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A new geography of preferences for Sub-Saharan African countries in a globalizing trading system

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Trade between developing countries, or South-South trade, has been growing rapidly in recent years following significant reductions in tariffs. However, significant barriers remain, and there is currently reluctance among many developing countries to undertake further reductions. In addition African countries and in particular least developed African countries are still marginal players in this reframing of geography of trade. The erosion of preferential access to Northern markets remains their major concern and the status quo in multilateral liberalization could be seen as a desirable scenario. This emphasis on developed countries markets, principally Europe and the US, is likely to represent a missed opportunity for African countries. Unless those countries are granted broader preferences by the European Union and other developed countries, especially in agriculture, significant gains would be obtained from trade preferences provided by other developing countries. To assess this we compare the potential effects of the removal of barriers on trade between African countries and other developing countries with the gains from developed country liberalization. A general equilibrium model containing information on preferential bilateral tariffs is used to estimate the impacts.

1. Introduction

The Doha round of trade negotiations could lead to significant cuts in MFN rates[i], sooner or later. This has raised serious concerns among developing countries about the possible erosion of trade preferences[ii]. Whether these concerns are justified or not has been the focus of various recent papers[iii], although possible issues characterizing preferences, including that of their erosion, have been discussed since their origin[iv] back in the 1960s'. A highly related concern of developing countries, and in particular African countries, is the still relatively poor access to sensible product markets in the European Union and the United States of America. The issue of sensitive products is likely to survive the conclusion of Doha round unless negotiations are firmly put on an ambitious scenario track limiting for instance the share of sensitive products to one percent of negotiated tariff lines[v]. Sensitive products could also represent an opportunity for some developing countries to keep their preferences and/or extending them. In that context, preferential access to sensitive products markets could be used by developed countries as a development assistance device.

Most of developing countries concerns, and in particular Least Developed Countries (LDCs) concerns, appear to be North oriented although access to other developing countries markets appears to be much more limited. Indeed, looking at simple coverage at the tariff line level, around 70 per cent of the tariffs faced by developing country exporters are applied by other developing countries. Tariff peaks and tariff escalation are a major issue also in South-South trade relationships[vi]. In addition, whatever the deepness of trade liberalization negotiated at the WTO, the

level of protection in many developing countries and LDCs will not be reduced significantly[vii].

This emphasis on Northern markets could represent a missed opportunity for developing countries[viii]. More attention should then be devoted to possibility and feasibility of trade preferences schemes among developing countries. This could contribute to soften the issue of the erosion of existing preferences schemes provided by developed countries. Developing countries preference schemes could also represent a powerful development instrument to be used in favour of LDCs.

The focus of the paper is the Sub-Saharan Africa region. This is justified by the presence within the region of most of the LDCs. This reveals socio-economic conditions which are often qualified as dramatic. In addition, the paper also aims at contributing to a general concern. Indeed, a particular attention has been paid recently to the issues characterizing most of Sub-Saharan African countries notably through the implementation by the United Nations of the Millennium Development Goals[ix].

The rest of the paper is organized as follow. Next section discusses more in details the potential for revisiting exiting preferences schemes, essentially North-South based, and for implementing new ones, essentially South-South based. Section 3 presents the various scenarios to be simulated and the simulation framework. Results are discussed in section 5. The last section concludes and presents some arguments for further discussion.

2. What potential for new trade preferences?

Many developing and least-developed countries enjoy tariff preferences under the Generalised System of Preferences and more selective schemes, such as the Cotonou Agreement, the Caribbean Basin Initiative, the EU's Everything-But-Arms initiative and the USA's African Growth and Opportunities Act (AGOA) (UNCTAD 2003). Even taking account of these preferences, average import-weighted applied tariffs on exports from these regions to developed countries are higher than those facing developed countries themselves. This reflects the composition of imports with different tariffs rather than higher tariffs on the same item. It also reflects the relatively weak bargaining power of the developing countries in past rounds of negotiations in that they were unable to secure tariff cuts on the kind of goods that they export.

Table 1 shows trade weighted applied tariffs, levied by developed and developing countries on merchandise exports from each other. These data include preferential rates. On average, developed countries impose tariffs of 2.1 per cent on imports from other developed countries, 3.9 per cent on imports from developing countries and 3.1 per cent from LDCs. The most significant sectors contributing to the higher tariffs on developing country exports are textiles, apparel and leather. On the other hand, developed countries also face higher tariffs when exporting to developing countries (9.2 per cent) than do other developing countries (7.2 per cent), partly reflecting the composition of trade and partly reflecting preferential arrangements among groups of developing countries.

Insert table 1 around here

Agriculture alone tells a slightly different story (table 2), with high protection applied in both developed and developing countries against products from both groups. Developed countries, however, give greater access to least developed country products (2 per cent) then do developing countries (12 per cent). This reflects the various preferential schemes previously mentioned. However, the protection is predominantly against temperate products grown in other developed countries with similar agronomic and climatic conditions. Typical developing country products such as coffee and tropical fruits are not particularly substitutable with temperate products. Notable exceptions are sugar (cane and beet sugar are substitutes), vegetable oils, tobacco and cotton. Many tropical products, such as coffee, attract little protection in developed countries. However, many developing countries have substantial tariffs on tropical commodities.

Insert table 2 around here

Trade weighted tariffs are averaged by imports, but it is instructive to look at the trade flows themselves to gauge the likely impacts. These are shown in table 3. Total trade in merchandises at world prices amounts to $7.44 trillion (2001) (including intra-EU trade). Developed countries import $3.2 trillion from other developed countries and slightly more than $1.4 trillion from developing (including Sub-Saharan African) countries. Developing countries themselves import a greater proportion of the imports from developed countries ($1.19 trillion versus $0.83 trillion) but South-South trade is a substantial proportion nonetheless (slightly more

than 40%). Sub-Saharan African countries share a similar trade profile: 54 per cent of imports originate from developed countries and 42 per cent from developing countries including SSA countries.

Insert table 3 around here

The high tariff burden on South-South trade poses the question as to whether developing countries could assist their development or the development of a specific group of countries by opening up their markets and eventually trading more with each other. One advantage is their proximity, which may imply lower transport costs. In addition, other developing countries, by definition at a similar stage of development, may not have the competitive advantage of developed countries. Thus, developing countries opening their markets are less likely to be swamped with imports. The benefits of trade come with divergences in relative factors endowment and costs. Table 4 shows ratios of the value of capital remuneration to other primary factors remuneration. SSA countries would have larger potential gains available from trading with countries with dissimilar endowments costs structures to one's own. SSA countries would gain from trade liberalization that favours land-intensive production. This could be obtained by establishing preferential trade agreements with all regions and group of countries. Gains from trade liberalization in natural resources would be observed only for a limited number of partners. In addition, access to market is almost duty free for all destinations, in particular the EU and the US. Table 4 also reveals that gains from trade in unskilled-labour intensive should remain limited.

Insert table 4 around here

Simulations undertaken in this paper only consider improvements in access to international markets for Sub-Saharan products. The impact of such improvements could be leveraged by systematic improvements in supply capacity. As such our simulation results could represent a lower bound of changes in market access conditions. Policy elements, whether national or international that could increase the leverage of foreign market access, are briefly discussed in the last section.

3. Scenarios and Simulations

As mentioned in the previous section, the focus of our simulation exercise remains Sub-Saharan Africa. Unless specified, Sub-Saharan countries and South Africa are treated separately and independently. In addition, Sub Saharan African countries are divided into two groups: the Southern African Development Community group (SADC) and the rest of Sub-Saharan African countries thereafter called the NON-SADC group. The division is motivated by the fact that SADC countries appear to be relatively more integrated with South Africa which behaves as the hub of the region. Hence we may expect differences in impact of policy shocks between SADC and NON-SADC countries.

A series of scenarios, which are described in table 5, have been simulated in order to assess the relative attractiveness of different possible preference schemes[x]. We first consider a complete and fully inclusive liberalization of trade by developed countries (North column). Then we consider full trade liberalization among developing countries (South-South column). The third scenario is the establishment of

a free trade area among Sub-Saharan African countries including South-Africa (SSA-RTA column). It could correspond to a SADC "plus" trade agreement. The next scenario contemplates a duty free access to all developed countries markets for product originating from Sub-Saharan countries (DEV column). We then consider two similar scenarios based on a duty free access to all developing countries markets for products exported by Sub-Saharan countries. While the first scenario (DVG1 column) does not account for trade liberalization among Sub-Saharan countries, the second (DVG2 column) does. The last two scenarios look at regional duty free access fro Sub-Saharan products. We report results for a duty free access to the Indian and Chinese markets (IND+CHN column) and for a duty free access to MERCOSUR countries markets (MER column).

Insert table 5 around here

Simulations are run using the GTAP 6 database and the standard GTAP model. The GTAP 6 database includes data for 57 sectors and 87 countries. However, computational constraints do not allow yet dealing with the fully disaggregated version. In our simulation exercises, we define 20 sectors and 22 country groups as described in table 6. The group 'Other Asia' includes the Republic of Korea and Taiwan Province of China. The remaining groups are, hopefully, self-explanatory. The sectoral aggregation attempts to split out sectors with significant protection, such as textiles, apparel, motor vehicles and electronics.

Insert table 6 around here

The standard GTAP model is a general equilibrium model that includes linkages between economies and between sectors within economies. Industries are assumed to be perfectly competitive and are characterised by constant returns to scale. Imports are distinct from domestically produced goods as are imports from alternative sources. This distinction relies on differentiation *à la* Armington. Primary factors are substitutable but as a composite are used in fixed proportions to intermediate inputs. We use the standard GTAP closure modified to maintain fixed trade balances for all regions but the USA. This alternative closure is chosen in order to prevent balance of trade surpluses from increasing dramatically.

The database includes tariffs, export subsidies and taxes, subsidies on output and on inputs such as capital, labour and land. Border measures are specified bilaterally, so the impact of preference erosion can be ascertained. Preferential tariffs are included in the initial database. Quota rents in textiles and apparel are modelled as export taxes, implying the rents accrue to exporting governments. The data applies to 2001. However, we first conduct a standard pre-simulation that implements pre-existing WTO commitments not implemented as of 2001 as described in the first row of table 5.

All results presented below are thus obtained using this updated version of the GTAP 6 database. We also present a benchmark simulation which corresponds to full trade liberalization. Within the conceptual GTAP framework full trade liberalization should generate the largest aggregate welfare gains obtainable from trade policy reform. Negative welfare results are imputable to the existence of other distortions

whose incidence may increase due to resources reallocation induced by trade liberalization.

4. Results

We focus on four dimensions that we believe are relevant to qualify the purpose of the paper, namely welfare, exports, sectoral effects and factors remuneration.

Welfare

Table 7 presents welfare effects observed in the various scenarios. Full trade liberalization as expected would generate the largest gains on aggregate. The simulations also show that there are potentially large gains for developing countries from South-South trade. However, NON-SADC countries in the Sub- Saharan region would be net losers. The outcome would be qualitatively the same in the case of an FTA among all Sub-Saharan countries including South Africa. In addition, gains occurring to SADC countries, excluding South Africa, would be more than three times larger in the South-South liberalization scenario. In all other preferential schemes both SADC and NON-SADC countries would be net winners. The largest aggregate gains for Sub-Saharan countries would be obtained in the case of full duty free access to developed country markets. However, 70% of these gains could be generated by duty free access to other developing countries markets accompanied by a free trade agreement among Sub-Saharan countries (South Africa excluded).

Insert table 7 around here

In all scenarios, preferences providers are on aggregate loosing less in absolute terms than what Sub-Saharan countries are gaining, especially in the case where providers are developing countries. In the latter case, some developing countries like the `Other Asia' group would even gain from the preferences scheme.
In the case of the European Union the projected losses due to duty free access for all products originating from SSA countries would amount to slightly more than 900 millions 2001 US dollars.

Thus, welfare effects do not appear to be a strong argument against the provision of trade preferences to Sub-Saharan countries by either developed or developing countries.

Interesting information could be retrieved from the source of welfare gains. The latter are made essentially of allocative effects and terms of trade effects. In all preferences schemes whether preferences are provided by developed or developing countries, welfare gains are driven by terms of trade effects. Gains from terms of trade effects, being fundamentally a price-effect, operate as a transfer from the provider of preferences to its beneficiary.

In 2004, the EU devoted around 7 billions 2001 US dollars to Official Development Assistance, meaning that the provision of duty free access to all products from SSA countries would imply a loss which is only slightly larger than the evolution of ODA observed in the past few years.

Output

The focus is on the two groups of Sub-Saharan countries. As a general comment based on change in sectoral shares (tables 8a and 8b), there are no dramatic differences in output composition across all scenarios. This is not surprising in the light of welfare results. Indeed, welfare gains accruing from pure re-allocation of resources remain small underlying small shifts of factors of production across sectors. However, we notice that the tendency in trade preferences schemes provided by developing countries would be to increase the share of manufacture sectors. In the case of South-South trade liberalization, this tendency disappears. In the latter scenario we observe negative terms-of-trade welfare effects. Sub-Saharan countries would have to compete with other similarly endowed countries but much more efficient in the production of manufactures. Sub-Saharan countries would focus on the production of agricultural goods where they are relatively more efficient. Nevertheless they would still have to compete severely with other developing countries similarly endowed. The share of natural resources in total production remains somewhat constant in NON-SADC countries in most scenarios and decreases in SADC countries in North-South preferential schemes. The latter result is due to re-allocation of resources towards agricultural goods but also to changes in relative prices which are favourable to agricultural goods.

Insert table 8a and 8b around here

As a preferences provider, the EU would not face any dramatic change in output composition. The only exception would be the shrinking of the sugar sector (-15 per cent). Although this represents a sensitive political argument in front of very

strong sugar industry lobbyists, the redirection of resources away from the sugar sector could be made to occur with low adjustment costs relative to the gains that it would generate to SSA countries.

Exports

Exports appear to be more sensible to changes in relative prices than output does as shown in table 9. The sensibility is particularly strong for SADC countries.

Insert table 9 around here

In most scenarios, exports in agricultural goods tend to increase in both groups of Sub-Saharan countries (tables 10a and 10b). The two most significant increases for SADC countries are obtained under scenarios with preferences extended in Northern markets. In these scenarios, the evolution of manufacture exports in SADC countries is the mirror of that of the agriculture exports. As to NON-SADC countries the share of agricultural goods in exports reaches its largest values under preferences schemes involving other developing countries. In all scenarios the share of manufactures in total exports tends to increase. The largest increases are observed in preference schemes with developing countries. In the scenario of a free trade area among all Sub-Saharan countries including South-Africa, the share in agricultural goods and manufactures both increase in proportions similar to those obtained under broader preferences schemes. This result underlines the still strong potential for economic integration with South Africa of all Sub-Saharan countries and not only SADC countries.

In most scenarios, the share of services in total exports falls for both groups of Sub-Saharan countries, which denotes a relatively poor efficiency in their production.

Insert tables 10a and 10b around here

Changes in EU exports composition remain insignificant when enlarging the product coverage of their trade preferences schemes, the exception remaining sugar products.

Factors remuneration

The evolution of factors of production remuneration is an indicator, although imperfect, of the forces at work in the distribution of income. Table 11 reports the evolution of real returns to primary factors. Real returns are computed as the ratio of return to factor to the consumer price index.

Overall, North-South liberalization and preference schemes would tend to favour proportionally more those factors used intensively in agricultural goods, namely unskilled labour and land relative South-South liberalization and preference schemes. In addition, variations are strong in SADC countries than in NON-SADC countries.

Real returns to natural resources fall in most scenarios. We observe that nominal returns do increase but by less that the overall price index. A notable exception is observed in the case of South-South trade liberalization. In that scenario, the increase in returns to natural resources is the largest. In other scenarios, changes in real returns to land dominate any other change in factor real returns. This is related to

the evolution of prices for agricultural goods which appears to be more favourable than for non-agricultural goods and services.

Insert table 11 around here

Skilled and unskilled workers' real wages vary similarly in sign in all scenarios, except in the case of a full liberalization of trade directed to developed countries. In that case, unskilled workers would enjoy higher real remuneration while real wages would fall slightly for skilled workers. In general, the rise in real wages is larger for unskilled than for skilled workers. The most important difference is obtained when duty free access for SADC countries exports is granted by developed countries. This is driven by the change in output and subsequent export composition which is biased towards agricultural good. As the agricultural sector is relatively more intensive in unskilled labour, a rise in agricultural output would translate in higher real wages for unskilled workers compared to that of skilled workers. Real returns to capital vary significantly only in the South-South trade liberalization scenario. This again reflects the change in output and export composition which is biased towards the relatively more skilled-labour-intensive manufacture sector.

In all scenarios, changes in real returns to factors are almost insignificant for the EU. Then, the inter-country redistributive effect of deeper preferences to SSA products could occur at almost no intra-EU redistributive costs.

Discussion and Concluding Remarks

The potential for broadening trade preferences for Sub-Saharan African countries in developed countries still exists, especially in the EU. Such potential remains concentrated in agricultural products like sugar, meat and vegetable oils. The deepening of trade preferences would occur at relatively low welfare costs for developed countries. Indeed, welfare losses would not be due to adjustment as production and exports composition remains almost unchanged under the extended preference scheme. They would be essentially related to changes in the terms of trade, which as mentioned previously, operate as a net financial transfer from the providers to the beneficiaries of the scheme. This enlarged duty free access could be seen as an effective instrument of development assistance as it would only be based on market adjustment mechanisms.

However, the focus of Sub-Saharan countries should not be developed countries markets exclusively. Simulations show that relatively significant welfare gains could be expected from the deepening of preferential access to developing countries markets. In addition, preferences schemes provided by developing countries would increase exports of manufacture goods from Sub-Saharan African countries and stabilize the share of agriculture in total output. The reverse would be observed in preference schemes provided by developed countries. Thus, South-South preference schemes could result in more production and export diversification and eventually the generation of value added in Sub-Saharan African countries. In addition, there would be also a diversification in destinations of trade. From a political point of view the Global System of Trade Preferences[xi] framework appears to be appropriate to discuss possible preferences schemes provided by developing countries in favour of LDCs in general and Sub-Saharan African countries more specifically.

The simulations undertaken in the paper have considered one component only of export performance, namely access to foreign markets. It is recognized that access to international markets is a necessary element to foster exports. However, poor access to international markets is only one side of an often deep structural productive distress, which remains a major cause of social distress. Export performance is also determined by supply capacity conditions[xii]. Empirical evidence seems to indicate that weak supply capacity conditions have represented a major impediment to export performance in various Sub-Saharan countries in the 1980s and 1990s[xiii]. More attention and especially resources should be devoted to relax such constraints. This would allow most of those countries to fully benefit from all trade preferences they have been granted. This would also allow them to face more efficiently the issue of preference erosion that would inevitably occur in the future due to the fall in MFN rates at the WTO.

A now topical response to the issue of preferences erosion is development assistance and in particular aid for trade[xiv]. Its proponents argue that aid for trade should be devoted to actions and policy measures that will remove exports constraints linked to poor supply capacity conditions[xv]. A typical example could be the financing of pavement of roads or more efficient port infrastructure. Trade facilitation is another issue related to supply capacity constraints. “The simplification and harmonisation of international trade procedures” could play an important role in promoting exports. Indeed, such procedures behave as fixed costs to export and their reduction could affect import performance more than proportionally. Lowering fixed costs could

increase not only the volume of exports in existing trade relationships but also the number of exporting sectors and/or the number of trade partners.

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Table 1: Trade weighted average applied tariffs (inc. preferences) by development status

	Developed	**Developing**	**Least developed**
	%	%	%
Source			
Developed	2.1	9.2	11.1
Developing	3.9	7.2	14.4
Least developed	3.1	7.2	8.3
Total	2.9	8.1	13.6

Source: Computed from WITS/TRAINS (2004) database.

Table 2: Trade weighted average agricultural applied tariffs (inc. preferences) by development status and degree of processing

	Developed		**Developing**		**Least developed**	
	Un-processed	Processed	Un-processed	Processed	Un-processed	Processed
	%	%	%	%	%	%
Source						
Developed	9.0	17.3	15.5	17.3	5.3	16.2
Developing	7.8	13.5	17.3	17.2	10.7	14.5
Least developed	2.3	7.6	11.8	18.5	4.8	12.1

Source: Computed from WITS/TRAINS (2004) database, latest available.

Table 3: Merchandise imports by source, 2001

	Developed	**CIS & SEE**	**Other Developing†**	**SSA**
	$m	$m	$m	$m
Source				
Developed	**3,258,933**	**225,400**	**1,177,938**	**47,996**
CIS & SEE	**219,975**	**90,719**	**53,739**	**2,125**
Developing	**1,397,432**	**47,778**	**814,270**	**32,297**
SSA	**49,540**	**1,582**	**15,681**	**4,981**
Total	**4,925,880**	**365,479**	**2,061,628**	**87,399**

Source: Computed from GTAP 6 database.

Note: CIS & SEE are Commonwealth of Independent States and South-East Europe

Table 4: Relative factors remuneration (ratio of capital remuneration to other primary factors remuneration)

	DEV	**ASIA**	**LAC**	**MENA**	**South Africa**	**CIS &SEE**	**Sub-Saharan AFRICA**
Land	89	11	26	18	48	68	9
Unskilled Labor	2	1	2	1	2	1	2
Natural Ressources	131	60	59	12	11	19	46

Source: Computed from GTAP 6 database

Note: CIS & SEE are Commonwealth of Independent States and South-East Europe

Table 5: Country and commodity coverage

Regions	**Sectors**
European Union	Cereals (CER)
USA, Rest of North America	Vegetables, fruits & nuts (VFN)
Japan	Vegetable oils (VOL)
Other developed	Sugar (SGR)
China	Other crops (OCR)
Other Asia	Livestock (LVS)
India	Resources (RES)
Other South Asia	Dairy (DRY)
ASEAN	Other foods (OFD)
Mexico	Textiles (TXT)
Andean	Apparel (WAP)
Mercosur	Leather (LEA)
Rest of Latin America	Non metallic manufactures (NMM)
Central America	Petroleum and coal products (P_C)
Caribbean	Motor vehicles (MVH)
NON-South-African Development Community (NSADC)	Electronics (ELE)
South-African Development Community† (SDAC)	Manufactures (MMN)
South Africa	Services (SER)
Middle East and North Africa	Transport (TRN)
Central and Eastern Europe	Business services (BFS)
Rest of World	

† Excludes South Africa.

Table 6: Alternative liberalisation and preferences scenarios

Pre-simulation	Phase-out of export quotas on textiles and apparel directed to the United States and the European Union and the implementation of commitments made by newly acceding WTO members notably China + 2004 European Union enlargement
North	Elimination of all import taxes in developed countries on trade with all countries.
South-South	Elimination of all import taxes in developing countries on trade with other developing countries.
SSA-RTA	Elimination of all import taxes in developing Sub-Saharan African countries on trade with other developing countries in the region.
DEV	Elimination of all import taxes in developed countries on trade with Sub-Saharan countries excluded South-Africa.
DVG1	Elimination of all import taxes in developing countries on trade with Sub-Saharan countries excluded South-Africa.
DVG2	Elimination of all import taxes in developing countries on trade with Sub-Saharan countries excluded South-Africa + Elimination of all import taxes in Sub-Saharan countries excluded South-Africa on trade with other Sub-Saharan countries excluded South-Africa
IND + CHN	Elimination of all import taxes in India and China on trade with Sub-Saharan countries excluded South-Africa.
MER	Elimination of all import taxes in MERCOSUR countries on trade with Sub-Saharan countries excluded South-Africa.

Table 7: Welfare effects by country (Millions of US dollars)

	Free Trade	**North**	**South-South**	**SSA RTA**	**DEV**	**DVG1**	**DVG2**	**IND+ CHN**	**MER**
	$m	***$m***	***$m***	***$m***	***$m***	***$m***	***$m***	***$m***	***$m***
European Union	24245	-171	-7681	-159	-924	-395	-544	-207	-30
USA	7346	-1751	-7060	-29	-170	-265	-324	-91	-14
North America	727	636	204	7	12	24	30	8	1
Japan	25977	16740	-2838	-13	-51	-93	-127	-61	-9
Other developed	3371	2234	-582	1	-124	7	15	11	-1
Subtotal	**61666**	**17688**	**-17957**	**-193**	**-1257**	**-722**	**-950**	**-340**	**-53**
China	6453	7850	3381	-19	-10	-31	-45	-36	-2
India	475	779	-449	-45	-18	-264	-272	-258	-1
Other Asia	13153	2776	16208	-25	-13	273	253	-27	-4
Other South Asia	-979	294	-170	-4	-13	-27	-29	-4	0
ASEAN	7450	5529	7309	-16	10	-45	-47	-13	-37
Asia Subtotal	**26552**	**17228**	**26279**	**-109**	**-44**	**-94**	**-140**	**-338**	**-44**
Mexico	-68	-1133	1192	4	-1	14	15	-1	0
Andean	-541	379	580	4	21	16	24	9	1
Mercosur	4084	4270	2176	-7	-13	-49	-51	-1	-2
Rest of Latin America	380	851	43	-1	-70	-4	-3	1	0
Central America	-190	1181	-505	0	-18	-3	-3	0	0
Caribbean	-153	61	-84	-1	-6	-3	-3	0	0
LAC Subtotal	**3512**	**5609**	**3402**	**-1**	**-87**	**-29**	**-21**	**8**	**-1**
NSADC	322	308	-127	-203	304	983	1108	420	35
SADC	491	132	1151	380	1667	270	330	117	42
Sub-Saharan Africa	**813**	**440**	**1024**	**177**	**1971**	**1253**	**1438**	**537**	**77**

Subtotal									
South Africa	-1677	-529	-543	-91	59	-24	-53	0	1
Middle East and North Africa	-1115	-532	5090	1	144	59	91	43	8
SEE	-699	-162	-179	-2	2	-7	-9	-3	0
Rest of World	1087	1502	106	14	54	44	57	21	2
Developing Countries	**28085**	**22216**	**35252**	**-23**	**2043**	**1165**	**1315**	**250**	**41**
World	**90139**	**41244**	**17222**	**-204**	**842**	**480**	**413**	**-72**	**-10**

Source: GTAP simulations

Table 8a: Output Composition in NON-SADC countries (percentage)

	Initial	North	South-South	SSA RTA	DEV	DVG1	DVG2
CER	4.8	4.2	4.7	5.0	4.8	4.7	4.8
VFN	2.2	2.2	2.2	2.2	2.3	2.2	2.2
OSD	0.3	0.5	0.6	0.3	0.3	0.7	0.3
SGR	1.8	1.7	1.8	1.8	1.8	1.8	1.8
OCR	9.1	9.2	9.1	9.0	9.1	9.1	9.1
LVS	5.1	5.0	5.1	5.1	5.1	5.1	5.1
DRY	0.4	0.4	0.4	0.4	0.4	0.4	0.4
OFD	3.9	3.9	3.9	3.8	3.9	3.9	3.9
Agriculture	**27.6**	**27.7**	**27.7**	**27.7**	**27.7**	**27.2**	**27.5**
Resources	**14.2**	**14.4**	**13.9**	**14.2**	**14.1**	**14.0**	**14.2**
TXT	1.2	1.0	1.2	1.3	1.3	1.2	1.3
WAP	0.6	0.5	0.6	0.6	0.6	0.6	0.6
LEA	0.6	0.5	0.6	0.6	0.6	0.6	0.6
NMM	8.7	8.6	8.8	8.6	8.6	8.8	8.7
P_C	1.5	1.4	1.5	1.5	1.5	1.5	1.5
MVH	0.6	0.7	0.7	0.6	0.6	0.7	0.6
ELE	0.2	0.2	0.2	0.2	0.2	0.2	0.2
MMN	2.3	2.4	2.3	2.3	2.2	2.2	2.3
Manufactures	**15.7**	**15.5**	**15.9**	**15.7**	**15.7**	**15.8**	**15.9**
TRN	14.6	14.8	14.5	14.6	14.6	14.6	14.6
BFS	16.5	16.6	16.5	16.4	16.5	16.5	16.5
SER	11.4	11.3	11.4	11.4	11.4	11.4	11.4
Services	**42.5**	**42.7**	**42.4**	**42.4**	**42.4**	**42.4**	**42.5**

Source: GTAP simulations and author's calculations

Table 8b: Output Composition in SADC countries (percentage)

	Initial	North	South-South	SSA RTA	DEV	DVG1	DVG2
CER	3.2	3.1	3.2	3.1	3.0	3.2	3.2
VFN	1.3	1.4	1.4	1.3	1.3	1.4	1.3
OSD	0.4	0.3	0.4	0.4	0.4	0.4	0.4
SGR	2.3	2.3	2.2	4.0	5.6	2.2	2.3
OCR	8.0	8.1	8.3	7.9	7.7	8.3	8.0
LVS	5.2	5.1	5.1	7.8	7.7	5.1	5.2
DRY	0.8	0.8	0.8	0.8	0.7	0.8	0.8
OFD	5.0	4.9	5.0	4.9	4.8	5.0	4.9
Agriculture	**26.1**	**29.7**	**26.1**	**26.0**	**30.9**	**26.3**	**26.4**
Resources	**8.0**	**8.0**	**7.9**	**7.8**	**7.6**	**8.0**	**8.0**
TXT	2.4	2.1	2.4	2.2	2.0	2.4	2.5
WAP	1.3	1.2	1.4	1.3	1.4	1.4	1.4
LEA	0.2	0.1	0.2	0.1	0.1	0.2	0.2
NMM	11.3	11.3	11.1	10.1	9.3	11.1	11.4
P_C	0.6	0.6	0.6	0.6	0.6	0.6	0.6
MVH	0.4	0.4	0.4	0.4	0.4	0.4	0.4
ELE	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MMN	4.1	4.3	4.1	3.5	3.0	4.1	4.1
Manufactures	**20.3**	**20.1**	**20.3**	**18.3**	**16.9**	**20.2**	**20.6**
TRN	19.0	19.0	18.9	18.8	18.9	18.9	19.0
BFS	14.1	14.1	14.1	13.9	14.1	14.1	14.1
SER	12.5	12.4	12.4	12.3	12.2	12.4	12.4
Services	**45.5**	**45.6**	**45.4**	**45.1**	**45.2**	**45.4**	**45.4**

Source: GTAP simulations and author's calculations

Table 9: Change in exports by country (Millions of US dollars and percentages)

	Initial	North	South-South	SSA RTA	DEV	DVG1	DVG2	IND+CHN	MER
	$m	*%*	*%*	*%*	*%*	*%*	*%*	*%*	*%*
European Union	2674109	1	0	0	0	0	0	0	0
USA	888812	5	-2	0	0	0	0	0	0
North America	267956	4	0	0	0	0	0	0	0
Japan	453022	7	-1	0	0	0	0	0	0
Other developed	260869	6	-1	0	0	0	0	0	0
Developed Subtotal	4544768	3	-1	0	0	0	0	0	0
China	481761	3	10	0	0	0	0	0	0
India	61126	2	34	0	0	1	1	1	0
Other Asia	319080	2	9	0	0	0	0	0	0
Other South Asia	28837	3	25	0	0	0	0	0	0
ASEAN	447936	1	6	0	0	0	0	0	0
Asian Subtotal	1338740	2	10	0	0	0.05	0.05	0.05	0
Mexico	165571	0	5	0	0	0	0	0	0
Andean	52762	2	2	0	0	0	0	0	0
Mercosur	102822	5	12	0	0	0	0	0	0
Rest of Latin America	55085	2	7	0	0	0	0	0	0
Central America	26970	5	5	0	0	0	0	0	0
Caribbean	7484	1	11	0	0	0	0	0	0
LAC Subtotal	410695	2	7	0	0	0	0	0	0
NSADC	23553	3	7	4	0.3	0.8	1.9	0.5	0
SADC	39747	1	8	2	1.9	0.3	1.3	0.1	0
Sub-Saharan Africa Subtotal	63300	2.4	8.9	3.6	1.3	0.7	1.9	0.4	0
South Africa	44822	-1	12	3	0	0	0	0	0
MENA	315127	0	8	0	0	0	0	0	0
SEE	36444	0	-1	0	0	0	0	0	0
Rest of World	156334	2	0	0	0	0	0	0	0

Source: GTAP simulations

Table 10a: Export Composition in NON-SADC countries (percentage)

	Initial	North	South-South	SSA RTA	DEV	DVG1	DVG2
Agriculture	19.5	18.9	20.4	19.7	20.0	20.7	21.0
Resources	47.3	47.8	43.6	46.2	46.8	45.6	44.7
Manufactures	19.1	18.9	22.4	20.3	19.4	20.6	21.6
Services	14.2	14.4	13.6	13.8	13.8	13.1	12.7

Source: GTAP simulations and author's calculations

Table 10b: Export Composition in SADC countries (percentage)

	Initial	North	South-South	SSA RTA	DEV	DVG1	DVG2
Agriculture	22.1	31.6	23.3	22.3	39.3	23.1	23.5
Resources	21.6	20.9	20.4	20.9	19.7	21.3	21.0
Manufactures	39.8	32.6	40.5	40.9	28.2	39.9	40.2
Services	16.4	14.9	15.8	15.9	12.8	15.7	15.4

Source: GTAP simulations and author's calculations

Table 11: Changes in factors real returns (percentage)

	Initial	North	South-South	SSA RTA	DEV	DVG1
NON-SADC						
Land	2.29	-1.1	0.2	2.72	8.12	8.35
Unskilled	-0.19	2.05	0.47	0.46	1.28	1.71
Skilled	-0.67	2.67	0.43	0.12	0.63	1.07
Capital	-0.62	2.98	0.5	0.04	0.41	0.84
Natural Resources	-0.88	13.05	-0.57	-2.68	-8.04	-9.73
SADC						
Land	22.08	2.55	0.15	35.16	3.18	3.79
Unskilled	1.68	2.39	1	4.23	0.59	1.05
Skilled	-0.47	2.35	0.89	1.02	0.31	0.7
Capital	0.06	2.46	1.01	1.64	0.38	0.82
Natural Resources	-13.99	5.59	0.41	-29.49	-3.91	-5.25

Source: GTAP simulations

Endnotes

[i] See for instance Anderson, Martin and van der Mensbrugghe (2005) for an overall analysis and assessment.
[ii] See for instance Hoekman and Özden (2005) for an overview of the issue of preferences erosion and for a quantitative assessment. See also Low, Piermartini and Richtering (2005) for a discussion of preference erosion in non-agricultural products markets.
[iii] See for instance Bouet, Fontagne and Jean (2006) and Curran, Nilsson and Frontini for an assessment.
[iv] UNCTAD (1964)
[v] See for instance Jean, Laborde and Martin (2005) for a quantitative illustration.
[vi] See for instance UNCTAD (2003) for a general quantitative discussion.
[vii] See Bouët, Mevel and Orden (2006) for a detailed discussion.
[viii] See Fugazza and Vanzetti (2006) and Anderson, Martin and van der Mensbrugghe (2005) for a quantitative illustration using Computable General Equilibrium (CGE) modelling.
[ix] See also for instance the Commission for African Report (2005) for a detailed analysis of the Sub-Saharan Africa situation and the discussion of possible policy "remedies".
[x] Some of these scenarios have been simulated in Fugazza and Peters (2005). However, results are obtained from the original dataset and do not account for instance for recent trade-related events as we do here in the pre-simulation step.
[xi] The Global System of Trade Preferences among developing countries envisages preferential trade arrangements among 43 developing countries from all regions and accession should be opened to China and the group of 77.
[xii] See Redding and Venables (2003) for a theoretical treatment and empirical evidence.
[xiii] See for instance Fugazza (2004).
[xiv] See for instance Hoeckman and Prowse (2005) for an extensive survey and discussion.
[xv] See for instance Charlton and Stiglitz (2006) for further discussion.