



**The Economic Effects of Tariff Liberalisation
With Reference to SACU**

Brian Russell

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SUMMARY

Domestic policy and tariff liberalisation

While the domestic policy framework is the cornerstone for sustainable economic and export growth, trade policy is critical for ending the marginalisation from the world economy of small, poor countries with limited domestic markets, capital and human resources.

The experience of AGOA has also shown preferential trade access can significantly increase exports of certain goods – if the restrictions on sourcing input are sufficiently liberal and the beneficiary is open to foreign investment. However, in general the most important aspect of trade policy for export performance is domestic – in particular the extent to which a country's own tariff structure create an anti export bias and damages international competitiveness.

The current pattern of SACU tariff protection

The SACU CET remains characterised by a high dispersion in tariffs (from 0-325%), a large number of tariff bands (41) and an often confusing and opaque variety of approaches to charging duties for different products. The pattern of protection offered by the SACU CET is further distorted by anti dumping measures.

This pattern of protection largely reflects the interests of South Africa's industrial lobbies and results in a high variance of tariffs that is costly in terms of economic efficiency. Some estimates suggest the tariff variance actually increases the welfare reducing impact of the CET by nearly 50%.

The effective rates of tariff protection are very high for some sectors, even taking into account the incidence of high unemployment and rigid factor markets. This is leading to the fragmentation of production behind high tariff barriers with unproductive firms surviving alongside efficient ones. For several sectors the tariff structure is making SACU companies uncompetitive on domestic markets relative to foreign companies exporting to SACU and able to source their inputs at world prices.

The incentive structure resulting from the CET is strongly biased against exports: only six sectors do not have their international competitiveness compromised by the tariff structure. With a fully functioning duty drawback scheme, the negative effective rates of protection on world markets go to zero. However, this does not mitigate all the anti competitive effects of the tariff structure. Nor does it remove the anti-export bias created by the protection offered to producers who choose to sell on the domestic market rather than face international competition. Furthermore, the number of sectors that would have to be covered by a duty drawback scheme to mitigate anti –export bias underlines the potential benefits from a rationalization of the CET.

Developing a request and offer for tariff liberalization in the SACU-USA FTA

While there are significant trade data constraints in BLS, approaches are presented in this paper which enable countries to identify their interests in the negotiations in a relatively simple and efficient fashion.

For the smaller more concentrated economies of the BLNS, a sector study approach to deepening understanding of interests is likely to be more efficient than the development of complicated, economy wide models, at least in the short run. Furthermore the analysis is accessible to all stakeholders involved in the policy process.

Over the longer term the development of economy wide models will help to further explore the inter-linkages between sectors that can be so important in determining distribution of income and the fiscal impact following tariff changes. However, data deficiencies and sensitivity to assumptions in these models means there needs to be a constant process of interaction between the modeling and empirical studies.

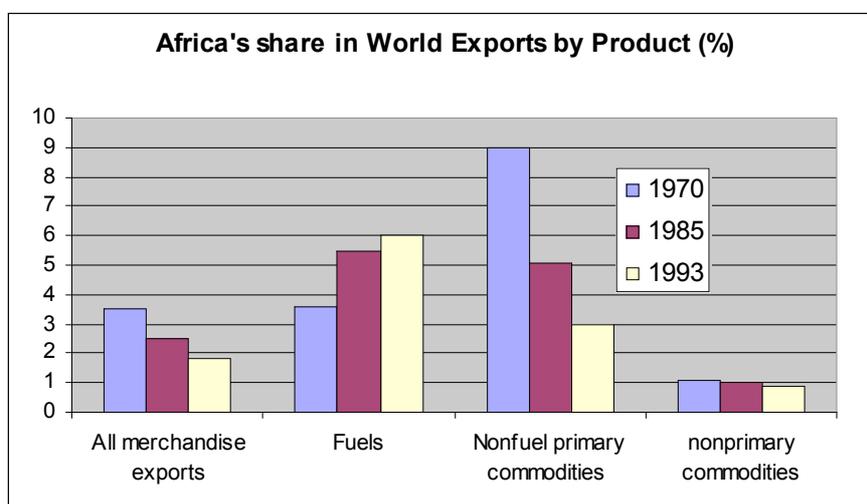
Finally, the importance of talking to companies engaged in trade cannot be emphasized enough. Consultations with the private sector during a recent review of the SADC Trade Protocol revealed major constraints to regional trade that would have been very difficult to pick up from an analysis of the data.

1. The domestic policy framework and tariff liberalisation

A strong and stable economic and political framework for the private sector is the cornerstone for lasting income and export growth. It is also central to the success of trade policy reform. High inflation and a rapidly appreciating real exchange rate will quickly reverse the pro-competitiveness effect of tariff liberalisation. Poor regulation and rigidities in the labour, land and credit markets will restrict the ability and incentive of the private sector to respond to the opportunities, and threats, arising from liberalisation. High transport costs and a fragmented transport infrastructure will also reduce the positive impact of liberalisation. And if the private sector believes that trade reforms may be reversed (either because reforms are externally “imposed” or because of vested interest lobbying activities) their reaction to what they see as a temporary changes in relative prices is unlikely to yield much in terms of investment or output.

The importance of domestic factors to exports is underlined by the fact that over the last three decades a major factor in Sub Saharan Africa’s (SSA’s) marginalisation from world trade has been a declining market share (see figure below) in all but fuels. An analysis of the decline in several SSA countries exports from \$35 billion to \$29 billion between 1990 and 1994 found that over 90% of the loss of export earnings resulted from factors eroding the competitiveness of supply; declining market size accounting for the rest (Ng and Yeats (2000)). SACU witnessed an expansion in its overall share in global markets.

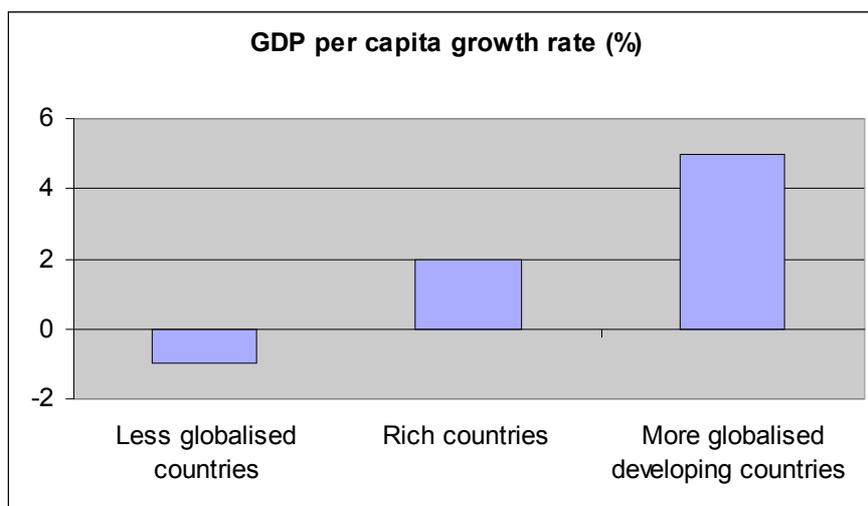
For SSA as a whole, in the early 1990’s it accounted for about 3.1% of world exports but by the end of the 1990’s this share had fallen to around 1%. To put this in perspective, the erosion of Africa’s world trade share between 1970 and 1993 represents an income loss of \$68 billion – or 21% of regional GDP (World Bank (2000)).



The performance of SSA countries on EU markets serves to further demonstrate the importance of supply side factors in explaining export performance: while SSA countries under Lome (now Cotonou) have enjoyed preferential market access in comparison to other developing regions this has not prevented their market share declining, from around 7% in 1980 to just over 2% in 2002 (Holland (2002) and EC (2003)). Developing Asia, which has not benefited from the duty and quota free access offered to the ACP on many key products, has increased its share from 6% to close to 20% in the same period.

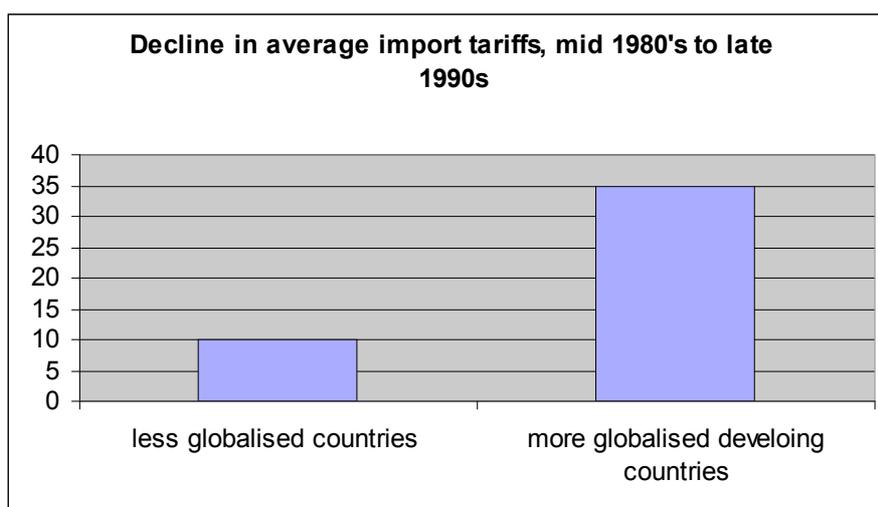
Good trade policy is a necessary but not sufficient condition for realizing sustainable economic growth and development. It is particularly important for small and poor economies. The economic costs of restricting the access of domestic companies to the best materials and skills available internationally, and biasing production towards small and fragmented domestic markets, are far more significant for Botswana, Lesotho and Swaziland – which have a narrow production base and a limited pool of skilled labour to draw from – than for China, India, the United States or the European Union for example.

Successful developing countries have been those which have integrated themselves in the world economy (see figure).



Source: Dollar and Kraay (2001)

And tariff reduction has been one of the policy measures aggressively pursued by the more successful developing countries (see figure below).



Source: Dollar and Kraay (2001)

The experience of AGOA has, however, shown preferential trade access can significantly increase exports of certain goods – if the restrictions on sourcing input are sufficiently liberal and the beneficiary is open to foreign investment. Lesotho in particular has been able to benefit from access to the USA under AGOA, increasing exports from \$321million in 2002 to \$467million in 2004, an increase of almost 50 per cent in two years. This has been possible in large part because it qualifies as an LDC which enables it, until September 2007, to produce apparel from fabric purchased anywhere in the world and export it to the United States. Further Lesotho provided an investment environment that encouraged Asian entrepreneurs to invest to take advantage of AGOA opportunities.

2. SACU's Tariff Policy Regime

The tariff policy regime is defined by the Common External Tariff, which is examined in section 2.1 and by SACU's bilateral and regional trade agreements which offer tariff preferences to parties to the agreements. These are reviewed in section 2.2.

2.1 SACU external tariff

Botswana, Lesotho, Namibia, South Africa and Swaziland share a common external tariff (CET). Though the CET has been simplified, it remains characterised by a high dispersion in tariffs, from 0-325 percent; a large number of tariff bands, 41 in comparison to 5 for Mozambique and 4 for Tanzania; and an often confusing and opaque variety of approaches to charging duties for different products¹.

Since South Africa's offer to the GATT in 1994 the average tariff rate has fallen from 15% to 11.4% and the number of duty free tariff lines has slightly increased from 42.4% to 43.7 in 2002 (see table). However, 34.8% of tariff lines are 15% or over. Particular product groups with a tariff of 20% and above include apparel (HS61), clothing accessories (HS62), tobacco (HS24) and carpets (HS57), clothing products (HS50, 61, 62, 63), footwear (HS64), beverages (HS22) preparations of cereal (HS19) and meat and meat offal (HS02).

SACU CET

	1997	2002
1. Bound Tariff Lines (% all tariff lines)	96.4	96.2
2. Duty free tariff lines (% all tariff lines)	42.4	43.7
3. Non ad valorem tariffs (% all tariff lines)	25.6	25
4. Tariff quotas (% all tariff lines)	8.1	7.3
8. Simple average applied rate	15.0	11.4
Agricultural products (HS01-24)	11.4	11.5
Non-agricultural products (HS24-97)	15.4	11.4
Domestic tariff spikes (% all tariff lines) (a)	4.0	3.9
International tariff spikes (% all tariff lines) (b)	39.4	34.8

(a) domestic tariff spikes are defined as those exceeding three the overall simple applied rate

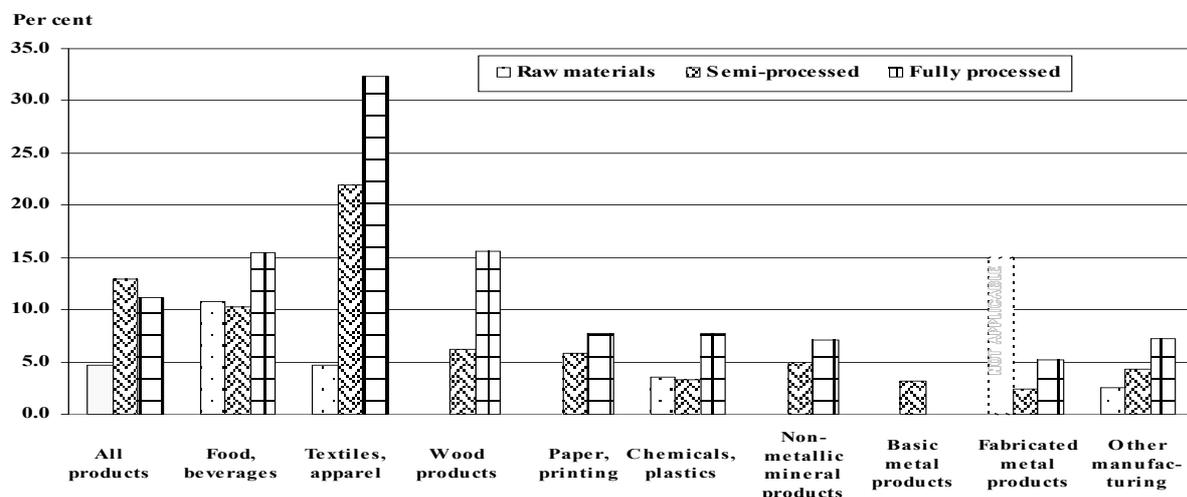
(b) International tariff peaks are defined as those exceeding 15%.

Source: WTO TPR (2003)

Tariffs are escalating with protection much higher for consumer than for capital or intermediate goods (see figure). This pattern of protection largely reflects the interests of

¹ Depending on the import, tariffs can be ad valorem, specific, mixed, compound, or formula duties.

South Africa's industrial lobbies and results in a high variance of tariffs that is costly in terms of economic efficiency: Kee, Nicita and Olarreaga (2004) estimate that this tariff variance actually increases the welfare reducing impact of the CET by nearly 50%.



Source: WTO Secretariat estimates, based on data provided by South Africa.

The structure of the SACU CET is very distinct from the simpler, more uniform pattern of tariff rates in the rest of Southern and Eastern Africa, which are designed primarily to maximise tariff revenue rather than for protection of specific domestic producers.

The pattern of protection offered by the SACU CET is further distorted by anti dumping measures with South Africa being one of the main initiators of these measures². Anti dumping duties are generally concentrated on intermediate products in the production process, with rates ranging from between 15% and 202% and averaging 52%. To the extent the antidumping duties are imposing higher costs on firms within SACU, they are undermining the competitiveness of the region. A recent study of export diversification in Botswana (BIDPA/World Bank 2005) has recommended the Government should act within SACU to reduce the number of anti dumping initiatives.

The SACU tariff structure allows for the use of duty rebates in specific sectors, namely motor vehicles and textiles and apparel. Virtually all of the industrial activities that benefit under these rebate schemes are located in South Africa. The cost of the rebate schemes in terms of foregone revenue are subsidized, disproportionately, by the smaller SACU states. In the case of rebates on imported inputs the fiscal cost is primarily shouldered by the BLNS, which still has to bear the cost raising impact of the tariffs on South African goods and third country imports, while the exports are captured largely by one country (South Africa).

² Anti dumping: Dumping is selling a good at a price below "fair value". Anti dumping duties are the duties imposed to counteract dumping by raising the price on the domestic market. The use of anti dumping measures remains controversial given its potential use as a protectionist tool.

2.2 EU and USA preferential trade arrangements with SACU Member States

The SACU common external tariff defines the duties and restrictions imposed on trade with countries outside the region. Trade between SACU member states is duty free³ but preferential treatment is also offered to other countries under various trade arrangements. The patchwork of agreements is complicated by two factors. Firstly, prior to the new SACU agreement, Member States were able to enter into bilateral preferential agreements without the participation of other members – even when these bilateral agreements apply de facto to all SACU members, as is the case of the South Africa – EU Trade and Development Co-operation Agreement (TDCA). In some cases this leads to exporters to SACU having different market access arrangements to Member States. Secondly, SACU Member States are at different stages of development and qualify for different preferential access arrangements to the markets of Europe and America.

The trade arrangements that are central to defining offensive and defensive interests in the context of the US – SACU FTA are the AGOA, and EU trade arrangements with countries in the region. We therefore provide a brief overview in this section. For an overview of trade arrangements within the SADC region see TSG/USAID (2004) and Tekere and Ndlela (2003).

AGOA

The African Growth and Opportunities Act (AGOA), the United States Trade Initiative for Sub – Saharan Africa became effective in October 2000. All SACU countries are eligible for the scheme, with Lesotho and now Botswana and Namibia designated as being Lesser Developed Beneficiary Countries⁴. These countries qualify for an additional, very significant, preference of duty free and quota free market access for apparel made from fabric originating anywhere in the world until September 2007. Countries not qualifying for this preference – including South Africa – have to meet rules of origin that require cloth to be imported from either the USA or from AGOA eligible countries.

AGOA is a non-reciprocal trade agreement – that is it offers preferential access to US markets but does not require reciprocal market opening from AGOA beneficiaries – this extends the US Generalised System of Preferences (GSP) in two important ways. First, privileges are guaranteed for 8 years, rather than requiring approval on a year by year basis. Second, it also offers significant improvements in access for textiles and apparels, products which are excluded from GSP because they are too sensitive (the list of sensitive products excluded under the GSP but incorporated in AGOA also contains watches, footwear, and handbags).

In the first year of implementation, 86% of US imports from SSA entered duty free, up from 60% in 2000. The greatest improvements in access were in textiles and apparel. Where previously only 0.7% of SSA exports of textiles and apparel entered the US duty free (with trade weighted average tariffs of 17%) in 2001 nearly 40% of textiles and apparel imports paid no duty. US textile and apparel imports from SSA rose 28%, from \$789m to \$998m.

³ Through various levies, bans and discriminatory taxation are still in place within SACU. See TSG (2004a).

⁴ Qualifying countries are those with a per capita GNP of less than US\$1,500 in 1998. Per capita GNP in Botswana and Namibia exceeds this ceiling; rather they have been granted this status.

Lesotho greatly increased textile and apparel exports to the US by 50% in 2001, compared with a 2% increase in 2000.

Though AGOA treatment may be continued after 2008, there is no guarantee. An offensive objective in the SACU – US FTA would be to lock in (and extend) AGOA preferences.

EU – SACU Trade Regime

The EU has three different trade arrangements with the different Member States of SACU. The Cotonou Agreement is the legal framework for trade and development co-operation between the EU and ACP countries. It offers duty free and quota access to Botswana, Lesotho, Namibia and Swaziland for a wide range of products, though there are significant restrictions in the coverage of agricultural products and rules of origin. Lesotho also benefits from the Everything But Arms (EBA) Initiative which offers duty and quota free access to EU markets for all LDCs, with transition arrangements for sugar, bananas and rice.

The EU – SA TDCA was concluded in 1999. The TDCA provides for asymmetrical trade liberalization towards the formation of a free-trade area by 2012. South Africa will liberalize around 86 percent of its imports from the EU during a 12-year transitional period. The EU will liberalize 95 percent of its imports from South Africa in ten years, starting from 1 January 2000, when the TDCA came into force. The bulk of industrial products will be liberalized during the first part of the tariff phase-down period. In the case of South Africa, sensitive products, comprising 16 percent of its imports from the EU, will be fully liberalized only at the end of the phase-down period. Several sensitive products, such as beef, are excluded from the agreement.

The TDCA provides for detailed rules of origin. There is provision for bilateral cumulation between South Africa and the EU, i.e., when applying the value added rule to a product from South Africa, the value of any EU materials used is counted to determine whether it meets the origin criteria. The same rule applies when defining the origin of EU products that include South African inputs. Goods that include materials from other ACP countries are also defined as originating in South Africa, and therefore eligible for preferential access to the EU market, provided that the value added in South Africa exceeds the value of the ACP materials. This is referred to as diagonal cumulation. Products made from materials from the BLNS countries are also defined as being of South African origin if the final stage of processing is undertaken in the country, regardless of the value added. Final processing carried out in the BLNS is not regarded as conferring origin. South Africa has a common external tariff with the BLNS countries, therefore any trade concession granted by South Africa to the EU under the TDCA have to be extended to all SACU members.

A likely objective for the US in negotiations is to enable US firms to compete with EU companies on SACU markets on a level footing – that is to achieve at least the same access under the FTA as has been offered under the TDCA. We use this to help investigate defensive interests/tariff offers in later sections.

3. The impact of tariff policy

Tariffs affect domestic resource allocation in the first instance by raising the domestic price of tradeables above world prices. Quantity restrictions, by reducing supply of imports, also serve to increase the domestic price of the restricted good. Secondary effects include real exchange rate appreciation and anti export bias.

3.1 Consumer Welfare

For consumers, the nominal tariff is a tax on their purchases of the protected goods, reducing their real income accordingly. The tax rate they pay is equal to the wedge between domestic and world prices, which in the absence of quantity restrictions is equal to the nominal tariff.

A recent study of trade and poverty linkages in Botswana (BIDPA (2004)) shows the significant impact high tariffs on meat and dairy products have in reducing the spending power of households and that they have a disproportionate impact on the poorest. The average household's food expenditure is 14.6% of total expenditure, 17% for low income households; meat and dairy are 5.9% of the average household's expenditure, 9.2% for low income. Tariffs on household and transport goods and clothing are also having a significant negative effect on household welfare.

The same study also highlights the incidence of differential pricing within the Customs Union, with South Africa products in Botswana often selling at the same price in Pula as in Rand, despite the relative strength of the Pula. This underlines the importance of competitive distribution channels if tariff reductions, in particular in the context of regional agreements, are to deliver benefits to consumers in terms of lower prices.

3.2 Economic efficiency and competitiveness of firms

The impact of tariffs on enterprises is more complex. Firstly, firms both benefit from increased prices and profitability as a result of tariffs on their final product, but also pay higher prices if tariffs are levied on their inputs. Secondly, firms focus on profits and the need to pay wages, and the same nominal tariff on final products will have a different impact on the profitability of different firms depending on how their cost structures differ (refer the example in the box below and also the explanation in Appendix A).

The impact of nominal tariff rates on the protection offered to a producer's profits and to wages therefore depends on the tariff rates on final goods, inputs, and the cost structure of the firm. Taking these factors into consideration gives us the **Effective Rates of Protection (ERP)**.

Nominal and Effective Rates of Protection:

The nominal tariff rate of protection refers to the total proportional difference between domestic and international prices resulting from import tariffs⁵. The effective tariff rate of protection incorporates the combined effect of price distortions (nominal tariffs) on both outputs and inputs, on the value added of manufacturing activities.

Positive ERPs indicate that domestic industries are able to operate with a higher level of value added than would prevail under free trade, increasing financial profits and/or permitting lower levels of efficiency, and constituting a subsidy to these activities. The higher are the implicit subsidies, the greater will be the incentives for the movement of domestic resources into these activities. Conversely, activities with negative ERPs are being implicitly taxed through the combined effects of price distortions on their inputs and outputs.

High effective rates of protection can be very costly in terms of misallocation of resources and economic inefficiencies. Recent research on the impact of the SADC FTA⁶ has shown that higher rates of effective protection are closely correlated with wider variance in efficiency. This indicates the fragmentation of production behind tariff barriers with unproductive firms surviving alongside productive ones. The degree to which this is happening is indicated by the variation in the effective rates of protection amongst firms in the same sector. ERP analysis also shows that nominal tariffs serve to offer greater protection to low value added producers, all else being equal.

Discouraging high value added production

The extent to which EU protectionism (in particular the very high tariffs on sugar and milk products) was seemingly preventing Ghana from adding value to cocoa by producing chocolate for export to the EU caught the attention of the European press following the launch of Oxfam's "Make Trade Fair" campaign. Closer examination revealed that while the EU duty rates of protection for chocolate and cocoa based products were in some cases very high – Ghana had duty free access for chocolate. The EU trade regime would actually give Ghanaian exporters of chocolate a competitive edge on European markets.

The irony is that Ghana's own tariff structure is probably contributing to the slow development of high value added production as a result of the incentives it creates. The reason for this is that tariffs have a disproportionate impact on low value added, relative to high value added production.

A comparison of two hypothetical companies serves to illustrate the point: firm A has gross sales of \$1000, out of which it pays \$800 for inputs (we do not consider in this example the role of tariffs on inputs). The value added in production, which is used to pay profit and wages, is \$200. A 20% nominal tariff will increase gross sales to \$1200 (by raising domestic prices 20%). With the costs of inputs unchanged, wages and profits increase to \$400; i.e. profitability is doubled. Firm B also has gross sales of \$1000, but has a higher value added of \$600 (with \$400 spent on inputs), then a 20% tariff on final product will also raise profits and wages by \$200, as for firm A, but this represents an increase of profitability of only 30%.

The impact of tariffs on the incentives of the firm varies by market. On the domestic market, firms benefit from the tariff on final goods, but pay tariffs on imported inputs. On world markets, the firms does not benefit from the tariffs on final goods but still pays the tariff on

⁵ Given the incidence of specific, formula based etc. duties in the SACU CET, the calculation of the nominal tariff in percentage is often complicated. See the Annex for a review.

⁶ "SADC Trade Protocol: Economic Impact Assessment" (2004) TSG/USAID at www.satradehub.org

imported inputs⁷ - in this way tariffs can lead to a negative effective rate of protection on world markets, damaging competitiveness.

Even when exporters are able to claim back duty paid on imported inputs, this is not sufficient to mitigate the direct impact on competitiveness unless the duty drawback scheme is extended to indirect exporters (firms that do not export themselves but that sell to exporters). The administration of such mechanisms is complicated in practice⁸. More importantly however, is the impact of protection on the real exchange rate. An analysis of factors constraining Botswana's export diversification (BIDPA/World Bank (2005)) found that appreciating of the real exchange rate, which has contributed to the slowdown and decline of non-traditional exports, can be attributed entirely to rising domestic prices in the 'non-tradeable' sector. This appreciation of the real exchange rate has coincided with a series of measures restricting foreign firms from providing goods and services in Botswana.

Tariffs also introduce an anti export bias by creating incentives to produce for the smaller local markets. This can be particularly detrimental if the bias to local markets induces producers to invest in smaller scale plants which have a lower initial cost but embody lower technology – leading to higher unit costs than if investment had been in larger scale plants to produce for the more competitive world market. Though research is ongoing, there is a growing consensus that the inability of Botswana to benefit fully from the preferential access it has under the EU Beef Protocol is in part a consequence of the high domestic prices resulting from the high SACU tariff and restrictions on imports. A possible way forward would be to open the SACU market to imports of larger quantities of forequarter meat (at lower prices to the consumer) partly in order to release hindquarter meat for exports to the higher priced markets of the EU (Stevens and Kennan (2005)). It is noteworthy that Mauritius imports sugar for domestic consumption while also being the main exporter to the EU under the Sugar Protocol.

The impact of tariffs on the effective protection resulting for firms is also affected by domestic market conditions, as illustrated by the case of wheat in SACU (see box).

The Price of Domestic Wheat in SACU

SACU grain millers have long justified their pleas for protection on the basis of the effects of the South African wheat tariff on its domestic price and hence on the millers' costs. For imported wheat, there can be little doubt that the tariff raises the cost of milling flour domestically, at least in South Africa. SACU millers outside of South Africa (i.e. the BLNS millers), on the other hand, receive a rebate of wheat import duties, and so enjoy the protection of the flour tariff while bearing none of the costs on wheat.

Imports account for only 30 to 40 percent of the wheat used in South Africa. The rest comes from domestic production. What is the effect of the wheat tariff on the price of domestic wheat? In a competitive market with low internal transport costs, it could be expected that the tariff would, more or less, be reflected fully in the domestic wheat price - i.e. domestic growers should receive close to the tariff-inclusive import price.

This does not appear to be what has happened, at least in recent years. Examination of wheat contract prices on the South African grain exchange suggests that local growers have received no more than pre-tariff import prices and often something much closer to an export-parity price. In addition, interview data from a number of

⁷ Unless there is a functioning duty exemption or drawback scheme.

⁸ Also note there is no drawback scheme for the antidumping duties currently imposed on imports into SACU. These antidumping measures are generally considered to reflect the interest of South African industries and can be particularly damaging to the BNLS as the most challenged products are intermediate products in the production process (Holden (2002)).

BLNS millers indicates that they prefer to buy South African wheat rather than imports, despite their enjoyment of a full duty rebate on imports. Indirect evidence of the same phenomenon comes from South African Millers who complain that certain BLNS millers often buy up domestic wheat, forcing them (South African millers) to use higher priced imports.

Why is the domestic wheat price so low? Part of the reason might be risk-averse behaviour by growers who have been too anxious to enter futures contracts in an environment of rising prices. The growers might also have suffered from a certain amount of 'exchange rate illusion' at a time when rising international prices and a depreciating Rand caused unexpectedly large increases in domestic prices of imported wheat.

An additional and at least equally important reason for low domestic prices (relative to full import parity) is a combination of regional segmentation of the South African market and considerable market power by a small number of local buyers. Recognizing this asymmetry in market power, growers in certain regions have tried to organize and present a united front in bargaining with monopsonistic buyers. When farmers in one region refused to enter futures contracts, however, the buyers filled their silos with imported wheat in advance of the domestic harvest. In the absence of local storage facilities at harvest time, farmers had little choice but to sell at heavy discounts.

Whatever the reason, there is considerable evidence that price of domestically grown wheat in South Africa have been far less than tariff-inclusive import parity in recent years. The main impact of the wheat tariff appears to have been on the price of imported and not domestically produced wheat. This has had a minimal impact on the costs of grain millers.

Source: Erasmus and Flatters 2003

Drawing on earlier studies (TSG/USAID (2003) we are able to estimate the effective rates of protection resulting from the SACU CET. The table below provides information on the average nominal (MFN) tariff rates alongside the effective rates of protection for different sectors of the economy, together with estimates of the dispersion of effective protection within the sectors. Key features of note are:

- Effective rates of protection are very high for several sectors, in particular for textiles, food processing, clothing, industrial chemicals and plastics.
- Effective protection for furniture, glass and ceramics and iron and steel products are over 30% - the estimated "ceiling" rate of effective protection for distorted economies with high rates of unemployment.
- Within the same sector there is a wide dispersion of effective protection for different firms. In part this reflects the product mix and the fact that different goods within the same sector can be subject to widely differing nominal tariffs. However, the dispersion of effective rates of protection also reflects the fragmentation of production behind high tariff barriers with unproductive firms surviving alongside efficient ones.
- For several sectors, fabricated metal products, ceramics and scientific equipment, the tariff structure is making firms uncompetitive on domestic markets relative to those foreign companies able to source their inputs at world prices.
- In several instances, nominal tariffs are not a good indication of the relative protection. For example, while the nominal tariff for clothing is half that on textiles, the effective rate of protection for clothing is twice that of textiles.

Description	Average MFN	Average ERP Domestic	Minimum ERP	Maximum ER	Variance ERP	Average ERP World
Agric & Forestry	4	16	-15	111	13	-8
Mining	0	0	0	0	0	0
Food Processing	9	100	-111	684	252	-13
Beverages	9	10	-10	1748	3234	-11
Textile	24	144	-16	2081	2422	-30
Clothing	50	73	37	1783	1430	-10
Leather & Footwear	25	16	16	36	2	-5
Wood and Wood Products	3	1	-2	166	50	0
Furniture	16	39	20	243	96	-8
Paper	8	0	-2	51	9	-3
Publishing	2	0	-43	0	3	0
Basic Chemicals	2	1	0	27	1	0
Industrial Chemicals	3	74	-19	118	12	-26
Rubber	19	2	2	2	N/A	-29
Plastics	12	69	65	248	88	-44
Glass & Ceramics	8	35	0	60	5	-4
Ceramic Products	6	-6	-6	-6	0	-6
Other non Metallic	3	0	-6	0	0	0
Iron & Steel Products	2	33	-7	259	34	-1
Fabricated Metal Products	8	-15	-22	72	11	-17
Machinery	3	2	-11	5926	35142	-6
Electric Machinery & Appliances	2	26	-7	31	2	0
Prof- & Scientific Equipment	1	.2	.2	-2	N/A	-2
Vehicles	29	14	-21	55	29	-102
Other Manufacturing	6	66	41	85	10	-56
All other Products	3	-1	-16	0	0	-1
Average	12	27				-15
Minimum		-15				-102
Maximum		144				0
Variance		15				5

Source: TSG/USAID (2003)

The final column of the table lists the Effective Rates of Protection on World Markets. The incentive structure resulting from the CET is strongly biased against exports: only six sectors do not have their international competitiveness compromised by the tariff structure, including mining and electrical machinery and appliances.

With a fully functioning duty drawback scheme, the negative effective rates of protection on world markets go to zero. However, as noted this does not mitigate all the anti competitive effects of the tariff structure. Nor does it remove the anti export bias created by the protection offered to producers who choose to sell on the domestic market rather than face international competition.

Furthermore, the number of sectors that would have to be covered by a duty drawback scheme to mitigate anti –export bias serves to underline the potential benefits from a rationalization of the CET.

3.3 A closer look at Free Trade Agreements (FTA)

Under an FTA, partners liberalise trade between each other, but tariffs on third party imports remain unchanged. This creates the possibility for trade diversion which reduces economic welfare.

Trade diversion arises when, as a result of an FTA or Customs Union, the source of imports changes from an efficient global producer to an inefficient regional producer. To illustrate: Initially, country A imports matches from country C, on which a 15% tariff is levied. Country B is unable to compete on country A's market. As a result of a preferential agreement between A and B, country B exporters are able to displace country C's exports of matches. In the initial situation, the tariff was reducing consumer welfare, but the government and local producers were also benefiting from increased revenue. The net loss from the tariff resulted from the "deadweight" loss of inefficiency. Following the implementation of the preferential agreement, the government is no longer receiving the tariff revenue and the revenue going to local producers may be reduced. This revenue loss is now split between the consumers in country A and the exporters in country B. The share depends on the extent to which consumers in country A benefit from lower prices.

The likelihood of trade diversion varies according to (i) the competitiveness of industries in the partner country. To illustrate, SACU consumers are likely to see price reductions in information technology products as a result of an FTA with USA, but U.S. exports in e.g. steel products resulting from preferential access could potentially be trade diverting. (ii) the size of the partner countries economy. A large economy is likely to be able to satisfy increased demand for exports, resulting from enhanced market access, without having to raise prices. A small economy is likely to see supply costs (and therefore prices) increase to meet greater demand for exports. (iii) The level of MFN tariffs. The higher the tariff on third party goods the greater the likely costs of trade diversion.

Given the existing low level of MFN tariffs in the US, which is the largest economy in the world the potential for trade diversion will, in aggregate, be low. Tariff liberalization between SACU and the USA or EU in an FTA is therefore of a fundamentally different nature to preferential liberalization amongst countries of Southern and Eastern Africa, indeed it could be considered a stepping stone to multilateral trade liberalization. In the case of Rwanda, for example, it is likely that most, if not all of the benefits from regional integration come from trade facilitation and enabling FDI rather than from tariff preferences on COMESA or SADC markets (Charalambides (2005)).

Fiscal revenue can be a concern in both unilateral and regional liberalization. However, (issues of trade diversion aside), while rationalization and reduction of MFN tariffs can increase fiscal revenue – e.g. where a reduction in the tariff leads to a more than proportionate increase in imports – under an FTA "substantially all trade" between the parties will be zero rated. This will lead to a fall in revenue and tax replacement can be expensive. However, the inefficiency of tariff taxes relative to a functioning VAT system is increasingly becoming clear. For example, estimates for Chile suggest that raising revenue through trade taxes has a marginal cost of 11% - this is equivalent to consumers and enterprises having to pay \$1111 for the government to receive \$1000 – while the marginal cost of raising revenue from VAT is an estimated 7.6% (Harrison, Rutherford and Tarr (2002)).

With regards to both trade diversion and fiscal revenue, the impact of an FTA needs to be judged in the context of the existing trade regime (see box below).

Trade Diversion and fiscal revenue: the marginal impact of a US – SACU FTA?

In assessing the potential for trade diversion and fiscal revenue loss under a US – SACU FTA, SACUs current and evolving trade regime is central, in particular with regards to the EU – SA TDCA.

To elucidate the point, consider the scenario where the US is offered the same market access arrangements under the FTA as the EU has under the TDCA. Will this lead to welfare losses from trade diversion? Probably not, as the main impact will most likely be greater competition between EU and US firms on SACU markets. Indeed, trade diversion under the TDCA is likely to be reduced, with consequent benefits for consumers in terms of lower prices. And if US exports are mainly displacing EU goods that are already entering duty free, the fiscal impact will be minimal.

The above observations are based on the assumption that the same market access to the EU and USA will induce a similar export response. This needs to be properly evaluated, but the similarity in the economic structure of the EU and US suggests that, on average, this will be the case.

4. Preparing requests and offers for tariff liberalization

In this section we present a simple approach to identifying interests in tariff negotiations, through using actual data for different SACU countries. For several of the SACU countries trade data is either unavailable or unreliable. However, in developing a strategy for tariff negotiations, we can use mirror statistics - that is e.g. recorded US imports from and exports to SACU countries. These are readily available at <http://dataweb.usitc.gov>. This database also provides information on US imports under the different preference schemes (including AGOA), duties payable and a tariff database. “Trademap” is a further useful tool for analyzing export and import trends and market shares (again using mirror statistics for BLNS) and has been made freely available at www.trademap.usaid.org. However, some inconsistencies emerge (see box). The data exchange process between parties enables verification of the accuracy of information.

The importance of the data exchange process

A first step in tariff negotiations is data exchange. This enables the accuracy of publicly available information to be directly verified as there are sometimes inconsistencies. To illustrate, Lesotho’s exports of men’s and boy’s cotton trousers (HS2034240) worth \$94.6 million, are not - according to the US tariff book – eligible for tariff preferences under AGOA. The MFN rate for this product line is 16%, which would suggest duties of \$15 million are being paid for this item alone. Yet, according to the same data base, Lesotho pays, for all its exports to the USA, \$1.5 million.

These discrepancies and issues can be addressed in the context of the data exchange process with the USA government.

There are more sophisticated approaches to identifying offensive and defensive interests but they are generally more appropriate to large economies⁹. For the smaller more concentrated economies of the BLNS, a sector study approach to deepening understanding of interests is likely to be more efficient than the development of complicated, economy wide models, at least in the short run. This approach permits a greater role for **consultation with the private sector and civil society** –the very group that will respond to the increased opportunities arising from the trade agreements. Consulting with the private sector is essential when the economic data is unreliable and incomplete and is appropriate since the use of economy wide models amplifies deficiencies in the data, is very time consuming and highly sensitive to the often not discussed assumptions of the analysts building the models. Close consultation with the private sector and broader civil society will minimize the risk of government officials following a negotiating position that they erroneously assert represents business interests.

⁹ Furthermore, Feenstra (2004) brings in to doubt the legitimacy of using the gravity model for developing country trade with OECD countries.

Furthermore the approach outlined is accessible to all stakeholders involved in trade negotiations and will contribute to building increased understanding of trade policy issues.

Over the longer term the development of economy wide models, currently underway in several BLNS countries including Botswana and Namibia, will help to further explore the inter-linkages between sectors that can be so important in determining distribution of income changes following tariff changes. However, for the reasons mentioned above – data deficiencies and sensitivity to assumptions – there needs to be a constant process of interaction between the modeling and empirical studies¹⁰.

The importance of talking to companies actually engaged in commerce cannot be emphasized enough. Consultations with the private sector during a recent review of the SADC Trade Protocol (TSG/USAID (2004)) revealed major constraints to regional trade that would have been very difficult to pick up from an analysis of the available data.

4.1 Identifying SACU interests in its market access request to the USA

The objective for the SACU request on US tariffs is to secure and improve preferential access for current exports and to develop new markets, in particular for priority products.

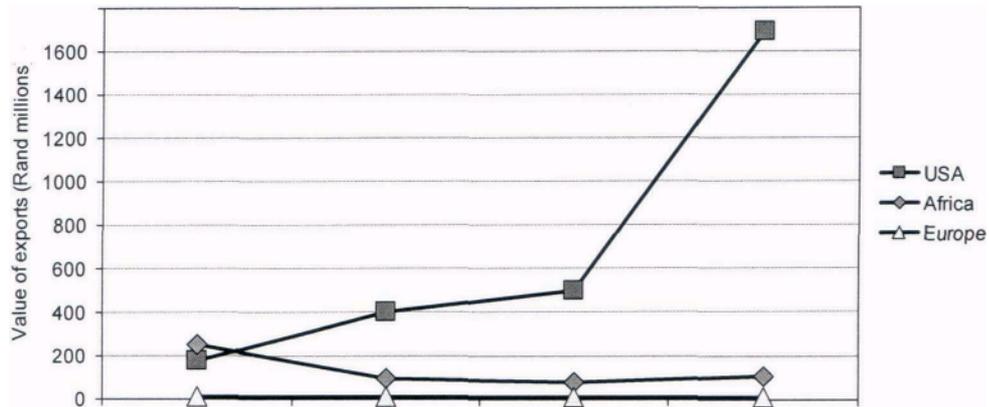
The maintenance of AGOA market access is a key concern though the percentage of goods exported to the US under the scheme varies by country (see table)

AGOA has had a major impact on exports from BLS to the USA markets. An evaluation of the extent to which this is a consequence of the third country fabric provision as opposed to duty free access is beyond the scope of the current work. However a comparison of exports from Lesotho to US and the EU (see figure) is informative as in both market companies have duty free access for originating products and MFN tariffs are broadly similar. The main distinction is the difference in rules of origin to qualify a product as originating, with the EU rules being more restrictive.

Exports to the US (2003 – 2004) by Preference Programmes, \$000				
	AGOA	GSP	No programme claimed	Total
Botswana				
2004	20,138	0	52,840	72,986
2003	6,324	25	7,293	13,642
Lesotho				
2004	447,622	181	19,244	467,047
2003	372,544	130	20,382	393,056
Swaziland				
2004	175,927	926	21,903	198,769
2003	127,005	6,970	27,994	162,033

Source: USITC

¹⁰ See McCulloch et al (2001) Chapter 5.



The strong upward trend to the USA market following the introduction of the third party fabric provision suggests that preserving this provision (and for South Africa extending it's application to cover their exports to the USA) is one of the key "market access" priorities.

With regards to non apparel exports, the main SACU exports currently benefiting from AGOA are unwrought manganese, with exports of \$14.1 million enjoying a tariff preference of 14%, \$3.7 million exports of aromatic amino-acids and their derivatives with MFN rates of 11.3% and \$2.8 million exports of antidepressants and tranquillizers with MFN rates of 10.5%.

Removing tariffs on existing exports yields an immediate benefit to the companies concerned and is often a priority for tariff negotiations. However, according to the figures available from the USITC database, BLS current exporters are paying minimal duty (see table) equal to between 0.6% and 2% of current exports to the USA.

Calculated duties paid on exports to the USA 2004 (\$ 000)

	Duties paid	Exports to USA	%
Botswana	1,700	73,000	2%
Lesotho	1,500	466,900	0.3%
Swaziland	1,223	198,900	0.6%
South Africa	11,500		

Source: USITC

South Africa has some interest in tackling US tariffs on existing exports as they are currently costing exporters \$11.5 million a year. The main goods affected are listed below.

SA exports to USA worth over \$1 million currently facing a tariff of > 5% (2004)

HS8	Description	Value \$m	MFN Tariff
81110045	Unwrought manganese	15.1	14.0%
28046950	Silicon	10.1	5.5%
54022030	Single high tenacity yarn of polyesters	4.6	9.0%
20087020	Peaches	4.1	17.0%
54021030	Single high tenacity yarn of nylon	3.4	9.0%
29224926	Aromatic amino-acids drugs and their esters	1.6	6.5%
	Total	38.9	

Develop opportunities for new markets in the USA for priority products. Up until now the approach to analysis has focused on top SACU exports to the USA. However, by its very nature tariff protection serves to reduce the exports of those countries facing high duties. FTA negotiations therefore may offer an opportunity to develop new markets through removing the tariffs that SACU exporters currently face. While 100% duty and quota free access is a legitimate goal, it may be more effective to focus requests on priority products. We illustrate below the different approaches to identifying these products.

Revealed comparative advantage (RCA) analysis: The RCA of a country in a product is measured as the ratio of that product's share in the country's exports to the share in world exports. If the RCA is higher than one, the country is said to have revealed comparative advantage in that product relative to the world.

In the case of Botswana, revealed comparative advantage (RCA) calculations suggest a high advantage in Botswana's current trading profile of minerals and beef. The highest items include copper mattes; cement copper (precipitated copper); nickel matte, nickel oxide sinters; diamonds, not mounted or set; salt; fresh or chilled meat of bovine animals. Botswana has a revealed comparative advantage in 28 items (see table). In all but diamonds there is potential to increase exports (BIDPA/World Bank (2005)).

Botswana's Revealed Comparative Advantage (2004)

Product code	Description	RCA
7401	Copper mattes; cement copper (precipitated copper)	378.1
7501	Nickel matte, nickel oxide sinters	226.9
7102	Diamonds, not mounted or set	104.9
2501	Salt	27.1
0201	Meat of bovine animals, fresh or chilled	10.4
1522	Degras and residues	9.3
6811	Articles of asbestos-cement, of cellulose fibre-cement	9.1
0507	Ivory, whalebone etc, unworked	6.1
7215	Bars & rods of iron or non-alloy steel nes	4.5
0202	Meat of bovine animals, frozen	4.3
2834	Nitrites; nitrates	4.0
2836	Carbonate;peroxocarbonate, commercial ammonium carbonate	4.0
6305	Sacks and bags of a kind used for the packing of goods	3.9
1103	Cereal grouts, meal and pellets	3.6
1603	Extracts & juices of meat, fish, crustaceans & molluscs	3.5
6503	Felt hats and other felt headgear	3.4
9601	Worked ivory & art of ivory; animal carving material (o/t ivory)	3.2
4823	Other paper, paperboard, cellulose wadding cut to size & adhesive paper, filter paper	2.6
8544	Insulated wire/cable	2.3
7228	Bars & rods, other alloy steel; hollow drill bars, etc.	2.2
6102	Women's overcoat, cape, etc, knitted/crochetd, o/t of hd 61.04	2.2
1602	Prepared or preserved meat, meat offal or blood,	1.2
1502	Bovine, sheep & goat fats	1.2
1512	Safflower, sunflower/cotton-seed oil & fractions	1.2
3002	Human & animal blood; antisera, vaccines, toxins, micro-organism cultures	1.2
1902	Pasta & couscous	1.1
2824	Lead oxides; red lead and orange lead	1.1
3210	Paints & varnishes	1.0

Source: BIDPA/World Bank (2005)

This analysis can be extended to take into account changes over time, see TIPS (2002).

Market share analysis: To complement the RCA analysis, we identify exports that are under traded with the USA by comparing market share of exports on the US with world market share¹¹. The table below sets out the key South African products for which the share of the world market is above the share of US markets (by at least 1%).

South African exports “under traded” on US markets (2004)

HS Code	Description	% of World Market	% of US Market	Min. MFN tariff rate	Max MFN Tariff rate
271000	Petroleum oil	3.58%	0.69%	0.30%	7.00%
870323	Motor cars (1500cc to 3000cc)	3.09%	0.53%	2.50%	2.50%
760110	Unwrought Aluminium	2.11%	0.83%	0.00%	2.60%

For the BLNS, the comparison between exports to the EU and exports to the US, both in share of country exports and in share on EU markets has two advantages. Firstly, this approach relies on EU import statistics which are regularly updated and easily available. Secondly, the BNLS have had preferential access to the EU for most products for a relatively long period and the pattern of exports to the EU offers, in general, a reasonable indication of products that might have potential in US market with the removal of tariff barriers. More liberal rules of origin under the US-SACU Agreement could open opportunities for more labor intensive manufacturing exports.

Are tariff barriers to blame for underperformance? The next step is to assess the extent to which US tariff barriers may be playing a role in the underperformance of exports of a priority product. In the first instance this involves simply assessing the US duty exporters are currently paying and the existence of tariff quota restrictions.

Non tariff barriers can be equally important in explaining poor export performance. In the case of agricultural exports an accelerated process for Pest Risk Assessments (PRA) is a major market access objective. Though it is not directly related to tariffs the PRA is central to being able to benefit from any tariff preferences offered under the FTA.

In the analysis care must be taken to examine how the exporting companies from the BLNS enter export markets. To illustrate, Botswana exports only bovine leather to Italy, and the majority of diamonds are exported to the UK. However, rather than reflecting tariff barriers on other markets – tariffs on exports of both these products to the US are zero rated under AGOA/GSP – the pattern of trade reflects the supply chain for Botswana producers.

Furthermore companies will focus their sales on markets where they stand to make the greatest profits. In evaluating the likely impact of US tariff liberalization under an FTA, it is therefore important to take into account the effective rate of protection offered on US, Domestic and other markets where SACU has preferential access, such as the EU. For example, if beef were to be included in the tariff liberalization request of SACU, in only one tariff line (HS02013080) does the US MFN tariff come close to SACU CET for this sector and the US market is also far more competitively priced than the EU. Beef price in the EU are inflated by Tariff Restricted Quotas. In this case, SACU beef export are unlikely to market in the US, unless SACU’s tariff and/or the value of preferences on the EU market fall.

¹¹ Trademap, at www.trademap.usaid.org can provide this information.

4.2 Preparing a SACU offer of tariff liberalization to the USA

In preparing a negotiating strategy on tariff liberalization, it is helpful to gain a perspective on the likely request by the USA. We here develop this perspective using the same approach set out for identifying SACU interests, but with a clearer focus on “leveling the playing field” with the EU. We then turn to consider defensive interests to be taken account of in finalizing the initial offer.

USA market access interests? The table below identifies main US exports to SACU (over R50 million) that are currently facing a tariff of more than 10%. Abolishing these tariffs would yield potential savings to US exporters of R360 million. Most of the goods identified are produced only in South Africa.

Main US exports to SACU facing tariff barriers

HS Code	Description	Rand M	SACU CET
98010015	Tractor components	235	35%
87032490	Motor vehicles (>3000cc)	163	47%
87012020	Tractors	152	20%
87032390	Motor vehicles (>1500 cc and <3000cc)	117	47%
10059000	Maize (corn)	110	27%
10019000	Wheat and meslin	91	34%
21069090	Food preparations	84	20%
33049900	Beauty or make-up preparations	69	20%
98010030	Passenger vehicle components	67	35%
39209100	Other sheets of plastics	55	rt5%

Turning now to the under traded imports (defined as products where the US has a higher average share of world markets than compared to the SACU market), set out in the table below, it is again primarily South African produced goods that are likely to be included in the US request for SACU tariff liberalization.

Under traded US exports to SACU

HS Code	Description	US % of World Markets	US % of SACU	Min tariff	Max tariff
870899	Motor vehicle parts	1.41%	0.30%	0%	20%
870829	Motor vehicle parts	1.16%	0.07%	20%	20%
847989	Vacuum Cleaners	1.10%	0.32%	0%	10%
851790	Telephone parts	0.86%	0.16%	0%	12.5%
870431	Motor vehicles not exceeding 5T	0.54%	0.00%	0%	47%

As mentioned, the United States is likely to want to use the FTA to level the playing field with EU competitors on SACU markets. The table below shows the main imports where the

EU gains a significant tariff preference following the implementation of the TDCA tariff phase downs 6 years and 12 years following the entry into force of the agreement.

EU tariff preferences arising from the TDCA

HS Code	Description	Tariff (%)		
		MFN 2000	EU 6 years	EU 12 Years
87012020	Tractors	20	0	0
21069090	Food preparations	20	15	0
39209100	Polvvinvl butvral	15	12	0
87089990	Motor vehicle parts	20	15	0
48101200	Paper and paperboard	10	0	0
54023300	Synthetic filament yarn	15	7	5
39269090	Articles of plastic	20	15	10
87033390	Motor vehicles	47	30	0

Food preparations, paper and paperboard and articles of plastic are of broader interest as their production is not restricted to South Africa.

Defensive interests in preparing the tariff offer include concerns over the welfare loss from trade diversion, fiscal revenue¹² and political economy. *A key factor is the extent to which market access to SACU under the FTA replicates the EU TDCA.* Given the similarities in economic structure, the EU and USA are competitive largely in similar areas, and have a broadly similar structure of exports. Though a full evaluation would need to take place on a case by case basis, in general providing US companies with the same access as the EU is likely to have a marginal impact in terms of trade diversion and fiscal revenue loss. Indeed the US FTA may serve primarily to introduce competition between US and EU suppliers – assuming that competition with the EU has already displaced inefficient SACU producers – and reduce welfare losses resulting from trade diversion under the TDCA.

In so far as the US – SACU FTA goes beyond the access arrangements of the TDCA, considerations need to include the scope for trade diversion for products that have high MFN tariff rates. In such circumstances, a reduction in the SACU tariff, possibly in the context of WTO negotiations, would mitigate the potential welfare losses. With regards to fiscal impact, it is important to note that the highest tariffs are generally not those generating highest revenue. Very high tariffs discourage imports and therefore reduce the size of the trade tax base.

¹² Political economy considerations are crucial to the trade policy and negotiation process but are beyond the scope of the paper.

List of References

- BIDPA/World Bank (2005) “Diversifying Botswana’s Exports”.
- Buffie (2001) “Trade Policy in Developing Countries”, Cambridge University Press.
- Charalambides (2005) “Preliminary Assessment of Rwanda’s Regional Integration Options”, Imani Development.
- Feenstra (2004) “Advanced International Trade: Theory and Evidence”, Princeton University Press.
- Flatters, Frank, (2001), “Rationalization of Tariffs: Some Lessons from International Experience”, Mimeo.
- Greenaway and Milner (1993) “Trade and Industrial Policy in Developing Countries” Macmillan.
- Holden, M (2002) “Anti-dumping: A Reaction to Trade Liberalisation or Anti-Competitive?”, The South African Journal of Economics, June.
- Harrison, Rutherford and Tarr (2002), “Trade Policy Options for Chile, the importance of Market Access”.
- Ng and Yeats (2000) “On the Recent Trade Performance of Sub Saharan African Countries”. Africa Region Working Paper Series Number 7, www.worldbank.org
- Stevens and Kennan (2005) “Botswana Beef Exports and Trade Policy”
- TIPS (2002) “The State of Trade Policy in South Africa”, www.tips.org
- Tekere and Ndlela (2003) “Study of the Compatibility of Trade Policies in the Context of Current Regional Economic Integration Processes: The Case of SADC”; Trade and Development Studies Centre, www.tradescentre.org.zw
- TSG/USAID (2004) “Mid Term Review of the SADC Trade Protocol”, www.satradehub.org
- TSG/USAID (2003) “SADC: Economic Impact Assessment Study”, www.satradehub.org
- World Bank (2002) “Globalization, Growth and Poverty.”
- World Bank (2000) “Can Africa Claim the 21st Century?”

APPENDIX A – THE THEORY OF PROTECTION

A.1 The Theory of Nominal Protection

A.1.1 Definition

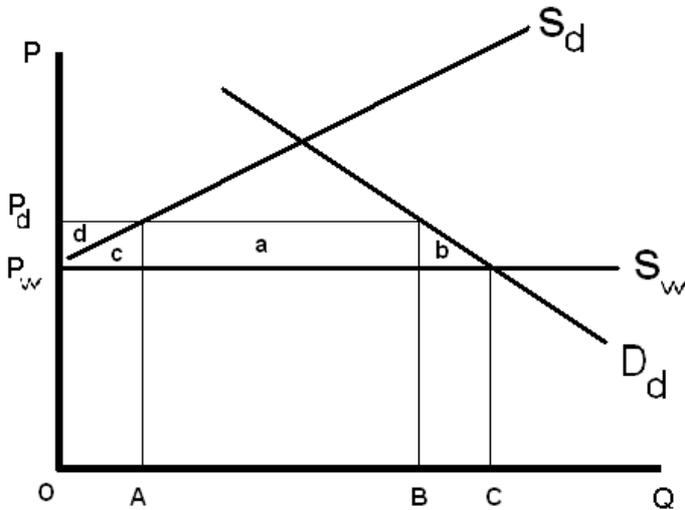
The Nominal Rate of Protection refers to the total proportional difference between domestic and international prices, taking into account both import tariffs and other distortions such as quantitative restrictions (licensing and prohibitions) and price distortions such as price controls. In principle, such a measure would look at the relationship between the prevailing domestic price of a good and the price of the same good that would be observed under free trade (i.e. an undistorted market). The NRP is an estimation of the equivalent tariff that would lead to the total disparity between domestic and international prices, over and beyond the known price-raising effect of the import tariff. In practice therefore, the measure is derived from the difference between the domestic price of a good and the observable world price of a comparable good.

For example, if the world price of a good is 200 local currency units and the import tariff is 15%, abstracting from delivery costs and other distortions, the domestic price of both imported and locally competing goods should be 230 units. If however, the local price for the good is 250 units, this suggests that there are other distortions at play, such as an absence of competition, or quantitative restrictions on supply, so that the NRP is 25%: the difference between the local price and the world price, indexed to the world price.

The analysis of NRP aims to estimate the total price raising effects of tariffs and of the imposition of other restrictions to free trade. Economic theory holds that any limitation on the supply of a good is likely to raise its price. Figure 1 below illustrates equally the price raising effect of a tariff or of a quantitative restriction on supply. The case is that of a “small country”, that is an economy with no influence over the world price of the good in question, which therefore faces a perfectly elastic (flat) world supply curve. Domestic production costs are assumed to be higher than the world price, so that the domestic supply curve lies above the world supply curve at all points: under free trade and perfect competition, all domestic demand would be met by imports¹³. Total consumption would be equal to OC, at price P_w given by the intersection of the domestic demand (D_d) and world supply (S_w) curves. Imposing a trade restrictive measure that restricts consumption to OB results in a price increase to P_d , where the demand curve intersects the resulting supply curve. The inflated price allows some of the domestic producers (the more efficient ones) to supply part of the market, OA, while AB is filled by imports.

¹³ It is possible to amend the assumption to allow for some domestic supply at world price level. The simplification made here merely highlights the price-raising effects.

Figure 1 – The Effects of Price Distortions



However, the shift in consumption from lower cost world sources (at P_w) to higher cost domestic sources (those of the more efficient local producers who can accept P_d) clearly imposes costs on the domestic economy. Consumers pay more (the total area below the new supply curve, that is $a + b + c + d$) than they would pay under free trade. Part of this accrues to importers or government (area a , depending on the type of distortion) and part to domestic producers (area d , which is rent, or the amount these producers get paid over what they would have accepted at quantity OA). The remainder is known as “dead-weight consumption loss” (area b) and excess production cost (area c), which are net losses for the economy. The effect of the distortion is therefore to redistribute income from (poorer) consumers to importers or government and to domestic producers, where consumers include producers who import inputs.

A.1.2 Calculation of Nominal Rates of Protection

The nominal rate of protection measures the proportion by which domestic prices exceed world prices. NRPs are calculated either *ex ante* or *ex post*, to indicate the difference between stated policy and the actual outcome, based on revenues collected. NRPs are estimated by identifying all price distortions affecting imports. The *ex ante* NRP is defined as the sum of the tariff and all other price distortions which include listed tariff surcharges, other duties and quantitative restrictions. The relationship between the domestic price and the world price, and the derivation of NRP from this, are expressed algebraically as:

$$P^d = P^w (1 + t + d + e) \quad [1]$$

$$NRP = \frac{P^d - P^w}{P^w} \times 100 \quad [2]$$

where P^d and P^w are the domestic and world price, respectively, t and d are tariffs and duties, and e is the net tariff equivalent of other trade restrictions (e equals zero where there are no restrictions other than tariffs and duties).

Ex post NRPs measure the tariff and other distortions actually levied against imports. A considerable variation can usually be observed between sectors, as well as contrast between ex ante and ex post rates, reflecting the difference between the intent of policy and its impact. Actual duty exemptions as opposed to listed duties can thus be highlighted. Caution must be exercised in interpreting ex post rates however, since manufacturers will adjust their pricing behavior to stated (ex ante) tariffs: duty exemptions are typically arbitrary, discretionary and uncertain, thus new-comers would plan any investment based on published rates.

Countries typically apply two types of tariffs: ad valorem and specific. An ad valorem tariff is a levy, the amount of which is calculated as a percentage of the value of the import, while specific rates apply a given amount per quantity of the import (e.g. 2 cents per liter). Specific rate tariffs are converted to ad valorem equivalents by taking the value of imports of the relevant product and dividing it by the number of units to obtain a “world price”. The specific tariff per unit, as a proportion of the “world price” thus derived, is then assumed to be the ad valorem tariff equivalent. Where no imports appear, the rate applying to the nearest tariff code is assumed to apply to the product line. NRPs can be derived, both unweighted and weighted by imports, for each country.

A.2 The Effective Rate of Protection

A.2.1 Introduction

Policy makers employ a number of measures, such as income and commodity taxes, import tariffs and subsidies, quantitative restrictions, import prohibitions, price controls, and entry barriers, that are intended to increase or decrease the domestic prices of both traded and non-traded goods and as a result create a divergence from their respective economically efficient prices (i.e. the prices that would prevail in the absence of intervention). Although the stated objective of import tariffs and commodity taxation may be to raise revenues, they are often applied in ways that are *de facto* intended to direct, through differential incentives, the allocation of resources by consumers and producers in ways in favor of import substitution activities. These incentives operate by creating a “wedge” or differential between the prices that would exist without intervention and the domestic prices that reflect these policies, referred to in this analysis as price distortions.

The introduction of differential incentives for industrial activities has often been viewed in terms of providing protection for domestic producers from potential competition from foreign producers, but this puts these issues in too narrow a context. The relationship between the financial costs of domestic production and the costs of imports is only one of the elements of competition for the limited resources available for industrial production. Granting relatively high “protection” for one activity also provides it with advantages relative to other existing and potential activities that are receiving less assistance, since price distortions draw resources towards favored activities, they increase costs for all other activities. In developing proposals for efficient industrial policies, it is important that these broader implications be explicitly recognized.

In the countries under consideration, the domestic prices of tradable industrial goods are influenced by the SACU Common External Tariff, SADC tariff preferences, anti-dumping tariffs and the price raising effects of import (and export) licensing on a small number of

products. In addition, the domestic price of some goods is influenced by subsidies, in particular through public enterprise pricing policies. The border prices of tradable goods reflect world market conditions. The domestic prices of non-traded goods (and exports) are also indirectly affected by the price distortions on tradable goods¹⁴. The central task in estimating economic incentives is assessing the differentials between the domestic and world prices of goods produced and used by industrial activities.

A.2.2 Calculation of the Effective Rate of Protection

The nominal rate of protection refers to the total proportional difference between domestic and international prices, taking into account both import tariffs and all other distortions. The effective rate of protection incorporates the combined effect of price distortions (i.e. NRP) on both outputs and inputs, on the value added of manufacturing activities. That is, it measures the amount by which an activity's value added at domestic prices would differ from that which would be realized if the prices of its products and inputs were not distorted through policy intervention.

Positive ERPs indicate that domestic industries are able to operate with a higher level of value added than would prevail under free trade, increasing financial profits and/or permitting lower levels of efficiency, and constituting a subsidy to these activities. The higher are the implicit subsidies, the greater will be the incentives for the movement of domestic resources into these activities. Conversely, activities with negative ERPs are being implicitly taxed through the combined effects of price distortions on their inputs and outputs.

The ERP is usually defined as the ratio of the domestic value added to the international value added and may be expressed as:

$$ERP = \frac{VA^d - VA^w}{VA^w} \times 100 \quad [3]$$

where VA^d is value added measured at domestic prices (i.e. the difference between the values of output and of material inputs at domestic prices) and VA^w is value added at world prices.

The estimation of price distortions for traded goods is in principle relatively straightforward. However, in the case of the BLNS countries SACU operates an extremely complex trade policy, which uses formula duties, variable import levies, local content requirements and specific duties, in addition to ad valorem duties. Nevertheless, the majority of import tariffs and import surcharges are levied on an ad valorem basis, making it possible to infer their impact on the relationship between domestic and world prices with a reasonable degree of confidence, although the use of specific tariffs and formula duties requires ad valorem equivalents to be estimated. The effects of import licensing, variable import levies and local content regulations would generally be addressed on a sector by sector basis because of the complexity.

¹⁴ Policies that distort the price of tradable goods affect the price of non-traded goods, directly by affecting the cost of the raw materials used in their production, but also indirectly by shifting demand patterns from importables to exportables and non-traded goods by altering relative prices.

A.2.3 Non-Traded Goods

The approach described above cannot be used in assessing price distortions for non-traded goods, as the effects of policies on prices are indirect. While non-traded goods are involved in most manufacturing activities, by their nature they do not have direct international trading prices. However, they employ traded and non-traded goods in their own production processes. Price distortions of traded goods therefore affect the prices of non-traded goods. When non-traded goods constitute a significant proportion of the value of materials used in a production process, the assessment of the impact of intervention on the prices becomes essential in the measurement of ERPs. There are three main approaches in estimating the price distortions of non-traded goods:

1. Assume that the price of non-traded goods will not change if the system of protection is removed, which implicitly means their nominal rate of protection is zero and they are supplied at constant costs. (This is generally referred to as the Balassa method.)
2. Assume that the tariff on non-traded goods is equal to the average of that for traded goods (the Scott method).
3. Assume that non-traded goods are part of the value added of the manufacturing activity employing them, or decompose non-traded goods in several rounds until their values become domestic value added and traded inputs (the Corden method).

A derivative of the Corden method has been adopted in this study. It is in many ways the preferred approach as it is likely to yield more precise measures¹⁵. The decomposition of the costs of non-traded inputs, directly and indirectly used in the production process, to identify the foreign exchange cost of traded inputs, actually measures “total protection”, that is the direct and indirect impact on the value added of manufacturing activities emanating from the prevailing structure of protection. Sensitivity analysis, allowing for instance the use of the cost of a non-traded input of one country into another country’s production structure, provides much flexibility in the analysis of the impact of protection on non-traded goods. The model designed for this study allows such flexibility.

A.2.4 The Exchange Rate

In assessing the structure of incentives, it is generally also important to consider the impact of intervention on the exchange rate and the differential impact that it has across activities. The imposition of tariffs or restrictions on imports affects the equilibrium exchange rate relative to a free trade regime: the equilibrium price of foreign exchange falls (i.e. fewer local currency units per US dollar). A lower exchange rate will reduce the price of imports, measured in domestic currency, and hence reduce the protection accorded by a given tariff to domestic competing products. The exchange rate that maintains exchange rate equilibrium will decline further as the average level of protection increases. A lower exchange rate also penalizes the export sector as it earns fewer local currency units per US dollar than would be the case under a free trade situation. Thus protective measures and the exchange rate are

¹⁵ Several studies have indicated that the approach used does not significantly affect the results obtained.

interdependent, they can be combined in various ways to ensure balance of payments equilibrium¹⁶.

The countries under consideration operate a variety of import controls covering a broad range of goods. The objectives of these controls include balance of payments management, revenue generation, essential goods supply and the protection of local industries. Usually, the macroeconomic rationale for foreign exchange controls is that they are prompt, direct and predictable in controlling import demand, compared with other policies such as demand deflation. To the extent that quantitative restrictions on use of foreign exchange result in an overvalued currency, the main implications for the economy are as follows:

1. Imported raw materials are effectively cheaper at an overvalued exchange rate than they would otherwise be, reflecting an implicit subsidy on those imported raw materials (where there are no other restrictions on import);
2. At an overvalued currency, there is excess demand for imports (which are cheaper) so the foreign exchange requirements of many industries are not satisfied, which leads to lower utilization of their capacities;
3. An overvalued currency augments the disparity of effective protection across industries, since the proportion of imported inputs vary among industries;
4. An overvalued currency promotes black marketing of foreign exchange, by affording room for arbitrage; and
5. An overvalued currency also encourages smuggling of imported goods across the border, again because of arbitrage profits to be made.

When the extent of overvaluation of the exchange rate is taken into account, the ERP measured is referred to as the net effective rate of protection (NERP). The NERP may be expressed algebraically as:

$$\text{NERP} = \frac{(1+q) (VA_T^d + VA_{NT}^d) - VA^w}{VA^w} \times 100 \quad [4]$$

with VA_T^d and VA_{NT}^d representing domestic value added for traded goods and domestic value added of non-traded goods, respectively, and q is the estimated exchange rate distortion.

In this analysis, the ERP is estimated at the prevailing official exchange rates. The qualitative analysis of the results highlights foreign exchange rate valuation for the countries under consideration for which it is relevant.

¹⁶ It will be recalled that Lesotho, Namibia, Swaziland and South Africa are members of the Common Monetary Area, which maintains the currencies of the first three on par with the rand. Given the relative sizes of the members, the exchange rate is likely determined by South Africa, which operates a relatively unrestricted forex regime for the current account with a more heavily controlled capital account. Further discussion of the CMA is, however, beyond the scope of this study.

A.2.5 Negative Value Added at World Prices

The analysis reveals that a number of firms in each country have negative value added at world prices. The incidence of negative value added at world prices indicates that the cost of inputs into the production process exceed the value of sales by more than the returns to labor and capital.

For example, a car assembly plant may have negative value added at world prices if the cost of the imported components exceeds the world value of the completed car. Where negative value added at world prices occurs, the assembled car is worth less than its component parts. This implies that the resources used in the production of the car would certainly be better employed elsewhere. The country would actually increase the value of its total output and save foreign exchange by closing down the factory, releasing and reallocating its resources, and importing its requirement of the closed factory's output.

With negative value added at world prices, the ERP may be regarded as infinite or extremely large. This means effective protection must be maintained at an inordinately high level in order to protect the activity. Since this would distort the sector and sub-sector averages presented in the results, no ERPs are presented for firms with negative world value added.

A.3 Assessing the Balance of Incentives

A.3.1 Introduction

As already explained, policy makers employ a number of measures which affect the domestic prices of goods, whether this is intended or not. The consequence is to introduce a “wedge” or differential between the prices that exist in the home market and those prevalent in other markets. These other markets are potential or actual export markets for domestic products.

Effective protection analysis highlights the interaction between protecting both inputs and outputs, and the consequences such protection has on the incentives facing a particular sector. Anti-export bias reveals the influence protection can have on the overall balance of incentives in favor of import competing production relative to exportable production. The “positive” protection that producers enjoy on their output is only available in their home market, in other markets they will either enjoy no such protection (where there is no tariff on their product, referred to as the undistorted or world market) or less protection, where the country of destination levies a smaller tariff than the home country. If producers enjoy protection in their home market, will they still want to sell in markets where they receive less or even no protection?

A.3.2 Methodology

The countries under consideration operate multiple tariff schedules. They all have a standard rate, extended to all non-preferential partners, called the most favored nation (MFN) rate. In the case of the BLNS as members of SACU, this is a common external tariff. All SACU members levy the same tariff on imports from outside their customs union (and no tariff on

intra-union trade). The countries further operate the SADC preferences. The SADC FTA came into effect in September 2000 and the Member States should have implemented their second cut in tariffs on 1 January 2002, both towards South Africa and towards other Member States¹⁷. Some countries also operate bilateral trading agreements, whereby they extend or enjoy preferential tariffs from one partner country¹⁸.

Whereas ERPs quantify the combined effect of price distortions on outputs and inputs, they measure the proportion by which an activity's value added at domestic prices differs from that which would be realized if the prices of its products and inputs were not distorted. Generally a study would consider three ERPs: the rate of protection received in the home market, the rate enjoyed on the regional export market and that prevailing on the world market. These three ERPs are derived by alternatively applying, home, regional, and no tariffs respectively to the domestic production structure¹⁹.

By looking at the relative ERPs for each of these, it is possible to quantify the extent to which domestic producers are discouraged from producing for export, depending on the level of protection they enjoy in their various markets.

AEB compares the average ERP for import-competing producers with the average rate of protection that applies to exports in a given market. Algebraically, the bias against exporting to regional preferential or world undistorted markets is expressed by:

$$AEB^E = \frac{ERP^I + 1}{ERP^E + 1} \quad [5]$$

where ERP^I is the average net rate of protection to imports as a percentage of import value and ERP^E is the average net rate of protection to exports as a percentage of export value (alternately in the regional or undistorted, world export market).

The model takes the overall average rate of protection across all the firms surveyed and compares the resulting ERP if they were producing solely for the domestic market with their ERP if they were selling all their output in the world market; while in order to assess the aggregate degree of protection within the regional market, anti-export bias will also be calculated by comparing the ERP in the domestic market with the ERP if firms produced entirely for the regional market.

Generally the analysis would presents results for AEB both by broad activity sectors and as an economy-wide average. Where AEB is greater than one, there is bias against exporting in the relevant market: the level of effective protection enjoyed in the home market exceeds the level achieved by exports and thus discourages from exporting. This implies an import-substituting regime and clearly has negative implications for foreign exchange revenues, openness and economic growth. A ratio of one indicates neutrality, while AEBs of less than one reflect a pro-export bias.

¹⁷ SADC Member States agreed to operate two tariff reduction schedules: a differentiated offer to all Member States except South Africa and an offer specific to South Africa, which recognizes the latter's more developed production capacity and therefore lowers tariffs later and slower than the differentiated schedule.

¹⁸ Malawi, Mozambique and Zimbabwe have bilateral agreements with South Africa, though these should have lapsed upon introduction of the SADC FTA.

¹⁹ See Appendix B on the calculations.

It will be recalled that negative value added at world prices can be observed, in which case no ERP may be calculated. Rather, it is represented that the level of protection needed to motivate domestic production in such cases is extremely high in terms of costs and benefits to the economy. For similar reasons, no AEB may be calculated where negative world value added is observed. Equally, where this is observed, the bias against exporting (in any and all markets) will be infinite.

Appendix B: SELECTIVE LITERATURE ON IMPACTS OF TARIFF LIBERALIZATION

Based on WTO Working Paper: TN/MA/S/1/ADD.1 with additions for 2004 and 2005.

General Anderson, James and Neary, J. Peter, (2004) “Welfare vs. Market Access: The Implications of Tariff Structure for Tariff Reform”, Working Paper No. 10730, Boston, National Bureau of Economic Research

This paper shows that the effects of tariff changes on welfare and import volume can be fully characterized by their effects on the generalized mean and variance of the tariff distribution. Using these tools, it derives new results for welfare- and market-access-improving tariff changes, which imply two 'cones of liberalization' in price space. Because welfare is negatively but import volume positively related to the generalized variance, the cones do not intersect, which poses a dilemma for trade policy reform. Finally, it shows that generalized and trade-weighted moments are mutually proportional when the trade expenditure function is CES.

Anderson, Kym, (2004), Agricultural Trade Reform and Poverty Reduction in Developing Countries, Policy Research Working Paper, WPS3396, Washington, World Bank

The author offers an economic assessment of the opportunities and challenges provided by the World Trade Organization 's Doha Development Agenda, particularly through agricultural trade liberalization, for low-income countries seeking to trade their way out of poverty. After discussing links between poverty, economic growth, and trade, he reports modelling results showing that farm product markets remain the most costly of all goods market distortions in world trade. The author focuses on what such reform might mean for developing countries both with and without their involvement in the multilateral trade negotiations. What becomes clear is that if those countries want to maximize their benefits from the Doha round, they need also to free up their own domestic product and factor markets so their farmers are better able to take advantage of new market opportunities abroad. The author also addresses other concerns of low-income countries about farm trade reform: whether there would be losses associated with tariff preference erosion, whether food-importing countries would suffer from higher food prices in international markets, whether China's WTO accession will provide an example of trade reform aggravating poverty by way of cuts in prices received by Chinese farmers, and the impact on food security and poverty alleviation.

Bacchetta, M and Bora, B. (2003), Industrial Tariff Liberalization and the Doha Development Agenda, WTO Discussion Paper, Geneva, WTO

The negotiating mandate for the Doha Development Agenda is both broad and comprehensive. This paper focuses on the basic mandate given to negotiators in the area of tariffs and trade in industrial products. With respect to developed country markets the key issue is how to tackle the residual protection arising from low overall levels of protection. We have identified a number of products at the 4-digit level of the HS system where issues of peaks and escalation need to be addressed. For developing countries there are two issues – their high levels of tariffs and the limited coverage of bindings for some Members. These, however, do not preclude problems of peaks and escalation such as those that we have

identified in developed country markets. Finally, for LDCs the issues are the degree of effective non-reciprocal market access granted by developed countries, and the very high levels of protection they face in developing country markets, and the role that high levels of protection are playing as industry policy instruments in their own economies.

Bacchetta, M and Jansen M. (2003) "Adjusting to Trade Liberalization: The Role of Policy Institutions and WTO Disciplines", Special Series No. 7, Geneva, World Trade Organization

This study examines in detail the process immediately following a change in trade policy and analyzes what this process entails for the economy as a whole and for individual workers and companies. The study aims to assist policy makers in pinpointing those aspects of an economy that hamper adjustment. It seeks to identify tools at the disposal of governments to smooth adjustment, to minimize an economy's adjustment costs and to alleviate the burden on those most impacted.

Bacchetta, M. and Bora, B. (2001) "Post-Uruguay Round Market Access Barriers for Industrial Products", *Policy Issues in International Trade and Commodities*, Study Series No.12, Geneva: UNCTAD.

http://www.unctad.org/en/pub/ditctab_list.en.htm

This paper examines the landscape of border protection remaining after the Uruguay Round. It is unique in many respects. First, it uses both applied and bound rates. Second, it examines the structure of protection from the perspective of both the importer and exporter. The general conclusion of the paper is that significant levels of protection still need to be addressed. The paper examines the degree to which preferential agreements will have an effect on the tariff structure and finds that in the specific context of least developed countries (LDC) market access into developed countries there is a large difference between the preferential and the most favoured nation (MFN) rates. The paper concludes with some suggestions for improving the literacy level of the policy debate on trade policy, by improving the quality and accessibility of protection and trade data.

Buffie, E. (2001), *Trade Policy in Developing Countries*, Cambridge University Press, Cambridge.

This book is the first work in the field to examine trade policy in an integrated theoretical framework based on optimising dynamic models that pay careful attention to the structural features of developing country economies. Following a thorough critique of the debate on inward vs. outward-oriented trade regimes, the book explores the main issues of concerns to less developed countries in the areas of optimal commercial policy, trade liberalization and direct foreign investment. The book contains a section on the problems of transitory unemployment in developing countries during the process of trade liberalization.

Finger J. M., M. D. Ingco and U. Reincke (1996) *The Uruguay Round: Statistics on Tariff Concessions Given and Received*, Washington DC: World Bank.

This publication provides summaries of the tariff liberalization agreed at the Uruguay Round negotiations of the GATT. The tables provide measures of reduction, bindings, and levels of most-favoured-nation (MFN) customs tariff rates. They do not provide estimates of how

exports and imports will change as a result of these liberalizations, nor do they gauge margins of tariff preferences or how the Uruguay Round concessions will affect those margins.

Finger, M., Reincke, A. and Castro, A. (1999) "Market Access Bargaining in the Uruguay Round", World Bank Policy Research Working Paper 2258, Washington DC: World Bank.

This study explores market access bargaining, particularly tariff bargaining, at the Uruguay Round. There are two general objectives (a) to measure the extent of country participation in market access bargaining—the degree to which countries agreed to reciprocal liberalisation or to bind under the GATT/WTO otherwise unilateral liberalisation; and (b) to analyse the basis of the success in market access bargaining that was achieved at the round—was the successful outcome attributable to a rigid adherence to reciprocity in bargaining—a dollar of concessions received by each party for each dollar of concession given?—Or is this success the result of a more relaxed view of reciprocity, one that recognises other reasons to reduce tariffs, such as the contribution of individual liberalisations to constructing an international system within which all may prosper—or even the domestic gains liberalisation brings?

Francois, J, Manole, V., and Martin W, (2005) Choosing formulas for Market Access Negotiations: Efficiency and Market Access Considerations, Policy Research Working Paper, WPS3474, Washington, World Bank

An important issue in multilateral trade negotiations is the approach taken to reduce tariffs. The authors believe that there are important advantages in formula approaches and survey a range of options between the sharply top-down Swiss formula and proportional cuts in tariffs. Over the range the authors consider, they find that the economic efficiency impacts for the importer are not greatly influenced by the extent to which higher tariffs face bigger cuts. However, top-down approaches appear to be more effective in reducing tariff escalation, and provide greater market access gains to poor countries.

Francois, J. (2001) *The Next WTO Round: North-South Stakes in New Market Access Negotiations*, Amsterdam and Rotterdam: Centre for International Economic Studies.
<http://www.adelaide.edu.au/cies/francois.pdf>

Reaching a consensus on the next round of multilateral trade negotiations has been a trying experience for members of the World Trade Organization (WTO). The failure to launch a new round at the WTO Trade Ministerial in Seattle in late 1999 was not just because of the disruptive efforts of 50,000 anti-globalization protestors. Also reluctant to see a new round launched were numerous developing country members of WTO. Some of those countries feel their economies have not benefited sufficiently from implementation of commitments made at the previous Uruguay Round of negotiations. Why should the next round be any different in that respect, they ask? This study explores that question using state-of-the-art modelling of the global economy. It examines the distributional consequences within (e.g. between unskilled and skilled workers) and between countries of a 20% and a 50% cut in the tariffs that will remain after the Uruguay Round is fully implemented by 2004. It takes explicit account of the fact that many (especially developing) countries have bound their tariffs on imports at well above the actual rates currently applied, so that a commitment to cut bound rates leads to less trade liberalization than previous studies have suggested. But this study also factors in the realities of imperfect competition in many markets (which generates pro-competitive gains from trade that are omitted from studies that simply assume perfect

competition in all markets), and the potential for gains from reforms in the services sectors. Among the results to emerge is the finding that developing countries could expect to gain more from the next round than they gain from all the official development assistance they currently receive – a gain comparable in value to their current inflows of foreign direct investment.

Francois, J. (2001) "Commercial Policy Variability, Bindings, and Market Access", London: CEPR.

<http://www.intereconomics.com/francois/text9702.pdf>

Protection unconstrained by rules often varies substantially over time. Rules-based disciplines, such as WTO tariff bindings and bindings on market access in services, constrain this variability. We examine the theoretical effects of such constraints on the expected cost of protection and offer a formalization of the concept of “market access,” emphasizing both the first and second moments of the distribution of protection. As an illustration, we provide a stylized examination of Uruguay Round bindings on wheat.

Laird, S. and Yeats, A. (1987) "Tariff-cutting Formulas and Complications", in J.M. Finger and A. Olechowski, *The Uruguay Round - A Handbook for the Multilateral Trade Negotiations*, Washington DC: World Bank.

This paper was written as a background note to tariff negotiations during the Uruguay Round. It identifies and examines four longer term problems associated with tariffs. These are, first, the fact many tariffs are not legally bound. Second, there are different effects of specific tariffs on developing countries' exports. Third, the cost-insurance-freight, as opposed to free-on-board procedures for customs valuations discriminate against geographically disadvantaged developing countries, particularly those that are least developed and landlocked. Fourth, the problem of how to liberalise tariffs for products that are also 'hard core' tariffs. The article also reviews general approaches to tariff liberalisation.

Martin, W. and Winters, L.A. (1996) *The Uruguay Round and the Developing Countries*, Cambridge; New York and Melbourne: Cambridge University Press.

Fourteen papers, originally presented at a World Bank conference held in Washington, D.C., in January 1995, examine the implications of the GATT Uruguay Round. Papers focus on agricultural liberalization and the Uruguay Round; trade in manufactures, the outcome of the Uruguay Round, and developing country interests; assessing the GATT; the Uruguay Round and market access for developing countries; assessing agricultural tariffication under the Uruguay Round; liberalizing manufactures trade in a changing world economy; quantifying the Uruguay Round; a numerically-based, qualitative assessment of the Uruguay Round; the liberalization of services trade and the aftermath of the Uruguay Round; safeguard provisions in GATT and legalized backsliding; the economic effects of Uruguay Round agreements on trade-related intellectual property issues; trade-related investment measures and a case for more comprehensive multilateral rules on investment; developing countries and system strengthening in the Uruguay Round; and the intrusion of environmental and labour standards into trade policy.

Milanovic, Branko and Squire, Lyn, (2005), “Does Tariff Liberalization Increase Wage Inequality ? Some Empirical Evidence, Working Paper No. 11046, Boston, National Bureau of Economic Research

This paper attempts to answer an often-asked question: if tariff rates are reduced, what will happen to wage inequality? It considers two types of wage inequality: between occupations (skills premium), and between industries. Using two large data bases of wage inequality that have become recently available and a large dataset of average tariff rates all covering the period between 1980 and 2000. The paper finds that tariff reduction is associated with higher inter-occupational and inter-industry inequality in poorer countries (those below the world median income) and the reverse in richer countries. The results for inter-occupational inequality though must be treated with caution.

Nordas, Hildegunn Kyvik, (2003) Is Trade Liberalization a Window of Opportunity for Women? WTO Working Paper, Geneva, World Trade Organization

This paper analyses how trade affects women's job opportunities and earnings through five case studies: Mauritius, Mexico, Peru, the Philippines and Sri Lanka. It is found that women's share of the labor force has increased over time and the wage gap between men and women has narrowed. It is also found that there is a positive and statistically significant relation between exports and women's share of employment while there is a statistically significant and negative correlation between women's share in employment and imports. The correlation between women's share of employment and trade stems from variation between sectors rather than within sectors over time, indicating that export-competing industries tend to employ women while import-competing industries tend to employ men. Trade liberalization is likely to create jobs for women and over time increase their relative wages.

OECD (1999) "Non-OECD Countries and Multilateral Trade Liberalization: A Background Note on Some Key Issues", Paris: OECD.

[http://appli1.oecd.org/olis/1999doc.nsf/8358a613ec4462afc12569fa005d1700/b6c50084198c9a8bc12568330058b793/\\$FILE/11E93248.ENG](http://appli1.oecd.org/olis/1999doc.nsf/8358a613ec4462afc12569fa005d1700/b6c50084198c9a8bc12568330058b793/$FILE/11E93248.ENG)

The objective of this paper is to analyse the benefits of multilateral trade liberalisation for non- OECD countries. These are presented both in terms of qualitative gains from enhanced rules and disciplines in the context of the WTO, and quantitative gains from further cuts in protection. Qualitative gains are described in reference to the system of rules and disciplines that are embodied in the WTO and the interests of developing countries in seeing these develop further. This is an area where all countries, be they net importer or exporter of this or that product or service, share similar interests, but perhaps where non-OECD economies have bigger stakes than the larger trading nations in the OECD area. Calculations made for this paper have sought to reflect different packages of cuts in tariffs on trade in agricultural and industrial goods. The results suggest that in the year 2010, assuming a full and global tariff liberalisation, net world welfare could be around US\$1,200 billion (in 1995 prices) higher than it would be if current levels of tariff protection remained unchanged. The technical limitations inherent in all exercises of this type are such as to lead, almost certainly, to the net benefits being underestimated. Two other scenarios are also presented here reflecting less ambitious tariff liberalisation outcomes. It should be stated that the purpose of this exercise is neither to describe the scope or modalities of future tariff negotiations, nor to prescribe what the agenda should or ought to encompass. Rather, the objective is to give an idea of the benefits that can still accrue from just traditional cuts in tariffs.

Panagariya, Arvind (2002) "Formula Approaches to Reciprocal Tariff Liberalization" in B. Hoekman, A. Mattoo, and Philip English (Eds.) Development, Trade, and the WTO: A Handbook, Washington, DC.

The GATT gives member countries considerable flexibility with respect to how tariffs are lowered. They can engage in bargains with their major trading partners by sectors, as was the case in the earlier rounds, or agree on a general formula applicable uniformly to all members, as in the Kennedy and Tokyo Rounds, or pursue a combination of the two, as in the Uruguay Round. This paper analyses the sectoral approaches on the one hand and the across-the-board approaches and tariff reduction formulas on the other. The final choice of approach depends largely on the underlying objective. For example, if the objective is maximum liberalization worldwide, an across-the-board approach which lowers higher tariffs more is appropriate. On the other hand, if governments are driven by domestic lobbies, a sector-by-sector approach is likely to be preferable. The author argues that, in the present scenario, from the view point of developing countries and across-the-board approach like the Swiss formula would make the most sense.

Rogowsky, R., Linkins, L. and Tsuji, K. (2001) "Trade Liberalization: Fears and Facts", Washington DC: CSIS mimeograph.
http://www.csis.org/pubs/2001_tradeliber.htm

The authors examine seven often-expressed concerns about trade liberalization to assess both the facts and common perceptions underlying the issues: (1) trade's effect on manufacturing jobs, (2) trade's effect on wage and income inequality, (3) trade deficits, (4) United States economic exposure to foreign-market instability, (5) the threat to sovereignty, (6) trade's effect on the environment, and (7) health and safety. Research shows that some popular concerns about trade are factually based, but others are less well supported or arise from apparent misunderstandings of the way international markets work. After briefly summarizing the concerns raised in each area, the authors review a large body of recent economic and legal literature. Plain statements by advocates of a particular position on an issue appear alongside discussion of more formal economic or legal analysis of the same issue. This form of presentation both highlights the current divergence of views and demonstrates the extent to which either new research or better public dissemination of existing research might lead toward greater consensus.

Safadi, R. (1996) "The Uruguay Round Agreements: Impact on Developing Countries", *World-Development* 24, 7: 1223-1242.

Implementation of the results of Uruguay Round will bring about significant increases in trade, investment, income and welfare for developing countries. This derives from increased market access to developed countries' markets and from enhanced efficiency originating from their own liberalization commitments, although the distribution of benefits will be uneven. Developing countries will also benefit from improved rules for trade and investment coupled with enhanced institutional enforcement of these rules and greater exposure to global competition within a more predictable, secure and credible international trading environment. To maximize the benefits, however, developing countries will need to continue with recent unilateral reforms to improve their supply response.

Snape, R. (1997) "Tariffs, Then and Now: Lecture in Honour of the Late Bert Kelly", *Australian Economic Review* 30, 2: 144-154.

While much of the Australian trade liberalisation for which Bert Kelly fought has been achieved, there are still areas of highly selective protection, particularly in textiles, clothing, footwear and passenger motor vehicles. An analysis is made of arguments for continued assistance which are advanced in some quarters: that Australia should not reduce its barriers unless other countries also do so and that we are 'leading the pack', that frontier barriers should not be reduced unless microeconomic reform in Australia is accelerated; that because other countries may exclude automobiles from their APEC commitments, so should Australia; that small tariffs don't matter; and that local pain overshadows national gain. Bert Kelly would have found many of the arguments all too familiar.

Tarr, David G. (2002) "Arguments For and Against Uniform Tariffs" in B. Hoekman, A. Mattoo, and Philip English (Eds.) Development, Trade, and the WTO: A Handbook, Washington, DC.

This paper examines the arguments for and against a uniform tariff structure. Arguments against uniformity have to do with terms of trade, promotion of 'strategic' or infant industries or restructuring of industries, revenue or balance-of-payments considerations, and the utility of tariffs as a negotiating tool at the WTO. Arguments in favour of uniformity include political economy considerations, administrative convenience, and reduction of smuggling and corruption in customs. The author maintains that tariff uniformity is the best choice, in practice.

Zafar, Ali (2005) "Revenue and Fiscal impact of Liberalization: The Case of Niger, Policy Research Working Paper WPS3500, Washington, World Bank

Using data collected during several missions, the author finds that the principal reasons for low revenue mobilization are (1) the adverse fiscal impact of trade liberalization, (2) the defiscalization of agriculture in the 1970s, (3) the collapse of the uranium boom in the 1980s, and (4) the poor record of the VAT in mobilizing revenue. The large reduction in tariffs during the 1980s and 1990s in the context of structural adjustment programs and West African regional integration initiatives had adverse effects on trade tax revenue during the period 1980-2003. But higher import levels after 1994 succeeded in partially mitigating the revenue losses. The experience of Niger shows that without accompanying macroeconomic policies, parallel improvements in tax and customs administration, and success in mobilizing domestic taxes, most notably the VAT, trade reform can have adverse fiscal consequences. Using a SMART model partial equilibrium analysis developed by UNCTAD for researchers and negotiators at multilateral trade rounds, the author simulated three different tariff shocks to test the fiscal and trade implications of additional trade liberalization in Niger. First, the preferred tariff regime in terms of overall fiscal and job creation impact was the harmonized Swiss formula in contrast to a 10 and 15 percent uniform tariff. Second, a possible Regional Economic Partnership Agreement (REPA) between the European Union and l' Union Economique et Monetaire Ouest-Africaine (UEMOA) by 2015 that would abolish duties on EU imports to the UEMOA countries would have negative fiscal effects on Niger of more than 1 percent of GDP, positive effects on trade creation of about 1.5 percent of GDP, and ambiguous effects on local industry. While there will be some welfare gains for consumers and importers from lower import tariffs and the possibility of trade creation, the fiscal losses and adjustment costs would be significant, particularly in the machinery and transport sectors. Third, there are asymmetric gains and losses from regional integration and tariff changes, and a 10 percent uniform tariff would have the greatest impact on Benin and Senegal and some

impact on Niger and Togo. In sum, further trade liberalization in Niger will have significant fiscal costs, partially offset by trade creation through increased imports. < BR >

WTO (2001) *Market Access: Unfinished Business*, Geneva: WTO Secretariat.
http://www.wto.org/english/res_e/booksp_e/maccess_e.pdf

This study has two closely related objectives: to evaluate post-Uruguay Round market access conditions and to contribute to a clarification of the stakes in the ongoing process of multilateral trade negotiations in the market access area. Industrial tariffs are included along with and agriculture and services, even though they are not currently the subject of a negotiating mandate, because their inclusion contributes to both objectives. The study also provides a brief overview of the progress to date in the mandated negotiations on agriculture and services.

WTO (1994) "The Results of the Uruguay Round of Multilateral Trade Negotiations: Market Access for Goods and Services: Overview of the Results", Geneva: GATT.

The Uruguay Round negotiations were concerned with two aspects of trade in goods and services. *First*, there was the goal of increasing market access by reducing or eliminating trade barriers. This objective was met by reductions in tariffs, reductions in non-tariff support in agriculture, the elimination of bilateral quantitative restrictions, and reductions in barriers to trade in services. *Second*, there was the goal of increasing the legal security of the new levels of market access. The strengthened and expanded rules, procedures and institutions are the Round's contributions to the second goal. Part II of this study is concerned primarily with increases in market access for goods.²⁰ Because of their quantitative nature, these results lend themselves to a further examination of the likely impact on the level of world trade in goods and world income. The "binding" of reductions in tariffs and certain other interventions - a key element in the security of market access, and one which can be described in quantitative (tabular) terms - is also covered in Part II. Part III focuses on the Uruguay Round's market access results in the services area, that is, on the commitments in countries' services schedules under the new General Agreement on Trade in Services (GATS). In some respects, the services schedules are similar to the goods schedules examined in Part II. Both contain elements of increased market access, together with elements of more secure market access in the form of commitments not to increase the level of restrictions covered by the schedules. Though to a much smaller extent than in the goods area, it is also possible to describe the results in the services area in quantitative (tabular) terms. In other respects, however, the respective schedules are very different. In particular, there is no meaningful way to quantify the *size* of the reduction in barriers to trade in services - no parallel, for example, to the 40 per cent reduction in developed countries' tariffs on industrial goods - which is why services could not be included in the estimates of the increase in trade and income from the Uruguay Round.

While the schedules of commitments on goods and services provide legal security for the market access contained in the schedules, their value also depends on rules limiting alternative forms of protection. Part IV is a brief summary of those parts of the Uruguay Round agreement that strengthen and extend the rules, procedures and institutions governing (a) other kinds of measures - such as subsidies, technical barriers and discriminatory internal taxes - that could be used to restrict market access and thus offset part or all of the increased

²⁰Earlier versions of many of the tables in Part II have appeared in GATT documents and publications over the past year.

market access contained in the schedules of commitments, and (b) procedures for resolving disputes over the interpretation of countries' obligations, both those in the schedules and those involving rules and procedures. By providing a framework for the monitoring of trade policies, for regularly scheduled ministerial-level meetings and for future negotiations, the strengthened institutional arrangements also help countries anticipate and defuse trade conflicts that might otherwise lead to violations of WTO obligations - that is, to illegal reductions in market access.

1. TARIFF STRUCTURE: TARIFF PEAKS AND TARIFF ESCALATION

Bouët, A., Fontagné, L., Mimouni, M. and Pichot, X. (2001) "Market Access Maps: A Bilateral and Disaggregated Measure of Market Access", Document de travail 2001 - no. 01-18, Paris: CEPII.

<http://www.cepii.fr/anglaisgraph/workpap/summaries/2001/wp01-18.htm>

MAcMaps (Market Access Maps) is a bilateral and disaggregated measure of market access which has been constructed to integrate the major instruments of protection (ad valorem and specific duties, prohibitions, tariff quotas, anti-dumping duties, norms) at the most detailed level (tariff lines), as well as all discriminatory regimes. It is derived from TRAINS (UNCTAD) source files, and AMAD (the Agricultural Market Access Database results from a co-operative effort by Agriculture and AgriFood - Canada - , the EU Commission - Agriculture Direction-, the FAO, the OECD, the World Bank, the UNCTAD, and the United States Department of Agriculture - Economic Research Service) databases, and integrating notifications obtained from member countries of the WTO regarding their anti-dumping regimes. Lastly these files are combined with data from the COMTRADE (UN) database. MAcMaps measures the market access for 223 exporting countries into 137 countries at the level of the tariff lines for the year 1999. It can be applied to any geographic or sectoral breakdown using a procedure that minimises the endogeneity bias while accounting for the importance of products in international trade: in MacMaps, the protection of an importing country is weighted by the imports of the reference group this country belongs to, the grouping criteria being GDP per capita. We present four case studies: the first one is a general estimation of protectionism for 8 countries (European Union, USA, Japan, Australia, Morocco, Brazil, Switzerland and China) and 6 sectors (Cereals, Other agricultural and food products, other primary products, Textiles and clothing, other manufacturers, Services). The second case study is an original measurement of tariff peaks. Identifying the most protected countries is the third case study and the last one is a measurement of the importance of technical barriers and standards.

Medrano, L. (1999) "Tariff Protection and Trade Agreements", *Estudios Económicos* 14, 2: 217-229.

This paper studies the optimal tariff rates on goods imported from the rest of the world when a commercial club accepts a new partner. It shows that when a new member is accepted into the club, the other members of a free trade agreement have incentives to reduce tariffs on the rest of the world's goods. However, when the trade agreement is a custom union, the union may have incentives to increase the common external tariff. This happens when the industry of the custom union is small compared to the world industry.

OECD (1999) *Post-Uruguay Round Tariff Regime: Achievements and Outlook*, Paris: OECD.

Two of the most significant success stories of post-war trade diplomacy and multilateral trade negotiations that have occurred under the auspices of the GATT (now the WTO) have been the massive reductions in tariffs, and the establishment of non-discriminatory tariffs as the principal means of trade protection. When leaders from around the world gather in Seattle, Washington at the end of November 1999, a fresh opportunity to continue dismantling tariff barriers will present itself. This book provides trade negotiators with an indispensable tool that will help them formulate their negotiating objectives and strategies in the area of tariffs; it also provides policy analysts with key data that are necessary to define negotiating scenarios and to impute the corresponding impact on trade, employment and growth. Finally, students of international trade will no longer need to labour over obtaining comprehensive, detailed, and comparable tariff-line data and could proceed to apply these to policy issues and options.

OECD (1997) *Indicators of Tariff and Non-Tariff Trade Barriers*, Paris: OECD.

The various summary tariff and NTB indicators reported in this study can be used either separately or together to shed considerable light on the structure of Member countries' tariff schedules and the pervasiveness of their NTBs. The indicators identify those sectors where, tariffs (or NTBs) are particularly high or pervasive, entailing not just high costs to consumers of protected products, but also large efficiency losses for the domestic economy as a whole. High tariffs levied on imports of products for which there are neither foreign nor domestic substitutes might be expected to lead to particularly large increases in the prices faced by the consumers of these products. Furthermore, the existence of tariff 'spikes' for some items in combination with relatively large values of one or more of the dispersion indicators for the group suggests that the consequent inter-sectoral distortion in production, and thus the net welfare losses, may be large. Although crude, the types of summary indicators discussed in this study nevertheless highlight the potential distortions embodied in countries' tariff schedules and, to a lesser extent, those associated with NTBs.

UNCTAD/WTO Joint Study, (2000), "The Post-Uruguay Round Tariff Environment For Developing Country Exports: Tariff Peaks and Tariff Escalation", TD/B/COM.1/14/Rev.1, Geneva: UNCTAD.

This study analyses the post-Uruguay Round tariff situation that will prevail for products imported from developing countries, once all Uruguay Round concessions have been implemented, in the four developed country markets of Canada, the European Union, Japan and the United States, as well as in the four developing country markets of Brazil, China, the Republic of Korea and Malaysia. This paper was revised essentially to reflect updated data for applied tariffs and import charges for Japan after the new tariffifications (2000) and for China (1998); new Generalised System of Preferences rates; as well as new estimates for *ad valorem* equivalents of specific post-Uruguay Round tariff rates based on average import unit values for 1996/1997. Problems of high tariffs and tariff escalation remain widespread for developing countries even after the Uruguay Round. About 10 per cent of the tariff universe of the Quad countries will continue to exceed the level of 12 per cent *ad valorem* after full implementation of the Round and taking into account GSP rates. Quad countries maintain tariff peaks reaching as high as 350 per cent to 900 per cent for important export products of developing countries, essentially basic food and footwear. One fifth of the tariff peaks of the

United States, about 30 per cent of those of Japan and the European Union and about one seventh of those of Canada exceed 30 per cent. The developing countries covered apply rates above 12 per cent more frequently than the Quad countries, but have fewer extremely high rates. Peak tariffs affect both agricultural and industrial products significantly. The main problems occur for major staple foods, such as sugar, rice, milk products, and meat; fruit, vegetables, fish, etc; food industry products; textiles and clothing; footwear, leather and travel goods; automotive products; and consumer electronics and watches. Peak tariffs are, for the time being, cumulated with the continued application of stringent textiles and clothing quotas by three of their most important developed country markets, as well as severe import restrictions maintained for reasons of plant and animal health. In addition to extremely high tariffs and other protection, tariff escalation remains a further important obstacle which makes it difficult for developing countries to enter into industrial exports. This is particularly pronounced in precisely those branches that offer a realistic chance for a successful start to a wider range among them: the food industry, textiles, clothing and shoe industries, as well as wood industry products.

2. MARKET ACCESS FOR LDCS

Bora, B, Cernat, L and Turrini, A (2001), "Duty and Quota Free Access for LDCs: Further evidence from CGE modelling", *Policy Issues in International Trade and Commodities*, Study Series No.14., Geneva: UNCTAD.

The aim of this work is to assess the effects of trade policy initiatives aimed at improving market access for LDCs in Quad countries (Canada, European Union, Japan and United States). The study simulates the effects of the two policy scenarios: (a) elimination of all tariff and non-tariff barriers against LDCs in the European Union. This experiment is aimed at simulating the effects of the already approved EBA initiative; and (b) elimination of tariff and non tariff barriers faced by LDCs in all Quad markets. This experiment analyses the effects of a hypothetical coordinated action where the other Quad follow the lead of the European Union. The policy experiments performed are analogous to those in Ianchovichina, Mattoo and Olarreaga (2000). Results, though, cannot be straightforwardly compared because of several reasons. First, beneficiary countries in our case are all LDCs, whereas in Ianchovichina, Mattoo and Olarreaga (2000) preferential market access is targeted to Sub-Saharan African countries only. Second, our analysis is conducted at a higher level of desegregation, both sectoral and geographical. Finally, data in our simulations refer to 1997, whereas in Ianchovichina, Mattoo and Olarreaga (2000) the base year is 1995 (GTAP4 database).

Results show that non-reciprocal preferential trade liberalization targeted to LDCs is likely to entail non-negligible gains to beneficiary countries coupled with negligible losses for donor and third countries. When the only donor country is the European Union (EBA initiative), the gains accrue mainly to Sub-Saharan African countries, and are mostly explained by improved terms of trade for beneficiaries. In this case, the key sectors are paddy and processed rice, and sugar. Increased exports from LDCs are directed almost only to the European Union. When liberalization occurs in all Quad countries, the benefits from duty-free and quota-free market access rise substantially. Overall, welfare gains are ten times higher compared with EBA. All beneficiary countries gain notably more, and countries like Bangladesh and the rest of Sub-Saharan Africa enjoy disproportionately higher gains. In this case, in addition to rice and

sugar, key sectors to benefit are wearing apparel, other food and dairy products. Increased export flows from some LDCs are still mainly directed to the European Union under this scenario. For other beneficiary countries, however, the rise in exports is basically targeted to the United States market (Bangladesh), and to Japan (rest of Sub-Saharan Africa).

Hoekman, B., Ng, F. and Olarreaga, M. (2001) "Eliminating Excessive Tariffs on Exports of Least Developed Countries", Washington DC: World Bank.
http://econ.worldbank.org/files/2196_wps2604.pdf

Average most-favored-nation tariffs in the “Quad” (Canada, the European Union, Japan, and the United States) have fallen to about 5 percent. But tariffs more than three times the average most-favored-nation duty are not uncommon in the Quad and have a disproportionate effect on exports of least developed countries. Giving the poorest countries duty-free access for peak-tariff products would increase their total annual exports by roughly \$2.5 billion. Most goods imported from developing countries enter Quad markets duty-free, and average tariffs in Quad markets are very low. But tariffs for some commodities are over 100 percent. Such “tariff peaks” are often concentrated in products developing countries want to export: agricultural and food products—especially such staples as sugar, cereals, and fish; fruits and vegetables; food products with a high sugar content; and tobacco and alcoholic beverages—and products from such labour-intensive sectors as apparel and footwear. Giving least developed countries full duty- and quota-free access in the Quad for peak-tariff products would increase their total annual exports by 11 percent—or roughly \$2.5 billion. Exports to Quad countries of peak-tariff products would expand by 30–60 percent. Considering that peak-tariff items account for only a small share of developing countries’ exports, granting least developed countries duty-free access would have only a negligible impact on other developing countries. For the same reason, Quad imports increase only marginally, suggesting that this factor should not constrain implementation of duty-free access for the poorest countries.

Hoekman, B., Ng, F. and Olarreaga, M. (2001) "Tariff Peaks in the Quad and Least Developed Country Exports", Washington DC: World Bank.
<http://www.worldbank.org/research/trade/pdf/peak.pdf>

Although average tariffs in Quad markets are very low, tariff peaks and tariff escalation have a disproportional effect on exports by least developed countries (LDCs). Tariff peak products tend to be heavily concentrated in agriculture and food products and in labor intensive sectors such as apparel and footwear. Full duty and quota free access for LDCs in the Quad for tariff peak products would result in a 11 percent increase in their total exports—on the order of \$2.5 billion. Exports to Quad countries of tariff peak products would expand by 30 to 60 percent. Given that LDC exports of tariff peak items account for only a small share of total developing country exports, granting LDCs duty free access has a negligible impact on other developing countries. For the same reason, Quad imports increase only marginally, suggesting that this should not be a factor constraining implementation of duty free access for the poorest countries.

OECD (1997) "Market Access for the Least Developed Countries: Where are the Obstacles?", Paris and Geneva: OECD Work Programme and WTO.
[http://www.oilis.oecd.org/olis/1997doc.nsf/a0c602508a90ce004125669e003b5adf/0efed85344f25830c12565380058fd34/\\$FILE/10E75479.ENG](http://www.oilis.oecd.org/olis/1997doc.nsf/a0c602508a90ce004125669e003b5adf/0efed85344f25830c12565380058fd34/$FILE/10E75479.ENG)

This study contains three parts. Part I discusses the main characteristics and structure of LDCs' trade, and sheds some light on the factors that may have impeded a greater participation in international trade. Part II analyses market access conditions for the exports of LDCs with particular emphasis on existing preferential trading arrangements LDCs enjoy in OECD markets, and finally Part III concludes.

UNCTAD (2001), "Duty and Quota Free Market Access for LDCs: An Analysis of Quad Initiatives", Geneva and London: United Nations and Commonwealth Secretariat.

Making developing country trade preferences more effective is essential, especially in the context of the last 5 years, when the international community has been struggling to deliver on its commitment to improve the scope and coverage of its market access initiatives. This study should enable readers to better understand current preference schemes; their value to LDCs; and how that value can be diminished as a result of their limitations. One of the key conclusions is that there would be positive gains to LDCs if the US Canada and Japan followed the lead of the EU and offered quota free and duty free market access to all goods originating from LDCs with the exception of arms. The study examines the costs and benefits of extending the EUs EBA policy in this way.

UNCTAD (2001), "Improving Market Access for Least Developed Countries", UNCTAD/DITC/TNCD/4, Geneva, UNCTAD.

Among the various initiatives undertaken at the multilateral and international level to favour LDCs' exports, the European Union (EU) proposal, originally made in the course of the preparations for Seattle by providing LDCs duty/quota-free treatment for "essentially all" products, is probably one of the most relevant. At present, the recently approved "Everything But Arms" (EBA) initiative is the most tangible implementation of such course of action. The original proposal was discussed in several forums including at the World Trade Organization (WTO), where agreement was reached that duty/quota-free treatment would be "consistent with domestic requirements and international agreements". The "essentially all" qualification of the offer may imply that some items would be excluded from the coverage of the initiative. Moreover the use of the word "consistent" with the existing requirements may imply that current rules of origin and administrative procedures will not be modified.

The value of any new initiative in favour of improving market access for LDCs should be measured against the factors determining the under utilization of current trade preferences (see Table) or "missed preferences", namely those granted but not utilized because of the stringent conditions attached to them and those that could be granted by the inclusion of non-covered products

WTO (1997) "Market Access for Least-Developed Countries", High Level Meeting on Integrated Initiatives for Least-Developed Countries' Trade Development, WT/LDC/HL/14 and Add.1, Geneva: WTO.

This document surveys border trade restrictions that affect the access of least-developed countries' exports to their twenty-three main export markets (accounting for 95 per cent of their exports). It is intended to serve two purposes: to provide background information to Agenda Item B of the High-Level Meeting ("Initiatives to Improve Market Access for Least-Developed Countries"), and to provide governments of least-developed countries and private business active in these countries with up-to-date information about border restrictions that apply in their

main export markets. To that end, the Addendum to this document (WT/LDC/HL/14/Add.1) provides highly disaggregated statistics on tariffs and selected non-tariff measures applied to least-developed countries' exports.

WTO (1998) "Market Access for Exports of Goods and Services of the Least-Developed Countries: Barriers and Constraints", WT/COMTD/LDC/W/11/Rev.1, Geneva: WTO.

This Note has been prepared at the request of the Sub-Committee on Least-Developed Countries as background material for its discussions on market access problems of least-developed countries (LDCs). It updates and expands on WT/LDC/HL/14,²¹ prepared for the High-Level Meeting (HLM) in October 1997, which focused principally on tariff and non-tariff barriers facing LDCs' merchandise exports. The Note complements WT/LDC/HL/14 by including commitments made and information provided on improvements on market access for LDCs since the HLM; expanding on the discussion in WT/LDC/HL/14 of non-tariff measures; and including elements relating to trade in services. Furthermore, to the extent that LDCs have identified such problems, this Note also highlights capacity limitations and other supply-side obstacles to trade expansion that may inhibit LDCs from utilising market access opportunities. In this regard, valuable information was drawn from the responses to questions, including on market access restrictions, provided by LDCs in the questionnaire circulated preparatory to the HLM. These responses are summarized in Annex 1 to this Note.

WTO (1999) "Market Access for Least-Developed Countries: Compilation of Information", WT/COMTD/LDC/W/16, Geneva: WTO.

In the context of the 1997 High Level Meeting on Least Developed Countries, the Secretariat had undertaken work on market access information relating to products of export interest to least-developed countries. The results of this work were presented in document WT/LDC/HL/14/Add.1, and also in document WT/COMTD/LDC/11/Rev.1. The former document presented information in tabular form, while the latter contained a background note presenting a broad overview of market access conditions relating to the exports of least-developed countries. Subsequently, at the meeting of the Sub-Committee on LDCs held on 25 November 1999, and at the initiative of the then Chairperson Ambassador Bruun, the Secretariat was requested to compile existing information on market access conditions relating to the exports of least-developed countries and to present such information on a country-by-country basis, thus updating and building on the work undertaken for the 1997 High Level Meeting.

Attached to this note are a series of tables presenting the results of the compilation exercise. Draft versions of the tables were circulated for comments and corrections, if any, with a request for timely responses so as to enable the Secretariat to finalise the compilation in time for the 18th Session of the Sub-Committee on least developed countries. The tables attached to this note include comments and corrections provided by delegations.

WTO (2000) "Market Access for Least-Developed Countries WTO Members", WT/COMTD/LDC/W/17, Geneva: WTO.

²¹ Market Access for Least-Developed Countries. This document was prepared for the High-Level Meeting on Integrated Initiatives for Least-Developed Countries Trade Development. It essentially focused on barriers to LDCs exports of goods.

The tables attached to this note provide summary information, based on the data presented in the document WT/COMTD/LDC/W/16, on market access conditions as measured by tariff rates which apply to products of export interest to least-developed countries (LDCs). Information is given for each LDC on an individual basis, first for the 23 markets as a whole, and is then disaggregated between developed countries and developing countries/transition economies. Data is also classified by sector groupings, as follows: (i) agriculture; (ii) fisheries; (iii) fuels, minerals, mining and forestry; and (iv) manufactures.

WTO (2001) "Market Access Conditions for Least-Developed Countries", WT/LDC/SWG/IF/14/Rev.1, Geneva: WTO.

This Note surveys market access conditions for exports of Least Developed Countries (LDCs) to 30 markets that account for over 95 percent of LDCs total exports. The survey specifically examines market access improvements for LDCs' exports since the WTO High Level Meeting on Integrated Initiatives for LDCs Trade Development (HLM), in October 1997. The study is based on Members' notifications to the WTO Integrated Database (IDB), COMTRADE and UNCTAD data. It builds on earlier analytical studies carried out by the Secretariat to examine tariff and non-tariff barriers facing LDCs' merchandise exports and briefly surveys access opportunities for trade in services.²² This Note was prepared pursuant to the decision by WTO Members at the 22nd Session of the Sub-Committee on Least Developed Countries on 6 December 2000.

3. IMPACT OF TRADE LIBERALIZATION

Alburo, F. (1999) "Liberalizing Manufacturing Trade", Washington DC: World Bank.
<http://www1.worldbank.org/wbiep/trade/manila/manufacturing.pdf>

The conclusion of the Uruguay Round trade negotiations in 1994 ended some years of uncertainty after they dragged on beyond original timetables, led to deadlocks among contracting parties, and encouraged searches for alternatives to a potential breakdown of the trading system. What is redeeming in the Final Act is an achievement beyond mere extensions of previous GATT commitments. In particular and aside from the (expected) reductions in tariffs, the Uruguay Round Agreement extended the application of multilateral rules and disciplines to areas previously excluded (though managed by GATT) i.e., trade in agriculture and textiles and clothing. Then the Agreement extended multilateral rules and disciplines for trade in services (through the General Agreement on Trade in Services or GATS), trade-related intellectual property rights (TRIPS), and trade-related investment measures (TRIMS). Other mechanisms were also strengthened which gave the new World Trade Organization (WTO) a distinct image from its GATT predecessor. This paper attempts to lay out negotiating options for further liberalization of manufacturing trade from the viewpoint of the East and Southeast Asian Developing Countries. While it may be empirically cumbersome to measure the importance of this Asian trade in manufacturing to some notion of global and regional impact the intention here is simply to highlight that the stakes for manufacturing trade liberalization go beyond the region. It is of course true that the context for any deeper tariff and non-tariff cuts in manufacturing should be multilateral not regional. However there are experiences in this region on mutual trade liberalization, which

²² WTO Secretariat documents: WT/LDC/HL/14 and Add. 1, WT/COMTD/LDC/W/11/Rev.1, WT/COMTD/W/16 and 17.

could be illustrative of options for the WTO 2000 negotiations from the perspective of developing countries. This is aside from the fact that this region has been at the forefront of unilateral liberalization measures that have partly been responsible for its success in the manufacturing trade. Indeed these experiences could also illustrate what not to pursue.

Anderson, K., Dimaranan, B., Francois, J., Hoekman, B. and Martin, W. (2001) "The Cost of Rich (and Poor) Country Protection to Developing Countries", CIES Discussion Paper No. 0136, Adelaide: Centre for International Economic Studies University of Adelaide.

This study confirms that substantial barriers to market access will remain in both rich and poor countries following full implementation of the Uruguay Round agreement. The analysis finds that around 40 percent of the costs of these barriers to developing countries arise from barriers to market access in industrial countries, and 60 percent from barriers in developing countries themselves. The results suggest that there would be large gains to almost all regions from a round of negotiations that increased market access in North and South. In Africa, the potential static gains from multilateral reform appear to exceed those from preferential liberalization, without the well-known disadvantages of a preferential approach.

Bhagwati, J. and T.N. Srinivasan (1999) "Outward-Oriented and Development: Are Revisionist Right?", New York: Columbia University, mimeograph.

This paper provides a theoretical critique of revisionist arguments which question the link between openness and growth, and attempts to reinforce the mainstream argument that there is indeed a strong link between a liberal trade policy and growth.

Dessus, S., Fukasaku, K. and Safadi, R. (1999) "Multilateral Tariff Liberalization and the Developing Countries", Policy Brief 18, Paris: OECD.

This policy brief concludes that:

- Tariffs still matter
- Full tariff liberalisation to 2010 would yield dynamic welfare gains of USD 1200 billion (1995 prices) or 3 percent of world GDP, from greater efficiency and higher productivity.
- Developing countries stand to gain relatively more from trade liberalisation, with aggregate gains amounting to nearly 5 percent of their GDP in 2010.
- The next WTO round will provide an opportunity to member to raise their living standards. Realising this potential, however, poses a major policy challenge to developing countries.

Ebrill, L., Stotsky, J. and Gropp, R. (1999) "Revenue Implications of Trade Liberalization", IMF Occasional Paper 180, Washington DC: IMF.

Although trade liberalization is presumed to reduce trade tax revenues, the impact is in fact ambiguous, since it depends on the nature of a country's trade barriers and its strategy of trade reform. The study analyses the issue using three complementary approaches—case studies, examination of trends in a broad range of countries, and econometric analysis. It assesses both the fiscal consequences of trade liberalization and the manner in which these fiscal effects may have influenced the strategy for trade reform. Given the strong association between trade liberalization and economic growth, the study also highlights the importance of

tax system reforms that would help generate the compensating revenues to support trade liberalization.

The study concludes:

- In many developing countries there has been progress in liberalizing trade and reducing reliance on international trade taxes. Moreover, many developing countries have implemented trade reform while avoiding significant revenue losses; and in some cases, revenues have increased, at least for a period.
- A number of countries maintain tariff rates that exceed revenue maximizing levels. These countries could liberalize, at least initially, without significantly adverse consequences for revenues from trade taxes.
- There is scope for tailoring the pattern of trade liberalization to avoid adverse revenue consequences. In particular, linking tariff reductions to a reduction in exemptions and special regimes, as well as in nontariff barriers and regulations, will typically reduce, often significantly, the tariff level at which revenue objectives can be met. In the long run, far reaching and comprehensive trade reform will inevitably reduce the ratio of trade taxes to GDP.
- Over the medium term, trade liberalization will work to increase the openness of the economy, mitigating revenue concerns.
- An increase in the ratio of trade tax revenues to GDP (or to total revenues) is not necessarily evidence of a negative orientation toward trade reform, since trade liberalization can be associated with an increase in trade tax revenues.
- The need to maintain revenue performance requires that domestic tax reform be considered along with trade liberalization, since sustained trade liberalization inevitably reduces over time the share of trade tax revenues in total receipts. Tax policy and administration reforms require a long gestation period.
- Sound macroeconomic policies have a crucial role in supporting trade liberalization. In particular, appropriate fiscal, monetary, and exchange rate policies are crucial to enhancing the compatibility of trade reform with macroeconomic stability.

Frankel, J. (2000) "Assessing the Efficiency Gains from Further Liberalization", Paper presented at the Center for Business and Government at Harvard University, mimeograph.

<http://www.ksg.harvard.edu/cbg/trade/frankel.htm>

The idea that it is more efficient for countries to engage in international trade, than to produce everything they want domestically, is virtually as old as the field of economics itself. The current vantage point in history, the year 2000, is a time when such gains should be abundantly tangible. During the first half of the 20th century, governments turned back the hands on the historical clock of international integration. The resulting decline in trade was implicated in world depression, political upheaval, and war. During the second half of the 20th century, the leadership of the western alliance, in general, and the United States, in particular, turned forward the hands of international integration. The resulting increase in trade has been accompanied by overall world prosperity and the spread of western economic and political values to virtually all parts of the globe. Nonetheless, the turn of the millennium is a time when critics are questioning the gains from further efforts to liberalize trade. Many are not convinced that historical correlation implies causation. Others might agree that the increase in trade has been a source of economic growth, but argue that concerns other than GDP - such as equality or the environment - point to a different judgment regarding the desirability of trade. Still others might agree with the characterization of the last half-

century, but say that little more now remains to be done. After all, most tariffs are now close to zero, and globalization seems to be complete.

Greenaway, D., Morgan, W. and Wright, P. (2002) "Trade Liberalisation and Growth in Developing Countries", *Journal of Development Economics* 67, 1: 229-244.

Trade liberalisation in developing countries over the last 20 years has often been implemented with the expectation of growth being stimulated; yet the evidence on its growth enhancing effects is mixed. This paper argues that problems with mis-specification and the diversity of liberalisation indices used are in part responsible for the inconclusiveness. Using a dynamic panel framework and three different indicators of liberalisation, the paper finds that liberalisation does appear to impact upon growth, albeit with a lag. The evidence points to a J curve type response and this finding is robust to changes in specification, sample size and data period.

Hertel, T. (1999) "Developing Country Interests in Liberalizing Manufactures Trade", Washington DC: World Bank.

http://www1.worldbank.org/wbiiep/trade/papers_2000/BPmanufact.pdf

The importance of manufactures trade to the developing countries has increased dramatically since the early 1980s, and developing countries' reliance on each others as markets has also risen sharply. Developing countries face disproportionately high trade barriers in manufactures - relatively in the industrial countries, and absolutely in the developing countries - and barriers to their manufactures exports account for around 70 percent of the total barriers faced by their exports. The inclusion of manufactures trade in the WTO 2000 negotiations is particularly important for developing countries, who would benefit both from improved market access and through greater domestic efficiency. In fact, developing countries capture nearly all the benefits (95 per cent) of manufacturing liberalization. In contrast, comparable cuts in agriculture and services benefit the high-income countries relatively more since only 27 and 30 per cent of the global benefits accrue to developing countries in these two cases.

Hertel, T.W., Preckel, P. and Cranfield, J. (2000) "Poverty Impacts of Multilateral Trade Liberalization", Purdue: GTAP.

<http://www.gtap.agecon.purdue.edu/resources/download/650.pdf>

Poverty reduction is an increasingly important consideration in the deliberations over multilateral trade liberalization. However, the analytical procedures used to assess the impacts of multilateral trade liberalization on poverty are rudimentary, at best. Most poverty studies have focused on a single country using detailed household survey data. When it comes to multi-country, global trade liberalization analyses, researchers are forced to resort to a discussion of average, or per capita effects. This severely limits their capacity to address the poverty question. This paper combines results from a newly available international, cross-section consumption analysis, with earnings data from household surveys from seven countries, to analyze the implications of multilateral trade liberalization for poverty in several developing countries in Asia, Africa and Latin America.

Our analysis begins by focusing on the impact of trade liberalization on households at the edge of poverty – the marginal households in our terminology. Since previous multi-region analyses have focused on the per capita effects, we decompose the departures of marginal

household welfare from these per capita effects. These differences are explained in terms of deviations in consumption and earnings shares. We find that the differences in earnings shares are relatively more important in explaining the changes in marginal households' welfare than the differences in their consumption profiles. The multilateral trade liberalization scenario that we examine involves complete elimination of merchandise tariff barriers as well as textile and apparel quotas in place in 1997. This ignores the potential impact of other non-tariff barriers as well as the significant barriers to trade and investment in services and trade distorting domestic farm policies. While this liberalization scenario is accordingly stylized, it does offer a useful benchmark for assessing the potential poverty impacts of multilateral measures. Of particular interest is our partitioning of the effects on poverty of countries' own policies versus those of other countries. We measure poverty using the Foster-Greer-Thorbecke transfer measure that reports the total transfer required to lift all households out of poverty, as a proportion of the poverty level of income. We find that the aggregate measure of poverty is reduced in Indonesia, Philippines, Uganda, and Zambia, while it is increased in Brazil, Chile, and Thailand, following multilateral trade liberalization. The largest percentage reduction in poverty occurs among agriculture-specialized households in Brazil. Indonesia experiences the largest national reduction. The largest increases in poverty occur in the non-agriculture, self-employed and wage-labour households in Brazil, Chile, and Thailand.

Hertel, T.W. and Martin, W. (2000) "Liberalising Agriculture and Manufactures in a Millennium Round: Implications for Developing Countries", *World Economy* 23, 4: 455-469.

<http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=03785920>

This paper brings together the available evidence regarding the impact of future, multilateral liberalisation in agricultural and manufacturing trade on developing countries. It finds that the largest percentage gains (in terms of GDP) from agricultural liberalisation would occur to developing countries in South and South East Asia, where the agricultural sector is quite large and distorted by current policies. Developing country exporters in Latin America are also big gainers, about half of the increase in income derives from improved terms of trade stemming from increased demand for their products overseas. In manufactures, there are substantial gains for developing countries from a reduction in tariff peaks in developed countries, from increased market access in other developing countries, and from efficiency gains resulting from lowering their own barriers.

Hertel, T., Martin, W., Yanagishima, K. and Dimaranan, B. (1995) "Liberalizing Manufactures Trade in a Changing World Economy", in W. Martin and Winters L.A. (eds.) *The Uruguay Round and the Developing Countries*, Cambridge University Press.

This paper aims to assess the impact of the Uruguay Round in the context of a changing world economy. It estimates that the total annual gains in the year 2005 are equal to 0.42 percent of global GDP in that year, or about USD 260 million at 1992 prices. Of this total, about 80 percent results from tariff and export subsidy reductions, and 20 percent from the abolition of the MFA. For industrial countries, the share of welfare gains due to the latter component is much larger-more than 90 percent in the case of US and Canada. Outside of Indonesia, the most important gains for developing countries come from the reduction in the burden imposed by their own, and their trading partners', tariffs. Due to the rapid increase in

South-South trade projected over the next decades, an increasing share of these gains will be realised on inter-developing country trade.

Keen, M. and Ligthart, J. (1999) "Coordinating Tariff Reduction and Domestic Tax Reform", IMF Working Paper: WP/99/93, Washington DC: IMF.
www.imf.org

A key obstacle to fundamental tariff reform in many developing countries is the revenue loss that it ultimately implies. This paper establishes a simple and practicable strategy for realizing the efficiency gains from tariff reform without reducing public revenues, showing that for a small open economy, a cut in tariffs combined with a point-for-point increase in domestic consumption taxes increases both welfare and public revenues. Increasingly stringent conditions are required, however, to ensure unambiguously beneficial outcomes from this reform strategy when allowance is made for such important features as non-tradeable goods, intermediate inputs, and imperfect competition.

Martinez, J. (1999) "Revenue-Neutral Tariff Reform: The Welfare Effects of Uniform Tariffs in 13 Developing Countries", Colorado: Center for Economic Analysis, University of Colorado-Boulder.
<http://www.colorado.edu/Economics/CEA/papers99/wp99-31.pdf>

This paper examines the welfare effects of replacing the existing tariff structure with uniform tariff in the context of a multi-country study that comprises thirteen developing countries from Asia and Latin America. For each country, static policy simulations are performed using a computable general equilibrium (CGE) world model with seven regions, nineteen sectors and five primary factors. Constant returns to scale and perfect competition are assumed in production. Trade reform in the simulation scenarios is revenue-neutral; i.e. the uniform tariff rate is endogenously determined in the model subject to the public budget constraint. Thus, in each country the uniform rate is close to the weighted average tariff of the benchmark situation. The model estimates show that replacing the benchmark differential tariff structure with a uniform rate is welfare improving in all selected countries. The size of the gains depends on the initial tariff dispersion and on the role of trade in the economy. Welfare gains are larger in countries where the range of dispersion was larger and/or with significant trade. Within a country, welfare gains are larger in the scenario with the broader tax-base to apply the uniform rate. Further, a positive welfare effect arises even though the level of the uniform rate is generally somewhat higher than the benchmark average tariff. The results of positive welfare effects are robust to alternative regional aggregations, as well as to different values of the elasticity of substitution between domestic and imported goods and to heterogeneous elasticities across goods.

Matusz, S. (1999) "Adjusting to Trade Policy Reform", Washington DC: World Bank.
<http://www.worldbank.org/html/dec/Publications/Workpapers/wps2000series/wps2142/wps2142.pdf>

Economic research has rather well documented the long-term benefits from improved resource allocation and efficiency that follow from trade reform. And, although causation remains an issue, research has shown strong and consistent correlation between trade reform and growth. Despite this evidence of improved incomes from trade reform, some policy makers are reluctant to implement trade reform due to fear of excessive adjustment costs. Policy makers fears may be based in part on political dynamics of reform (politicians in

power fear they will incur the anger of the owners of displaced resources while the benefits may accrue in later years), but may also be based in part on the fact that there is much less written and known on the subject of the nature, magnitude, and duration of adjustment costs. In this paper we attempt to fill the void in the literature by surveying the evidence on the adjustment costs of trade liberalization, and placing those estimates of adjustment costs in perspective relative to the gains from trade liberalization. The outline of the paper is as follows: in section II we first define adjustment costs, distinguishing social and private costs of adjustment, and then develop a model for thinking about adjustment costs. We survey the estimates of adjustment costs, both social and private, as well as studies of the employment effects of trade liberalization in section III. In section IV, we examine the impact of trade liberalization on macro-stability. In section V, we provide suggestions for future research, focusing on means of addressing opposition to reform as well as reducing the adjustment costs. Our detailed summary and policy conclusions are in section VI. Briefly, our results are as follows: while we find that it is necessary to apply caveats to most of the more than 50 studies we survey, virtually all the studies find that adjustment costs are very small in relation to the benefits of trade liberalization. And those studies that focused on manufacturing employment in developing countries found that it had typically increased within one year after liberalization. Collectively, the weight of so many studies of various types, all pointing in more or less the same direction, makes it difficult to avoid the conclusion that adjustment costs are relatively very small relative to the benefits of trade liberalization and after the economy has one year to adjust to the trade liberalization, we should expect to see an increase in manufacturing employment. The explanation for the low adjustment costs in relation to the benefits is as follows: (1) most importantly, adjustment costs are typically short term and terminate when workers find a job, while the benefits of trade reform can be expected to grow with the economy; (2) estimates of the duration of unemployment for workers in most industries are not high, especially where workers were not earning substantial rents in the original job; (3) in many industries normal labor turnover exceeds dislocation from trade liberalization, so that downsizing where necessary could be accomplished without much forced unemployment; and (4) it has been observed that a significant portion of the resource reallocation after trade liberalization was accomplished through inter-industry shifts, which minimized the dislocation of factors of production. In addition, developing countries would be expected to have comparative advantage in labor intensive industries, so trade liberalization should favor labor. This may explain why manufacturing employment has typically increased after trade liberalization.

McKibbin, W. (1999) "Trade Liberalization in a Dynamic Setting: Implications of a New WTO Round", Washington DC: Brookings Institute.

<http://www.brook.edu/dybdocroot/views/papers/bdp/bdp147/bdp147.pdf>

This paper explores the impacts of a new WTO Round of trade liberalization over the period from 2000 to 2010, using a model that allows for short run unemployment, adjustment costs in capital formation, international flows of financial assets and forward looking expectations of the announced policy changes. The focus of the paper is on the dynamic adjustment from 2000 to 2020 and the implications for short run global adjustment. So as to provide a metric for judging the scale of the results, the results are compared to policy in which there is a transfer of foreign aid to Asia Crisis countries. This policy is normalized so that the present value of consumption is equal for the recipient countries under both policies. The trade reforms lead to much higher global consumption for the same return to the Asia Crisis countries.

In addition, the paper considers the endogeneity of total factor productivity growth in manufacturing industries to changes in tariffs. This implements, in general equilibrium, the empirical results in Chand (1999). It is shown that these growth effects can lead to large gains to trade liberalization relative to the standard assumption of exogenous TFP growth but also can accentuate the adjustment process with short term policy implications.

McLulloch, N., Winters, L.A. and Cirera, X. (2001) *Trade Liberalization and Poverty: A Handbook*, London: CEPR.

This Handbook, published with the Department for International Development (DFID), examines how openness to trade is a key element of economic policy; continuing extreme poverty in developing countries is a disgrace. This Handbook examines how our concerns about the world's poor should affect our attitude towards and implementation of trade liberalization. Part I draws on economic analysis and practical experience to construct a framework to analyse the complex links between trade liberalization and poverty. It shows policy-makers how to use the framework to identify the critical features in their economies so they can ensure that the poor benefit from liberalization. Part II explores the links in relation to reform of particular sectors - agriculture, services, etc. - and particular instruments of trade policy - export subsidies, anti-dumping measures, etc. It presents an economic analysis of each type of reform, shows the likely outcome for the poor, and, where appropriate, discusses the issue's status in the World Trade Organisation's agenda. Trade liberalization ultimately helps poverty alleviation by stimulating growth, but appropriate complementary policies in areas such as transport, infrastructure, education, and financial services are essential to ensure that the poor benefit from this growth. Trade liberalization also affects poverty more directly, via the prices of goods, wages and employment, and government revenue. In some cases, the poor can suffer. Appropriate domestic policies can reduce the number of such cases and help to alleviate the pain where suffering does occur. The principal benefits of trade reform come from unilateral trade liberalization, but the poor would also benefit considerably from substantially improved access to markets in the developed world. While the links between trade and poverty are many and complex, the main ones are usually fairly obvious, so governments can devise policies to help the poor gain from liberalization.

Reimer, J.J. (2002) "Estimating the Poverty Impacts of Trade Liberalization", Washington DC: Trade Development Research Group, World Bank.
<http://econ.worldbank.org/view.php?type=5&id=12035>

As a new round of World Trade Organization negotiations is being launched with greater emphasis on developing country participation, a body of literature is emerging which quantifies how international trade affects the poor in developing countries. In this survey of the literature, Reimer summarizes and classifies 35 trade and poverty studies into four methodological categories: cross-country regression, partial-equilibrium and cost-of-living analysis, general-equilibrium simulation, and micro-macro synthesis. These categories include a broad range of methodologies in current use. The continuum of approaches is bounded on one end by econometric analysis of household expenditure data, which is the traditional domain of poverty specialists, and sometimes labelled the "bottom-up" approach. On the other end of the continuum are computable general equilibrium models based on national accounts data, or what might be called the "top-down" approach. Another feature of several recent trade and poverty studies—and one of the primary conclusions to emerge from the October 2000 "Conference on Poverty and the International Economy" sponsored by Globkom and the World Bank—is the recognition that factor markets are perhaps the most

important link between trade and poverty, since households tend to be much more specialized in income than they are in consumption. Meanwhile, survey data on the income sources of developing-country households has become increasingly available. As a result, this survey gives particular emphasis to the means by which studies address factor market links between trade and poverty.

The general conclusion of Reimer's survey is that any analysis of trade and poverty needs to be informed by both the bottom-up and top-down perspectives. Indeed, recent "two-step" micro-macro studies sequentially link these two types of frameworks, such that general equilibrium mechanisms are incorporated along with detailed household survey information. Another methodology in a similar spirit and also increasingly used involves incorporating large numbers of surveyed households into a general-equilibrium simulation model. Although most of these studies have so far been limited to a single region, these approaches can be readily adapted for multi-region modelling so that trade and poverty comparisons can be made across countries within a consistent framework.

Rodriguez, F. and Rodrik, D. (1999) "Trade Policy and Economic Growth: A Skeptic's Guide to the Cross-National Evidence", NBER Working Paper: 7081, Washington DC: NBER.

Do countries with lower policy-induced barriers to international trade grow faster, once other relevant country characteristics are controlled for? There exists a large empirical literature providing an affirmative answer to this question. We argue that methodological problems with the empirical strategies employed in this literature leave the results open to diverse interpretations. In many cases, the indicators of "openness" used by researchers are poor measures of trade barriers or are highly correlated with other sources of bad economic performance. In other cases, the methods used to ascertain the link between trade policy and growth has serious shortcomings. Papers that we review include Dollar (1992), Ben-David (1993), Sachs and Warner (1995), and Edwards (1998). We find little evidence that open trade policies--in the sense of lower tariff and non-tariff barriers to trade--are significantly associated with economic growth.

Whalley, J. (2000) "What Can The Developing Countries Infer From The Uruguay Round Models For The Millennium Round Positions?", CSGR Working Paper No. 60/00, Warwick: University of Warwick.

<http://www.warwick.ac.uk/fac/soc/CSGR/wpapers/wp6000.PDF>

This paper discusses the results from general equilibrium trade models executed towards the end of the Uruguay Round, reporting both aggregate and regional gains. These results were generated some 5 years ago, and were important to the debates at the end of the Uruguay Round as to what would be the foregone gains were the Round not to conclude. The paper argues that there are substantial, and at times hard to explain inconsistencies across model results. One model shows most of the gains come from agricultural liberalization, another from textiles, and yet another from tariff cuts. One model shows developing countries account for around 10% of the total gain, another shows them to gain over 50 per cent. One model shows developing countries losing from elimination of the MFA, another shows them as large gainers. One model shows that imperfectly competitive and scale economy effects double global gains, another shows almost no impact. These differences occur even where similar data sets and benchmark years are used, and are hard to explain on the basis of parametric specifications for models seemingly used though these are frequently poorly

exposed. The paper also discusses the verification of models relative to behaviour since the Round concluded, expressing scepticism as to its feasibility for reasons set out in the paper. It also attempts to discuss what, if any, are the implications for the developing countries, and the possible ways forward in making these models more useable in the Millennium Round.

WTO (2000) *Trade, Income Disparity and Poverty*, Special Studies 5, Geneva: WTO.

The linkages between trade and poverty are not as direct and immediate as the linkages between poverty and national policies on education, health, land reforms, micro-credits, infrastructure, governance and so on. Nor does trade compare to other international policies, such as debt relief, vaccination programs, or research on tropical and other diseases that set back developing countries. Trade can nevertheless affect the income opportunities of the poor in a number of ways-some positive and some negative. The aim of this study is to clarify the interface between trade, global income disparity and poverty.

4. STUDIES ON SPECIFIC REGIONS OR COUNTRIES

Abed, G. (1998) "Trade Liberalization and Tax Reform in the Southern Mediterranean Region", IMF Working Paper No. 98/49, Washington DC: IMF.
<http://www.imf.org/external/pubs/ft/wp/wp9849.pdf>

The European Union's Association Agreements with several countries in the Southern Mediterranean Region (SMR) aim to promote deeper economic integration between the SMR and the EU by establishing a free trade area in twelve years. Because a large share of the SMR countries' total imports comes from the EU, the removal of import tariffs could reduce budgetary revenue by the equivalent of 1 percent to 4 percent of individual countries' GDP. This paper proposes tax and tariff reforms that would help generate the needed compensatory revenue and, more important in the long run, reduce the distortionary effects of the tax and tariff systems and underpin higher rates of sustainable growth.

Ahammad, H. and Greig, R. (2000) "A Regional Perspective on Tariffs: The Western Australian Experience", *Australasian Journal of Regional Studies* 6, 1: 67-94.

There is a widespread concern that tariffs have differential impacts across the Australian States and Territories. Public policy has tended to focus on the effects of tariff reductions on those regions where jobs will be lost. For a benefiting State, the gains will depend on its structural differences from the other States, and in particular the extent of its export orientation. This paper provides some measures of structural difference between Western Australia (WA) and the other States and provides two estimates of the impacts of tariffs on the WA economy. In the paper the burden of tariffs on WA (a major exporting State) is examined using a method previously employed by Clements and Sjaastad for Australia. The extent to which the benefits of a tariff reduction program are received by WA and how they are distributed are also investigated using a computable general equilibrium model of the State economy. It was found that substantial benefits accrue to the WA economy while the major industry sectors which benefit are mining, transport, wholesale and retail trade and entertainment, agriculture forestry and fishing, and finance and business services.

Ahmed, N. (2000) "Export Response to Trade Liberalization in Bangladesh: A Cointegration Analysis", *Applied Economics* 32, 8: 1077-1084.

<http://www.tandf.co.uk/journals/routledge/00036846.html>

This paper investigates the response of Bangladesh's aggregate merchandise exports to a real exchange rate-based trade liberalization programme during the period 1974-95. The cointegration and error correction modelling approaches have been applied. The empirical results suggest that there exists a unique long-run or equilibrium relationship among real quantities of export, relative export price and export-weighted real effective exchange rate. The short-term dynamic behaviour of Bangladesh's export supply has been investigated by estimating an error correction model in which the error correction term has been found to be correctly signed and statistically significant. Relative export price (lagged two quarters), real effective exchange rate, predicted values of real GDP (lagged one quarter) and a dummy variable capturing the effects of trade liberalization programme have all emerged as important determinants of an aggregate export supply function for Bangladesh. The error correction model has also been found to be robust as it satisfies all relevant diagnostic tests.

APEC (1997) "The Impact of Trade Liberalization in APEC", 1997, APEC #97-CT-01.2, Singapore: APEC.

<http://www.apecsec.org.sg/>

This study employs a computer simulation technique to estimate the income and trade impacts expected from APEC members' implementation of their trade liberalization and facilitation commitments under the Manila Action Plan for APEC (MAPA). The result quantifies significant benefits for APEC economies.

APEC (1999) "Assessing APEC Trade Liberalization and Facilitation - 1999 Update", APEC #99-EC-01.1, Singapore: APEC

<http://www.apecsec.org.sg/>

This year's research project, Assessing APEC Trade Liberalization and Facilitation – 1999 Update, has updated and expanded the 1997 study, The Impact of Trade Liberalization in APEC. Its aim is to provide an objective basis for considering and promoting trade liberalization and facilitation within APEC. As with the 1997 study, the 1999 study employs a sophisticated analytical tool (computable general equilibrium model) to assess ultimate gains from the trade measures committed to date by APEC economies. In addition, the 1999 study examines the role of competitive markets, the role of the public sector, and the scope for APEC's economic and technical cooperation (ECOTECH) programs.

Ariff, M., Mahani, Z.A. and Tan, E.C. (1996) "Effects of the Emerging Multilateral Trading Arrangement on the Malaysian Economy", *Asian Development Review* 14, 2: 44-72.

Because it is a country with relatively large export orientation, Malaysia is likely to benefit from the emerging multilateral trading arrangement through improvements in market access, gains due to competition, and strengthened international trade regulations. Despite this optimism, there are concerns about the effect of liberalization because major industrial exports may not grow much more due to the low Pre-Uruguay Round tariff rates. Furthermore, Malaysia's services sector may face new challenges in the areas of domestic production capability, regulatory environment, and trade. Similarly, the inclusion of trade-related intellectual property rights and antidumping provisions means that exporters will need special help in adapting to the new trading system. Malaysia's immediate concern is the

successful implementation of the present arrangement and is apprehensive about the presence of issues such as labor standards and environment on the trade agenda. In its view these are not trade issues.

Boko, S.H. (2001) "The Impact of International Agreements on Domestic Policy: An Analysis of Tariff Policy in African Countries", *Atlantic Economic Journal* 29, 1: 75-86.

This paper estimates a fixed effects tariff model to study the impact of the tariff reform provisions of international agreements on domestic tariffs, using a sample of eight Sub-Saharan African countries. The structure of the model explaining domestic tariff changed from the pre-agreement period to the post-agreement period. However, the results indicate that for the most part, efforts by governments to adhere to tariff agreements failed in all but a few countries. Even for the countries in which the agreements appeared to be successful, the significance of the results is relatively weak.

Boko, S.H. and Lapan, H. (2001) "Pre-Commitment Mechanism and Policy Credibility in African Trade Reform", *Review of Development Economics* 5, 1: 25-39.

<http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=13636669>

In the absence of a binding pre-commitment mechanism, a government has an incentive to renege on announced policy. This is a well-established result in the literature. The paper applies this theory to tariff policy by developing a two-game model to analyze the credibility of government tariff reform announcements. The pre-commitment solution is sub game-imperfect; therefore, government's announcement of tariff reforms is time-inconsistent. Using a sample of African countries operating under IMF structural adjustment programs, the study finds only weak evidence that countries implemented their announced tariff reforms. However, SAP agreements seem to enhance private sector confidence in government reforms.

Bora, B. and Neufeld I. (2001) "Tariffs and The East Asian Financial Crisis", *Policy Issues in International Trade and Commodities*, Study Series N.13, Aug. 2001, Geneva: UNCTAD.

http://www.unctad.org/en/pub/ditctab_list.en.htm

This study examines the role of tariffs during the East Asian financial crisis. The paper finds despite its rather limited reflection in the previous debate, there is a role of tariffs when it comes to fighting the negative impact of a financial downturn. Each of the affected countries made an explicit and conscious decision to not raise tariff barriers in response to the crisis. Individual strategies applied by the Affected-5 to offset the crisis varied from country to country: significant tariff reductions in the framework of accelerated trade liberalization programmes can be found as well as tendencies to decelerate or even pause liberalization. Thailand was the exceptional case, where tariffs were increased upwards. The principal motivation for tariff increases was revenue generation, as opposed to an explicit desire to protect industries from import competition. The paper highlights the complementary role played by the strategic use of trade policy to other policies such as financial and corporate sector reforms.

Chanda, R. (1996) "Implications of the Uruguay Round for Kenya", IMF Working Paper: WP/96/08, Washington DC: IMF.

This paper studies the implications of the Uruguay Round for Kenya's own trade regime and its external trading environment. The analysis indicates that Kenya did not undertake significant liberalization commitments under the Uruguay Round. There are however, several effects on Kenya's external trading environment due to most-favored nation tariff cuts, erosion of preference margins, and changes in food prices. These effects are determined using simple computational techniques in a partial equilibrium framework. Overall, the results indicate that the effect on Kenya's balance of payments in the medium-term may be negative but modest, and can be offset by pursuit of appropriate structural adjustment policies.

Chow, L.K., Fung, M. and Zhu, L. (1999) "Distributional Effects of Tariff Reduction in the Transforming Chinese Economy", *Pacific Economic Review* 4, 2: 115-135.

<http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=1361374x>

A general equilibrium trade model is constructed to study the issue of income redistribution between the state sector and the private sector induced by a tariff reduction in the transforming Chinese economy. The analysis is conducted in the presence of price control, tariff protection, and the coexistence of state and private sectors. It is shown that the way in which income levels of the two sectors are affected by the tariff reduction depends on (i) the way in which the price of non-tradables is affected, (ii) the degree of privatization, and (iii) the extent of price control.

Coetzee, Z.R., Swanepoel, J.J. and Naude, W.A. (1997) "A Minimalist CGE Model for Analysing Trade Liberalisation in South Africa", *Journal for Studies in Economics and Econometrics* 21, 1: 37-56.

CGE models are increasingly being used to inform economic policy analyses in South Africa. This paper is an attempt to improve the accessibility of the approach by providing a minimalist CGE model for the South African economy. The strengths and weaknesses of this minimalist CGE are determined by using it to simulate South Africa's tariff reform programme. The results are consistent with theoretical and empirical research on trade liberalisation, and the model provides justification for these aspects in the government's recently announced macroeconomic strategy. The weaknesses of the minimalist model are such however, that the need for a large-scale multi-sectoral model remains. The primary use of the minimalist CGE model lies in its suitability as a pedagogical tool. For this purpose, the spreadsheet version of the model is available from the authors.

Davies, R. (2000) "Zimbabwe: Economic Adjustment, Income Distribution and Trade Liberalization", Center for Economic Policy Analysis, New York: New York University.

<http://www.newschool.edu/cepa/papers/archive/cepa0121.pdf>

Zimbabwe's economic relations with the rest of the world have changed between extremes. The dramatic shift from import regulation under and after sanctions to full scale trade liberalization offers a unique opportunity for investigating policy-driven globalization. Usually the economic motivation for such a historic shift is of long run nature. A protectionist regime has costs in terms of limited access to world market innovation and technology and limited competitive pressure in domestic markets. Reform is an attempt to take advantage of global technological progress and competition, although it is not clear that the dreams will

come true. In this paper we focus on the short run aspects of liberalization, which are rather seen as obstacles to reform (Rodrik, 1994). Opening up for imports easily may crowd out more output than is gained in export product expansion, and the associated changes in income distribution involve losers who will protest the policy reorientation. The conventional approach to the consequences of trade reform addresses the microeconomics of labor market adjustments and sectoral competitiveness. Allocation of production factors between sectors clearly is important to understand the experiences made in the recent trade liberalization in Zimbabwe. But the main story definitely looks macro. The key year is 1992, when the trade account was essentially fully liberalized. As confirmed by Table 1, output and investment contracted by about 8-10 per cent, the inflation rate doubled to above 40 per cent, a consumption boom increased imports, and the trade balance moved into serious deficit. This performance must be understood against the unfortunate background of a coincidental drought, which must take much of the blame for the contraction. The worry is that the GDP never really has recovered. GDP per capita in 1996 is still at the 1992 level, well below the gradually expanding per capita GDP during the period 1985-1991.

De-Santis, R.A. (2001) "The 1990 Trade Liberalisation Policy of Turkey: An Applied General Equilibrium Assessment", *International Economic Journal* 15, 2: 115-132.
<http://iias.snu.ac.kr/wthong/IEJ/>

The author uses a static multi-sector, multi-labour, multi-household Applied General Equilibrium (AGE) model for Turkey to show that the trade policy implemented by Turkish policy-makers in the 1990s is not trade diverting. Aggregate welfare rises by 0.6% of the consumer income. Most importantly, since agriculture and traditional industrial sectors grow to the detriment of services, rural groups are better off (2.3% of the rural income), while urban groups are worse off (-0.5% of the urban income). It is also shown that overall income inequality declines by 1.1-1.7%, and that its main source is the inter-income inequality between urban and rural areas, which decreases by 8.9-14.7%.

Evans, D. (2001) "Identifying Winners and Losers in Southern Africa from Global Trade Policy Reform: Integrating Findings from GTAP and Poverty Case Studies", Paper prepared for the Fourth Annual Conference on Global Economic Analysis, Purdue: Purdue University, West Lafayette.
<http://www.gtap.agecon.purdue.edu/resources/download/344.doc>

The IFI's rely on twin propositions that poverty alleviation is best pursued through increased growth, and that trade liberalisation encourages growth and thereby poverty alleviation. These aggregate propositions are not disputed in this paper. Rather, the argument is made for desegregation to identify the winners and losers among the poor in the short and medium run from further trade policy liberalisation, both between and within countries. Desegregation is important on both equity grounds, especially when the losers are among the poor. It is also important on efficiency grounds particularly when designing policies to help poor losers realise the opportunities for gain from trade policy liberalisation in the longer run.

Two methodologies are frequently employed to assess the linkages between trade and poverty. Country and sector case studies dominate the literature. The key difficulty with case studies is that it is not possible to deploy their rich descriptive data in a consistent analytical framework. It is usually not possible to construct a quantitative counterfactual situation, for example the impact of a trade policy change on the poor. Obtaining a counterfactual through general equilibrium trade models has its own catalogue of difficulties arising from data

availability, model assumptions and interpretation of results. The two methodologies lie at extreme ends of a spectrum, but insights from both can be mutually reinforcing.

This paper uses Zambia as an 'example' country to explore the possibility of combining the rich poverty case study material available for that country with the results for Zambia of a multilateral trade model based on the GTAP dataset and modelling software. It describes some of the salient features of case studies of poverty in Zambia. A common thread runs through all the case studies, that trade policy reform in Zambia is likely to be pro-poor. This key proposition is tested using the GTAP dataset and modelling software. The GTAP database for 1997 is described including an extension for Zambia to permit the analysis of poverty impacts for four classes of households together with the modelling strategy adopted for this exploratory study. It then reports on the poverty impacts of a series of trade policy experiments using the 1996 LCMS Survey for Zambia to estimate headcount changes from:

- Unilateral trade policy reforms in Southern Africa that took place from 1992-4 up to 1997.
- A seven-country version of the SADC FTA.
- A 'suppose' WTO Round.
- A 'suppose' effective extension of the EU/South Africa FTA into an EU/SADC7 FTA through Least Developed Country access into the EU through negotiations about to begin.

Zambian households are disaggregated into four groups so that GTAP aggregate household results can be disaggregated to real post-tax income changes in each of the four household groups in post simulation calculations. A key finding is that regionally based trade policy reforms have a neutral or adverse impact on household income distribution compared with possible major trade policy reforms under the WTO. However, the final headcount poverty impacts of the international trade policy reforms are offset by the lower income responsiveness of the poverty impacts in the poorest rural households. Whilst these findings are suggestive, the research strategy on the modelling side using both the GTAP dataset and run GTAP as computing software has a number of important limitations. On the data side, for Southern Africa applications, the standardised GTAP dataset throws away too much useful information for trade and poverty analysis that is available in the underlying MERRISA SAMs upon which the Southern Africa dataset for GTAP was built. This is most notable for household aggregation, factor aggregation at the low income or subsistence end, margins aggregation, rudimentary treatment of government income and expenditure. On the run GTAP modelling side, satisfactory resolution of the database problems poses serious programming problems.

The above suggests an alternative trade and poverty research strategy in which the CGE model and country case study interface is first explored with country models without the constraints of the standard GTAP dataset aggregation. An obvious choice for a starting model is the standard model Lofgren, Harris and Robinson (2001). At a later point, such country models could be tied into a global model using the GTAP dataset for scenario calculations using a common sectoral classification to complete the bottom-up strategy for the analysis of trade and poverty impacts.

Feliciano, Z.M. (2001) "Workers and Trade Liberalization: The Impact of Trade Reforms in Mexico on Wages and Employment", *Industrial and Labor Relations Review* 55, 1: 95-115.

Between 1986 and 1990, the Mexican government reduced tariffs and import license coverage by more than 50%. The author, using micro-level data, analyzes the impact of trade reform on Mexican wages and employment. Industries that had greater reductions in protection levels, she finds, had a larger percentage of low-skill workers. Wage dispersion increased in both the non-tradable sector and, to a much greater degree, the tradable sector. This pattern suggests that trade reform increased wage inequality. The decline in import license coverage appears to have reduced relative wages of workers in reformed industries by 2%, but did not affect relative employment. Reductions in tariffs had no statistically significant effect on relative wages or relative employment.

Francois, J., Glismann, H. and Spinanger, D. (2000) "The German Economy and EU Industrial Tariff Reductions: Partial and CGE Analyses of a Stillborn Millennium Round", Kiel: Kiel Institute of World Economics.

The Millennium Round of MTNs, which was stillborn in Seattle, was supposed to have initiated wide-sweeping changes to the world's trading system. This paper deals with the impact on the German economy of some changes that might have been forthcoming from proposed liberalization strategies. It examines sectoral and global strategies with partial and general equilibrium methods. It underlines the advantages of more global strategies, but not only because the gains are significantly larger. The paper concludes that Germany in its own interests should throw its weight in the EU behind wide-sweeping liberalization and that developing countries stand to gain more from global liberalization.

Gang, I.N. and Pandey, M. (1998) "What Was Protected? Measuring India's Tariff Barriers 1968-1997", *Indian Economic Review* 33, 2: 119-152.

We investigate the inter-industry structure of protection in India, asking how much protection each industry receives and how this changes over time. We calculate, compare and analyze several measures of trade protection across agricultural, manufacturing and service industries. Protection levels were high when ex ante tariffs are used as the basis of measurement, supporting earlier studies. However, when ex post tariff rates are used, a number of sectors exhibit negative effective protection rates. In addition, ex post rates show greater variability and provide a different ranking of the degree of protection by industry when compared to ex ante tariff-based measures.

Han, S. (1998) "APEC Trade Liberalisation : Its Implications", Paris: OECD.
<http://www.oecd.org/pdf/M00001000/M00001296.pdf>

Over the past decade, globalisation has been a pervasive trend in almost all economies. The world economy is becoming increasingly interdependent, deepening and intensifying international linkages, most notably in trade. As trade expands among nations throughout the world, integration of the Organisation for Economic Co-operation and Development (OECD) economies with non-OECD economies has become a salient feature of the global economy. This study identified the possible long-term effect of APEC's trade liberalisation commitments on real GDP and trade across regions, both inside and outside the APEC area, and on employment by production sector in each region, using a multiregion, multi-sector, computational general equilibrium (CGE) model. One of the key findings from our empirical work is the impacts of trade liberalisation and facilitation measures in the APEC region have turned out to be significant at least in direction if not in magnitude, throughout OECD as well as non-OECD economies. In particular, because agricultural liberalisation and trade

facilitation are incorporated in our experiment, the impact stemming from liberalisation in these areas turned out to be substantially important.

Hanson, G.H. and Harrison, A. (1999) "Trade Liberalization and Wage Inequality in Mexico", *Industrial and Labor Relations Review* 52, 2: 271-288.

<http://www.ilr.cornell.edu/depts/ilrrev>

To what extent was the increase in wage inequality between skilled and unskilled workers in Mexico in the 1980s associated with Mexico's sweeping 1985 trade reform? Examining data on 2,354 Mexican manufacturing plants for 1984-90 and Mexican Industrial Census data for 1965-88, the authors find that the reduction in tariff protection in 1985 disproportionately affected low-skilled industries. Goods from that sector may have fallen in price because of increased competition from economies with larger reserves of cheap unskilled labor. The consequent increase in the relative price of skill-intensive goods could explain the increase in wage inequality.

Hosoe, N. (2001) "A General Equilibrium Analysis of Jordan's Trade Liberalization", *Journal of Policy Modelling* 23, 6: 595-600.

With a computable general equilibrium model, we investigate Jordan's trade policies: implementation of the Uruguay Round (UR) and establishment of a Free Trade Agreement (FTA) with the European Union. Simulations suggest that the UR would improve Jordan's welfare and that the FTA, which presupposes the UR, would bring about further improvements in Jordan's welfare. Under these trade liberalization measures, the chemical and the agricultural sectors would expand while the non-metal mineral sector would contract.

Jonsson, G. and Subramanian, A. (2001) "Dynamic Gains from Trade: Evidence from South Africa", *IMF Staff Papers* 48, 1: 197-224.

This paper examines the empirical relationship between trade and total factor productivity (TFP) in South Africa. Using data on actual trade protection across different manufacturing sectors, it is shown that trade liberalization had a positive impact on TFP growth during the 1990s. In addition, time-series evidence on macro data supports a positive long-run relationship between TFP and openness

Khan, F.C. (1996) "The Incidence of Import Liberalization with and without a Value Added Tax: An Application to Bangladesh", *Journal of Policy Reform* 1, 4: 389-412.

This paper examines the impact of import tariffs and tariff-replacing indirect taxes on the welfare of households grouped by the size distribution of income. A computable general equilibrium model for Bangladesh is simulated to examine the removal of quantitative restrictions and tariffs as well as the replacement of trade taxes with a value added tax (VAT). Import liberalization alone expands the manufacturing sector and increases the welfare of lower income households. If a uniform VAT is placed on both imports and all non-agricultural production in order to replace the lost tariff revenue for the government, some of the gains from import liberalization are diminished. If exports are exempted from the VAT, the gains are sustained to a greater degree. With a combination of tariff liberalization, quota mark-ups, and the VAT, the economy goes through a contraction and the welfare of all households is reduced.

Konan, D.E. and Maskus, K. (2000) "Joint Trade Liberalization and Tax Reform in a Small Open Economy: The Case of Egypt", *Journal of Development Economics* 61, 2: 365-392.

<http://www.elsevier.com/inca/publications/store/5/0/5/5/4/6/index.htm>

They develop a CGE model of the Egyptian economy to analyze the impact of various trade liberalization scenarios, allowing distortionary domestic taxes to vary endogenously in order to satisfy a fixed real government revenue target. We decompose computed welfare gains into effects from tax reform, trade reform, and their interaction. Scenarios include removal or unification of the consumption tax, capital tax, or both, and tariff unification, a free-trade agreement with the European Union, and unilateral tariff elimination. Welfare effects depend critically on the type of revenue replacement tax. While both are important, neither trade-policy reform nor tax reform dominates.

Lee, H., Roland-Holst, D. and van-der-Mensbrugghe, D. (2000) "The Long-Run Impact of APEC Trade Liberalization on Real GDP and Sectoral Adjustments", *Kobe Economic and Business Review* 0, 45: 57-83.

<http://www.nacsis.ac.jp/sokuho/articles/VAA00261054.html>

On the threshold of a new century, most of the APEC countries are embarking on an ambitious plan for open multilateralism. Using an 18-region, 16-sector dynamic computable general equilibrium (CGE) model of the global economy, we appraise the effects of APEC trade liberalization on member-country real GDP, sectoral output, exports and imports by the year 2020. Our results suggest that developing-country APEC members could realize significantly greater gains in real GDP than developed members. Although implied structural adjustments may be challenging for some groups, they are necessary if each member economy and the region as a whole are to realize the full economic potential of expanded regional trade.

Mabugu, R. (2001) "Short-Run Effects of Tariff Reform in Zimbabwe: Applied General Equilibrium Analysis", *Journal of African Economics* 10, 2: 174-190

This paper applies a short-run computable general equilibrium model for Zimbabwe to analyse how tariff reform could have modified the effects of the actual trade liberalisation that took place in the 1990s. This is important because the trade liberalisation removed quantitative restrictions but left tariff rates intact. The results show that tariffs on intermediates have held back production in traded sectors. Thus, the nature of the trade reform taken contributed to more deindustrialisation than necessary. The results also show the trade-off with respect to the fiscal balance, which points to the need to ensure that an alternative tax system is in place before removing customs tax revenue.

Meller, P. (1994) "The Chilean Trade Liberalization and Export Expansion Process, 1974-1990" in G. Helleiner ed. *Trade Policy and Industrialization in Turbulent Times*, Routledge, New York.

This paper analyses the trade liberalization experience of Chile between 1974 and 1990. It argues that the credibility of trade reform was more related to the overall macroeconomic and policy reform environment than to the specificity of the stages and context of trade reform itself. It argues that trade liberalization did see a shift in resource allocation towards sectors

where Chile had a comparative advantage i.e. export of natural resources. However, it notes that the export expansion process can be slow. And that trade reform can lead to deindustrialisation and unemployment in the short run. The share of industry in GDP during that period fell from 25 percent to 20 percent and employment declined by 10 percent in the reform years.

Ng, F. (1997) "Open Economies Work Better! Did Africa's Protectionist Policies Cause Its Marginalization in World Trade?", *World-Development* 25, 6: 889-904.

Sub-Saharan Africa's declining importance in global trade is primarily due to its inability to remain competitive in international markets. If Africa merely retained its 1962-64 shares for major products its exports would now be 75% (\$11 billion) higher. External protection against Africa has not played an important role in this decline--in fact, OECD trade preferences made market access conditions for Africa more favorable than that for many other exporters. In contrast, sub-Saharan Africa's own trade barriers are considerably higher than those of most other developing countries--particularly those that launched sustained export-oriented industrialization drives. Since numerous studies show countries which pursue liberal trade policies generally achieve superior growth rates, these findings accent the importance of domestic policy reforms if Africa is to reverse its diminishing role in world trade. In short, the future of African economies will be determined by Africans themselves and not by outsiders.

O'Cleireacain, S. (1999) "Sub-Saharan Africa's Trade Liberalization Experience", in Oyejide, A.; Ndulu, B.; Greenaway, D. (eds.) *Regional Integration and Trade Liberalization in Sub-Saharan Africa. Volume 4. Synthesis and Review*. New York: St. Martin's Press; London: Macmillan Press.

This paper offers a comparative look at the trade liberalization experiences of the case-study countries by highlighting the experience with trade liberalization and economic reform generally in other developing countries and by examining the extent to which the case-study countries kept pace with changes elsewhere. It begins with background data on basic trends for 10 countries. This is followed by a broad treatment of the political economy of trade liberalization that draws heavily on political science literature and presents data on political and civil liberties trends as well as fiscal indicators of changing reliance on trade taxation. The implications of the failure to integrate more fully into the world economy are examined in a section on liberalization, openness and growth, while a section on African participation in the Uruguay Round presents some data on the extent to which this group of countries did, or did not, use the Round to consolidate domestic reforms. The final section attempts to draw some lessons from the East Asian experience prior to the crisis of 1997-98.

OECD (1996) "Trade Liberalisation Policies in Mexico", Paris: OECD.

Examines challenges facing policymakers in formulating trade liberalization policies in Mexico. Presents an overview of the macroeconomic context of trade policy, indicating the pattern and trends of trade and investment flows. Focuses on some discrete elements of policy that are important for the overall coherence of open trade policies, discussing Mexico's multilateral trade policy; contingency trade policy; technical standards, marking, labelling, and no preferential rules of origin; deregulation, trade facilitation, and sectoral policy; institutional reform in customs; privatization and competition policy; and investment policy. Analyzes NAFTA and other regional trade agreements. Examines the results of the Uruguay

Round and Mexico's participation in the negotiations. Discusses the challenge of maintaining open trade policies in the face of contrary pressures and the issue of trade relations and coherence among overlapping trade agreements and commitments.

Pyo, H.K., Kim, K. and Cheong, I. (1996) "Foreign Import Restrictions, WTO Commitments, and Welfare Effects: The Case of Republic of Korea", *Asian Development Review* 14, 2: 21-43.

This paper examines foreign import restrictions on Republic of Korea's exports and its two policy responses: a domestic response in trade policy, investment policy, and foreign exchange regime; and an external policy response in the form of WTO commitments. The paper also analyzes the welfare effects of trade liberalization under WTO Agreements based on two alternative tariff reduction scenarios using a computable general equilibrium model. The simulation results indicate that WTO is expected to create annual gains of US\$38 to 50 billion globally, with Korea expected to gain relatively the most from the global implementation of the commitments by WTO member countries, earning \$3.3 to 3.7 billion. Therefore, Korea's policy response to increasing protectionism abroad in the form of a full commitment to WTO Agreements is fully warranted.

Rege, S.R. (2001) "General Equilibrium Analysis of India's Trade Reforms", *Review of Urban and Regional Development Studies* 13, 2: 123-142.

<http://www.blackwellpublishers.co.uk/asp/journal.asp?ref=09170553>

WTO membership for India implies cutting tariffs in a phased manner. A general equilibrium approach is used to evaluate its impacts. The study analyses both the reduction and elimination of tariffs. With a small country assumption, there are welfare gains by liberalizing trade. With a large country assumption, welfare gains are observed when a CET transformation function is used and welfare loss in its absence.

Sharma, K. (2001) "Liberalization, Growth and Structural Change: Evidence from Nepalese Manufacturing", *Applied Economics* 33, 10: 1253-1261.

<http://www.tandf.co.uk/journals/routledge/00036846.html>

This paper presents an empirical analysis of the consequences of liberalization on industrial structure in Nepal, a least developed country with weak institutions and severe infrastructure bottlenecks. Results suggest some structural change in manufacturing output and trade orientation which appears to be due to a change in incentive structure, but no significant improvements were recorded in total factor productivity growth which is of central importance for a least developed country like Nepal. Export intensity rose significantly in the post-liberalization period despite poor productivity performance of export-oriented industries while import intensity fell due mainly to improved competitiveness in import competing industries and a fall in imports for smuggling to India.

Siddiqui, R., and Iqbal, Z. (1999) "The Impact of Tariff Reforms on Income Distribution in Pakistan: A CGE-Based Analysis", *Pakistan Development Review* 38, 4: 789-802.

The study examines the impact of reduction in tariff on industrial goods across households and on other broad macroeconomic aggregates. Using a CGE model framework, we analyse the impact of reduction in tariff on industrial goods. The model has 215 equations explaining

the linkage among the variables. The basic data for estimating the model are taken from Social Accounting Matrix for the year 1989-90. The simulation exercise suggests that the negative impact of changes in relative prices in response to reduction in tariff rate are disproportionately higher for the lower income group. The gap between the rich and poor households is widening. Decline in investment also has negative implications for the economy as a whole. The paper suggests that income distribution is worsening in rural and urban areas of Pakistan due to reduction in tariff rate on industrial imports.

Sorsa, P. (1995) "The Burden of Sub-Saharan African Own Commitments in the Uruguay Round--Myth or Reality?", IMF Working Paper: 95/48, Washington DC: IMF.

The paper reviews Sub-Saharan Africa's (SSA) (i) own market access commitments in the Uruguay Round, and (ii) the nature of the constraints on SSA policies set by the Uruguay Round. It concludes that SSA failed to use the Uruguay Round to lock domestic reforms to an international anchor. Apart from South Africa, most SSA countries made few substantial liberalization commitments on border protection. The new rules set few immediate constraints on SSA policies as developing countries benefit from long and extendable transition periods. The main impact of the new rules will be increased transparency of policies from increased notification requirements. Further trade liberalization will have to rely on unilateral initiatives.

Zhang, Z. (2001) "Trade Liberalization, Economic Growth and Convergence: Evidence from East Asian Economies", *Journal of Economic Integration* 16, 2: 147-164.

In recent years most studies analyzing cross-country convergence have ignored the role of international trade, simply framing the analysis in a Solow world. These models then have very limited power in explaining the economic growth of East Asia, given that East Asian integration is largely due to the market-driven forces, trade induced by foreign direct investment (FDI). This paper investigates the interrelationship between regional integration and economic convergence by linking income convergence to intra-regional trade and FDI. A central focus of the model is on how the degree of market integration driven through trade and FDI interacts with income convergence among the East Asian countries during the period 1960-96. We shed light on the significance of trade openness, liberalization and regional integration in contributing to cross-country income convergence.
