ATPC

Work in Progress

No. 11

Economic Commission for Africa

African Trade Policy Centre

ATPC

Unrestricted Market Access for sub-Saharan Africa: Important Benefits with Little Cost to the QUAD

By

Hakim Ben Hammouda, Stephen Karingi and Romain Perez

March 2005

Abstract

The issue of unrestricted market access for sub-Saharan Africa has featured lately in the debate on overcoming Africa's development challenges through trade, rather than aid. This paper assesses empirically the impact of eliminating all tariff and non-tariff barriers faced by all exports from Sub-Saharan Africa to the developed economies of the QUAD, meaning Japan, United States, Canada and the European Union. The empirical assessment quantifies the potential benefits of Africa in terms of export growth and welfare, as well as the costs to be borne by developed and developing economies. The paper uses a global CGE model in its analysis. The study finds that as a result of unrestricted market access, African exports would increase by US$ 1.9 billion. This growth will be mainly due to agricultural exports towards Japan and the European Union. However, the results did also indicate that due to supply-side constraints, the growth in exports to the QUAD countries would be associated with a decrease in exports to other markets, as African producers shift their resources to the benefit of the European and Japanese markets. As a result of the growth of its exports and the associated multiplier effects, sub-Saharan African countries have the potential to benefit from a large growth in their value added. This sudden growth of the economy induces a corresponding increase in welfare of more than US$ 15 billion. Up to 70 percent of this welfare improvement results from increased demand for the abundant unskilled labour in sub-Saharan Africa.

Contrary to what might pass as the conventional wisdom, other developing countries also benefit from the privilege granted to sub-Saharan Africa. They enjoy increased exports to Africa of intermediate and final consumption and capital goods which more than balance their exports loss due to trade diversion in the QUAD countries. Other developing countries enjoy an increase in exports of more than US$ 400 million. Globally, there are benefits from unrestricted market access in favour of sub-Saharan Africa. The welfare of the rest of the world including other developing countries increase by US$ 11.9 billion, in spite of very limited declines in welfare experienced by the producers of some of the QUAD countries.

ATPC

Work in Progress

Economic Commission for Africa

Unrestricted Market Access for sub-Saharan Africa: Important Benefits with Little Cost to the QUAD[1]

By

Hakim Ben Hammouda, Stephen Karingi and Romain Perez

Trade and Regional Integration Division
March 2005
Addis Ababa, Ethiopia

Contents

Executive Summary

World Trade Organization (WTO) members signed a framework agreement on the Doha Round in July 2004, which led some to believe the spirit of Doha had been revived. However, a thorough analysis of the agreement shows that the main interests of sub-Saharan Africa were not considered ambitiously enough. Hence, strong measures are still needed to enable this region of the world to benefit fully from trade globalization.

The objective of the present study is to assess whether unrestricted access of African exporters to developed country markets could be one of these strong measures in favour of genuine development. The study considers the feasibility of the project, by measuring its associated costs for developed and other developing countries.

The simulations discussed in this paper show that:

- Africa would enjoy significant welfare gains amounting to US$15 billion; additional Gross Domestic Product growth of 5.8 percent and export growth of 3.3 percent, thanks to the increase in exports to agricultural markets of the European Union and Japan.

- The rest of the world would undergo minor welfare losses but would benefit from the economic boom of African countries as their total export increases sharply.

Two main recommendations arise from these results:

- "Tackle all tariff barriers": If tariff peaks survive and agreements are not comprehensive, any market access will still have some restrictions.

- "Tackle all non-tariff barriers": Rules of origin, customs requirement and multiplicity of preferential agreements are major hidden barriers to unrestricted market access.

1.   Introduction

In less than a quarter of a century, Africa's share of global international trade has decreased from five percent to less than two percent today. In order to deal with this marginalization, the Members of the World Trade Organization (WTO) launched in Doha, in 2001, a new round of trade negotiations whose central foundation is development. The spirit of Doha, which inspired the international community, focuses on the integration of poorer countries in the multilateral trading system and sharing of the benefits of globalization. Thus, the Ministerial Declaration of Doha emphasizes the role of agricultural trade liberalization – especially the reduction of tariff barriers, domestic support and export subsidies – and the importance of special treatment for of developing countries.

As negotiations have progressed however, little progress has been made to meet African interests and there is evidence that the negotiations have become detached from the original Doha spirit. This was clearly exemplified by the failure of the 2003 Ministerial Conference in Cancun, where WTO member States could not bridge the huge differences in their positions. Intense negotiations since Cancun led to the agreement on the July Package that was obtained on 1st August 2004, which may be seen as a revival of the Doha spirit. Nevertheless, looking at the July Package, details show that the interests of developing countries, particularly African countries, were only partially integrated. On agriculture liberalization, the scenario retained appears to be far less ambitious than the commitments of the Doha Round. Empirical studies including one by the Economic Commission for Africa (ECA) indicate that the gains for Africa are maximized only if there is ambitious liberalization of the agricultural sector. Moreover, subsequent analytical work by ECA confirmed that gains for Africa will be limited exemptions for special products for developed countries in the July Package. The potential benefits of an agreement on industrial market access are also reduced, when specific issues for developing countries, such as tariff peaks, tariff escalation or erosion of preferences, are not fully taken into account.

If the negotiations continue along the same trajectory, the generous goals of the Doha Round will not be reached. However, all is not lost and complementary actions could help to deliver the gains promised in the original Doha Spirit. In this regard, the prevailing political momentum seems to be now favourable, as elections in Europe and in the United States have put in place new Ministerial trade teams. With a strong political will, the negotiations can easily move away from restrictive technical debates, (like the debate related to the choice of the tariff reduction formula) to focus on the bigger picture of development challenges in the developing world, especially in Africa.

Unrestricted market access for sub-Saharan Africa into QUAD countries for instance, is one of the solutions negotiators could consider in order to adapt the multilateral trade system towards helping African countries. It is true that currently, African countries benefit from a large deal of preferential

agreements entitling them to duty and quota free or reduced duty access to developed countries markets. These agreements, which have since been reinforced by the Africa Growth and Opportunity Act (AGOA) and the Everything-But-Arms (EBA) initiative in 2000 and 2001, have reduced the tariff barriers faced by African exporters to historically low levels. However, there are limitations to these preference schemes. Firstly, all African countries and all tariff lines are not included. Secondly, administrative conditions are sometimes very restrictive and the rules of origin vary across the schemes. And thirdly, essential products, such as sugar exports to the European Union (EU), are still excluded from the agreements. Thus, there is still a case for genuine unrestricted access to the developed markets, which would lead to a surge in African exports and a significant rise in the welfare of the continent. The resulting welfare loss to developed economies and to other developing countries would be limited, as African economies are still constrained on the supply side and are unlikely to distort international markets prices.

The aim of this study is to revisit empirically the impact of eliminating all tariff and non-tariff barriers faced by all the exports of sub-Saharan Africa to the developed economies of the QUAD, meaning Japan, United States, Canada and the European Union markets. The empirical assessment quantifies the potential benefits to Africa in terms of export growth and welfare, as well as the costs to be borne by developed and other developing economies.

The paper is organized as follows. After a brief review of the literature on this subject in Section 2, attention is drawn on the simulations undertaken with the Global Trade Analysis Project (GTAP) model, whose principles and construction are presented briefly in Section 3. The results are summarized and analysed in Section 4. This analysis then leads to the concluding remarks and recommendations in Section 5.

2.   Review of the literature

There is evidence in the economic literature regarding the potential gains that Africa would obtain from fully unrestricted market access to the developed economies. The World Bank, in a study undertaken in 2001 by Ianchovichina, Mattoo and Olarreaga prior to the launch of the current Round of trade negotiations, looked at the unrestricted market access scenario for SSA. Based on an exposition through a simple partial equilibrium model, the authors show that unrestricted market access would act as a generalized preferential agreement and has the same consequences as a gain in productivity. Duty free access to developed economies implies that, for a given market price, African exporters will obtain higher revenue, thanks to the suppression of import taxes. As a consequence, their supply would increase, leading to a drop in the international market price. The following three points are worth noting in interpreting the results of Ianchovichina et al. (2001):

- African exporters gain market share in the developed economies and enjoy higher revenues as the drop in market price is of less magnitude than the drop in import taxes.

- Non-African producers (national and foreigners) experience a drop in market prices and market shares, which implies net loss of welfare.

- The consumers of developed countries benefit from the drop in market price, which raises their welfare.

- Developed countries face a loss in tax revenues, mitigating the total welfare effect of the country.

Using Version 4 of the GTAP model, the Ianchovichina et al. (2001) assessed the gains and costs of unrestricted market access for 37 sub-Saharan African countries. The results of these simulations were striking: the concerned African countries would enjoy a growth in welfare equivalent to US$ 1.8 billion as well as an improvement in their exports by US$ 2.5 billion. The study estimated that these improvements would be equivalent to a productivity gain in the 37 sub-Saharan Africa countries concerned of 1.5 percent. Besides, the costs of unrestricted market for the rest of the world would be rather limited. The total welfare of developed countries would decrease, as the consumer welfare gain is more than offset by the loss of producers and states welfare. This total decrease would not exceed 0.01 percent of the initial level of welfare. With a loss of US$ 5.2 billion (0.1% of its total welfare), Japan would be the main loser among developed countries, but this loss remains negligible. Developing countries would suffer from trade diversion, but due to the low level of exports of Africa, this trade diversion is not significant.

The study emphasized the sensitivity of the gains to the region concerned by the suppression of the market access barriers. Sub-Saharan Africa exports mainly to European markets and its main exports

are agricultural products. Hence, most gains from unrestricted market access are concentrated on liberalization of the agricultural markets in Europe and Japan. Unrestricted market access to the United States would leave African welfare almost unchanged, and generate limited growth in exports.

After the implementation of the AGOA and EBA initiative in 2000/01 periods, there is the question of whether Africa really enjoys an unrestricted market access and whether the potential gains revealed by the World Bank have been captured through these new agreements. AGOA was adopted by the US Congress in May 2000 to offer tangible incentives for African countries to continue their efforts to open their economies and build free markets. Thanks to this Act, eligible African countries would enjoy better market access to the United States with a larger number of duty free lines. However, significant restrictions still exist in AGOA (see Additya Mattoo 2003):

• Number of eligible candidates has now reached 38 African countries as of December 15, 2004, but only 25 of them benefit from apparel provisions, and only 24 from the special rule on apparel.

• There has been uncertainty given that each country's eligibility is reviewed annually, with the risk for an eligible country of losing instantly the advantages granted.

• To access AGOA, African countries have to face restrictive conditions. First, the rules of origin are strict, especially in textiles, leading countries like South Africa to opt out of the preferential access offered by AGOA to export apparel to the United States. Furthermore, complementary conditions for African countries are associated with the agreement, such as opening their market to US trade and investment, strengthening customs requirement and implementing market based reforms. According to the some calculations, the absence of these restrictions would have magnified the impact of AGOA nearly five-fold, leading to an increase in non-oil exports of US$ 540 million, instead of the US$ 100-140 million expected in the presence of these restrictions.

• The products coverage is not comprehensive: Some sensitive products for African exporters are still excluded from the agreement. According to Mold (2004)[2], eight percent of the tariff lines are not covered by AGOA. These are mainly textiles and footwear that still face exceptionally high tariffs.

Thus, while AGOA has enabled significant growth of African exports to the United States, (doubling between 2001 to 2003 to reach US$ 33.4 billion) this increase is largely due to oil exports. Seven African countries only, among which are large oil exporters such as Nigeria and Angola, capture 96 percent of the benefits. Besides, the level of exports reached in 2003 is still below the level of exports of Africa to the United States in 1980[3].

The European Parliament on its part voted the EBA initiative in February 2001. The objective of EBA was even more ambitious than the AGOA, as all the exports from Least Developed Countries, except

arms, were supposed to be granted duty free access to the EU. However, significant restrictions remain, leading to a low level of utilization of the EBA preferential access:

- Only LDCs countries benefit from the EBA initiative. In Africa, 18 countries are not eligible, 13 of them being Sub-Saharan countries[4].

- Three sensitive products are still excluded from the agreement, rice, sugar and bananas. According to the calculations of UNCTAD (2004)[5], rice and sugar are the two main agricultural outputs of the LDCs. Therefore; main gains of the EBA initiative are associated to these three "sensitive" products subject to gradual liberalization.

- Strict rules of origin and administrative constraints[6] apply to the beneficiaries of EBA. As EBA is an extension of the Generalized System of Preferences (GSP), diagonal cumulating principle prevails, meaning that products can move inside the EBA zone for further processing, but sourcing outside the EBA, including with other ACP countries, is not allowed to enter the EU duty free.

These constraints, added to the fact that African countries already benefited from preferential agreements, such as the Lomé and Cotonou agreements, have led to low utilization by LDCs of the EBA preferential access. According to OECD, 70 percent of these countries have hardly ever used the scheme and 93 percent of qualifying imports from Africa still enter under the Cotonou scheme.

In spite of the commitments of developed countries in favour of unrestricted market access, access to their markets is still restricted. Even though the preferences of Africa have been reinforced by AGOA and EBA, the objective of unrestricted market access for African exporters remain to be achieved. Based on the work done by the CEPII on the applied tariffs[7]; the market access of African exporters is indicated below. Even after the implementation of AGOA and EBA, tariff barriers still apply to African countries.

Exporters	Importers							
	European Union		United States		Japan		World	
	Industries	Agriculture	Industries	Agriculture	Industries	Agriculture	Industries	Agriculture
Africa	1.3%	1.1%	1.7%	1.7%	2.9%	2.7%	4.6%	16.5%
Developing Countries	3.1%	2.4%	2.9%	2.4%	4.2%	3.3%	5.8%	17.9%
World	3.9%	3.2%	2.6%	2.3%	4.4%	3.7%	6.2%	5.4%

Source: MacMap database

The presentation above of the tariffs average does not reflect some highly restrictive barriers that developed countries still impose on African exports. Tariff peaks on sensitive African products are one of the plagues that hamper African exports to developed countries. In this respect, unrestricted market access could have a significant impact on exports currently facing tariff peaks, such as textiles, food products, cereals, meat, milk, rice, sugar and oil.

3.   The Analytical Model: Rationale for a General Equilibrium Methodology and Theoretical Framework of the GTAP Model

Kehoe and Kehoe (1994)[8] captures succinctly what general equilibrium models are. General equilibrium models are an abstraction that is complex enough to capture the essential features of the economy, yet simple enough to be tractable. These models are popular over their partial equilibrium counterparts because they stress the interactions among different sectors. However, they are not perfect, especially the static ones. This is because they fail to take account of the dynamic effects that accompany changes taking place in a given economy as a result of policy change. The Global Trade Analysis Project (GTAP) model is in this class of general equilibrium models. GTAP is a multi-region computable general equilibrium (CGE) model designed for comparative-static analysis of trade policy issues (Adams et al. 1997[9]). It can be used to capture effects on output mix, factor usage, trade effects and resultant welfare distribution between countries as a result of changing trade policies at the country, bilateral, regional and multilateral levels. Since the GTAP model puts emphasis on resource reallocation across economic sectors, it is a good instrument for identifying the winning and losing countries and sectors under policy changes involving the trade aspects of the EPAs.

The underlying theory of GTAP is captured in two types of equations. The key drivers of the model are the behavioural equations, which are based on microeconomic theory. These equations capture the behaviour of agents in the economy. Accordingly there are behavioural equations for the consumers and also for the international trade (exports and imports). The behavioural equations capture the behaviour of the optimising agents such as the consumers that allows the derivation of the demand functions. The second types of the equations are the accounting relationships. These are essential in order to ensure that the behavioural equations solution occurs within a consistent macroeconomic framework. Thus, the accounting relationships ensure that the receipts and the expenditures of all the agents (consumers, producers, government, rest-of-the-world) are balanced. Chapter 2 of the GTAP book (Hertel 1997[10]) covers in details the theory behind the model and the derivations of the behavioural equations. For the purposes of this study, these derivations are taken as given and the study simply provides just the broad outline of what the GTAP model is like.

The GTAP model allows international mobility of capital, multiple trading regions, multiple goods and primary factors, empirically based differences in production technology and consumer preferences across regions and explicit recognition of a global transport sector. In each region there are five types of factors of production. First, the model recognizes two types of labour (skilled and unskilled) and a single, homogenous capital good. Then there is land and other natural resources that also form part of the set

of the factors of production. In the typical closure of the model, total supplies of labour and land are fixed for each region, but capital can cross regional borders to equalize changes in rates of return. In other words, there is clear distinction between those factors that are perfectly mobile and those that are sluggish to adjust. *In this study, a surplus supply of unskilled workers is assumed, as unemployment of unskilled workers is particularly high on the African continent.*

The GTAP Database and the Study Aggregation

The GTAP model is used together with the GTAP database. The database, like the model, captures different individual and composites of countries. For this study, we start with Version 5.4 of the database. This version of the database has 1997 as the base year and recognizes 78 regions as well as 57 sectors and five factors of production. Not all countries are individually captured in GTAP, however, all the world economies are part of the database as they could be part of a given composite region or included as part of the rest of the world. Thus, global macroeconomic consistency holds. Unfortunately, only a very small proportion of African countries are individually disaggregated in Version 5.4 of the database. A majority of African countries are captured through one or other regional composite. This was however not a limitation for this study, as the focus was on the regional grouping sub-Saharan Africa. Before turning to the aggregation scheme used in the study, it is useful to describe very briefly what constitutes the GTAP database.

Bilateral trade data is a critical component of the GTAP database. It is these bilateral trade flows that transmit policy and growth shocks between countries. Indeed, trade shares are important in explaining the simulation results. Bilateral trade is also important when it comes to looking at the terms of trade implications. The global bilateral data is sourced from the United Nations COMTRADE data. This is supplemented with individual countries global trade information and trade totals or aggregate bilateral trade statistics such as from the IMF, FAO and World Bank.

Another important sub-component of the GTAP database is the protection data. This data is both explicit and implicit. Explicit in the sense that tariff revenue or export revenue by commodity is available. In addition, anti-dumping data by commodity and region is also obtainable. It is implicit in the sense that the bilateral trade data is available both in market and world prices. The key sources of the protection data vary. In the case of tariffs, the agricultural tariffs are obtained from the Economic Research Service, the EU and the applied or MFN rates. Merchandise tariffs on the other hand are available from the World Integrated Trade Solution project of the World Bank and UNCTAD. The domestic support protection data is obtained from the OECD's producer subsidy equivalent tables and this can be divided into output subsidies, input subsidies, land-based and capital-based payments.

Study Aggregation

The present study aggregates the original GTAP database into seven regions and 18 products. This level of aggregation is broad enough to capture the effects of unrestricted access of African countries to developed market access, and allows the assessment of the impact of such measure on developing countries and the QUAD.

4.   Results

The analysis of the simulations reveals that Africa, as well as the rest of the world, should enjoy significant benefits thanks to granting unrestricted access to African exporters in developed markets of the QUAD countries.

Trade growth and trade diversion in the developed economies

Thanks to unrestricted market access, African exports should increase by US$ 1.9 billion (+3.3%). This growth will be mainly due to agricultural exports towards Japan (+US$ 1.1 billion) and European Union (+ US$ 3.3 billion).

Sub-Saharan exports growth to the Quad
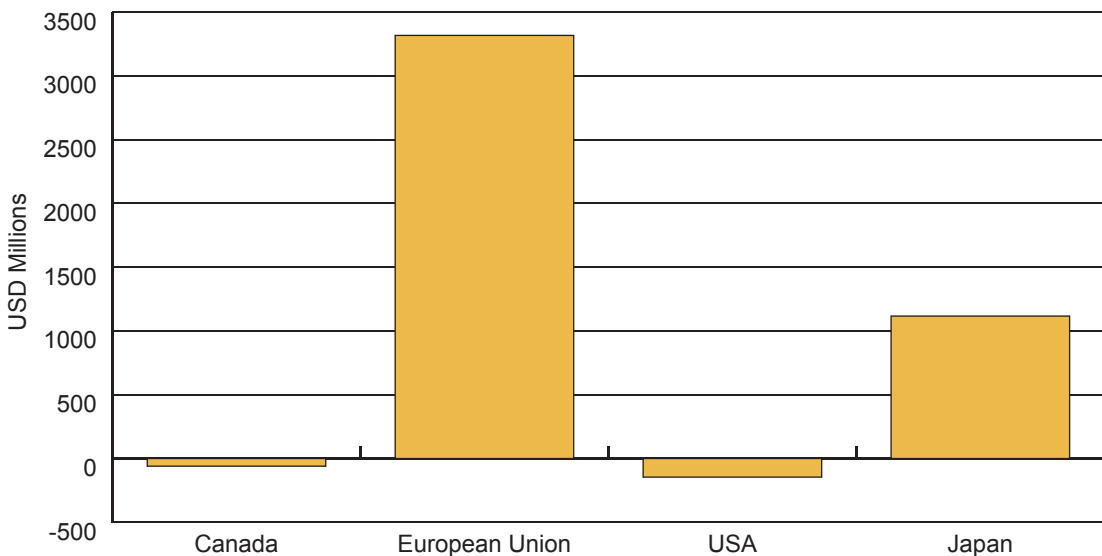
The net exports growth will be fuelled by tariff cuts and improvement of the terms of trade (+4.5%). The results do also indicate that probably due to supply capacities limitations, the growth in exports to the QUAD countries would be associated with a decrease in exports to other markets, as African producers shift their resources to the benefit of the European and Japanese markets. Thus, their exports to the American and developing markets drop by US$ 0.1 billion and US$ 0.7 billion respectively. In the meantime, the rest of the world would experience insignificant trade diversion in the European and

Japanese markets; this minimal decline is compensated by the room created by the African trade drop in the US and in the developing markets.

Trade diversion undergone by developing countries in the developed markets amount to US$ 1.8 billion, and trade diversion inside among developed countries to US$ 1.1 billion.

Exporters	Importers			
	Canada	EU-25	USA	Japan
Sub-Saharan Africa	-60.1	3318	-146	1117
Canada	0	-0.2	-59.8	-74.1
DVPG countries	-29.3	-771	-604	-436
European Union	58	-1522	429	71
USA	34.3	-142	0	-241
Japan	15	85	243	0
Total	-23.5	51	-633	93

Significant increase of welfare, GDP and imports among sub-Saharan African economies

As a result of the growth of its exports and the terms of trade, sub-Saharan African countries should benefit from a large growth of their value added and GDP (+ US$ 12 billion, +5.8%). This sudden growth of the economy would induce a significant reduction of unemployment[11] and a corresponding increase in welfare of more than US$ 15 billion[12].

Furthermore, as Africa enjoys an economic boom, it imports much more than before for consumption and also for production of export goods. The additional imports are in the form of intermediate and capital equipments. In other words, growth of exports implies growth of imported intermediate and capital goods. Growth of production requires investment, and purchase of imported heavy equipment. Growth of consumption is also favourable to the imports of final goods. Therefore, the sub-Saharan Africa imports increase by more than 15 percent, from the baseline, creating new opportunities for the partners of this region.

Thanks to the African economic boom, the whole world would benefit from export growth while the total welfare effect should be positive

As a result of the increase in African domestic demand and the shift of production the whole world should benefit from unrestricted market access in favour of sub-Saharan Africa. Thus, the total world welfare would increase by US$ 11.9 billion, and the losses of welfare are only located in the developed world. Besides, no region undergoes reductions in exports.

	World	Africa	DVPG	EU	USA	Canada	Japan
GDP	< 0.001%	5.8%	< 0.001%	< 0.001%	< 0.001%	< 0.001%	< 0.001%
Welfare	11,852	15,069	224	-2,160	-888	39	-919
Exports		3.3%	0.0%	0.2%	0.2%	0.0%	0.3%
Imports		15.8%	0.0%	0.0%	0.0%	0.0%	0.0%

Contrary to what might pass as conventional wisdom, other developing countries would also benefit from the privilege granted to sub-Saharan Africa. Their increased exports to Africa of intermediate and final consumption and capital goods would more than balance the trade diversions they face in the QUAD countries, so that other developing countries would enjoy an increase of their exports by more than US$ 400 million, even though their level of welfare appears to be practically unchanged.

In the same vein, developed countries would see the costs of unrestricted market access significantly reduced by the African economic boom. In the case of the EU, the simulations reveal that the exports to Africa (+US$ 3.8 billion) would grow much more than European trade would be diverted from developed countries (US$ 1 billion). Furthermore, as African producers need to reallocate their resources from American and developing markets, the EU enjoys significant increase of exports to these markets (US$ 1.4 billion).

> *Unrestricted market access would imply significant gains for sub-Saharan Africa, not only in export growth but also in welfare and GDP. Indeed, the economic and social impact of such a measure could be considerable as more than USD 10 billion of welfare should be created thanks to the employment of African unskilled workers. The results of these simulations are all the more striking in that the costs for the rest of the world appears to be particularly low. Trade diversion on the developed markets is far less important that the trade created by the African economic boom, estimated at US$ 9.5 billion. Losses of welfare and GDP would not be significant at the scale of the developed economies. Furthermore, these calculations do not take into account the accelerating role of Foreign Direct Investment. As evidenced in the case of AGOA[13], foreign investors try to benefit from the opportunities created by preferential agreements, and thus would contribute to the economic development induced by unrestricted market access.*

Exporters	Importers			
	QUAD	SSA	DVPG	Total
DVPG countries	-1,840	2,264	78	465
EU	-964	3,795	1,018	4,537
USA	-349	1,018	430	1,286
Japan	342	440	365	1,435
Sub-Saharan Africa	4,229	-81	-1,530	1,904
Total	-513	10,017	-143	9,515

5. How to make sure that Unrestricted Market Access will benefit Africa?

The results discussed in Section 4 have shed some light on the considerable impact unrestricted market access in favour of sub-Saharan Africa could have, not only for the region itself, but for the whole world. This measure would be a genuine special and differential treatment for Africa, leading to major growth of exports, GDP and welfare as well as significant social improvements, with the hiring of thousands of African unskilled workers.

Part of these gains may have been captured through the initiatives of the US and EU in favour of African countries and Least Developed Countries, but most of them remain to be delivered. AGOA and EBA cannot truly be considered as unrestricted market access as serious restrictions are still applied on African exports towards these developed economies.

Genuine unrestricted market access requires two essential conditions: "no tariff barrier, no non-tariff barrier".

"No tariff barrier" is an obvious principle of unrestricted market access. Product exclusion, tariff peaks, tariff escalation are still used by the QUAD to prevent the access of African exports. Even though African economies are not very profitable, they are still treated as if they are a threat to developed economies in sectors such as sugar, cereals processed agricultural products, textile, and clothing. A lot has been done in these fields, but the developed countries have to take a clear and firm commitment towards Africa so that no tariff on African export exceeds zero percent.

"No non-tariff barrier" is a more complex issue. Economic literature has underlined the noxious effect of restrictions such as rules of origin, obligations of reciprocal opening to the trade and investment of the nation granting unrestricted market access, customs requirement and commitment to implement market based reforms. Furthermore, the multiplicity of preferential agreements seems to be in itself a major non-tariff barrier. Due to the "diagonalisation" of the rules of origin[14], differentiation, and sometimes contradictory rules of application, the different preference schemes are not compatible. Many African countries prefer not using their preferences, or specialize in one preference scheme, as the system of schemes is too complex to be completely used. Hence, the simplification and rationalization (harmonization) of the different schemes would be an essential action to enable genuine unrestricted access for Sub-Saharan African exporters.

Annexes

Results from the Simulations

Change in Welfare (US$ million)

CANADA	38.99
EU	-2160.25
USA	-888.29
JAPAN	-919.38
SSA	15069.36
DVPD	487.8
DVPG	224.07

Change in GDP (volume and %)

	% Change	Pre (US$ mln)	Post (US$ mln)	Chng (US$ mln)
Canada	0	630479.5	630483.44	3.94
EU	0	8254239.5	8254433.5	194
USA	0	7934515.5	7934494	-21.5
JAPAN	-0.01	4248630	4248309.5	-320.5
SSA	5.81	207001.56	219030.61	12029.05
DVPD	0	2282932.5	2282970.75	38.25
DVPG	0	5410829.5	5410758	-71.5

Terms of trade (% change from the baseline)

CANADA	0.018
EU	-0.089
USA	-0.077
JAPAN	-0.121
SSA	4.482
DVPD	0.061
DVPG	0.03

Value Added by industries (% change from the baseline)

	CANADA	EU	USA	JAPAN	SSA	DVPD	DVPG
Cereals	0.19	-0.2	0.06	-0.06	11.25	-0.08	-0.01
Veget	-0.01	-0.38	0	-0.03	6.18	-0.02	-0.03
Oilseed	-1.44	-0.27	-0.54	-2.87	25.31	-0.53	-0.13
Sugar	0.03	-1.77	-0.05	-0.06	17.11	-0.18	-0.05
Cotton	0.31	1.65	0.9	1.28	-6.85	1.31	0.62
OCrops	-0.71	0.4	-0.43	-0.37	3.47	0.11	-0.02
Livest	-0.04	-0.53	-0.1	-0.9	10.26	-0.15	-0.04
Anmlprod	-0.08	-0.42	-0.04	-0.06	7.44	-0.15	-0.02
Fishing	0	0	0.01	-0.01	5.07	-0.03	0
Energy	0.17	0.2	0.16	0.18	-3.58	0.13	0.16
ONatres	0.29	0.91	0.24	0.18	-3.86	0.34	0.31
Agroproc	-0.13	-0.61	-0.06	-0.07	17.17	-0.21	-0.07
Textile	-0.04	0.07	0.02	0.09	5.2	-0.13	0.01
Clothing	-0.1	-0.03	-0.01	0.03	20.35	-0.33	-0.14
Lowtechind	-0.1	0.16	0.03	0.05	-2.67	-0.25	0.01
Medtechind	-0.03	0.12	0.02	0.06	-0.49	-0.15	0
Heavyind	-0.06	0.12	0	0.08	-9.93	-0.26	-0.09
Svces	0.01	0	0	-0.01	6.17	0.06	0
CGDS	-0.08	-0.15	-0.09	-0.09	17.13	-0.03	-0.08

Welfare decomposition (US$ million)

	Allocative efficiency	Unskilled labour gains	Terms of trade	Investment savings balance	Total
1 CANADA	3.9	0	35.4	-0.4	39
2 EU	193.9	0	-2318	-36.1	-2160.3
3 USA	-21.6	0	-688.9	-177.8	-888.3
4 JAPAN	-320.2	0	-584.2	-15	-919.4
5 SSA	1782.7	10335.7	2571.8	379.1	15069.4
6 DVPD	38.3	0	501.3	-51.7	487.8
7 DVPG	-71.4	0	405.5	-110.1	224.1
Total	1605.6	10335.7	-77.1	-11.9	11852.3

Export volumes from other developing countries (US$ million)

	1 CANADA	2 EU	3 USA	4 JAPAN	5 SSA	6 DVPD	7 DVPG	Total
1 Cereals	0	-9.1	-0.3	-1.6	71.4	-3	-4.9	52.5
2 Veget	-0.7	-87.8	-5.5	-6.7	16.7	-1.4	10.8	-74.7
3 Oilseed	-0.2	-12.1	-1.2	-43.4	3.7	1.2	-1	-53
4 Sugar	0	-5.4	0.1	0.1	0.1	0	0	-5.1
5 Cotton	0	47.7	0	0.8	2.6	8.5	35.4	95.1
6 oCrops	4.4	82	-192.3	-76	23.3	24.2	41.6	-92.9
7 Livest	0	-2.4	-1.2	-2.8	4.2	0	-0.2	-2.4
8 Anmlprod	-0.1	-14.7	-0.7	-2.1	3.8	-1.6	0.3	-14.9
9 Fishing	0	-1.2	0.6	-1.3	3.2	0	1.2	2.4
10 Energy	3.3	163.8	153.8	26.9	21	18.5	73.5	460.7
11 oNatres	1.5	202.8	9.8	16	11.1	52.5	62.7	356.4
12 Agroproc	-3.3	-484.9	-64.1	-179.7	265.7	-11.1	-18.3	-495.6
13 Textile	-1.6	-59.7	-14.5	-6.6	211	-10.4	-4.7	113.6
14 Clothing	-6.4	-181.1	-111.3	-27	84.4	-1.1	-3.8	-246.2
15 Lowtechind	-2	-23.4	-27.4	-10.5	91.3	-2.1	3.1	29.1
16 Medtechind	-6.6	-92.2	-80	-37	633.1	-49.1	-32	336.2
17 Heavyind	-15.4	-169.1	-263.2	-64.6	397.9	-82.9	-87.3	-284.5
18 Svces	-2.4	-123.9	-6.7	-20.8	419.5	20.8	1.4	288
Total	-29.3	-770.7	-604	-436.3	2264.1	-37	77.8	464.7

Export volumes from sub-Saharan Africa (US$ millions)

	1 CANADA	2 EU	3 USA	4 JAPAN	5 SSA	6 DVPD	7 DVPG	Total
1 Cereals	0	32.3	-1.2	19.7	-0.7	-0.7	-4.7	44.7
2 Veget	-0.5	222.7	-2.4	25.5	-0.3	-4.4	-52.2	188.4
3 Oilseed	-0.1	-17.8	1	302	0.5	-9.3	-13.2	263.2
4 Sugar	0	78.4	-0.2	-0.2	0	-0.1	-0.2	77.6
5 Cotton	-1.8	-83.8	0	-3.5	1.2	-18	-166	-271.8
6 oCrops	-9.7	-373.6	351.5	176.9	-0.7	-70.8	-155.8	-82.4
7 Livest	-0.1	9.4	-0.3	84.7	-0.1	-0.2	-2.3	91.1
8 Anmlprod	0.1	-2.4	-2.7	1.9	-0.3	-5.1	-12.3	-20.8
9 Fishing	-0.4	-16.8	-3	-1.4	-0.2	-1.4	-3.6	-26.8
10 Energy	-14.3	-283.6	-315	-28.8	-0.8	-79	-150.4	-871.9
11 oNatres	-17.7	-639.5	-36.8	-41.9	-3.5	-162.4	-178.2	-1080
12 Agroproc	10.4	5192.2	185.6	828.7	-11.4	-37.4	-58.9	6109.1
13 Textile	2.8	149.6	11.9	1.6	-5.2	-4.5	-21.2	135
14 Clothing	20.7	354.5	192.6	6.7	-1.8	-3.4	-16.3	552.9
15 Lowtechind	-0.8	-122.3	-9.8	-2.3	-4.4	-7.2	-34.2	-181
16 Medtechind	-1.3	-513.4	-105.9	-54.4	-27.2	-31.1	-197.2	-930.5
17 Heavyind	-2	-51.2	-3.6	-0.9	-18.7	-122.1	-122.1	-320.6
18 Svces	-45.5	-617.1	-407.1	-197.3	-7	-157.4	-340.8	-1772.3
Total	-60.1	3317.6	-145.6	1117.1	-80.8	-714.7	-1529.6	1904

Endnotes

[1] The QUAD countries are Canada, the European Union, Japan and the United States.

[2] Andrew Mold, 2004, "Trade Preferences and Africa - The state of play and the issues at stake", Economic Commission for Africa.

[3] Sub-Saharan Africa exported to the United States a total good value of US$ 32.1 billion in 2003 versus US$ 33.4 billion in 1980.

[4] 12 if not including South Africa.

[5] Mattoo, Aaditya, Devesh Roy and Arvind Subramanian (2003), "The African Growth and

Opportunity Act and its Rules of Origin: Generosity Undermined?" The World Economy,

Volume 26, Issue 6, June, pp.829-851

[6] For instance, African countries are allowed to use their boats or European boats if they want to benefit from EBA initiative to export fish. As many of these countries do not have a significant fleet, they will have to fish with European boat to enjoy EBA preferential access.

[7] "MAcMaps (Market Access Maps) is a bilateral and disaggregated measure of market access which has been constructed to integrate the major instruments of protection (ad valorem and specific duties, prohibitions, tariff quotas, antidumping duties, norms) at the most detailed level (tariff lines), as well as all discriminatory regimes. MAcMaps measures the market access for 223 exporting countries into 137 countries at the level of the tariff lines for the year 1999. It can be applied to any geographic or sectoral breakdown using a procedure that minimizes the endogeneity bias while accounting for the importance of products in international trade." From « MACMAPS : UNE MESURE BILATÉRALE ET DÉSAGRÉGÉE DE L'ACCÈS AU MARCHÉ », Antoine Bouët, Lionel Fontagné, Mondher Mimouni and Xavier Pichot, 2002

[8] Kehoe, P.J. and T.J. Kehoe, 1994, "A Primer on Static Applied General Equilibrium Models", *Quarterly Review,* Federal Reserve Bank of Minneapolis, Spring Issue, pp. 2-16.

[9] Adams, P., M. Horridge, B. Parmenter, and X. Zhang, 1997, "Long-run Effects on China of APEC Trade Liberalization", Unpublished paper based on a report prepared for the East Asia Analytical Unit, Department of Foreign Affairs and Trade, Canberra, Australia.

[10] Hertel, T.W., 1997, *Global Trade Analysis: Modelling and Applications,* Cambridge University Press, New York and Cambridge.

[11] It is assumed in the simulations that unskilled labour is a non-fixed factor, as African unemployment of unskilled workers is high. This allows for welfare gains associated with increased employment and utilization of unskilled labour.

[12] More than US$10 billion of this welfare increase are due to the improvement of the employment of unskilled labour workers. Parallel simulations with fixed unskilled labour hypothesis show that the welfare would be reduced to US$ 4 billion in that scenario.

[13] According to UNCTAD (2002), AGOA implementation was associated by significant FDI from American and Asian companies in Ghana, Malawi, Mauritius, Senegal, South Africa and Tanzania.

[14] For the analysis of "diagonalisation" please refer to the paragraph related to the impact of EBA (2.).