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**Agricultural Trade Reform Under the Doha Agenda:
Some Key Issues**

Will Martin and Kym Anderson

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**University of Adelaide
Adelaide 5005 Australia**

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Will Martin and Kym Anderson

World Bank and University of Adelaide
Wmartin1@worldbank.org
kanderson@worldbank.org
kym.anderson@adelaide.edu.au

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Abstract

A successful agreement on agriculture is essential for an overall agreement under the WTO's Doha trade negotiations. Reaching agreement has been difficult, and as of August 2007, much still remains to be done if a successful agreement is to be reached. We consider three of the most controversial areas of the agricultural negotiations: the relative importance of domestic support, market access and export subsidies; three market access issues of sensitive-product exceptions sought for all countries, the additional special product exceptions sought for developing countries, the proposed special safeguard mechanism; and the domestic support issue. We show that decisions made on reform in these areas will have a critical influence on whether the negotiations achieve their objectives of promoting trade reform and reducing poverty.

JEL codes: C68, D58, F13, F17, O55, Q17

Key words: Trade policy, WTO, Doha Development Agenda, multilateral negotiations, computable general equilibrium modeling

Contact author:

Kym Anderson
School of Economics
University of Adelaide
Adelaide SA 5005
kym.anderson@adelaide.edu.au

Agricultural Trade Reform Under the Doha Agenda: Some Key Issues

The negotiations on agriculture under the WTO's current Doha Development Agenda (DDA), like some previous GATT rounds of multilateral trade negotiations, have encountered many difficulties. The Doha Ministerial declaration in September 2001 specified goals for agriculture of increasing market access; reducing, with a view to phasing out, export subsidies; and making substantial reductions in domestic support. However, the deadlines in 2003 for "modalities" and draft commitments were missed, and the Ministerial Conference in September 2003 at Cancún, ended in disarray. A new framework agreement was reached on 1 August 2004, but only limited progress was made by the Hong Kong Ministerial at the end of 2005, and the negotiations were suspended in July 2006 before a resumption of negotiations in early 2007 resulted in draft modalities in July (WTO 2007). As of August 2007 WTO members were weighing whether the potential gains are sufficiently large and widely enough distributed relative to any (political or economic) costs to provide a basis for an outcome that would command consensus.

At this point in the negotiations, it is useful to take stock of the information that is currently available about the potential shape of an agreement, and to reflect on key uncertainties. This paper focuses on the key issues involved in the agricultural negotiations by first examining the broad features of the latest proposals under discussion; then considering three of the most controversial areas of the agricultural negotiations: the relative importance of market access, domestic support and export

subsidies; market access issues such as the sensitive-product exceptions sought for all countries, the additional special product exceptions sought for developing countries, and the proposed special safeguard mechanism; and then domestic support issues. Some conclusions on implications for the DDA are provided in the final section.

1. The broad shape of a potential agreement

While much is yet to be decided, much has been tentatively agreed, and the range of likely outcomes is spanned by key proposals. Likely features of a WTO agreement on agriculture include: a complete phase out of export subsidies, reductions in WTO-bound tariffs under the market access pillar, and reductions in WTO-bound domestic support.

The export competition pillar looks the most straightforward, with agreement to completely abolish these measures. Subsidies under this pillar have been relatively minor in recent years compared with during the lead-up to the GATT's Uruguay Round in the 1980s (Hoekman and Messerlin 2006), so the major gain would be the systemic one of making them illegal and preventing their re-emergence. Even developing countries that benefit from subsidies on goods they import have pushed hard for the abolition of these subsidies, perceiving that the damage they cause to the health and legitimacy of the trading system outweighs their terms-of-trade gains.

One early point of agreement in the negotiations was on the use of formula approaches for negotiating improvements in market access, domestic support and export subsidies. This reflects the need for more structured procedures than on the traditional GATT request-and-offer approach. It may also reflect the limited success of request-and-

offer negotiations relative to formula-based negotiations. Baldwin (1987, pp. 42-3) notes that the GATT's second through fifth multilateral negotiating rounds (conducted using request-and-offer) yielded tariff reductions of only 2.5 percent per round, as against 35 percent in the formula-based sixth (Kennedy) round of the 1960s and 30 percent in the seventh (Tokyo) round of the 1970s. The use of the formula approach provides a better basis for *ex ante* analysis than is possible in a request-an-offer negotiation, or in one based on a general rule such as the 36 percent average-cut formulation adopted in the eighth (Uruguay) round.

2. The relative importance of the three 'pillars'

A continuing issue for negotiators is the need to strike a balance between the efforts devoted to the three different pillars of the agricultural negotiations: market access, domestic support, and export competition. One surprising feature of the debate on this issue has been a tendency to stress the gains that might be obtained from disciplines on domestic support. A recent EC newsletter on agricultural trade policy (European Commission 2006) sets out to "explode the myths surrounding world trade". First among these purported myths is a widely-quoted World Bank research result, publicized in Anderson and Martin (2005) and since explored in detail in Anderson, Martin and Valenzuela (2006), suggesting that market access barriers are by far the most costly global agricultural-support policies.

The EC paper draws on a USDA study (2001, p. 6) which reports that market access contributes 54 percent of the impact of global liberalization, domestic support 32

percent and export subsidies 10 percent. It compares these results with World Bank estimates putting the contribution of market access barriers at 93 percent and an OECD (2006) study that puts it at 79 percent. A problem with this comparison is that the cited USDA numbers refer to the impact of reform on *international food prices*, whereas the World Bank and OECD results refer to impacts on global *economic welfare*. As Anderson and Martin (2007) note, the same USDA report (2001, p. 37) estimates that tariffs account for 89 percent of potential global welfare gains– very close to the World Bank estimate.

The overwhelming importance of market access estimated in these three studies is not just an artifact of the computable general equilibrium models they use.¹ The Anderson, Martin and Valenzuela (2006) study – published in the WTO’s own refereed journal – was designed to provide more intuition into the basis for this repeated research finding. To ensure transparency, it used widely available data and focused on a simple back-of-the-envelope model rather than a computable general equilibrium (CGE) model with its inherent complexities (Piermartini and Teh 2005). Its results confirmed the overwhelming importance of market access found in the studies using CGE models.

Snape (1987) first highlighted the general point that domestic subsidies are likely to be much less important than market access barriers. He pointed out that subsidies are likely to be much less important than market access barriers because subsidies involve

¹ Hoekman, Ng and Olarreaga (2004), using a simpler partial equilibrium framework and extremely detailed information on tariffs plus official WTO data on domestic subsidies, also established the importance of agricultural market access barriers. Their findings were even stronger than the Anderson, Martin and Valenzuela (2006) results cited above. They found that reductions in domestic support would yield less than one percent of the gains obtainable from reductions in market access barriers.

outlays by treasuries and must pass regular budget scrutiny, while tariffs usually generate government revenue and are typically subjected much less rigorous review.

Despite these results, domestic support should not be ignored in the Doha negotiations, not least because it is extremely important for some products of great interest to developing countries. This is particularly so for cotton, where Anderson and Valenzuela (2007) estimate that abolishing domestic subsidies on cotton would provide almost 80 percent of the \$147 billion in total welfare gains to Sub-Saharan Africa from cotton market reform. There is also a systemic risk that restraints on market access barriers, if unaccompanied by restraints on domestic support, could lead some high-income countries to replace market access barriers with distorting domestic support.

The policy message to draw from these results is that reductions in domestic support cannot, alone, be expected to realize very much of the potential global trade and welfare gains sought from the negotiations, and that achieving improvements in market access is extremely important for a successful outcome in these negotiations. One reason countries put different emphases on the three pillars, and perhaps a reason the EU seeks to downplay the importance of market access, is that a large share of support for its farmers – and most of its food processors – comes from market access barriers. By contrast, domestic support measures are much more important in the United States (Table 1). The table also highlights the much smaller use of domestic support relative to market access barriers in developing countries. Outside the OECD, domestic support accounts for less than five percent of total support to primary agriculture.

[Insert Table 1 about here]

3. Market access issues

The recent draft modalities (WTO 2007) provide clear indications of many points of agreement, and of difference, in the negotiations. A key point of agreement is on a tiered or banded formula, under which cuts in higher tariffs are larger than the cuts in lower tariffs. This agreement is important from the viewpoint of economic efficiency. Since the cost of a tariff rises with the square of its rate, reducing higher tariffs more than lower tariffs generates greater economic gains than a similar-sized proportional cut to all tariffs. It also rules out an important route to avoidance of disciplines during the Uruguay Round—making larger reductions in lower tariffs in order to attain a target average-cut in tariffs. The choice of four bands allows for progressive increases in the rate of cut on tariffs, while reducing, relative to a two- or three-band solution, the potential problems of discontinuities associated with changes in the cut to tariffs (Jean, Laborde and Martin 2006). However, with three band boundaries and four cut rates for developed and developing countries, the formulas are complex and their effects nontransparent—a fact that may have contributed to the difficulty in reaching agreement (see Martin and Messerlin 2007).

Major sources of contention regarding the negotiations on market access involve the depth of tariff cuts in these four bands, and the placement of their boundaries. Three key proposals made in October 2005, and still relevant to the current bilateral negotiations, are those of the European Commission, the G-20 group of developing countries, and the United States. These differ in the placement of the bands, and in the

depth of the proposed cuts. The EC proposal (EC 2005) involves smaller cuts within each band, and higher band boundaries, and hence a smaller proportion of tariffs facing the highest cuts. The G-20 formula (G-20 2005) is more aggressive, with slightly lower boundaries for the tariff bands and higher cuts in each band. The US (2005) proposal is the most aggressive, with lower boundaries for the bands, and higher cuts within each band. In addition to the formula, each of these proposals involves tariff caps, which Anderson, Martin and van der Mensbrugghe (2006) found to have important impacts on the benefits from reform. In the high-income countries, the EC and the G-20 specified 100 percent, while the United States specified 75 percent. For the developing countries, the EC and the G-20 specified a cap of 150 percent. The July 2007 draft modalities drop these caps.

Given the complexity of these tiered formulas, their impacts are frequently summarized by their impact on a measure comparable with the Uruguay Round result—the average-cut in tariffs.² On this measure, the proposed G-20 formula without exceptions or a tariff cap would result in a cut³ of almost 52 percent in EU bound, dutiable tariffs—almost one and a half times the comparable target in the Uruguay Round (36 percent). The reduction in the average tariff on all tariff lines is considerably higher, at 62 percent, because of the larger cuts in higher tariffs, even though this measure includes zero tariffs. The cut in the average applied rate is frequently considerably

² In the context of the Uruguay Round, this measure overstated the extent of improvement in market access, since countries were allowed to make larger cuts in smaller tariffs. In the context of the Doha agenda, the average-cut understates the improvement in market access since the higher cuts are made in higher tariffs.

³ These estimates are drawn from the widely-cited, unpublished, tariff simulations distributed to WTO members.

smaller, however, because of the presence of binding overhang (that is, gaps between the bound tariff rate and the applied rate) due to tariff preferences, non-binding tariff rate quotas, or applied rates below bound rates.

For developing countries, the bands are wider—placing more tariffs in bands with smaller cuts—and the cuts in tariffs are smaller. The G-20 formula involved cuts rising to 40 percent on tariffs above 130 percent. The proportionality principle in the framework guiding these negotiations since 1 August 2004 requires that the cuts to bound tariffs in developing countries be smaller than in industrial countries (WTO 2004, para 40). This is achieved in the four countries (Brazil, Egypt, India and Malaysia) covered by the simulations, with the average-cuts in bound tariffs ranging from 28 to 36 percent, even though bound tariffs in developing countries are typically much higher than in the industrial countries and hence subject to higher-than-otherwise cuts under the tiered formula. The July 2007 draft modalities propose increasing the size of the cuts in developing countries to two-thirds those agreed for the industrial countries, and allowing smaller cuts in members where the formula would otherwise result in overall average-cuts above a level to be agreed between 36 and 40 percent.

The degree of binding overhang in developing countries is more than double that in industrial countries (Jean, Laborde and Martin 2006, p. 91). This means that even a comparable cut in tariff bindings in industrial and developing countries implies a smaller reduction in developing than in developed countries. Further, these impacts are very different both between commodities and between countries. One important complicating factor is that some countries, and notably China, have very little binding overhang and,

hence, cuts in bound tariffs translate into much sharper reductions in their agricultural tariffs than in countries with greater binding overhang.

Several categories of developing countries could make smaller cuts in their bound tariffs. The UN Least Developed Countries are not required to make any reductions. A group of economies seen as small and vulnerable, plus nine other African countries including Kenya and Nigeria, and Suriname, are likely to make cuts 10 percentage points smaller than for other developing countries. The draft modalities propose allowing cuts that are five percentage points smaller in each band for most recently-acceded members.

As is typically the case in a formula-based trade negotiation, a great deal of attention is focused on flexibilities and exceptions from the agreed formula. As noted by Francois and Martin (2003), a tariff-reduction formula is inherently arbitrary. It therefore seems likely that allowing some flexibility to account for the particular interests and concerns of importing countries would allow a greater degree of liberalization than in the absence of flexibilities—but only if the cuts in the formula are sufficiently deep to overcome the reductions in economic efficiency and market access resulting from allowing flexibility.⁴ The key challenge for negotiators is to identify an approach to defining and treating flexibilities that will lead to this felicitous outcome, and avoid unintended sharp losses that can arise from seemingly-modest amounts of flexibility (Jean, Laborde and Martin 2006).

There are three broad areas of flexibility under discussion: sensitive products to be available to all countries; special products to be available to developing countries

⁴ Anderson and Neary (2006) show that there are important differences between the tariff reductions that increase welfare and those that increase market access.

only; and a special safeguard mechanism that would allow developing countries to temporarily increase their tariffs above bound levels. We consider each in turn.

3.1 Sensitive products

The approach to flexibilities taken under the Doha agenda is more promising than in the Tokyo Round, where many products—particularly those of interest to developing countries, such as textiles, clothing and agriculture— were exempted by being withdrawn from liberalization (Baldwin 1987). Under the Doha agenda, the treatment of sensitive products, in particular, has been constrained by the requirement that “substantial improvements in market access should be achieved for all products” (WTO 2004, p. A-6). This has required that at least some cuts be made even in products deemed “sensitive”. A key challenge when dealing with flexibilities is to ensure that they do not eliminate the liberalization that is the objective of the negotiations. A number of potential constraints are available. One is the percentage of sensitive tariff lines permitted . Another is restrictions on the share of imports covered or, as in the case of developing-country non-agricultural flexibilities, on both the number of tariff lines and the share of imports (WTO 2004, p. B-2). The size of the tariff cuts on sensitive products is another important parameter. A key question is whether any tariff caps should apply to sensitive products. A final parameter affecting the degree of liberalization achieved is whether liberalization should include expansion of any tariff-rate-quotas applying to sensitive products.

In the initial phases of the negotiations, very few of the parameters for sensitive products were defined. Analysis of the potential impact of sensitive products reported in Anderson and Martin (2006) made clear that the number of tariff lines alone was unlikely to be sufficient to achieve a reasonable balance between flexibility and discipline. Assuming sensitive products were chosen based on the size of the required cut in applied tariffs and the importance of the products as imports, Martin and Anderson (2006) are able to relate the change in the weighted average applied tariff to the share of tariff lines treated as sensitive. They provide an example of a formula cut under which the European Union's average agricultural tariff would be reduced by 40 percent in the absence of sensitive products. If sensitive products were completely exempted from liberalization this cut in the average tariff would decline very rapidly. With just one percent of products exempted, the cut in the average tariff falls by half; and with ten percent exempted, the cut falls to an eighth of its original level. The reason for this striking finding is straightforward—some tariff lines are much more important than others in terms of their potential contribution to improvements in market access. This suggests that it is necessary to focus not just on the number of tariff lines treated as sensitive but also on the depth of cut in these products—a range that extends from one third to two-thirds of the formula cut in the draft modalities (WTO 2007).

The treatment of sensitive products has been linked with the presence of tariff-rate-quotas—a combination of two potentially quite separate issues that considerably complicates policy formulation and evaluation. Where smaller tariff cuts are made on sensitive products, increases in market access are to be provided through expansion of tariff-rate-quotas (TRQs) as well as through cuts in out-of-quota tariffs.

Frequently, these TRQ expansions are interpreted as providing “compensation” for the reduced tariff cuts. There are, however, two concerns with this interpretation. The first is that TRQ expansion may not provide compensation because it is redundant. If, for instance, the tariff cut allows over-quota imports to expand by five percent, all or part of a five percent TRQ expansion may be redundant. The second concern is that a tariff cut on a TRQ product inherently provides less liberalization than the same cut on a tariff-only product. This is because shocks to supplies, demands and world prices mean that tariffs may limit imports of TRQ products in some periods, while quotas may limit them in other situations. If the out-of-quota tariff limits imports in 50 percent of years and the quota limits imports in the other 50 percent, a cut of 60 percent in the out-of-quota tariff may provide only a 30 percent reduction in protection. If the goal is to achieve a 60 percent cut in the original level of protection, the 60 percent cut in the out-of-quota tariff would then need to be paired with a TRQ expansion large enough to generate the same reduction in protection in years when the quota is binding—an expansion whose size can be estimated taking into account the price reduction implied by the tariff cut and the elasticity of import demand. If the goal is to reduce protection by 60 percent of its initial level, any “compensation” for a tariff cut not taken would be in addition to the TRQ expansion needed to reduce protection by 60 percent in years where imports are determined by the quota regime.

3.2 Special products

Proposals for special products have frequently been justified as a means of dealing with problems faced by small producers in developing countries. The best-articulated proposals (eg G-33 2006) focus on criteria of improving food security, livelihood security and rural development. Indicators used to identify these products include that the product be a staple food, that it have a large share in food expenditure in the country, and/or that it be produced by subsistence farmers. A potential concern is that protection for such products may reduce rather than increase the food and livelihood security of poor people, even if it improves the income situation of farmers who are net sellers of those products. This concern arises from the fact that poor people in poor countries frequently have extremely high expenditure shares on staple foods. Cranfield, Hertel and Preckel (2006) estimate that the poorest households allocate almost three-quarters of their total budgets to staple foods. At the same time, subsistence farmers tend to focus on production of staples for their own consumption. If a poor, subsistence-oriented household produces grain valued at \$100 but consumes \$90 worth and earns only \$10 from sales, then raising the price by 10 percent will increase household income by only \$1. By contrast, the real income of a poor household that purchases all of its staple foods would fall by about \$7.50. The exact numbers will depend on the specific situation of each country, so this effect needs to be evaluated empirically but there seem to be strong grounds for caution in assuming that protection of staple foods will improve the situation of poor people.

Many of the arguments for special product protection appear to be based on a presumption that raising agricultural prices (as, for example, occurred when export barriers on rice in Vietnam were removed) will reduce rural poverty, and hence improve income and food security. Indeed, Edmonds and Pavcnik (2005) find that raising the price of rice in Vietnam made many low-income households better off. That example seems of limited relevance to the special products debate, however, since import protection does not raise the price of exportable goods. Morley and Pineiro's (2004) finding that world trade liberalization causes world food prices to rise, and poverty to fall in Latin American countries, is also sometimes used to suggest a link between higher food prices and poverty reduction. However, these results do not seem to make a case for agricultural protection—the study is, after all, an analysis of global trade liberalization. Part of the reason they find that poverty falls in Latin America is the abolition of protection in these countries, which reduces the domestic prices of some foods in these countries. The increases in world prices that benefit Latin America's many net exporters are also irrelevant to the question of the impact of countries' providing protection to their special products. Exporting developing countries such as Thailand, Malaysia, Paraguay, Uruguay and Argentina are also concerned that extensive use of special product exceptions might reduce their opportunities to expand south-south exports and thereby reduce poverty in their countries.

The major study on trade and poverty by Hertel and Winters (2006) stresses that the relationship between trade reform and poverty is very complex, with complementary policies heavily influencing the outcome. Nonetheless it finds a general tendency for liberalization to result in poverty reduction, underscoring the point that raising the prices

of staple foods may well *increase* poverty in poor countries rather than reduce it. The recent finding (World Bank 2006) that the price increases resulting from the ban on rice imports into Indonesia had thrown three million people into poverty between 2005 and 2006 provides a specific example of how raising prices of importable food staples through protection can increase poverty.

3.3 Special safeguard mechanism

The Uruguay Round Agreement on Agriculture provided access to a special safeguard (SSG) for countries that had converted their non-tariff barriers into tariffs in the Uruguay Round. Most high-income countries have access to this contingent protection measure while few developing countries do because most of them made use of the option for “ceiling” bindings. The Hong Kong Ministerial Declaration (WTO 2005, p. A6) and subsequent draft modalities include a special safeguard mechanism (SSM) for developing countries with a price trigger, and a quantity trigger designed to provide temporary protection in response to import “surges”.

It is true that low prices can be a serious problem for producers with inadequate access to finance intertemporal smoothing of consumption, while price peaks can be a problem for poor consumers. However, safeguard instruments focused on import “surges” are not necessarily synonymous with producer revenue stabilization— the effect depends on the source of the shocks and on the price elasticities in the markets involved. They might be if the shocks are exclusively from exogenous world prices, but need not be

if the shocks arise from domestic sources such as crop yield fluctuations, and certainly will not be if the import surges arise from variations in domestic demand.

Another important point to consider is the risk that such schemes will be captured by vested interests. The history of price stabilization schemes is replete with schemes whose avowed purpose was to stabilize, but whose actual effect was largely to raise prices (perhaps EU intervention policies, or the Australian wool reserve price scheme) or to lower them (commodity boards in Africa), depending on the power of the dominant interest groups involved. This history suggests a need for caution in the design of such an instrument to avoid weakening hard-won WTO disciplines for which a major role is to reduce the ability of special interests to create trade distortions.

Quantity triggers of the type discussed in G-33 (2006), Paraguay and Uruguay (2006) and USA (2006) pose particular dangers, for three reasons. First, there is the risk that they will run counter to the objectives of the mechanism. If implemented—perhaps because of interest-group pressure—in response to an increase in domestic demand, they can destabilize domestic prices and producer revenues. Second, there is a risk that they will allow the market to be closed frequently, rather than merely under the exceptional circumstances envisaged in proposals for such a mechanism. Simulations reported by Paraguay and Uruguay (2006) suggest that this could be the case with the parameters included in the G-33 proposal. Third, there is a risk of cumulative market closure, again perhaps in response to interest group pressures. If a measure is invoked, imports can be expected to decline, and the lower level of imports becomes part of the trigger for the following three years. This, in turn, makes it easier to invoke the measure in subsequent years.

In addition to these concerns about the impact of an SSM at the individual market level, there are concerns about the impact on global markets. If trade expands, or world prices fall, it is likely that a number of markets would introduce safeguard measures. A consequence of this is likely to be increased instability of world markets. This instability would, in turn, lead to pressure for more intensive use of safeguards, and hence to further increases in world market instability.

The challenge in this area is to devise an approach that allows the risks to be managed in a way that meets the valid concerns underlying SSM proposals without exacerbating distortions to world markets. Doing so will require careful attention both to the design of the measures used and to the specification of magnitudes such as the quantity price triggers to be adopted. The current research base seems inadequate to meet the needs of policy makers in this area.

4. Domestic support issues

There has been considerable dissatisfaction with the constraints on domestic support negotiated under the Uruguay Round Agreement on Agriculture. Part of the problem was that the commitment levels negotiated by the USA and the EU in that Round provided a great deal of flexibility, partly because of the choice of base years, and partly because these constraints only applied to agriculture as a whole, and not to individual commodities. Another source of concern was the fact that the *de minimis* limits for product and non-product-specific support were not only substantial (5 percent), but could be counted twice—once for product-specific support and once for non-product-

specific support, allowing a larger amount of such support than was perhaps originally envisaged.

In addition, it had become clear that one of the intended constraints on domestic support had become an escape valve. Support provided by administered prices appears to have been included in the Aggregate Measure of Support (AMS) in order to impose an additional constraint on this form of protection. However, this created an opportunity to relax their domestic support constraints by replacing administered prices by a system, potentially identical in effect, under which domestic prices were supported by adjusting border measures. Doing this, as Japan did with its support to rice, removed this support from the AMS, while leaving the commitments based on the presence of an administered price unchanged—creating a larger gap between commitments and actual protection.

The latest proposals include restrictions on the Aggregate Measure of Support, on the Overall Trade-Distorting Support, on the Blue Box (support tied to production-limiting programs), on *de minimis* support, and on support to individual commodities. Proposals by the US, the EU and the G-20 in October 2005 still underpin the current negotiations. Brink (2005) provides an excellent introduction to the analysis of WTO constraints on domestic support. Some key features of these proposals are summarized in Table 2. Fortunately a tiered-formula approach to reducing domestic support is proposed, such that the largest reductions are to be made in the countries with the largest absolute amount of domestic support.

[Insert Table 2 and Figure 1 near here]

Figure 1 shows the extent to which committed levels of the Aggregate Measure of Support exceed the actual levels, and shows just how much the commitment levels must

be cut if they are to begin to reduce actual levels of support. It shows that only the US is likely to face substantial cuts in actual support levels under all of the proposals under discussion—which is perhaps part of the reason that it is more defensive in this area of the negotiations than in other areas. However, the EU might also need to make reductions in support relative to historical levels under the US and G-20 proposals. The differences in the cut proposals by the US, EU and others reflect to a considerable extent the different degrees of reliance they each have on the respective pillars in their agricultural support regimes (shown in Table 1 above).

5. Conclusions

There has been significant progress on at least some of the key parameters in the negotiations under the Doha Development Agenda in the twelve months to mid-2007. The proposed reductions in bindings, when translated into cuts in actual delivered support, appear to be large relative to the reductions achieved in the Uruguay Round. In market access, they involve reducing high tariffs, tariff peaks and tariff escalation in ways not attempted in the Uruguay Round. In domestic support, they involve critically important restrictions on blue box measures and on product-specific support as well as substantial reductions in total support limits. And the abolition of export subsidies would undeniably be an important achievement.

Given the importance of agriculture for economic development (World Bank 2007) the fact that the proposed reductions in tariff bindings in developing countries are large relative to those undertaken in previous rounds is also encouraging. The ‘special

and differential treatment' principle leads to them being smaller than those in the industrial countries, and the greater binding overhang in developing countries leads to their impact on applied tariffs being smaller again, but they are nonetheless non-trivial. However, exceptions for least developed countries and for small and vulnerable developing economies reduce the prospective net economic gain for those countries, as do proposals for special product exceptions in developing countries that would allow them to maintain tariffs higher than would be possible in the absence of these flexibilities. And if the special products are chosen according to criteria such as being important staple foods produced by subsistence farmers, there is a risk that this will reduce the income security of many poor people who are net buyers of food.

Recent advances in databases and analytical tools mean that the research community can contribute much more directly to informing policy decisions and prospective negotiating positions. This is a very different situation from previous rounds, where it was not possible to make useful analytical contributions in the later, more detailed, and more contentious stages of these negotiations. Inevitably, though, such analyses risk being controversial.

Despite recent advances, analysts will continue to need to work hard to improve analytical toolkits in this trade policy field. One area is in analyzing the impacts of policy reforms on households, and particularly on poor households, rather than simply on countries as a whole. Another is to take into account the dynamic impacts of reform, perhaps using some of the approaches developed in work following Melitz (2003) and surveyed in Francois and Martin (2007) and Martin and Anderson (2008). And much more, and better, analysis will be needed once more-definitive offers are available.

The evidence to date suggests that what is (possibly) within the reach of DDA negotiators is a very substantial agreement—much more so than the Uruguay Round Agreement on Agriculture in terms of cuts both in bound tariffs and subsidies and in actual delivered levels of farm protection and support. There is also a potential Doha agreement on non-agriculture that is substantial, plus an as-yet unknown degree of commitment to reform policies affecting markets for services. In July 2007 the Chairs of the Agricultural and the NAMA negotiations provided new texts for members to consider as they try to narrow their differences. True, many developing countries remain cautious about undertaking more liberalization commitments, and the fast track authority for the US President expired on 30 June 2007, so agreement may yet prove elusive or still be some years away. Our hope is that, when deciding what commitments to make, the governments and citizens of those countries will at least be aware of economic analyses that suggest deeper liberalization generally leads to greater income gains and—particularly if accompanied by appropriate complementary policies—to greater reductions in poverty.

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Table 1: Agricultural subsidies and applied tariffs, by region, 2001

(percent)

	Primary agriculture			Processed agriculture ^d	
	Domestic production subsidies ^a	Export subsidies ^b	Import tariffs ^c	Export subsidies ^b	Import tariffs ^c
OECD countries	13.5	0.8	16.9	3.3	17.0
Australia	2.9	0.0	1.0	0.0	9.1
New Zealand	0.3	0.0	0.4	0.0	2.7
United States	16.2	0.0	1.1	0.2	3.2
Canada	10.6	0.0	1.3	0.0	13.6
Mexico	8.8	0.0	10.7	0.0	12.2
European Union (EU15)	17.7	4.4	7.4	8.6	17.9
Norway and Switzerland	39.8	4.2	29.5	3.9	31.4
Other European members	10.7	0.0	6.2	1.4	17.0
Turkey	3.1	0.2	15.9	1.6	18.0
Japan	6.0	0.0	27.8	0.0	31.4
Korea	3.6	3.3	146.4	0.0	26.1
Non-OECD countries	0.7	0.0	14.9	0.0	17.5
<i>E. Europe & Central Asia</i>	<i>0.5</i>	<i>0.0</i>	<i>8.9</i>	<i>0.2</i>	<i>18.0</i>
<i>East Asia & Pacific</i>	<i>0.0</i>	<i>0.0</i>	<i>32.9</i>	<i>0.0</i>	<i>19.8</i>
China	0.0	0.0	50.8	0.0	18.3
Indonesia	0.0	0.0	1.8	0.0	9.0
Other E. Asia & Pacific	0.0	0.0	16.8	0.0	22.9
<i>South Asia</i>	<i>3.0</i>	<i>0.0</i>	<i>17.8</i>	<i>0.0</i>	<i>50.9</i>
Bangladesh	0.1	0.0	6.3	0.0	19.7
India	3.4	0.0	25.5	0.0	76.4
Other South Asia	2.3	0.0	13.4	0.0	29.9
<i>Middle East & North Africa</i>	<i>0.0</i>	<i>0.6</i>	<i>10.3</i>	<i>0.0</i>	<i>16.4</i>
<i>Sub-Saharan Africa</i>	<i>0.2</i>	<i>0.0</i>	<i>9.3</i>	<i>0.0</i>	<i>21.3</i>
South Africa Custom Union	0.0	0.0	6.3	0.0	8.3
Other Southern Africa	0.4	0.0	11.0	27.2	0.4
Other Sub-Saharan Africa	0.1	0.0	10.4	0.0	24.5
<i>Latin America & Caribbean</i>	<i>0.4</i>	<i>0.0</i>	<i>6.7</i>	<i>0.0</i>	<i>11.1</i>
Argentina	0.0	0.0	4.7	0.0	7.6
Brazil	1.3	0.0	2.4	0.0	8.6
Other Latin America & Carib.	0.0	0.0	8.6	0.0	11.8

^a The ratio of subsidies to the value of primary agriculture production at market prices. (That is, domestic support is estimated by measuring value wedges between payments at agents' prices and at market prices.) These payments are by commodity and region to final output, factors of production, domestic intermediate inputs, and imported intermediate inputs.

^b Export subsidy rates are the ratio of subsidy payments over the value of exported commodities. Trade weights are used for aggregation.

^c Intra-EU15 trade is ignored in EU and world trade in calculating import weights.

^d There are no domestic production subsidies on processed agricultural products.

Source: Calculations from GTAP database 6 by Anderson, Martin and Valenzuela (2006).

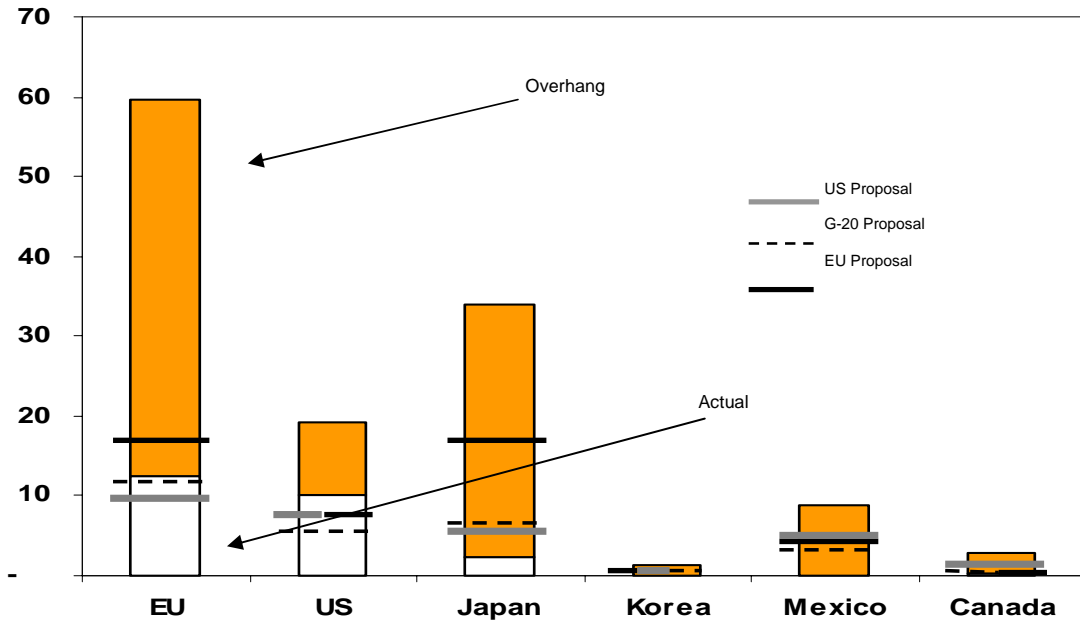
Table 2: Domestic support proposals by the US, the EU and the G-20 as of October 2005

(percent)

	USA	EU	G-20
AMS			
EU	83	70	80
Japan	83	60+	80
USA	60	60	70
Canada	37	50	60
Brazil	?	?	60
OTDS			
EU	75	70	80
Japan	53	?	75
USA	53	60	75
Canada	31	50	70
Cut <i>de minimis</i> by:	50	80	Adjust to overall cap
Cap on Blue	2.5	5	5

Source: Authors' compilation based on Brink (2005)

Figure 1: The extent of the cuts in bindings required to cut actual support



Note: The shaded portion of the bars shows the gap between the maximum commitment levels, and actual support levels.

Source: Martin and Anderson (2006).

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