FTAs with India and Brazil: An Initial Analysis

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The views expressed in this paper are those of the authors and do not necessarily represent those of the National Treasury.

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Contents

Summary

The purpose of this report is to launch a debate on the proposed free trade agreements (FTAs) with Brazil and India by providing some preliminary analysis. Two different but complementary research methodologies have been employed, each of which provides a different perspective on the possible impact of these agreements.

GTAP analysis

Using the database and general equilibrium model of the Global Trade Analysis Project (GTAP), the economy-wide impact of a number of different tariff liberalisation scenarios have been evaluated. The model is a particularly useful one for comparing the relative effects of alternative scenarios.

The results suggest that SACU would achieve positive gains from bilateral trade liberalisation with South Asia and Mercosur. Exports over a 2–3 year period would be of the order of 0.2–0.4 percentage points higher than would otherwise be the case.

But the gains would be greater from unilateral liberalisation, an FTA with East Asia or even one with the rest of Africa. Almost all of the increased trade resulting from bilateral liberalisation with Mercosur or South Asia arises from the artificial diversion of demand away from favoured to less favoured suppliers (at the expense in the case of SACU imports of South African consumers, including producers using imported inputs).

Trade analysis

An analysis of trade and tariff data was used to identify those areas that would be most affected by bilateral trade liberalisation with Brazil and India. These are also the most sensitive sectors and, hence, the ones that are more likely to be excluded from immediate liberalisation. Hence they represent the economic activities that are most worthy of further investigation.

On the export side, they are the industries that have most to gain from an opening in the Brazilian and Indian markets. Since South Africa must assume that it will not achieve a full opening for all, it must establish its priorities by examining supply potential and the socio–economic impact of any expansion.

On the import side, the sectors are those that *appear* most likely to face adjustment costs. Again, prioritisation is needed to identify where the effect of these would be most severe.

The way forward

Although this analysis reflects just the first step in a more comprehensive research programme, it should enable policy makers to identify sensible assumptions for sensitivity analysis, and sectors in which further work is required. Much of this could be achieved by DTI, with assistance from Finance and IDS, using the methodologies applied in this study.

The Purpose of the Analysis

This report analyses from two perspectives the DTI's proposed 'butterfly strategy'. In a number of policy statements the DTI has indicated a willingness to negotiate bilateral agreements to strengthen trade relations with large and growing developing countries to the east and west (the wings of the butterfly). Brazil and India have been mentioned specifically.

This initial analysis identifies the possible implications of such accords to establish the areas in which more careful consideration may be warranted. The research methodologies are complementary: they provide views from different perspectives that need to be combined. They are:

- a simulation of full or partial trade liberalisation between South Africa and the whole of Mercosur or South Asia using the database and model of the Global Trade Analysis Project (GTAP);
- an analysis of trade and tariff data to identify areas in which current trade between South Africa and Brazil/India may be constrained by policies that might be amended in a bilateral accord.

They are complementary since each is relatively strong in the areas where the other is relatively weak. The main attraction of the GTAP analysis is that it shows the economy-wide effects of liberalisation. Hence, for example, it will identify the full range of effects resulting from any increase in South African imports due to liberalisation. These include output and employment gains in the sectors that benefit as well as the losses in import-competing sectors. But the analysis is undertaken at a relatively high level of aggregation and, of course, the indirect effects of liberalisation are calculated on the basis of assumptions that may be open to challenge.

The main attraction of the trade data analysis is that it is more highly disaggregated and involves fewer, more transparent assumptions. Hence, it provides a realistic picture of the South African sectors that would be most likely to face early import competition following bilateral liberalisation and those with an early enhancement of export opportunities. This intelligence can be linked with information on government expectations and plans for the affected sectors, and to other trade policy plans. But, by the same token, this approach lacks the economy-wide scope of the GTAP exercise.

Why Negotiate an FTA?

The two questions that need to be asked to determine whether or not an FTA should proceed are:

- Why liberalise?
- Why limit liberalisation to just one (or a few) trade partners?

The arguments for and against trade liberalisation are well known from the textbooks. The answer to the more tricky second question appears from the experience of successful FTAs/Customs Unions to be that geographically restricted liberalisation *may* lessen the adjustment shock and/or allow the partners to make more progress than would be possible through multilateral trade liberalisation. Such 'progress' may be non-economic. Some of the most successful FTA/Customs Unions (such as the EU) have

had very clear non-trade objectives, with the promotion of trade seen as a means to the underlying objective. Or, it may involve economic integration in areas (e.g. services) for which a multilateral consensus does not yet exist.

In other words, there are many reasons why countries negotiate FTAs, of which trade promotion is only one. Possible reasons to negotiate a bilateral agreement with Brazil and/or India, for example, may include increasing the flow of services, knowledge and capital as well as goods. Or an FTA could be seen as a means to begin opening up SACU's most protected sectors without exposing them to the full force of international competition.

This analysis deals only with trade in goods and hence fails to take account of many of the wider concerns. This is because FTAs typically have a *direct effect* only on market access for goods. But the market for goods is less than half of the total: in all three regions, output is dominated by the service sector — in SACU it contributes almost 60% (Appendix 2). Thus, despite some spin-offs benefits, more than half of the economy is unlikely to be affected directly by an FTA which covers goods alone. Even in FTAs that cover services, references tend to be couched in somewhat broad terms and the potential effect on trade is difficult to measure

For goods, the motivation for a bilateral accord is to raise the level of trade from the current level. If this is considered to be unsatisfactorily low there could be four reasons:

- the two countries export the same types of things to each other as to the Rest of the World (RoW) but the latter is much larger and so consumes a larger share;
- the two countries export different things to each other and to the RoW, and growth of the latter is greater;
- there are 'natural' barriers (such as transport) that are restricting bilateral trade;
- there are artificial barriers, notably policy restrictions of one kind or another on imports.

A bilateral trade agreement will impact directly only on the last of these. It will alter directly only the market access policy barriers, although it may contribute indirectly and over the medium term to easing (e.g. through investment) some natural barriers and a mismatch of supply.

The Scope for an FTA with Brazil or India

What are the barriers?

It follows that FTAs are likely to have the greatest effect (for good or ill) between countries with high pre-existing market access barriers. To see how far this situation characterises the cases under review, data on trade-weighted tariffs have been collected from the GTAP database for SACU and for the whole of Mercosur and of South Asia.[1] The relevant figures are given in Tables 1–3. The trade-weighted average tariff levied by SACU in 1995 was 4.8% on imports from Mercosur and 8.5% on imports from South

[1] Disaggregated data on Brazil and India will be obtained in September 2000 after the next phase of GTAP data improvement has been completed.

Asia. The equivalent figures for Mercosur tariffs on imports from SACU was 4.9% whilst for South Asia it was a massive 47.9%.

In broad terms, Mercosur and SACU have broadly similar tariffs whilst those of South Asia are much higher. This has implications for the expected balance between trade creation/diversion and between types of welfare effect that are brought out below.

Table 1. SACU trade-weighted import tariffs by product and selected regions

	MERCOSUR	SASIA	EASIA	AUSNZ	RAFRICA	RSADC	EU
PrimAg	2.8	4.3	2.4	4.6	-1.0	2.1	7.0
AgProc	4.1	1.6	9.3	26.3	3.7	9.0	17.0
MachEle	6.3	5.7	4.8	3.9	1.7	7.2	2.3
Transport	14.8	14.9	28.7	24. 6	18.6	19.6	19.6
OManu	4.0	6.7	9.5	3.3	3.1	10.6	5.1
Metal	7.8	8.6	9.8	3.2	2.5	10.1	4.8
Chem	3.3	3.9	10.5	2.4	5.3	16.1	2.1
Mineral	6.4	8.6	8.9	10.1	0.3	2.8	3.3
TexCloth	17.9	15.1	21.9	12.4	13.1	19.0	9.8
Average	4.8	8.5	12.2	10.5	0.6	9.4	4.8

Table 2. Mercosur trade-weighted import tariffs by product and selected regions

	SACU	MERCOSUR	SASIA	EASIA	NAFTA	RSADC	EU
PrimAg	2.7	7.4	8.9	8.2	1.7	10.3	5.2
AgProc	11.6	3.5	4.5	-2.1	6.8	12.6	4.6
MachEle	7.5	11.7	14.3	15.4	15.1	16.9	14.4
Transport	17.0	20.6	15.4	19.9	17.7	15.8	21.6
OManu	10.7	9.0	14.7	15.6	9.2	7.7	8.9
Metal	8.6	10.5	14.3	13.3	11.8	6.0	12.0
Chem	3.0	10.5	9.7	11.5	9.5	2.1	9.2
Mineral	7.8	11.7	8.0	6.8	5.7	13.5	10.3
TexCloth	3.3	12.6	13.1	15.7	12.1	14.3	14.6
Average	4.9	10.4	10.4	11.9	10.3	10.7	11.7

Table 3. South Asia trade-weighted import tariffs by product and region

	SACU	MERCOSUR	SASIA	EASIA	NAFTA	RSADC	EU
PrimAg	17.0	37.4	47.9	46.4	11.2	10.2	21.1
AgProc	66.3	55.3	1.9	56.5	63.6	46.0	79.6
MachEle	57.8	61.4	63.1	56.1	53.0	60.9	52.8
Transport	54.1	57.4	70.4	66.7	40.8	73.0	52.8
OManu	44.8	49.8	49.4	62.1	44.9	79.4	53.2
Metal	57.1	67.2	53.6	70.3	45.7	72.6	61.7
Chem	61.3	51.1	62.0	59.4	57.9	58.0	59.1
Mineral	18.2	47.1	53.2	36.0	28.2	22.2	5.1
TexCloth	74.9	49.5	67.2	73.0	69.5	67.1	54.9
Average	47.9	50.5	48.3	56.5	40.2	33.5	41.8

Interpreting the data

Although the broad picture of relative protection in the three regions painted by Tables 1–3 is probably realistic, the figures on trade-weighted tariffs need interpreting with care. There are two reasons for this. First, there is the standard problem with trade-weighted figures in cases where there is a strong polarisation within the broad GTAP product categories between sub-sectors facing low and very high protection. Since there will be more trade in the low than in the very highly protected sub-sectors the figures will provide an unrealistic impression that access is more liberal than is the case.

Second, though GTAP attempts to capture actual bilateral tariffs, the database does not contain details of all existing preferential trade agreements. The effect of this can be seen very clearly in Table 1, which shows SADC (RSADC) paying higher tariffs on their exports to SACU than most other regions when reality is the opposite. The data show SACU imports from SADC of textiles and clothing paying a tariff of 19% despite the Zimbabwe and Malawi bilateral trade agreements. What this figure means is that SACU imported from Zimbabwe, Malawi and other SADC states textiles and clothing *that would have paid* duties of 19% had tariffs been levied at the standard rate.

The Methodologies

The basic assumption is that the principal short-term effects of a bilateral agreement on trade in goods will result from the reduction of direct market access barriers. These will be cut from their current level (which can be measured) to a future level (which can be assumed). The effect will be proportional to the reduction.

GTAP

These effects have been calculated in two ways. The first uses the GTAP database and model (see Appendix 1). The data used is from the GTAP Version 4 database, which 'contains detailed bilateral trade, transport and protection data characterising economic linkages among regions, linked together with individual country input–output data bases which account for intersectoral linkages among the 50 sectors within each of 45 regions. All monetary values of the data are in $US millions and the base year for Version 4 is 1995.'[2]

A series of tariff 'shocks' are applied to a general equilibrium, economy-wide model of world trade. Whilst it is possible to test the impact of any number of different liberalisation scenarios, this study has begun by simply assuming both full and partial liberalisation between SACU and Mercosur or South Asia. The partial liberalisation scenario involves a slower (and more realistic) phase-down schedule (see below). For comparison, the effect of full and partial liberalisation between SACU and a number of other trade partners has also been simulated.

For each scenario the model generates results on relative changes in:

- output — by sector and country;
- trade — by sector and country;
- prices — by sector and country;

[2] GTAP website, http://www.gtap.org

- employment — by sector and country;
- GDP — by country;
- welfare — by country.

Simple trade and tariff analysis

The second methodology uses trade and tariff data to tease out the main short-term effects on the assumption that this will be on sectors in which:

- one party has a supply capacity and the other consumes;
- there are significant import controls;
- these controls will be reduced significantly under the bilateral accord.

The first two of these can be analysed from data on trade flows and market access restrictions (and the conclusions amplified when the shape of any FTA is known). For the first, data on the recent trade patterns of South Africa, Brazil and India have been analysed to identify for SACU:

- sectors that may experience increased imports into SACU as a result of bilateral liberalisation;
- sectors that may experience increased export opportunities.

For the second, South African import duty data and UNCTAD TRAINS database have been used to identify the extent to which trade may be inhibited by market access restrictions.

The Pattern of Trade

The trade of SACU, Mercosur and India is dominated by the OECD and East Asian states. Their South–South trade is modest. For an FTA to have a direct effect on this pattern, one of the reasons for the concentration on some trade partners must be the presence of artificial barriers in the others (rather than just being a reflection of production and consumption patterns).

The initial impression derived from a review of the sectoral distribution of each party's trade suggests that the geographical pattern of trade is at least partly a reflection of the types of goods these countries export. Figures 1–6 cover the exports and imports of SACU, Mercosur and South Asia. SACU's main merchandise exports are minerals and metals which, with services, account for almost two-thirds of the total. These two merchandise sectors account for a smaller share, 13% and 23% respectively, of Mercosur and South Asia's non-services imports. Mercosur has relatively diversified exports. Processed and primary agriculture, metals, minerals, and manufacturing account for just under two-thirds of the total. These sectors account for only about one-quarter of SACU's imports. In the case of South Asia, textiles/clothing is the dominant merchandise export accounting for 39% of the total. It accounts for a mere 5% of SACU's imports.

But this does not mean that there is no scope to boost bilateral trade through an FTA. Both the GTAP and the trade/tariff analysis show that there are significant areas in which trade could be encouraged through liberalisation. What it does mean is that the impact of

such liberalisation on the economies of the participants will be limited because OECD/E Asian states will remain their main trade partners.

This economic limitation could represent a political advantage. One of the reasons to liberalise bilaterally rather than multilaterally is to limit the adjustment costs which always have a more prominent political impact than the underlying economic gains. A bilateral agreement with Brazil or India *might* have fewer adjustment implications.

Figure 1. SACU imports by sector

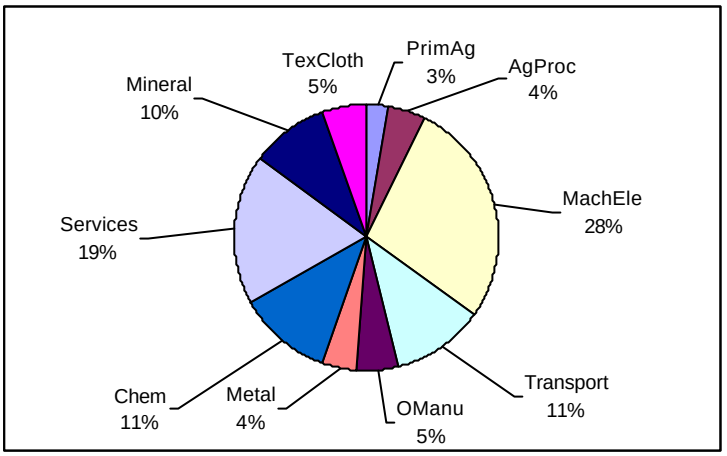


Figure 2. SACU exports by sector

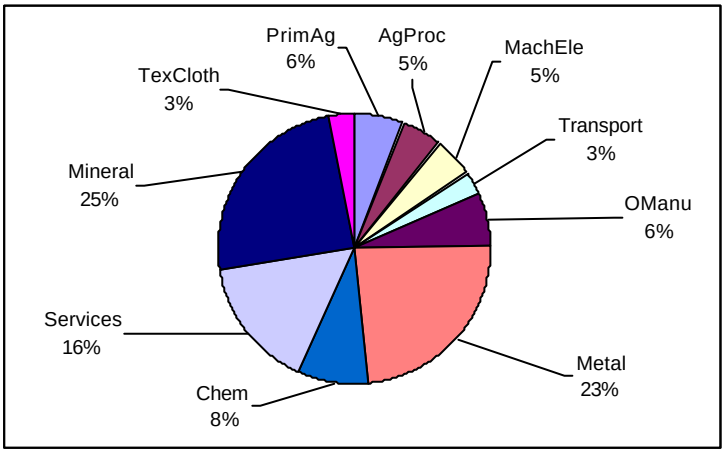


Figure 3. MERCOSUR imports by sector

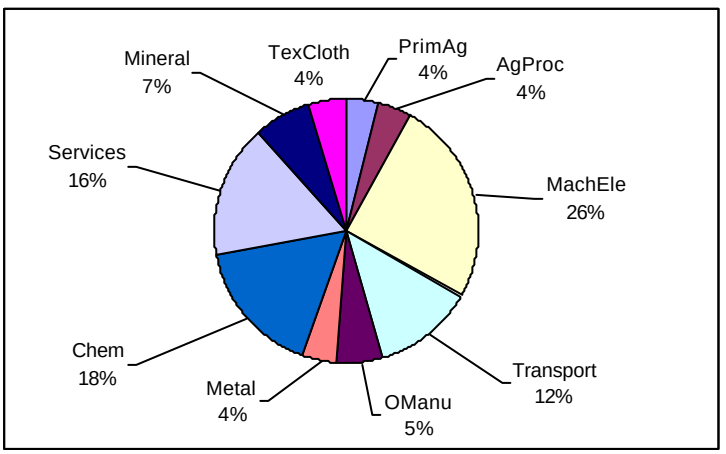


Figure 4. MERCOSUR exports by sector

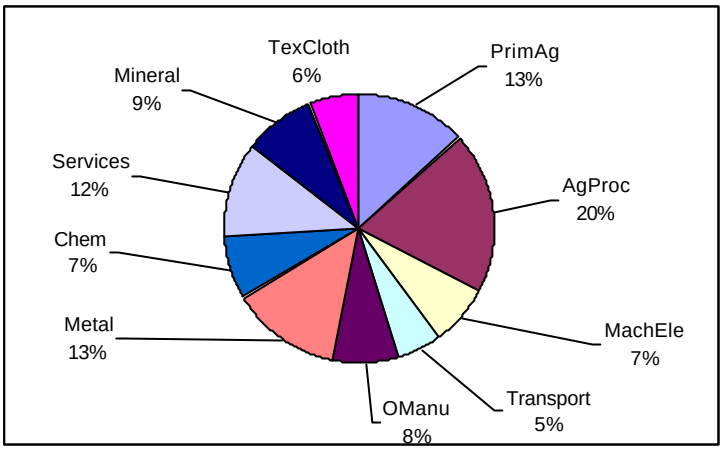


Figure 5. SASIA imports by sector

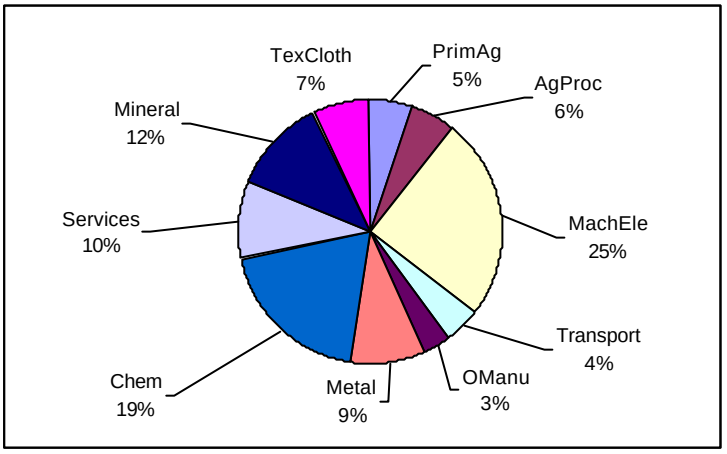
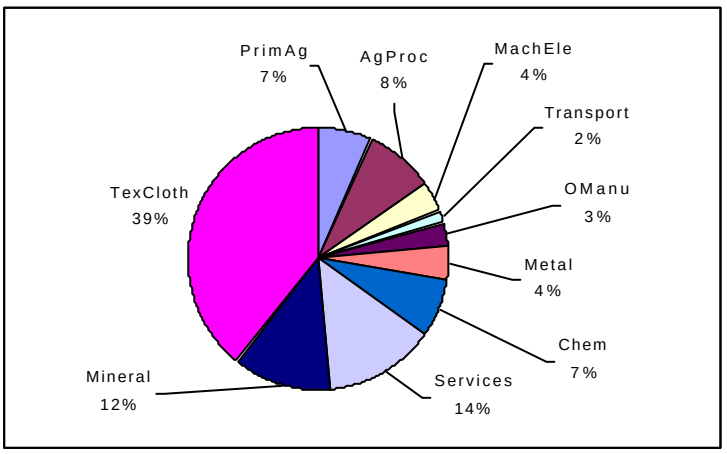


Figure 6. SASIA exports by sector



The Macro-Effects of an FTA

The GTAP model was used to simulate the effects of an FTA between SACU and Mercosur or South Asia. We simulated both full liberalisation (in which both parties reduce to zero their tariffs on all imports from their partner) and 'partial' liberalisation. The 'partial' scenario does not exclude completely any sector, but it maintains positive

(though reduced) tariffs in the most sensitive ones. It assumes the following phase-down schedule to each party's existing tariff structure:

- tariffs of 15% or less are reduced to zero;
- tariffs between 15% and 25% are reduced to 10%;
- tariffs greater than 25% are reduced by half.

For comparison purposes, the same full and partial liberalisation schedule was applied to trade between SACU and East Asia (EASIA), Australasia (AUSNZ) and Africa excluding SADC (RAFRICA). In addition, we also simulated full and partial autonomous liberalisation by SACU to all trading partners (i.e. without reciprocal liberalisation).

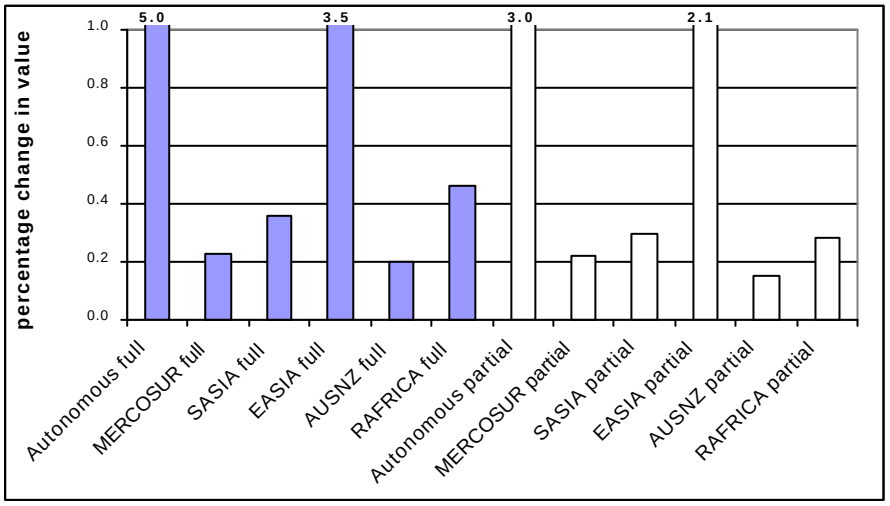
The results are shown in Figures 7–12 that cover the impact on SACU's exports, imports, GDP, output and welfare. In all cases the change measured on the vertical axis reflects the additional growth above the underlying rate that would be achieved over the 2–3 years following the tariff shock.

For example, the effect of autonomous liberalisation on SACU's exports (Figure 7) would be to increase by 5 percentage points the underlying rate of growth. In other words, the rate of growth of exports would be 5% greater if autonomous liberalisation were to occur than if it did not. Hence if it is assumed, for example, that SACU's underlying (US$) real export growth rate is around 10% p.a., or approximately 25% over the next 2–3 years, this growth is forecast to rise with autonomous liberalisation to around 30%.

Exports

Figure 7 suggests that all four scenarios with Mercosur and South Asia would produce modest but positive increases in the rate of export growth. In all cases, this boost would be much smaller than would result from an FTA with East Asia or from autonomous liberalisation. The option of an FTA with the Rest of Africa (especially if it involved full liberalisation) also appears relatively attractive, although there would be major practical difficulties in realising these benefits. They are spread over numerous small economies and it is unlikely that SACU could conclude an FTA with all of them over the short term.

Figure 7. Impact on SACU exports



There is a difference in the main cause of the increase in exports between the Mercosur/South Asia FTAs on the one hand and East Asian or autonomous liberalisation on the other. For the former, the main source of SACU export growth is trade diversion away from existing suppliers towards Mercosur or South Asia, whereas with the latter it is trade creation. This is because the simulation assumes that Mercosur/South Asia lower tariffs on imports from SACU but not from other sources. Hence, SACU suppliers gain some of the economic rent created by the artificial supply restrictions imposed by the Mercosur and South Asian governments.

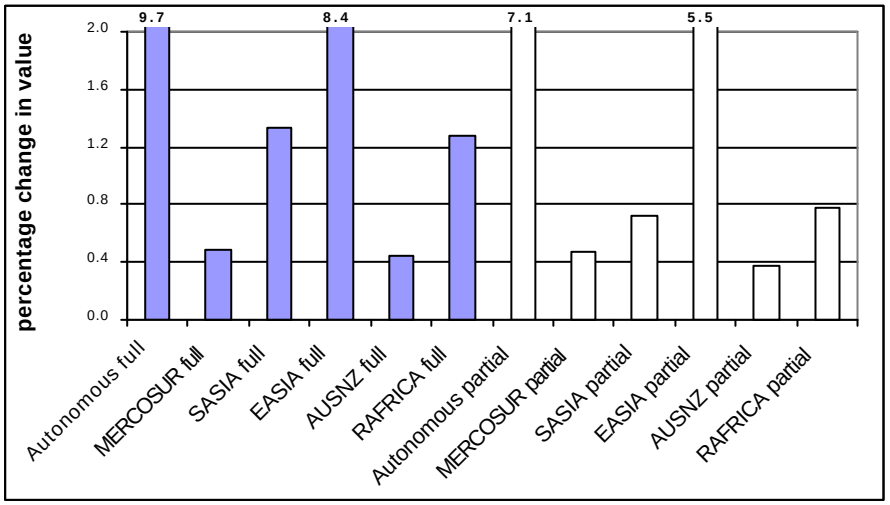
This is the main reason why the growth in exports is shown to be greater with a South Asia than with a Mercosur FTA. Since the initial South Asian tariffs are much higher (see Tables 2 and 3), the trade diversion in favour of SACU is greater.

The reason why the export gains from partial liberalisation are only slightly smaller than those from full liberalisation is that, as explained above, the latter scenario does not exclude sensitive sectors. Even though it assumes a reduction of only half in the current level of the highest tariffs, these are so high that the resulting cut is large in absolute terms. In Mercosur, tariffs in all but the transport sector fall to zero under partial liberalisation, and South Asian tariffs are cut by 50%, which is a significant reduction in import protection.

Imports

The picture painted by Figure 8 on imports is similar to that for exports: positive growth for all scenarios, but lower for the FTAs with Mercosur and South Asia than for an FTA with East Asia or autonomous liberalisation. And the main source of change is the same: trade diversion for the Mercosur/South Asia FTAs and trade creation for the East Asia FTA and unilateral liberalisation. The main difference between the full and partial liberalisation scenarios is that textiles and clothing remains the only protected SACU sector in the latter. This explains why South Asian import growth is much lower under the partial compared with the full liberalisation simulation.

Figure 8. Impact on SACU imports



An interesting feature of Figure 8 is that in all cases the anticipated increase in growth is greater for imports than it was for exports. This is assumed by the authors to be a

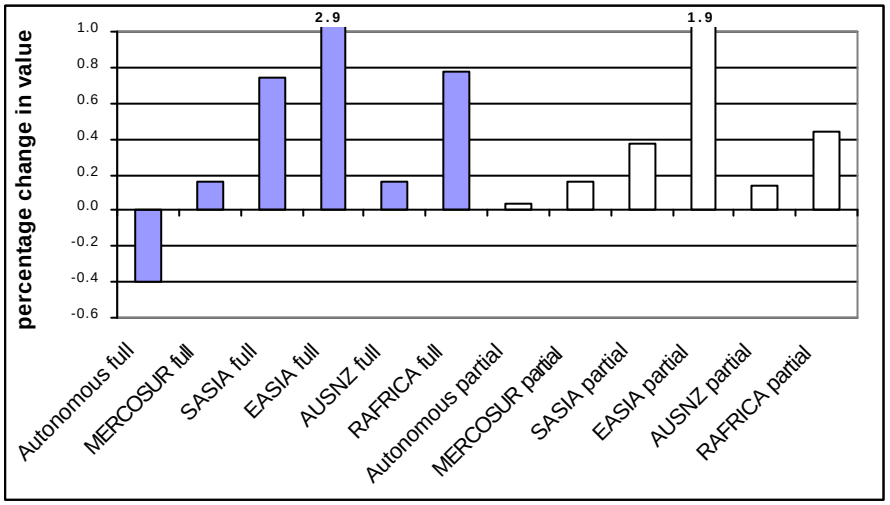
consequence of SACU's high propensity to import: a given export stimulus to growth provokes a more than proportionate increase in imports.

Fortunately, this disparity does not appear to be sufficiently large to give rise to serious concern. As explained, the simulated increase in growth does not continue forever: it is dissipated over a period of 2–3 years. The absolute balance-of-trade effect of the simulated disparity in SACU imports and exports over this period is not sufficiently great to become a major policy concern. After the 2–3 year impact period the underlying trends are assumed to reassert themselves.

GDP

The results for imports and exports explain the simulated impact of the FTAs on GDP (Figure 9). The boost to GDP growth is higher from the South Asia than from the Mercosur FTA because of the higher initial tariffs and, hence, greater trade diversion. Hence the difference between full and partial liberalisation is also greater for South Asia because, as explained above, textiles and clothing (which are liberalised only modestly) are more important exports for South Asia than for Mercosur. Partly as a consequence, an FTA with the Rest of Africa turns out to have a greater positive effect on GDP growth than one with either Mercosur or South Asia on both the full and partial liberalisation scenarios.

Figure 9. Impact on SACU GDP growth



The insights gained from understanding how the export and import results have come about also explain the apparently anomalous finding that full autonomous liberalisation will depress nominal GDP growth — despite the fact that it has substantial positive effects on both exports and imports that result from trade creation. It occurs because the rise in imports is expected to exceed export gains (because of the absence of reciprocity). This leads to a marginally lower nominal GDP growth rate (reflected in GTAP as a negative terms-of-trade effect).

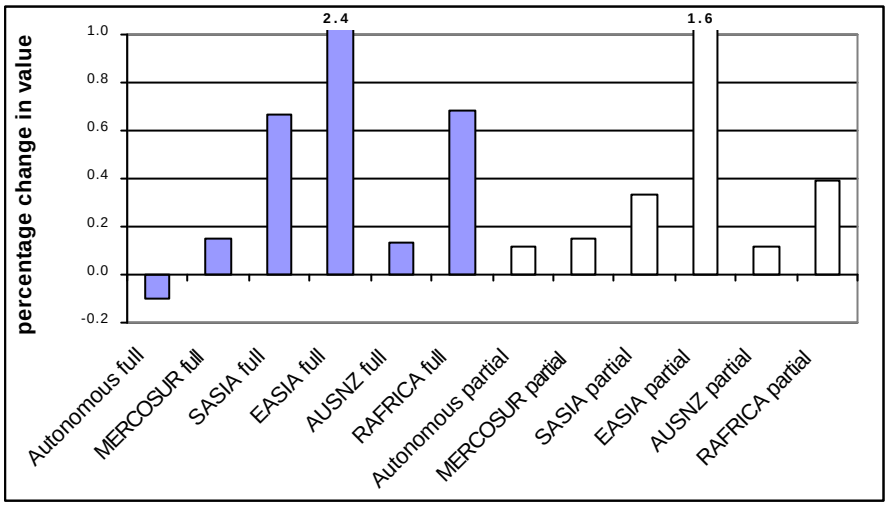
The interesting observation to be drawn in passing from Figure 9 is how small are the relative costs of the, politically wildly unrealistic, strategy of autonomous, non-reciprocal liberalisation. The impact of this shock is equivalent only to a reduction in the rate of nominal US$ GDP growth by 0.4 percentage points over a period of 2–3 years. On an annual basis, nominal US$ economic growth would be just 0.1 to 0.2 percentage points

lower. Even this modest effect would be dampened by a corresponding fall in import prices. GTAP shows the GDP price index falling significantly more than the reduction in GDP growth. Hence the net effect on *real* GDP growth would be positive. But then, as noted above, the GTAP model includes many assumptions, some of which are controversial!

Output

An important gain from all of the simulated FTAs is the increase in output achieved under all the scenarios apart from full autonomous liberalisation (Figure 10). As in other cases, the gains for the Mercosur and South Asia FTAs are smaller than for an East Asian FTA and also, in this case, one with the Rest of Africa on both full and partial liberalisation scenarios.

Figure 10. Impact on SACU output

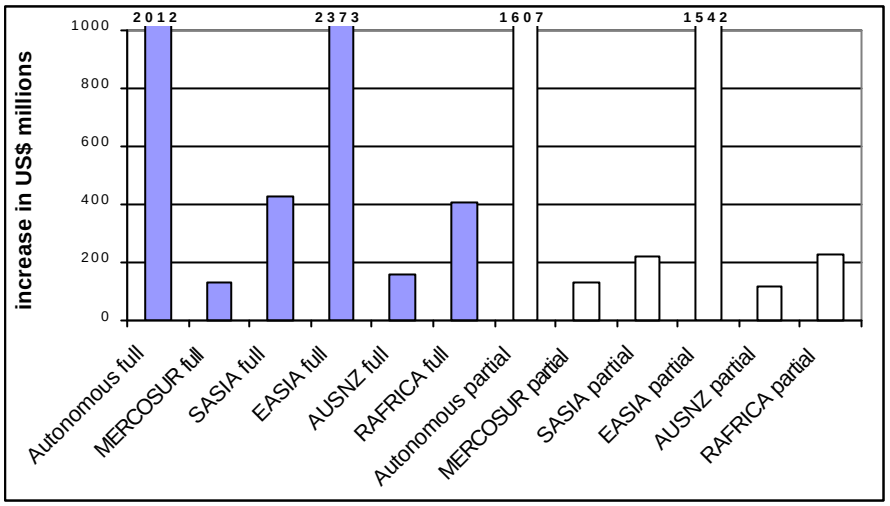


The increase in output provides a handy guide to the modelled relative sectoral impact of the FTAs. In the case of a full South Asia FTA, the sectors that have the greatest proportionate increase in output are chemicals and metals; those with the greatest reductions are minerals, transport and electrical machinery. In the case of a Mercosur FTA the greatest gains are for other manufacturing and electrical machinery, whilst the declines are for transport, textiles/clothing and agriculture.

Welfare

The overall effect on welfare is summarised in Figure 11. GTAP uses the concept of *equivalent variation* (EV) to estimate changes in consumer utility in dollar terms. The figures on the vertical axis of Figure 11 represent the amount of dollars that would need to be injected into SACU to produce the same welfare effects as the liberalisation scenarios. The pattern between the various scenarios is the same as above: autonomous liberalisation and the EASIA FTA have the greatest welfare effect but the gains from FTAs with Mercosur or South Asia (or Rest of Africa) are also positive, albeit modest.

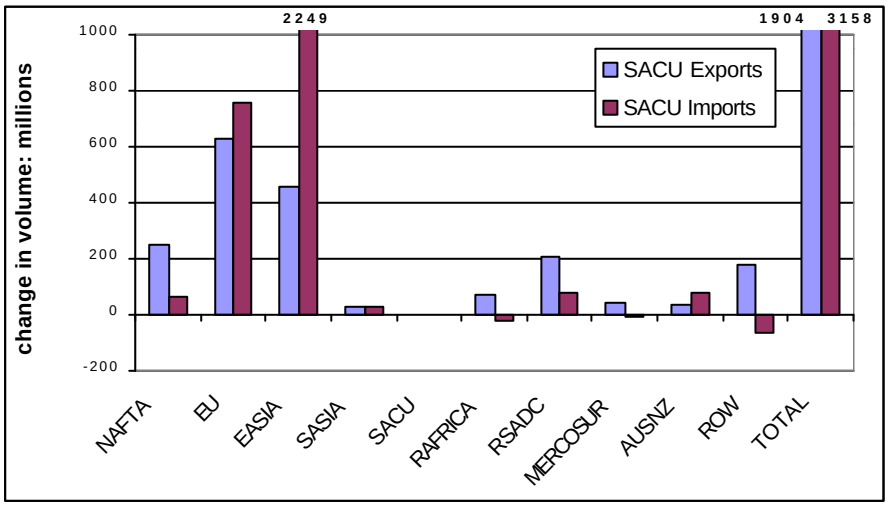
Figure 11. Impact on SACU welfare



The cost of an FTA

An indication of the nature of the cost of the FTA route to liberalisation as opposed to the autonomous (or, more realistically, multilateral) path is given in Figure 12. This shows the geographical pattern of exports and imports that GTAP indicates would result from autonomous liberalisation. The bulk of new SACU imports would come from East Asia, with EU and NAFTA also significant; few would come from Mercosur or South Asia. In other words, the preference of SACU importers (for reasons of price, quality or type of good) is not to purchase from the countries that an FTA would favour. The artificial diversion of demand away from favoured to less favoured suppliers is one of the most direct costs of geographically restricted liberalisation.

Figure 12. Trade effect of autonomous liberalisation



The Detailed Effects of FTAs with Brazil and India

Whilst GTAP provides a very useful economy-wide perspective it does so at a relatively high level of aggregation and in a form that makes it difficult to alter the assumptions built into the model. These constraints do not apply to the more detailed analysis of trade data

presented in this part of the paper. When read together, the detail provided in this section can be placed within the broader context established by the GTAP analysis.

The exercise described in this section provides a simple, static analysis intended to direct attention to the sectors that may need to be studied further. In the case of imports, for example, how well placed are the sectors most likely to be affected to withstand increased competition and what are current adjustment plans? In the case of potential export opportunities, is there adequate supply capacity to take advantage of them?

The static analysis can be extended subsequently by introducing various dynamic assumptions. These can best be brought into play through sensitivity analyses. As with the GTAP analysis, this should be done following discussion of this paper.

This initial exercise has identified a short list of the products most likely to be affected by FTAs. It comprises current and potential traded goods that face significant market access barriers in SACU, Brazil or India. The sources from which the data have been obtained are:

- **current trade:** figures on SACU imports from and exports to Brazil and India have been obtained from the TIPS database;
- **potential trade:** the supply capacity of Brazil and India has been identified from their global exports as indicated in the UN Comtrade database;
- **SACU import restrictions:** data on duty paid (from DTI) and SACU's 1998 WTO scheduled tariffs (from IDC[3]) have been used together with the UNCTAD TRAINS database to identify the level of market access restrictions on SACU's current and potential imports from Brazil and India;
- **Brazil/India import restrictions:** UNCTAD TRAINS data have been used to identify the level of market access restrictions on SACU's current and potential exports to Brazil and India.

How Might SACU Imports be Affected?

Currently traded goods

SACU's trade with both Brazil and India is broadly in balance, bearing in mind that export figures are cif and imports are fob. Its total 1998 exports to these countries were R 1.1 billion and R 1.6 billion respectively, compared with imports of R 1.3 billion and R 1.7 billion. The most important imports from Brazil are mainly vehicles and parts (including those imported under the MIDP) and industrial inputs, together with tobacco, leather and footwear (see Appendix 3, Table A.1, which shows the 4-digit groups with imports of R10 million or more). The more extensive list of important imports from India includes rice, leather and footwear, textiles and clothing, industrial inputs and machinery, and MIDP vehicle parts.

Which of these face significant import restrictions and, hence, would be affected directly by an FTA? Because of the uncertainty over South Africa's applied tariff rates we have identified both the reported duty paid and the scheduled WTO tariff for each of the main imported items listed in Appendix 3 Table A.1. If either of these indicate an *ad valorem*

[3] Data for Chapters 25 upwards have been obtained directly from South Africa's GATT offer; data for Chapters 1–24 have been derived from the EU–South Africa FTA schedules.

equivalent tariff of 15% or more the item has been deemed to face a significant market access barrier.

Table 4 lists all of the main current SACU imports from Brazil and India that face significant tariff barriers (as defined above). It is these products for which an FTA might provide a boost to imports. The term 'might' is used both because the terms (and exclusions) of any FTA are unknown at this point but also because of the opacity of SACU tariffs. In almost all of the rows in Table 4 there is the possibility that imports face low rather than high tariffs, either because there exist tariff ranges within the 4-digit heading or because of differences between the rate calculated from the duty reportedly paid and the WTO scheduled rate.

Table 4. Current SACU imports from Brazil and India facing high tariffs (potential tariff of 15% or more)

HS4	Brief description	Imports 1998 (R mn)	Tariff range 1998	
			Calculated [a]	*Scheduled* [b]
Imports from Brazil				
9801	Original equipment components	250	0–7.1%	49%
8701	Tractors (excluding tractors of heading no. 87.09).	81	0–11.9%	0–28%
2401	Unmanufactured tobacco; tobacco refuse.	56	0–0.6%	15%
8501	Electric motors and generators (excluding generating sets).	49	0–21.8%	0–22%
8409	Parts suitable for use solely or principally with the engines of heading no. 84.07 or 84.08.	30	0–18.9%	0 or 20%
8708	Parts and accessories of the motor vehicles of headings nos.87.01 to 87.05.	24	0–24.6%	0–30%
1507	Soya-bean oil and its fractions, whether or not refined, but not chemically modified.	18	0–2.4%	0–20%
4415	Packing cases, boxes, crates, drums and similar packings, of wood	17	0.1%–20%	11 or 12%
0207	Meat and edible offal, of the poultry of heading no. 01.05, fresh, chilled or frozen	17	0–43.8%	27%[c]
7321	Stoves, ranges, grates, cookers etc. and parts thereof, of iron or steel.	14	11.3–15.3%	15%
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather.	12	3.2–40%	30 or 40%
8207	Interchangeable tools for hand tools whether or not power-operated or for machine-tools	10	0–19.7%	0–20%
8702	Motor vehicles for the transport of ten or more persons, including the driver.	10	1–34.9%	20–54%
Imports from India				
6204	Women's outerwear (not knitted/crocheted).	51	20.3–62.5%	66%
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather.	40	3.2–40%	30 or 40%
6205	Men's shirts.	35	3.7–57.7%	66%
9801	Original equipment components:	33	0–7.1%	49%
5205	Cotton yarn (excluding sewing thread)	32	0.4–24.4%	22%
5208	Woven fabrics of cotton, containing 85 or more by mass of cotton	28	0.8–52%	10–33%
1404	Vegetable products not elsewhere specified or included.	27	0 or 14.3%	0 or 15%
9506	Articles and equipment for general physical exercise	26	0–14.2%	0–25%
6302	Bed linen, table linen, toilet linen and kitchen linen.	25	0–66.5%	43%
5509	Yarn (excluding sewing thread) of synthetic staple fibres	22	0–40%	22%
3204	Synthetic organic colouring matter	22	0–9.8%	0 or 18% [d]
5515	Other woven fabrics of synthetic staple fibres.	17	0–107.3%	33%
0910	Ginger, saffron, turmeric (curcuma), thyme, bay leaves, curry and other spices.	16	0–20%	0–20%
8306	Bells, gongs, statuettes, picture frames, mirrors etc., of base metal	16	0 or 19.3%	0 or 20% [d]
8524	Records, tapes and other recorded media for sound	16	0–18%	0–15% [d]
2401	Unmanufactured tobacco; tobacco refuse.	14	0–0.6%	15%
6206	Women's shirts.	14	33–56.2%	66%
8540	Thermionic, cold cathode or photo- cathode valves and tubes	13	0–5.1%	0–25%
1302	Vegetable saps and extracts	13	0–22%	0–25%
5902	Tyre cord fabric of high tenacity yarn of nylon or other polyamides,	12	3.7–12.2%	15%

HS4	Brief description	Imports 1998 (R mn)	Tariff range 1998	
			Calculated [a]	*Scheduled* [b]
	polyesters or viscose rayon.			
0904	Pepper of the genus piper; ground fruits of the genus capsicum or of the genus pimenta.	12	0 or 11.5%	0 or 25%
0306	Crustaceans, whether in shell or not	12	0–5.7%	5 or 30%
8539	Electric filament or discharge lamps	11	0–23%	0–21%
4010	Conveyor or transmission belts or belting, of vulcanised rubber.	11	6.5–17.2%	16–19%
5407	Woven fabrics of synthetic filament yarn	10	0–55.9%	20–60% [b]
8708	Parts and accessories of the motor vehicles of headings nos.87.01 to 87.05.	10	0–24.6%	0–30%
5702	Carpets and other textile floor coverings, woven	10	8.1–31.4%	30%

Notes:

(a) The 'average tariff' derived from calculating the duty collected as a percentage of imports from all sources in 1998.

(b) According to the EU–South Africa FTA base tariffs (for goods in HS Chapters 1–24), or the scheduled tariff in 1998 according to South Africa's commitments under the Uruguay Round (Chapters 25 onward).

(c) Only one of the 8-digit components of this HS4 sub-heading is included in the EU–South Africa FTA tariff schedules (from which the tariff ranges for goods in HS Chapters 1–24 are derived here). The tariff shown for that one 8-digit code is 27%.

(d) For these items one or more 8-digit components of the HS4 sub-heading are not shown in South Africa's WTO commitment schedules. Where the 8-digit codes are shown in the EU–South Africa FTA tariff schedules, these tariffs have been used.

Source: TIPS; IDC; WTO Schedule; EU–South Africa FTA.

Despite this problem, the products listed in the table are ones that deserve closer analysis to identify the potential for increased imports under an FTA. In the case of Brazil they are vehicles and parts, agricultural goods (tobacco, soya oil and meat) and footwear. For India they are mainly textiles and clothing, footwear, vehicle parts, and some agricultural goods.

Under-traded items

Table 4 thus shows the products that SACU currently trades with Brazil or India for which an FTA might produce import growth as a result of trade creation or, more probably, diversion. But what about products for which access barriers are presently sufficiently high to suffocate imports from Brazil and India? An indication is needed of the goods that are under-traded at present with SACU for which Brazil and India have a supply capacity. This has been obtained through a three-step process.

An initial long-list was derived from a comparison of the product distribution of Brazil/India's exports to the world and to SACU. Products that form a significantly larger share (at least 0.5 percentage points) of Brazil/India's exports to the world than to SACU are listed in Appendix 3, Table A.2.

In some cases the disproportionately low level of exports to SACU may be due to lack of demand for imports. A good example is diamonds: these account for 12.5% of Indian world exports but, for obvious reasons, do not feature at all in exports to SACU. Ideally, the initial long-list would be pruned of such items following analysis of South African consumption data. But this has not been possible. Instead, the authors have used their judgement to remove items that appear unlikely to be under-traded (in the sense that tariffs are suppressing imports of a good for which an underlying demand exists).

The resulting revised long-list has been turned into a short-list by identifying those items that face SACU tariff barriers that are sufficiently high to be a plausible cause of the current absence (or very low level) of imports (see Tables 5 and 6). This involves

converting data from the SITC[4] to the HS nomenclature. An UNCTAD TRAINS concordance has been used for this exercise, which will have introduced some error. In addition, similar problems have arisen from the opacity of SACU tariff data as for current imports.

Table 5. Under-traded Brazil exports facing high SACU tariffs

SITC 4d [a,b]	Description	Tariff range 1998 [c]	Export growth 1994-1998 [d]
0123	Poultry, meat and offal	0-27%	6.9
0176	Bov.meat,prpd,prsrvd,nes	0-40%	-2.5
0591	Orange juice	25%	4.1
0611	Sugars,beet or cane, raw	45%	3.5
0612	Other beet,cane sugar	45%	38.8
0713	Extracts,etc. of coffee	20-25%	-8
0813	Oil-cake,oilseed residue	0-15%	0
1212	Tobacco,stemmed,stripped	15%	10.5
1222	Cigarettes contg.tobacco	45%	17.1
6252	Tyres,pneumatic,new,bus	25%	3.6
6726	Semi-finish.iron,steel	14-15%	0.9
7132	Intrnl comb.engine vehcl	0-19%	11.2
7231	Self-propelld.dozers etc	0-10%	13.3
7821	Goods vehicles	0-61%	17.1
7841	Motor vehicle chassis	36-61%	5.9
8215	Furniture,nes,of wood	20-26%	7.2
8514	Oth.footwear,lthr.uppers	0-50%	-4.1

Note:

(a) Only SITC 4d items where the tariff applicable to the relevant HS8 components *could be* 10% or more included here.

(b) Only SITC 4d items where the share of Brazil's exports to the world exceeds that of Brazil's exports to SACU by at least 0.5% included here.

(c) According to the UNCTAD TRAINS database, which provides a concordance from SITC Rev.3 4-digit codes to SA 6-digit HS codes and tariffs. Where no data exists in TRAINS, tariff ranges are based on the EU–South Africa FTA base tariffs (for goods in HS Chapters 1–24), or the scheduled tariff in 1998 according to South Africa's commitments under the Uruguay Round (Chapters 25 onward).

(d) Annual average US$ increase in Brazil exports to the world, by product, according to UNCTAD TRAINS database.

Source: UNCTAD Comtrade; UNCTAD TRAINS, Eurostat COMEXT; SA Offer; and WTO schedule, IDC.

As with current imports, the list provides a focus for further investigation. The under-traded Brazil exports covered in Table 5 are mainly agricultural (meat, fruit juice, sugar, oilcake, coffee and tobacco), vehicles and parts, wood furniture, semi-finished base metals (iron and steel) and leather footwear. Of these products, sugar, tobacco and vehicles have shown particularly strong export growth since 1994, and are therefore likely to be of priority to Brazil.

Table 6. Under-traded India exports facing high SACU tariffs

SITC 4d [a, b]	Description	Tariff range 1998 [c]	Export growth 1994-1998 [d]
0342	Fish,frozen ex.fillets	5-25%	23.62%
0361	Crustaceans, frozen	5-30%	-0.05%
0577	Edible nuts fresh,dried	0-25%	-1.91%
0813	Oil-cake,oilseed residue	0-15%	20.09%
1211	Tobacco,not stripped,etc	15.00%	115.94%
2631	Cotton,not carded,combed	0-15%	240.86%
6252	Tyres,pneumatic,new,bus	34.00%	4.67%
6513	Cotton yarn,excl. thread	22.00%	26.34%
6522	Cotton fabric,wvn,unblch	33.00%	-2.04%
6585	Curtains,oth.furnishings	43.00%	9.87%
7812	Pass.transport vehicles	0-61%	15.42%

[4] Used by Comtrade, the source for the global exports of Brazil and India.

SITC 4d [a, b]	Description	Tariff range 1998 [c]	Export growth 1994-1998 [d]
8427	Blouses,shirt-blouse,etc	66.00%	3.55%
8454	T-shirts,othr.vests knit	66.00%	59.62%
8481	Leather apparel,accessrs	23-33%	3.72%
8519	Parts footwear,etc.	0-50%	4.33%
8973	Gold,silver jewelry,ware	0-20%	13.20%

Note:

(a) Only SITC 4d items where the tariff applicable to the relevant HS8 components *could be* 10% or more included here.
(b) Only SITC 4d items where the share of Brazil's exports to the world exceeds that of Brazil's exports to SACU by at least 0.5% included here.
(c) According to the UNCTAD TRAINS database, which provides a concordance from SITC Rev.3 4-digit codes to SA 6-digit HS codes and tariffs. Where no data exists in TRAINS, tariff ranges are based on the EU–South Africa FTA base tariffs (for goods in HS Chapters 1–24), or the scheduled tariff in 1998 according to South Africa's commitments under the Uruguay Round (Chapters 25 onward).
(d) Annual average US$ increase in Brazil exports to the world, by product, according to UNCTAD TRAINS database.

Source: UNCTAD Comtrade; UNCTAD TRAINS, Eurostat COMEXT; SA Offer; and WTO schedule, IDC.

With regard to India, under-traded exports are concentrated in the agricultural and clothing and textile sectors, with the motor sector also worth investigation. All of these sectors have shown strong growth since 1994, with cotton and products as well as tobacco particularly buoyant.

How Might SACU Exports be Affected?

The methodology for identifying currently traded and under-traded SACU exports that might benefit from an FTA is similar to that adopted for imports. The main difference concerns the attribution to market access barriers of any of the features of the current trade pattern. Without the same level of knowledge on the market access barriers of Brazil and India as is available on SACU's tariffs the analysis must necessarily be more tentative.

Currently traded goods

SACU's most important current exports to Brazil and India (all products exceeding 1% of the total by value) are listed in Table 7. This also gives the import tariff imposed upon them as identified in TRAINS.[5]

Overwhelmingly the most important goods exported to Brazil are coal, metals and chemicals. Apart from armaments, most appear to be bulk industrial supplies. The tariff data for most of these exports are in the form of ranges showing that some sub-items face relatively high, but others quite low, tariffs. If the maximum tariff were applicable in all cases, just three of the 20 products face tariff protection of less than 15%. But if the lower range were applicable, this number would rise to 12. It is important, therefore, to analyse most of these industries in greater detail, to identify those sectors in which SACU supply and Brazilian demand remain under-exploited. It is noteworthy, however, that no product faces a tariff that approaches 'suffocation level'.

[5] Data on global import barriers are very complex and subject to frequent change. Whilst it is the best available source, TRAINS is not perfect. For example, a comparison for a group of the EU's most important imports of the figures in TRAINS and in the definitive *Official Journal* revealed that they were identical in only 20% of cases.

Table 7. SACU exports to Brazil and India, 1998

HS4	Brief description	Tariff range 1998	Exports 1998	
			Rand mn	*Share of total*
Exports to Brazil				
2701	Coal; briquettes, ovoids and similar solid fuels manufactured from coal.	0%	276	25.4%
2809	Diphosphorus pentaoxide; phosphoric acid and polyphosphoric acids.	5-13%	97	8.9%
3808	Insecticides, rodenticides, fungicides, herbicides etc.	11-19%	69	6.4%
7506	Nickel plates, sheets, strip and foil.	15%	49	4.5%
8609	Containers specially designed for carriage by one or more modes of transport.	20%	44	4.0%
7202	Ferro-alloys.	9%	39	3.6%
2933	Heterocyclic compounds with nitrogen hetero-atom(s) only	5-19%	33	3.0%
2833	Sulphates; alums; peroxosulphates (persulphates).	5-16%	31	2.9%
5402	Synthetic filament yarn (excluding sewing thread)	5-19%	30	2.7%
8421	Centrifuges, filtering or purifying machinery, for liquids or gases.	3-29%	27	2.5%
7219	Flat-rolled products of stainless steel, of a width of 600 mm or more.	5-17%	23	2.2%
3102	Mineral or chemical fertilisers, nitrogenous	3-9%	22	2.0%
9306	Bombs, grenades, torpedoes, mines, missiles and similar munitions	23%	18	1.7%
6812	Fabricated asbestos fibres	15-17%	14	1.3%
4801	Newsprint, in rolls or sheets.	9-15%	13	1.2%
8402	Steam or other vapour generating boilers	20%	13	1.2%
7216	Angles, shapes and sections of iron or non-alloy steel.	15%	13	1.2%
2707	Oils and other products of the distillation of high temperature coal tar	0-12%	12	1.1%
8708	Parts and accessories of the motor vehicles of headings nos.87.01 to 87.05.	20-21%	12	1.1%
7308	Structures & parts of structures (e.g. bridge-sections,lock-gates,etc.)	17-20%	12	1.1%
Exports to India				
2701	Coal; briquettes, ovoids and similar solid fuels manufactured from coal.	3-10%	306	18.8%
2809	Diphosphorus pentaoxide; phosphoric acid and polyphosphoric acids.	30%	293	18.0%
9306	Bombs, grenades, torpedoes, mines, missiles and similar munitions of war	40%	195	12.0%
7208	Flat-rolled products of iron or non- alloy steel	30%	75	4.6%
4702	Chemical wood pulp, dissolving grades.	5%	70	4.3%
2835	Phosphinates, phospho-nates, phosphates and polyphosphates.	30%	54	3.3%
7219	Flat-rolled products of stainless steel	30%	49	3.0%
2914	Ketones and quinones	30%	36	2.2%
7202	Ferro-alloys.	20%	36	2.2%
4802	Uncoated paper and paperboard, of a kind used for writing, printing etc.	20%	35	2.1%
7207	Semi-finished products of iron or non- alloy steel.	30%	33	2.0%
2907	Phenols; phenol-alcohols.	25-30%	30	1.8%
2926	Nitrile-function compounds.	10-30%	25	1.5%
8708	Parts and accessories of the motor vehicles of headings nos.87.01 to 87.05.	40%	24	1.5%
7216	Angles, shapes and sections of iron or non-alloy steel.	30%	24	1.5%
2712	Petroleum jelly; paraffin wax etc.	30%	20	1.3%
Source: TIPS and TRAINS				

Exports to India are broadly similar. Indeed, seven of the (16) most important exports to India are also among the main exports to Brazil. The number facing a range of tariffs is much smaller, and so the level of Indian protection may be judged more clearly. Two-thirds of the products face a certain (or, in two cases, possible) tariff of 30% or more. As is clear from the GTAP analysis, the Indian market is relatively heavily protected. This lends credence to the view that there are potential South African exports which have been suffocated by protectionist barriers (which *might* be reduced in an FTA).

Under-traded goods

We have identified from UN statistics (Tables 8 and 9) products for which:

- Brazil and India have an import demand that is not being satisfied by SACU (see Appendix 2 Table A.3); *and*
- SACU appears to have a competitive supply.

Table 8. Under-traded Brazil imports from SACU facing high tariffs

SITC 4d [a,b]	Description	Tariff range 1998 [c]	SACU exports 1998
5148	Oth.nitrogen-func.compds	5-19%	29.4
6299	Hard rubber etc.,nes	5-19%	10.8
6411	Newsprint,rolls,sheets	9-15%	58.8
6842	Aluminium,alum.alloy,wrk	5-17%	54.5
7139	Parts,nes.IC.piston engs	19-28%	68.5
7284	Mach.appl.spcl indus nes	3-21%	40.2
7418	Oth.temp.change mach etc	20-29%	10.5
7484	Gear,gear box,parts,etc.	20%	11.4
7599	Parts,data proc. etc.mch	3-32%	84.0
7641	Line telephone etc.equip	3-32%	35.4
7649	Parts,telecommun. equipt	3-33%	46.5
7712	Oth.elec power mach,part	19-21%	12.4
7725	Switch.apparatus,<1000v	3-22%	28.0
7742	X-ray apparatus etc.part	3-20%	16.5
7787	Elec mch wth indiv funct	3-23%	12.8
7812	Pass.transport vehicles	49%	283.3
7843	Other parts,motor vehicl	20-21%	393.3
8742	Drawing,measurg.instrmnt	3-21%	10.9
8931	Plastic containers etc.	21%	42.8

Note:
(a) Only SITC 4d items where the tariff applicable to the relevant HS8 components *could be* 10% or more included here.
(b) Only SITC 4d items where SACU exports to the world were US$10 million or more included here
(c) According to the UNCTAD TRAINS database, which provides a concordance from SITC Rev.3 4-digit codes to Brazil 8-digit HS codes and tariffs.
Source: UNCTAD Comtrade; UNCTAD TRAINS

Table 9. Under-traded India imports from SACU facing high tariffs

SITC 4d [a,b]	Description	Tariff range 1998 [c]	SACU exports 1998
2823	Othr.ferrous waste,scrap	5-30%	10.4
5226	Oth.inorgan.bases,oxides	0-30%	107.5
5621	Nitrogenous chem.fertlzr	0-30%	54.4
5629	Fertilizers, nes	0-30%	86.4
6811	Silver	40%	27.2
7284	Mach.appl.spcl indus nes	20-30%	40.2
7599	Parts,data proc. etc.mch	20-40%	84.0
7649	Parts,telecommun. equipt	20-40%	46.5
9710	Gold,nonmontry excl ores	40%	15.7

Note:
(a) Only SITC 4d items where the tariff applicable to the relevant HS8 components *could be* 10% or more included here.
(b) Only SITC 4d items where SACU exports to the world were US$10 million or more included here.
(c) According to the UNCTAD TRAINS database, which provides a concordance from SITC Rev.3 4-digit codes to India 8-digit HS codes and tariffs.
Source: UNCTAD Comtrade; UNCTAD TRAINS

Once again, interpretation is difficult because of the existence of tariff ranges, even in the case of India. In many cases, the lower end of the range is a nuisance tariff only. Further, industry-specific investigation is necessary.

With this caveat, our preliminary findings are that the main SACU exports that *may be* under-traded are:

- Brazil: motor vehicles and parts, telecommunications equipment, plastic containers, rubber, aluminium, newsprint and various types of electrical machinery;
- India: fertilisers, telecommunication equipment and industrial machinery.[6]

Conclusion

Both the GTAP results and the trade and tariff analysis suggest that the benefits of free trade agreements with India and Brazil are relatively modest. Whilst a number of important South African export products appear under-traded in Brazil, the economy-wide benefits of an FTA are relatively low. Though the economy-wide benefits would be more substantial from an FTA with India than with Brazil, it is unlikely that SACU would be able to negotiate significant tariff reductions in the more protected Indian sectors (textiles, agriculture and motor vehicles).

The GTAP analysis raises questions about the priority to be attached to different regions as candidates for negotiating free trade agreements (given that negotiating capacity is bound to be constrained). The trade and welfare benefits arising out of the scenarios of autonomous liberalisation, free trade with East Asia, or even, in some cases, Africa, are higher than those involving Mercosur and South Asia. Moreover, almost all of the export growth to Mercosur and South Asia is a result of trade diversion rather than creation, whereas in the other cases significant new trade may be created.

If, however, these FTAs are to proceed, the following under-traded sectors should be subject to further research to underpin the most intense negotiations.

SACU imports:

- Vehicles and parts
- Agricultural goods
- Tobacco and cigarettes
- Seafood
- Footwear
- Wooden furniture
- Jewellery
- Textiles
- Clothing

SACU exports:

- Vehicles and parts

[6] Precious metals are excluded from this list, as the prices of silver and gold are determined on international markets, and there would be no additional benefits to selling directly to India.

- Telecommunications equipment
- Industrial and electrical machinery
- Fertiliser
- Newsprint
- Rubber
- Plastic containers
- Base metals

One of the most attractive features as a research tool shared by both of the methodologies is that the assumptions can be varied and the analysis extended iteratively at low cost. This paper is intended, therefore, as a genuine contribution to a debate which should continue, not as a one-off exercise.

Appendix 1: The GTAP Database

What is GTAP?

The Global Trade Analysis Project was established in 1992, with the objective of lowering the cost of entry for those seeking to conduct quantitative analyses of international economic issues in an economy-wide framework. It is based at Purdue University in the USA. The project consists of several components:

- A fully documented, publicly available, global database.
- A standard modelling framework.
- Software for manipulating the data and implementing the standard model.
- A global network of researchers, linked through the internet, with a common interest in multiregion analysis of trade and resource issues.
- A World Wide Web site for distributing software, data, and other project-related items of interest.
- A consortium of national and international agencies providing leadership and a base level of support.

GTAP has established itself as a leader in the field of trade policy analysis, and the models and data provided are used widely by academic and government researchers to evaluate the impact of trade shocks on the global economy. The most recent data set contains detailed bilateral trade, transport and protection data characterising economic linkages among regions, linked together with individual country input–output data bases, which account for intersectoral linkages among the 50 sectors within each of 45 regions (including South Africa).

Data

This initial analysis has been restricted to a 10 region, 10 sector database/model. In this aggregation, Brazil is incorporated with Argentina, Chile and Uruguay into a single Mercosur region, and South Asia is also represented as a single region. Specific countries could be separated out from these aggregations once greater clarity is obtained on the exact scope of the negotiations.

Regions

- East Asia (EASIA)
- South Asia (SASIA)
- Australasia (AUSNZ)
- NAFTA (NAFTA)
- Mercosur (MERCOSURE)
- European Union (EU)
- SACU (SACU)
- Rest of SADC (RSADC)
- Rest of Africa (RAFRICA)
- Rest of World (ROW)

Sectors

- Primary agriculture (PrimAg)
- Agro–processing (AgProc)
- Mineral products (Mineral)
- Textile, Clothing and Leather (TexCloth)
- Petroleum & Chemical products (Chem)
- Metal products (Metal)
- Other manufacturing (OManu)
- Transport (Transport)
- Machinery and electronic equipment (MachEle)
- Services (Services)

Appendix 2: Output by Region

In all three regions, output is dominated by the service sector, which in the case of SACU contributes to almost 60% of output. The next largest sector, again in all three regions, is agriculture (primary and processed). In South Asia, primary agriculture accounts for 23% of output, whereas in both SACU and Mercosur, processed agriculture is more dominant. Although the textile/clothing sector is of importance to South Asia, and to a lesser extent Mercosur, it contributes towards just 2% of SACU's total output. Similarly, the highly protected transport sector, accounts for between 2% and 3% of output in all three regions.

Figure 13. SACU output by sector

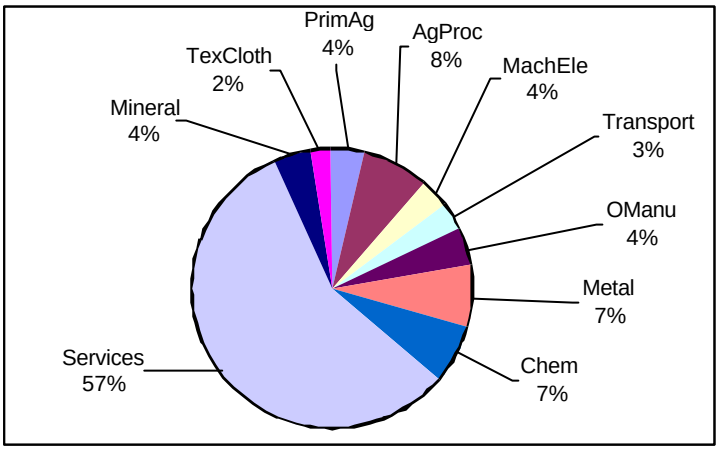


Figure 14. MERCOSUR output by sector

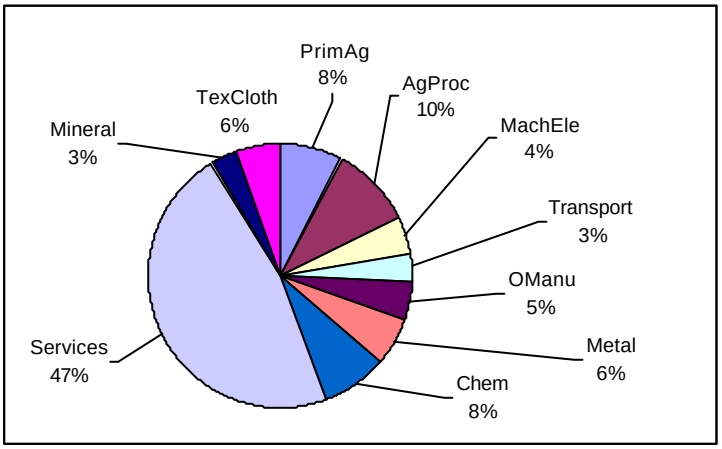
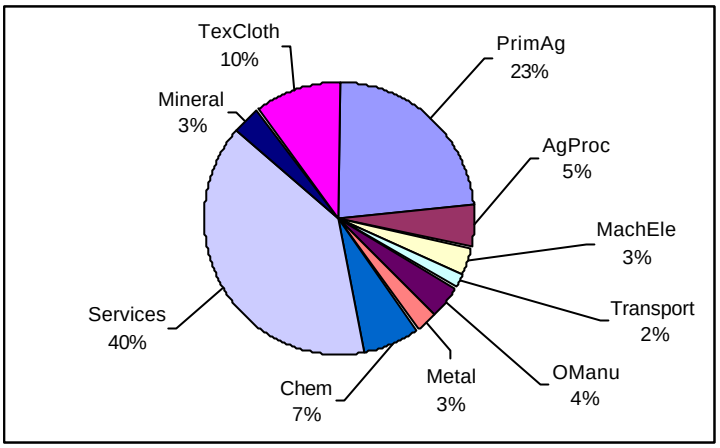


Figure 15. SASIA output by sector



Appendix 3: SACU's Trade with Brazil and India

Table A.1. SACU imports from Brazil and India, 1998

HS4	Brief description	Imports 1998 (R million)
Imports from Brazil		
9801	Original equipment components	250
8701	Tractors (excluding tractors of heading no. 87.09).	81
2401	Unmanufactured tobacco; tobacco refuse.	56
8501	Electric motors and generators (excluding generating sets).	49
8414	Air or vacuum pumps, air or other gas compressors and fans	44
7502	Unwrought nickel.	38
8409	Parts suitable for use solely or principally with the engines of heading no. 84.07 or 84.08.	30
4104	Leather of bovine or equine animals, without hair on	28
8708	Parts and accessories of the motor vehicles of headings nos.87.01 to 87.05.	24
2929	Compounds with other nitrogen function.	20
1507	Soya-bean oil and its fractions, whether or not refined, but not chemically modified.	18
7203	Ferrous products obtained by direct reduction of iron ore and other spongy ferrous products	18
2922	Oxygen-function amino-compounds.	17
8413	Pumps for liquids, whether or not fitted with a measuring device	17
4415	Packing cases, boxes, crates, drums and similar packings, of wood	17
0207	Meat and edible offal, of the poultry of heading no. 01.05, fresh, chilled or frozen	17
4407	Wood sawn or chipped lengthwise	16
7202	Ferro-alloys.	16
7321	Stoves, ranges, grates, cookers etc. and parts thereof, of iron or steel.	14
3907	Polyacetals, other polyethers and epoxide resins, in primary forms	13
3901	Polymers of ethylene, in primary forms.	12
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather.	12
3504	Peptones and their derivatives	11
8207	Interchangeable tools for hand tools whether or not power-operated or for machine-tools	10
8702	Motor vehicles for the transport of ten or more persons, including the driver.	10
Imports from India		
1006	Rice.	215
4104	Leather of bovine or equine animals, without hair on	88
6204	Women's outerwear (not knitted/crocheted).	51
3004	Medicaments	41
6403	Footwear with outer soles of rubber, plastics, leather or composition leather and uppers of leather.	40
7614	Stranded wire, cables, plaited bands and the like, of aluminium	38
6205	Men's shirts.	35
9801	Original equipment components:	33
5205	Cotton yarn (excluding sewing thread)	32
5208	Woven fabrics of cotton, containing 85 % or more by mass of cotton	28
2304	Soya bean oil-cake and other solid residues	28
1404	Vegetable products not elsewhere specified or included.	27
9506	Articles and equipment for general physical exercise	26
6302	Bed linen, table linen, toilet linen and kitchen linen.	25
7102	Diamonds, whether or not worked, but not mounted or set.	24
2709	Petroleum oils and oils obtained from bituminous minerals, crude.	22
5509	Yarn (excluding sewing thread) of synthetic staple fibres	22
3204	Synthetic organic colouring matter	22
5515	Other woven fabrics of synthetic staple fibres.	17
8479	Machines/mechanical appliances having individual functions, not specified or included elsewhere	16
0910	Ginger, saffron, turmeric (curcuma), thyme, bay leaves, curry and other spices.	16
8306	Bells, gongs, statuettes, picture frames, mirrors etc., of base metal	16
8524	Records, tapes and other recorded media for sound	16
2401	Unmanufactured tobacco; tobacco refuse.	14
6206	Women's shirts.	14
4106	Goat or kid skin leather, without hair on	13

HS4	Brief description	Imports 1998 (R million)
8540	Thermionic, cold cathode or photo- cathode valves and tubes	13
1302	Vegetable saps and extracts	13
5902	Tyre cord fabric of high tenacity yarn of nylon or other polyamides, polyesters or viscose rayon.	12
0904	Pepper of the genus piper; ground fruits of the genus capsicum or of the genus pimenta.	12
0306	Crustaceans, whether in shell or not	12
0909	Seeds of anise, badian, fennel, coriander, cumin, caraway or juniper berries.	11
3808	Insecticides, rodenticides, fungicides, herbicides	11
8539	Electric filament or discharge lamps	11
4010	Conveyor or transmission belts or belting, of vulcanised rubber.	11
7208	Flat-rolled products of iron or non- alloy steel	11
5407	Woven fabrics of synthetic filament yarn	10
3504	Peptones and their derivatives	10
8708	Parts and accessories of the motor vehicles of headings nos.87.01 to 87.05.	10
5702	Carpets and other textile floor coverings, woven	10
Source: TIPS.		

Table A.2. World and SACU share of Brazilian/Indian exports by SITC 4 digit code, 1998

SITC 4d	Description	Share of total exports (1998)	
		to World	*to SACU*
Brazilian exports			
0123	Poultry, meat and offal	1.96%	1.37%
0176	Bov.meat,prpd,prsrvd,nes	0.75%	0.02%
0591	Orange juice	3.21%	0.00%
0611	Sugars,beet or cane, raw	2.78%	0.00%
0612	Other beet,cane sugar	2.15%	1.41%
0711	Coffee, not roasted	5.91%	0.83%
0713	Extracts,etc. of coffee	0.69%	0.16%
0813	Oil-cake,oilseed residue	4.45%	0.00%
1212	Tobacco,stemmed,stripped	2.08%	1.09%
1222	Cigarettes contg.tobacco	1.54%	0.00%
2222	Soya beans	5.52%	0.00%
2816	Iron ore agglomerates	2.92%	1.44%
4211	Soya bean oil, fractions	2.10%	1.37%
6252	Tyres,pneumatic,new,bus	0.60%	0.00%
6613	Building stone,workd.etc	0.52%	0.01%
6726	Semi-finish.iron,steel	2.79%	0.74%
6732	Flat,hot-rolld,prod.iron	1.14%	0.00%
6841	Alum.,alum.alloy,unwrght	2.44%	0.00%
7132	Intrnl comb.engine vehcl	0.91%	0.04%
7231	Self-propelld.dozers etc	0.69%	0.13%
7821	Goods vehicles	2.58%	0.15%
7841	Motor vehicle chassis	0.53%	0.01%
8215	Furniture,nes,of wood	0.62%	0.01%
8514	Oth.footwear,lthr.uppers	2.96%	0.84%
9310	Special trans not classd	1.59%	0.08%
Indian exports			
0342	Fish,frozen ex.fillets	0.76%	0.01%
0361	Crustaceans, frozen	2.31%	0.00%
0577	Edible nuts fresh,dried	1.15%	0.18%
0711	Coffee, not roasted	1.00%	0.00%
0741	Tea	1.44%	0.07%
0813	Oil-cake,oilseed residue	2.68%	1.82%
1211	Tobacco,not stripped,etc	0.63%	0.00%
2631	Cotton,not carded,combed	0.57%	0.00%
5169	Organic chemicals, nes	0.82%	0.01%
6252	Tyres,pneumatic,new,bus	0.59%	0.02%

6513	Cotton yarn,excl. thread	4.29%	2.26%
6522	Cotton fabric,wvn,unblch	1.23%	0.20%
6585	Curtains,oth.furnishings	1.58%	0.12%
6672	Diamonds.excl.industrial	12.54%	1.55%
7812	Pass.transport vehicles	0.62%	0.09%
8427	Blouses,shirt-blouse,etc	1.99%	0.85%
8454	T-shirts,othr.vests knit	0.87%	0.07%
8481	Leather apparel,accessrs	1.29%	0.20%
8519	Parts footwear,etc.	0.71%	0.18%
8973	Gold,silver jewelry,ware	1.82%	0.21%
Source: UNCTAD Comtrade.			

Table A.3. World and SACU share of Brazilian/Indian imports by SITC chapter, 1998

SITC 4d	Description	Share of total imports (1998)	
		from World	*from SACU*
Brazilian imports			
5148	Oth.nitrogen-func.compds	0.75%	0.03%
5629	Fertilizers, nes	0.91%	0.00%
6299	Hard rubber etc.,nes	0.57%	0.07%
6411	Newsprint,rolls,sheets	0.85%	0.30%
6413	Paper,paperbd,coated,etc	0.89%	0.01%
6842	Aluminium,alum.alloy,wrk	1.53%	0.20%
7139	Parts,nes.IC.piston engs	1.48%	0.00%
7284	Mach.appl.spcl indus nes	3.67%	0.01%
7331	Metal forming mach.tools	0.60%	0.00%
7418	Oth.temp.change mach etc	0.50%	0.00%
7484	Gear,gear box,parts,etc.	0.65%	0.08%
7599	Parts,data proc. etc.mch	1.94%	0.00%
7641	Line telephone etc.equip	1.84%	0.00%
7649	Parts,telecommun. equipt	3.65%	0.01%
7712	Oth.elec power mach,part	0.98%	0.01%
7725	Switch.apparatus,<1000v	1.36%	0.02%
7742	X-ray apparatus etc.part	0.74%	0.00%
7787	Elec mch wth indiv funct	0.78%	0.00%
7812	Pass.transport vehicles	9.16%	3.39%
7843	Other parts,motor vehicl	5.49%	1.02%
8742	Drawing,measurg.instrmnt	0.73%	0.04%
8931	Plastic containers etc.	0.54%	0.02%
Indian imports			
0542	Legumes,dried,shelled	0.92%	0.12%
2823	Othr.ferrous waste,scrap	0.85%	0.08%
3352	Mineral tars and product	1.21%	0.00%
3425	Butanes, liquefied	0.54%	0.00%
5112	Cyclic hydrocarbons	0.94%	0.00%
5223	Inorganic acid,oxide etc	2.05%	0.00%
5226	Oth.inorgan.bases,oxides	0.56%	0.01%
5621	Nitrogenous chem.fertlzr	0.83%	0.00%
5629	Fertilizers, nes	0.84%	0.02%
6811	Silver	1.14%	0.24%
7284	Mach.appl.spcl indus nes	0.92%	0.03%
7599	Parts,data proc. etc.mch	0.68%	0.01%
7649	Parts,telecommun. equipt	0.56%	0.00%
9310	Special trans not classd	4.85%	0.01%
9710	Gold,nonmontry excl ores	7.38%	0.11%
Source: UNCTAD Comtrade.			