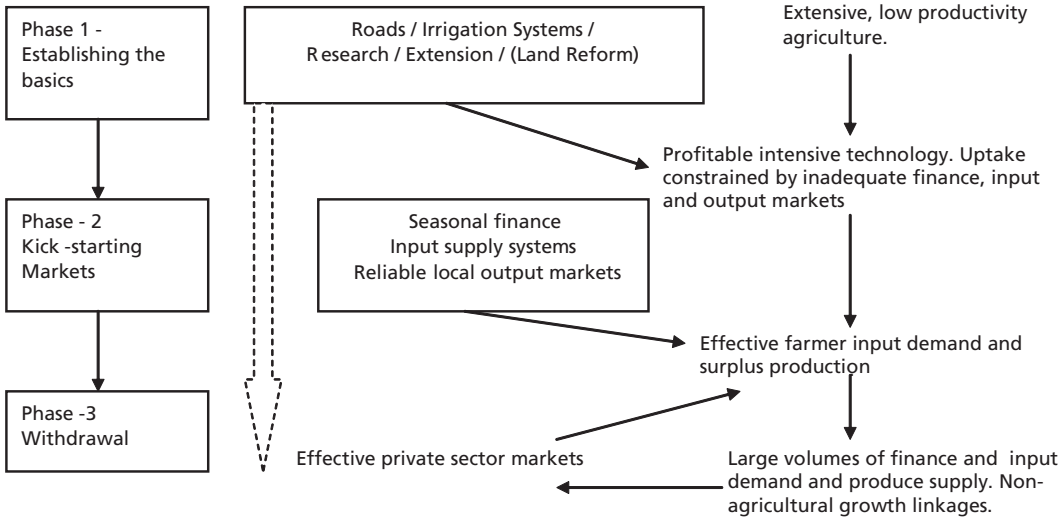
By contrast, with the exception of Guyana in the early stages of reform, and in Senegal and Cameroon in the mid 1990s (when there was a significant devaluation of the CFA franc), the exchange rate played a more limited role in determining domestic rice prices, and a combination of world price movements 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.

FIGURE 8
Policy phases to support agricultural transformation



Source: Dorward et al. (2004)

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 components[14] 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.

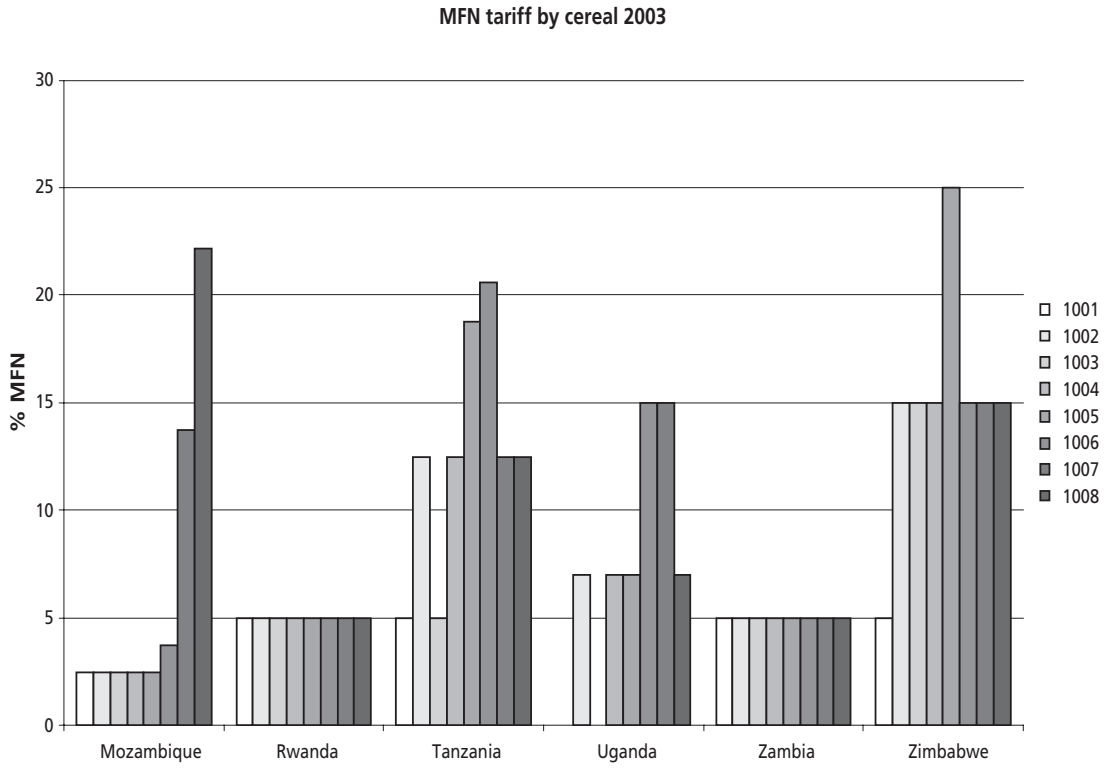
5.4 Current trade policies differ widely across countries, crops and level of processing

Figure 9 illustrates the MFN applied tariff[17] 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



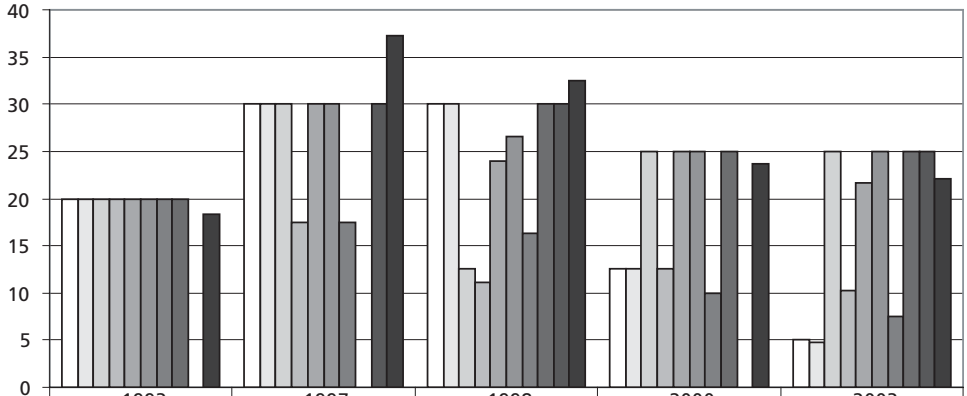
Key: 1001 - Wheat; 1002 - Rye; 1003 - Barley; 1004 - Oats; 1005 - Maize; 1006 - Rice; 1007 - Sorghum; 1008 - Buckwheat, millet

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



	1993	1997	1998	2000	2003
Durum Wheat 100110	20	30	30	12.5	5
Other wheat 100190	20	30	30	12.5	4.71
Wheat Flour 1101	20	30	12.6	25	25
Maize seed 100510	20	17.5	11.14	12.5	10.28
Maize other 100590	20	30	24	25	21.67
Maize flour 110220	20	30	26.57	25	25
Rice in husk 100610	20	17.5	16.33	10	7.5
Husked rice 100620	20		30	25	25
Rice flour 110230		30	30		25
Food preperation 19	18.36	37.25	32.54	23.72	22.15

Source: Authors' compilation using data from WITS/TRAINS

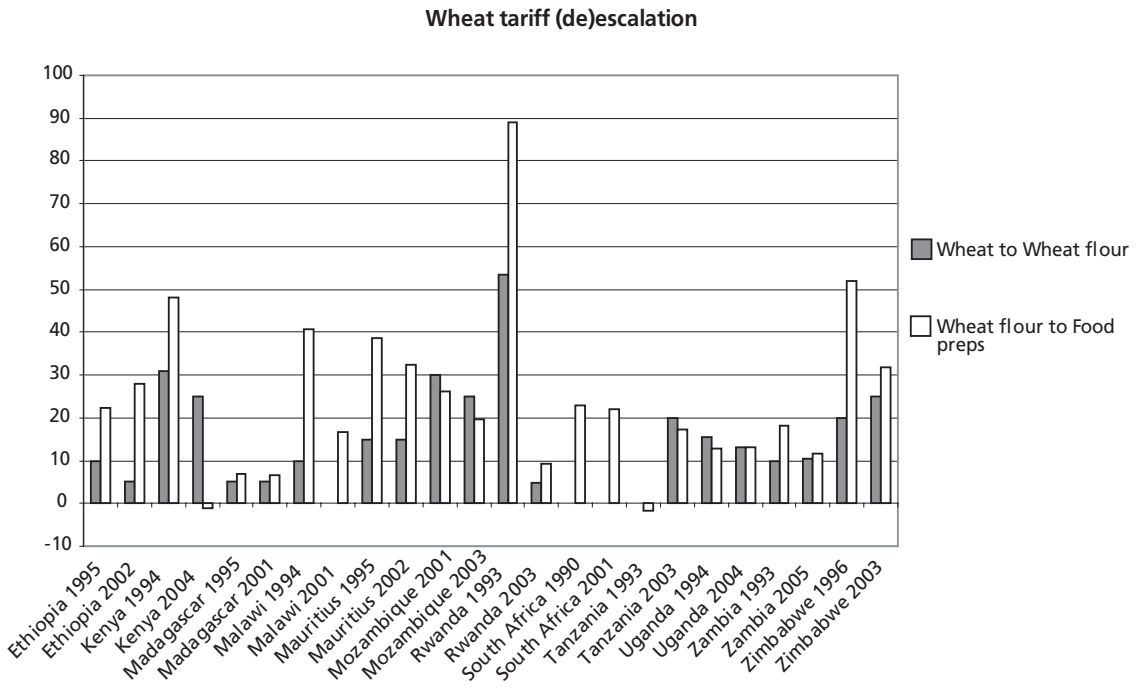
The pattern of tariff differentiation by stage in the processing chain is also very mixed across countries. Figures 11 to 13 compare the extent of tariff escalation or de-escalation in the mid 1990s with the most recently reported levels for the three main crops in 12 SSA countries.

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)



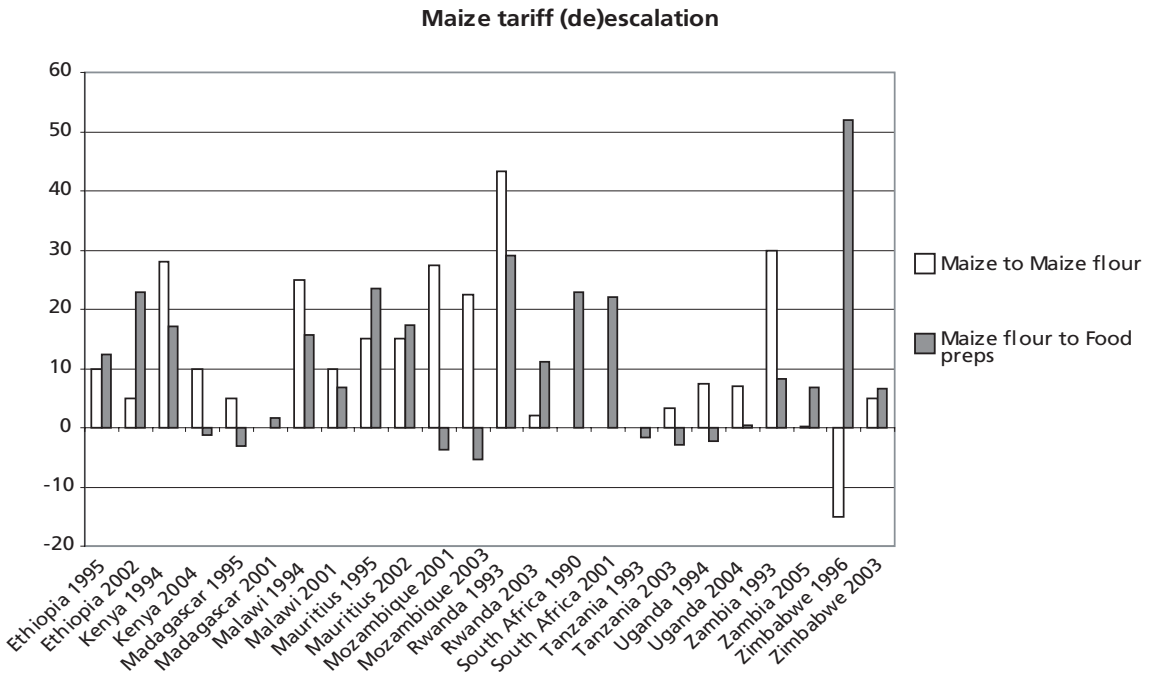
Source: Authors' computation from data from WITS/TRAINS

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

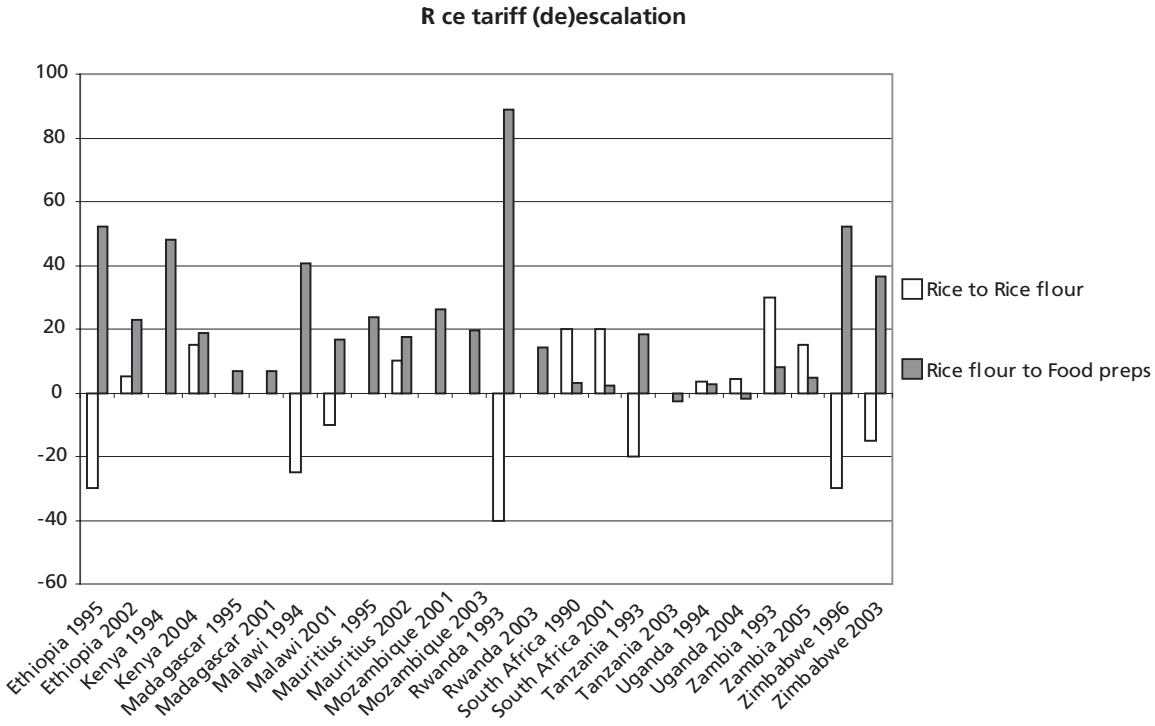
Rice

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)



Source: Authors' computation from data from WITS/TRAINS

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 Uganda[19]). 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.

References

Adelman, I. 1984. Beyond export-led growth. *World Development.* Vol. 12, No. 9: 937-49.

Anderson, K. 2002. *Agricultural trade reform and poverty reduction*. Adelaide, Centre for International Economic Studies.

Anderson, K., Martin, W.,& van der Mensbrugghe, D. 2006. Global impacts of the Doha scenarios on poverty. *In*:. T. Hertel and L.A. Winters (eds.) *Poverty and the WTO: Impacts of the Doha Development Agenda* Palgrave Macmillan and the World Bank. Washington DC.

Ardnt, C. 2006 *The Doha Round and Mozambique*. *In*:. T. Hertel and L.A. Winters (eds.) *Poverty and the WTO: Impacts of the Doha Development Agenda* Palgrave Macmillan and the World Bank. Washington DC

Bardhan, P.K. 1970. *Economic development and international trade*. Wiley-Interscience. New York

Buffie, E.F. 2001. *Trade policy in developing countries*. Cambridge. Cambridge University Press.

Corden, W.M. 1974. Trade policy and economic welfare. Oxford. Clarendon Press.

Coulter, J. & Poulton, C. 2001. Cereal market liberalization in Africa. *In*: T. Akiyama, J. Baffes, D. Larson and P. Varangis. eds). *Commodity market reforms: lessons of two decades.* Washington DC, World Bank.

Coeymans J. E. & Mundlak, Y. 1993. *Sectoral growth in Chile*: 1962-82. Washington DC. International Food Policy Research Institute. Research Report 95.

Diao, X. & Hazell, P. 2004. *Exploring market opportunities for African smallholders*. 2020 Africa Conference Brief No.6 IFPRI, Washington DC

Dixon, J., Gulliver, A & Gibbon, A. 2001. *Farming systems and poverty: improving farmers' livelihoods in a changing world.* Rome and Washington DC, FAO and World Bank.

Dorward, A. & Morrison, J. 2001. *The Agricultural development experience of the past 30 years: lessons for LDCs*, Paper prepared for FAO. Imperial College London.

Dorward, A, Fan, S., Kydd, J., Lofgren, H., Morrison, J., Poulton, C., Rao, N., Smith, L., Tchale, H., Thorat, S., Urey, I., & Wobst, P. 2004. *Institutions and economic policies for pro-poor agricultural growth.* DSGD Discussion Paper No. 15. IFPRI, Washington DC

Dorward, A., Kydd, J., Morrison, J. & Urey, I., 2004. A policy agenda for pro-poor agricultural growth. *World Development,* 32 (1) 73-89, 2004.

Fan S., Thorat, S. & Rao, N. 2004. *Investment, subsidies, and pro-poor growth in rural India.* Report to DFID. http://www.imperial.ac.uk/agriculturalsciences/research/sections/aebm/projects/.

FAO. 2003. *Trade reforms and food security: conceptualizing the linkages*. FAO, Rome.

FAO. 2004. *The State of Agricultural Commodity Markets 2004*. FAO, Rome.

FAO. 2005. *Trade policy simulation models: estimating global impacts of agricultural trade policy reform in the Doha Round*. FAO trade policy technical note on issues related to the WTO negotiations on agriculture, No. 13.

FAO. 2005a. *The State of Food Insecurity in the World 2005*. FAO, Rome.

Fei, J.C. & Ranis, G. 1961. A theory of economic development. *American Economic Review*, vol. 51 (4), pp. 533-65.

Haggblade, S. & Hazell, P. 1989. Agricultural technology and farm-non-farm growth linkages. *Agricultural Economics* (3) 345-364.

Hazell, P. 2006. *Transformations in agriculture and the impacts on rural development*. Paper prepared for a conference on Beyond agriculture: the promise of the rural economy for growth and poverty reduction. January 16 - 18, 2006. FAO, Rome.

Hertel, T. & Winters, L.A. (eds.). 2006. *Poverty and the WTO: Impacts of the Doha Development Agenda*. Palgrave Macmillan and the World Bank. Washington DC.

Hirschman, A.O. 1958. *The strategy of economic development*. Yale University Press, New Haven, Connecticut.

Hornby, J.M. 1968. Investment and commercial policy in the dual economy. *Economic Journal*, vol. LXXVIII, no. 309, March, pp. 96-107.

Jayne, T., Yamano, Y., Nyoro, J. & Awour, T. 2000. *Do farmers really benefit from high food prices? Balancing rural interests in Kenya's maize pricing and marketing policy*. Tegemeo Institute for Agricultural Policy and Development. Kenya.

Jorgenson, D.G. 1961. The development of a dual economy. *Economic Journal*, vol. 71, pp. 309-334.

Kalecki, M. 1960. Unemployment in Underdeveloped Countries. *Indian Journal of Labour Economics* Vol. 3 (2), pp. 59-61; reprinted in M. Kalecki, 1976, *Essays on Developing Countries,* Sussex, UK, Harvester Press.

Kalecki, M. 1971. *Selected essays on the dynamics of the capitalist economy 1933-1970*. London, Cambridge University Press.

Krueger, A., Schiff, M. & Valdes, A. (eds.). 1991. *The political economy of agricultural pricing policy.* World Bank and Johns Hopkins University Press.

Kuiper, M & van Tongeren, F. 2006. Growing together or growing apart? A village level study of the impact of the Doha round on rural China. *In* T. Hertel and L.A. Winters (eds.). *Poverty and the WTO: Impacts of the Doha Development Agenda*. Palgrave Macmillan and the World Bank. Washington DC.

Kuznets, S. 1968. *Toward a theory of economic growth with reflections on the economic growth of nations*. New York, Norton.

Kydd, J., Dorward, A. & Poulton, C. 2001. New institutional economics, agricultural parastatals and marketing policy. *In* D. Byerlee and Livingstone, I. (eds.) *Renewing development in Sub-Saharan Africa: policy, performance and prospects*. Routledge.

Mellor, J.W. 1976. *The new economics of growth: a strategy for India and the developing world*. Ithaca, New York, Cornell University Press.

Mellor, J.W. & Johnston, B.F. 1984. The world food equation: interrelations among development, employment and food consumption. *Journal of Economic Literature*. vol. XXII (June), pp. 531-574.

Mundlak, Y., Cavallo, D. & Domenech, R. 1989. *Agriculture and economic growth in Argentina, 1913-84*. Washington DC. International Food Policy Research Institute. Research Report 76.

Nicita, A. 2006. Multilateral trade liberalization and Mexican households: the effects of the Doha Development Agenda. *In* T. Hertel and L.A. Winters (eds.) *Poverty and the WTO: Impacts of the Doha Development Agenda*. Palgrave Macmillan and the World Bank. Washington DC.

Nyange, D. & Morrison, J. 2006. Extent and impact of food import surges: the case of Tanzania. FAO, Rome.

Perry B.D, Randolph, T.F., Ashley, S., Chimedza, R., Forman, T., Morrison, J., Poulton, C., Sibanda, L., Stevens, C., Tebele, N. & Yngström, I.. 2003. *The impact and poverty reduction implications of foot and mouth disease control in southern Africa*. ILRI, Regal Press. Kenya.

Poulton, C., Kydd, J., Wiggins, S. & Dorward, A. 2005. *State intervention for food price stabilization in Africa: can it work?* Paper prepared for World Bank-DFID workshop *Managing Food Price Risks and Instability*, February 28 - March 1 2005 Washington DC.

Rosenstein-Rodan, P.N. 1943. Problems of industrialization of Eastern and South-Eastern Europe. *Economic Journal* vol. 53, pp. 202-211.

Sah, R.K. & Stiglitz, J.E. 1984. The economics of price scissors. *American Economic Review* vol. 74, No. 1: 125-138.

Sah, R.K. & Stiglitz, J.E. 1987. Price scissors and the structure of the economy. *Quarterly Journal of Economics*. vol. 112, No. 1: 109-134.

Sarris, A. 2001. *The role of agriculture in economic development and policy reduction: an empirical and conceptual foundation*. World Bank, Rural Development Strategy Background Paper No. 2.

Smith, L. & Urey, I. 2002. *Institutions and economic policies for pro-poor agricultural growth: India literature review.* Working Paper, Institutions and Economic Policies for Pro-Poor Agricultural Growth. Imperial College London.

Stern, N. 1994. *Growth theories, old and new, and the role of agriculture in economic development.* Mimeographed, report prepared for the Policy Analysis Division, FAO.

Taylor, L. 1991. *Income distribution, inflation and growth. Lectures on structuralist macroeconomic theory*. Cambridge, Massachusetts. The MIT Press.

Thirlwall, A.P. 1986. A general model of growth and development along Kaldorian lines. *Oxford Economic Papers* vol. 38: 199-219.

Thomas, H. (ed) 2006. *Trade reforms and food security: Case studies and synthesis*. FAO, Rome.

Thomas, H. & Morrison, J. 2006. Trade related reforms and food security: synthesis of case study findings. *In* H. Thomas (ed.) *Trade reforms and food security: Case studies and synthesis.* FAO, Rome.

Timmer, C.P. 1988. The Agricultural Transformation. *Chapter 8 in* H. Chenery and T.N. Srinivasan (eds.) *Handbook of Development Economics.* vol. I. Elsevier Science.

3

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 undercut and discourage 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 Rudaheranwa, 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 then 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.

References

Abrar, S., Morrissey, O. & Rayner, A. 2004. Crop-level supply response by agro-climatic regions in Ethiopia. *Journal of Agricultural Economics* 55 (2), 289-312.

Ackah, C. & Morrissey, O. 2005. *Trade policy and performance in Africa since the 1980s*. Tunis: African Development Bank, Economic Research Working Paper No. 78.

Auty, R. 1994. Industrial policy reform in six large newly industrialising countries: the Resource Curse thesis. *World Development* 22 (1), 11-26.

Auty, R. & Kiiski, S. 2001. Natural resources, capital accumulation, structural change and welfare. *In* R. Auty (ed) *Resource abundance and economic development*. Oxford: OUP for UNU-WIDER, pp. 19-35.

Byers, T. 2003. Agriculture and development: the dominant orthodoxy and an alternative view. *In* Ha-Joon Chang (ed) *Rethinking Development Economics*. London: Anthem Press, pp. 235-253.

Djurfeldt, G. 2005.Global perspective on agricultural development. *In* Djurfeldt *et al.* 2005, pp. 9-24.

Djurfeldt, G., Holmén, H., Jirström M. & Larsson, R. (eds). 2005. *The African food crisis: lessons from the Asian Green Revolution.* Wallingford: CABI Publications.

Feder, G. & Feeny, D. 1993. The theory of land tenure and property rights. *In* K. Hoff, A. Braverman & J. Stiglitz (eds) *The Economics of Rural Organization*. Washington, DC: The World Bank, pp. 240-258.

Greenaway, D., Morgan, W. & Wright, P. 2002. Trade liberalization and growth in developing countries. *Journal of Development Economics*. 67, 229-244.

Hamilton, K. 2001.The sustainability of extractive economies. *In* R. Auty (ed) *Resource abundance and economic development.* Oxford: OUP for UNU-WIDER, pp. 36-56.

Holmén, H. 2005. The state and agricultural intensification in sub-Saharan Africa. *In* Djurfeldt *et al*. 2005, pp. 87-112.

ICTSD. 2005. Special and differential treatment: LDCs and agriculture. *Bridges* No. 10 December 2005, 9 (www.ictsd.org).

Isinika, A., Ashimogo G. & Mlangwa, J. 2005. From Ujamaa to structural adjustment - Agricultural intensification in Tanzania. *In* Djurfeldt *et al*. 2005, pp. 197-218.

Jirström, M. 2005.The state and green revolutions in East Asia., *In* Djurfeldt *et al*. 2005,. 25-42.

McKay, A., Morrissey, O. & Vaillant, C. 1997. Trade liberalization and agricultural supply response: issues and lessons. *European Journal of Development Research*, 9 (2), 129-147.

McKay, A., Morrissey, O. & Vaillant, C. 1999.Aggregate agricultural supply response in Tanzania., *J. International Trade and Economic Development* 8 (1), 107-123.

Matthews, A. 2002. Developing countries' position in the WTO agricultural trade negotiations. *Development Policy Review* 20 (1), 75-90.

Matthews, A. 2006. Shallow versus deep special and differential treatment (SDT) and the issue of differentiation in the WTO among groups of developing countries. Paper presented at the workshop on WTO rules for agriculture compatible with development. FAO, Rome, 2-3 February 2006. Edited version included in Chapter 4 in this volume.

Milner, C., Morgan, W. & Zgovu, E. 2004. Would all ACP sugar protocol exporters lose from sugar liberalization? *European Journal of Development Research* 16: 4, 790-808.

Milner, C. & Morrissey, O. 1999. Measuring trade liberalization in Africa. *In* M. McGillivray & O. Morrissey (eds) *Evaluating economic liberalization*. London: Macmillan, pp. 60-82.

Milner, C., Morrissey, O. & Rudaheranwa. N. 2000. Policy and non-policy barriers to trade and implicit taxation of exports in Uganda. *Journal of Development Studies* 37 (2. 67-90.

Mold, A. 2005. Non-tariff barriers and the Hong Kong Negotiations: How much of a risk do phytosanitary controls pose? *Bridges* No. 10 December 2005, 20-21 (www.ictsd.org).

Morrison, J. & Sarris, A. 2006. *Determining the appropriate level of import protection consistent with agriculture led development in the advancement of poverty reduction and improved food security*. Paper presented at the Workshop on .WTO Rules for Agriculture Compatible with Development. FAO, Rome, 2-3 February 2006. Edited version included in Chapter 2 in this volume.

Morrissey, O. 2002. *Costs, benefits and risks of trade: theory and practice with reference to agricultural development and food security*. Paper for FAO Expert Consultation on Trade and Food Security: Conceptualising the Linkages Rome, 11-12 July 2002

Morrissey, O. 2004. *The WTO and developing countries: new issues or new approaches?* Paper presented at the World Trade Forum 2004 - The Single Undertaking after Cancun: diversity and variable geometry in the WTO system. World Trade Institute, Bern, 4-5 June 2004

Morrissey, O. 2005. Imports and implementation: neglected aspects of trade in the report of the Commission for Africa. *Journal of Development Studies* 41 (4) 1133-1153.

Newbold, P., Pfaffenzeller, S. & Rayner, A. 2005. How well are long-run commodity price series characterized by trend components? *Journal of International Development* 17 (4) 479-494.

Ray, D. 1998. *Development Economics*. Princeton: Princeton University Press.

Reardon, T. 2002. *Product-market and capital-market trade liberalization and food security in Latin America.* Paper presented at the FAO Expert Consultation on Trade and Food Security: Conceptualising the Linkages, Rome, 11-12 July 2002.

Shaffer, G. 2003. *Defending interests: public-private partnerships in WTO litigation.* Washington, DC: Brookings Institution Press.

Stiglitz, J. 1986. The New Development Economics. *World Development*, 14 (2. 257-65.

Sitglitz, J. & Charlton, A. 2005. Fair trade for all: how trade can promote development. Oxford: Oxford University Press.

Thirlwall, A.P. 1986. A general model of growth and development along Kaldorian lines. *Oxford Economic Papers* 38, 199-219.

UNCTAD. 1999. *Trade and development report 1999.* Geneva: UNCTAD.

World Bank. 2005. *World Development Report 2005.* Washington DC: OUP for The World Bank.

4

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 economics 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 (2002*a*) 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	**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	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**	
Developing countries with special need for rural development	Indonesia, Kyrgyzstan, Moldavia, Nigeria, Uzbekistan	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*	

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, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Russia, Slovak Republic, South Africa, Ukraine	Andorra, Australia, Austria, Belgium, Canada, Cyprus, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Liechtenstein, Luxembourg, Malta, Netherlands, New Zealand, Norway, Portugal, Slovenia, Spain, Sweden, Switzerland, United Kingdom, United States of America.

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 secure. 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 NFIDCs.

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 date[7], 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 a 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 "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". 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.

References

Delgado, C., Hopkins, J. & Kelly, V. 1998. *Agricultural growth linkages in Sub-Saharan Africa,*. IFPRI Research Report 107, Washington, D.C., International Food Policy Research Institute.

Díaz-Bonilla, E., Thomas, M. & Robinson, S. 2002. *On boxes, contents, and users: food security and the WTO Negotiations*. TMD Discussion Paper No. 82, Washington, International Food Policy Research Institute.

European Communities. 2002. *The WTO work programme on special and differential treatment*. **TN/CTD/W/26,** 11 December 2002.

FAO. 2005. *Special and differential treatment in agriculture*. Trade Policy Technical Note No. 10, Rome, FAO.

Green, D. & Priyadarshi, S. 2002. *Proposal for a "Development Box" in the WTO Agreement on Agriculture*. Paper presented at the FAO Geneva Round Table on special and differential treatment in the context of the WTO Negotiations on agriculture, 1 February 2002, Geneva.

Jales, M. 2005. Tariff reduction, Special Products and Special Safeguards: An analysis of the agricultural tariff structures of 4-33 countries. *ICTSD*. June 2005 http://www.ictsd.org/dlogue/2005-06-16/Jales.pdf

Hayami, Y. 2005. An emerging agrarian problem in high-performing Asian economies. Presidential Lecture at the 5th Conference of the Asian Society of Agricultural Economists. Iran, 29-31 August 2005.

Kasteng, J., Karlsson, A. & Lindberg, C. 2004. Differentation between developing countries in the WTO., Stockholm, Swedish Board of Agriculture.

Lipton, MN. & Ravaillon, M. 1995. Poverty and policy. *In* Behrman, J. & Srinivasan, T., eds. *Handbook of Development Economics*, Volume 3., Amsterdam, North-Holland.

Mandelson, P., 2006. EU Trade Policy after Hong Kong, Speech by Commissioner Peter Mandelson at the Haus der Deutschen Wirtschaft Berlin, 23 January 2006.

Matthews, A., 2005. Special and differential treatment in the WTO Negotiations. *In* Rainelli, P. ed. *Les Politiques Agricoles sont-elles Condamnées par la mondialisation?* Paris, Institut français des relations internationales and Academia-Bruylant, pp. 269-304.

Matthews, A. 2005. The road from Doha to Hong Kong in the WTO agricultural negotiations: a developing country perspective. *European Review of Agricultural Economics,* 32, 4, 2005, 561-574.

Mellor, J. 2000. *Faster more equitable growth: the relation between growth in agriculture and poverty reduction*. CAER II Discussion Paper No. 70, Harvard Institute for International Development, Cambridge, MA.

Paugam, J-M. & Novel, A-S. 2005. *Why and how differentiate developing countries in the WTO? theoretical options and negotiating solutions.* Paper prepared for the IFRI/ARD Trade and Development Conference, Paris, October 28, 2005.

Pearce, R. & Morrison, J. 2001. *Incorporating food security concerns in a revised Agreement on Agriculture*. Paper presented at the FAO Round Table on food security in the context of the WTO Negotiations on agriculture, 20 July 2001, Geneva.

Roberts, I., Buetre, B., & Jotzo, F. 2002. Agricultural trade reform in the WTO: Special treatment for developing countries, Canberra. *Abareconomics.*

Ruffer, T., Jones, S. & Akroyd, S. 2002. *Development Box proposals and their potential Effect on developing countries, Vols. 1 and 2*. Report submitted to the UK Department for International Development, London, DFID.

Ruffer, T. 2003. *Special Products: thinking through the details. Oxford Policy Management*. June 2003.

Stevens, C. & Kennan, J. 2003. Putting differentiation into practice: the case of food security. *In* Special and Differential Treatment in terms of trade. *IDS Bulletin* Volume 34 Number 2, April.

5

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)

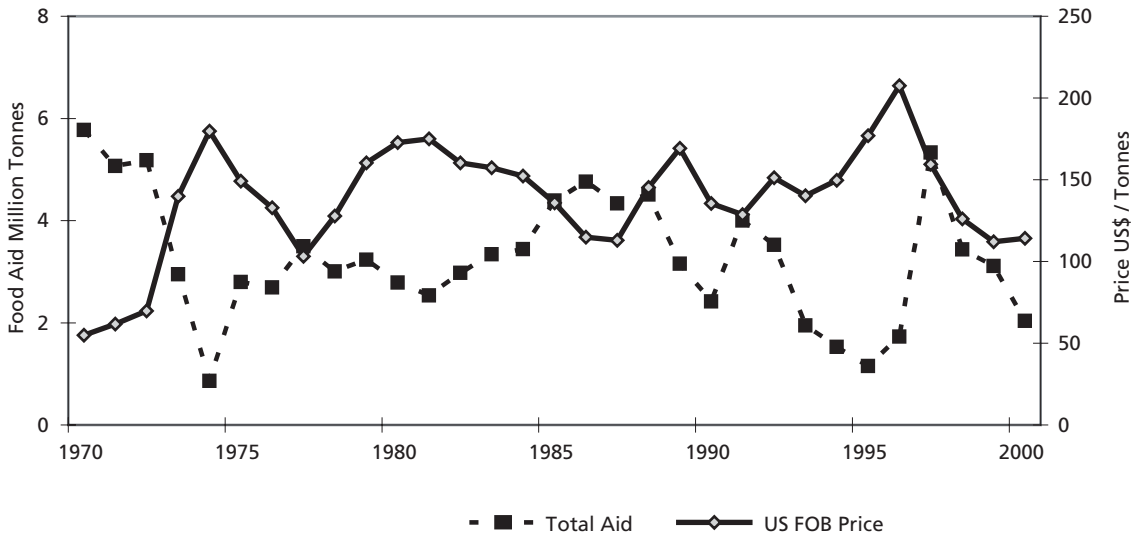
Reduction from current	
Norway	18.4
EU	15.9
Australia	10.4
United States of America	28.1

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

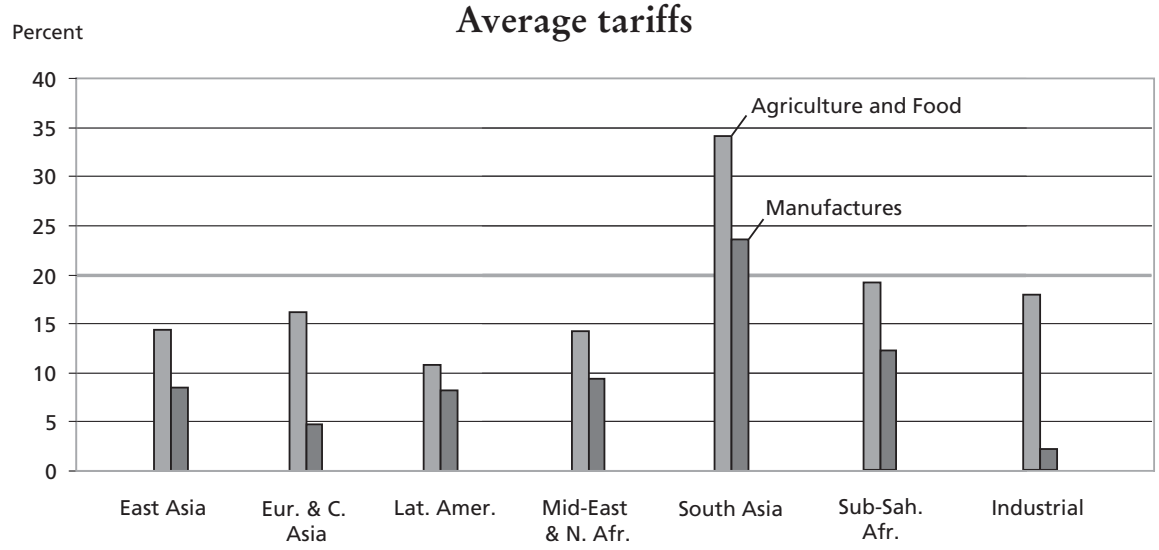
was the only driver of these changes. But most observers would probably conclude that it was an important factor in the minds of policy-makers when they were considering reforms for whatever reason.

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, Cespedes 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.

FIGURE 2
Average tariffs



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

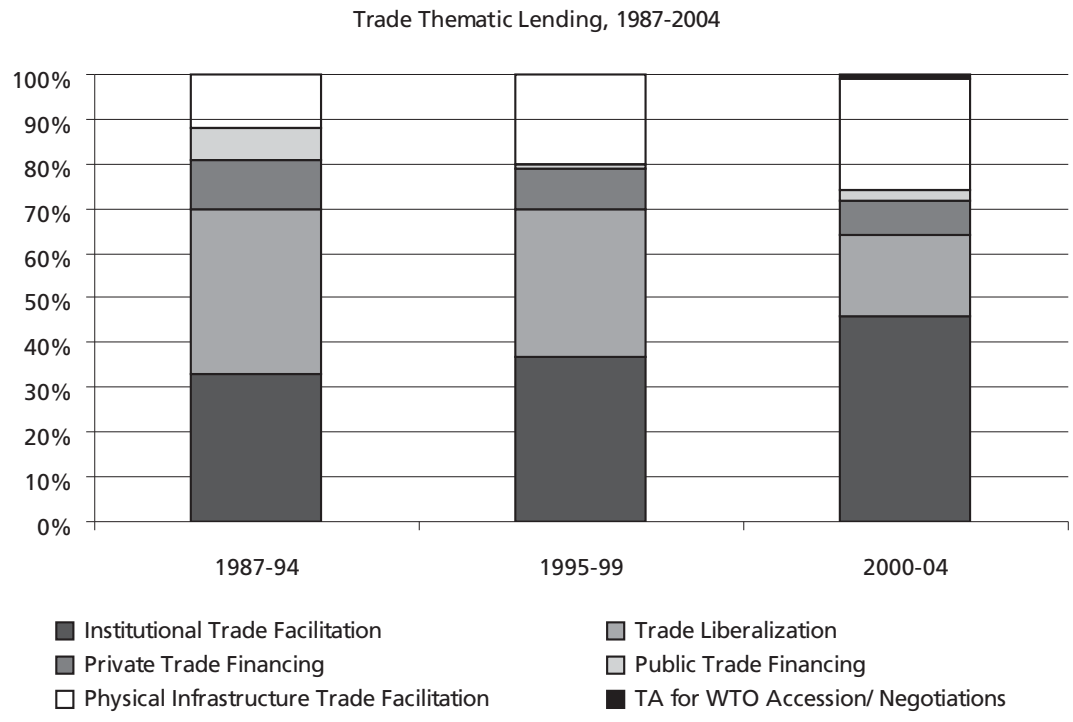
[2] This may be the foundation for one proposal in the Ministerial text that was tabled before the Hong Kong Ministerial by the LDCs: *Decision on Measures in Favour of Least-Developed Countries*: It is reaffirmed that least-developed country Members will only be required to undertake commitments and 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.

FIGURE 3

Thematic focus of bank lending for trade: trade liberalization and direct lending to exporters gave way to trade facilitation



Source: Trade Assistance Evaluation Project Database, Internal Evaluation Group (Report forthcoming April, 2006)
Note: Total Lending 1987-94 = US$22.1 billion; 1995-99 = US$10.2 billion; 2000-04= US$ 5.1 billion

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 in2000.
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.

FIGURE 2
Average tariffs

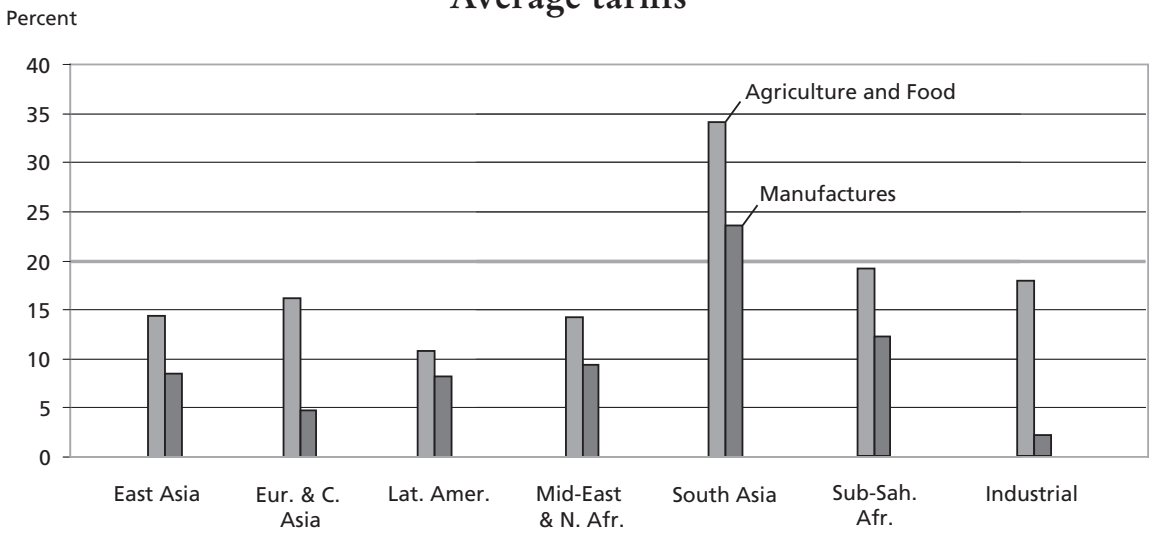


TABLE 4
Tariff rate escalation in agriculture

	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 communitaire* 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 package[8].

[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 projects[9] 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.

References

Aksoy, M.A. & Beghin, J.C. eds. 2005. *Global agricultural trade and developing countries*. Washington, D.C.: World Bank.

Anderson, K. & Martin, W. eds. 2005. *Agricultural trade reform and the Doha development agenda*. Washington, D.C.: Palgrave MacMillan and the World Bank.

Baffes, J., Badiane, O. & Nash, J. 2004. *Cotton: Market Structure, policies and development issues*. Paper presented at the WTO African Regional Workshop on Cotton, Cotonou, Benin.

Baffes, J. & de Gorter, H. 2005. Experience with Decoupling Agricultural Support. Chapter 5 *in* Aksoy &. Beghin.

Balassa, Bela and Associates. 1982. *Development strategies in semi-industrial economies*, Baltimore: Johns Hopkins University Press.

Bautista, R. & Valdès, A. 1993. *The bias against agriculture*. San Francisco: ICS Press.

Bhattasali, D., Li, S. & Martin, W. 2004. *China and the WTO: Accession, Policy reform, and poverty reduction strategies.* Washington, DC: Oxford University Press and the World Bank.

Cashin, P., Cespedes, L. & Sahay, R. 2002. *Keynes, cocoa, and copper: in search of commodity currencies*. IMF Working Paper WP/02/223.

Choksi & Papageorgiou. 1986. (eds.) *Economic liberalization in developing countries.* Oxford: Blackwell.

Diaz-Bonilla, E., Diao, X. & Robinson, S. 2003. Thinking inside the Boxes: Protection in the development and food security boxes versus investments in the Green Box. *In* E. Diaz-Bonilla, S.E. Frandsen, & S. Robinson, eds., *WTO negotiations and agricultural liberalization: the effect of developed countries' policies on developing countris.* Oxford: CABI Publishing.

Dewbre, J., Anton, J. & Thompson, W. 2001. The transfer efficiency and trade effects of direct payments. *American Journal of Agricultural Economics* 83 (5): 1204- 1214.

Dimaranan, B., Hertel, T. & Martin, W. 2006. Potential gains from post-UR trade reform: impacts on developing countries. *In* McCalla & Nash.

Foster, W. & Valdès, A.. 2004. Managing potential adveres impacts of agricultural trade liberalization. *In* Ingco & Nash.

Gisselquist, D., Pray, C. & Nash, J. 2002. Deregulating the transfer of agricultural technology. *World Bank Research Observer,* Vol. 17, No. 2, pp. 237- 265.

Ianchovichina, E. & Martin, W. 2004. Economic Impaacts of China's Accession to the WTO, Chapter 12, (pp. 211- 237) in Bhattasali, Li & Martin.

Ingco, M. & Nash, J. 2004. *Agriculture and the WTO: creating a trading system for development*. Washington, DC: Oxford University Press and the World Bank.

Jean, S., Laborde, D. & Martin, W. Consequences of alternative formulas for agricultural tariff cuts. *In* Martin & Anderson.

Jensen, H., Robinson, S. & Tarp F. 2002. *General equilibrium measures of agricultural policy bias in 15 developing countries.* TMD Discussion Paper 105, Washington, DC: IFPRI.

Jensen, H. and Zobbe, H. 2005. Consequences of reducing limits on aggregate measures of support. *In* Agricultural Trade Reform and the Doha Development Agenda. K. Anderson and W. Martin, (eds). *World Bank.*

Josling, T. 2006. An Overview of the WTO Agricultural Negotiations. Chapter 1 in McCalla & Nash.

Kherallah, M., Delgado, C., Gabre-Madhin, E., Minot, N. & Johnson, M. 2002. *Reforming agricultural markets in Africa*. Baltimore: Johns Hopkins University Press and IFPRI.

Konandreas, P. 2000. *The Need for effective safeguards against very low world market prices in the context of negotiations on agriculture*, UN Food and Agriculture Organization Informal Expert Consultation, December 7-8, FAO, Rome.

Krueger, Anne O. 1978. *Foreign Trade regimes and economic development: liberalization attempts and consequences.* Cambridge, MA: Ballinger Publishing Co.

Krueger, Anne, Schiff, Maurice & Valdès, Alberto. 1991. *The Political economy of agricultural pricing policy.* Baltimore : Johns Hopkins University Press for the World Bank.

McCalla, A. & Nash, J. eds. (2006). *Reforming agricultural trade for developing countries*. Washington, DC: World Bank.

Michaely, M. 1991. The lessons of experience: an overview. *In* Geoffrey Shepherd and Carlos G. Langoni (eds.). *Trade reform: lessons from eight countries*. San Francisco, C.A.: ICS Press.

Michaely, M., Papageorgiou, D & Choksi, A. eds. 1991. *Liberalizing foreign trade: lessons of experience in the developing world*. Oxford: Basil Blackwell.

Orden, D. & Diaz-Bonilla, E. 2005. Holograms and ghosts: new and old ideas for agricultural policies. Chapter 11 in Anderson & Martin.

Valdès, A. & Foster, W. 2003. *The positive externalities of Chilean agriculture: the significance of its growth and export orientation, a synthesis of the roles of agriculture. Chile case study.* Rome: FAO (http://www.fao.org/es/ESA/ROA).

Valdés, A. & Foster, W. 2004. The breadth of policy reforms and the potential gains from agricultural trade liberalization: an ex post look at three Latin American countries. In A. McCalla & Nash.

World Bank. 2004. *Trade progress report: focus on agricultural trade*. SecM2004-3090.

WTO. 2006. *Cooperation with the IMF and the World Bank, Report of the Director General,* WT/TF/COH/S/11, 16 February 2006.