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Economic Commission for Africa

## African Trade Policy Centre

# Assessment of the Impact of the Economic Partnership Agreement between the COMESA countries and the European Union

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Economic Commission for Africa

## Assessing the Consequences of the Economic Partnership Agreement on the Ethiopian Economy

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# Introduction

The European Union (EU) has taken major steps forward, in cementing its relations with the African, Caribbean and Pacific (ACP) countries, by instigating multilateral arrangements for reciprocal preferential treatment, under the Lome Convention. These ties of international cooperation are however not new, and date back to the post-Independence era, when Europe was in search of adequate means of maintaining its relations with former colonies, and participate in their development processes. Thus, in the early Seventies, the Lome Convention was conceived, as a binding instrument in promoting trade relations, which would be mutually beneficial to all Parties concerned. Beneficiary countries of the Lome Convention, would maintain existing privileges, but in return, would accord the same preferential treatment to their EU partners. Such commitment to reciprocity in trade-related policies, and exchanges, constitute an essential component of the anticipated Economic Partnership Agreement (EPA), in Sub-Saharan Africa (SSA), which could pave the way to the creation of a Free Trade Zone (FTZ), in association with the EU countries, at a later date.

The principle of reciprocity itself, raises important questions, as the removal of customs duties on imports from Europe, could have serious repercussions on national economies in Africa.. A fall in revenues, on customs' levies, would induce an increase in European imports, but to the detriment of the local producers as well as to those exporters from non-European countries. Furthermore, this reduction of customs tariffs, could trigger-off significant shortfalls in public revenues, and consequently, in public expenditure, bearing in mind that this could also mean lower prices of European consumer goods, available on African markets, translated into improved welfare in Sub-Saharan Africa.

The purpose of this study, is to evaluate possible economic repercussions of the trade facet, in Economic Partnership Agreements (EPAs), currently being negotiated between countries of the Common Market in Eastern and Southern Africa (COMESA) and Member-States of European Union (EU). In so-doing, we have used two complementary models, the first one, based-on a general equilibrium approach, and the second, a partial equilibrium method. Indeed, multilateral trade agreements, will have implications trade activities, on the production of goods and factors, the price of consumer-goods, on the are of specialization of national economies, and their productive structure. Existing trade policy instruments also, will have direct and indirect effects on the market value of goods produced locally, or imported onto the markets of the COMESA sub-region.

In order to reflect these interactions in various economic sectors, a general equilibrium method was used, for a clearer overall picture of possible consequences of EPAs, in the COMESA countries, as well as any modification in trade policies, would entail for their respective economic structure under this type of partnership agreement.



However, the majority of the African countries are not individually present in the databases, associated with the above-mentioned models, preferring to visit aggregated sets, as the case may be in most of the COMESA countries. By applying the WITS-SMART formula however, it is possible to complete the general equilibrium analysis, using a database that does not interfere with national specificities.

The study under review, has four parts, which are as follows: The first, highlights major challenges in negotiating EPAs, are presented on the COMESA sub-region (1), followed by a systematic approach to the evaluation of various economic repercussions, these agreements might have in the COMESA sub region (2), then, moving onto simulations of the general equilibrium approach (3) and, the results of partial equilibrium scenarios (4) .

# I. Challenges in negotiating Economic Partnership Agreements (EPAs)

## 1.1 Issues at stake in making the transition from the Lome Convention

Considering that multilateral cooperation, between Europe and Sub-Saharan Africa (SSA), date back to the pre-Independence colonial era, when and that Europe was desirous of maintaining and strengthening its relations with its former colonies, once they had acceded to full Autonomy, by involving themselves in its economic development processes, a major step forward was taken in the early Seventies, when Europe decided to create an innovative framework of multilateral cooperation agreements, known as the Lome Convention. At the time, this was a great achievement in international relations, particularly because of the support it was offering African countries, in diversifying their economies, and stabilizing World Market prices of raw materials<sup>1</sup>

The Lome Convention comprises a number of principles, relating to North-South multilateral cooperation, as follows:

- The right of each State to determine its political, social, cultural and economic choices;
- The need for ACP countries to define autonomous and self-centred development policies;
- Agricultural development to ensure the food independence of ACP countries;
- Industrialization, which should play a key role in development policies;
- The need for diversifying the production of these countries and for abandoning their excessive specialization;
- The development of cooperation and trade between them.

Despite the diversity of tools advocated, the Lome Convention was not effective in trade creation among ACP countries, or in stabilizing the prices of raw-materials, on the World Market. Furthermore, this Convention was ineffective in preventing gradual deterioration of trade links between the ACP-countries, and the permanence of agro-based specialized export economic structures. In spite of all indications to the contrary, clearly stipulated provisions in the Lome Convention, the ACP countries did not call into question, the economic soundness, of specialized agricultural export production, opting to continue operating, as Europe's providers of basic commodities. Moreover, these ACP countries, did not put into place, strong and competitive economic dynamics, for sustained development, and mutually beneficial trade links with Europe.

Against this background of ineffectiveness of that Instrument, signed in Lome, in the early Seventies, Europe began negotiating, a new framework for multilateral cooperation with the ACP countries, and in 1997, drafted a "green paper" entitled "The relationships between the EU and ACP countries, at the dawn

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<sup>1</sup> H. Ben Hammouda, Africa: For a new development contract, Edition Harmatan, 2000.

of the 21st century”<sup>2</sup>. This formal statement, took two major issues into account: First, the phenomenon of globalization, and second, the need for all future agreements, to be integrated into this new reality.. In fact, the European Commission (EC), had already underscored this last point by declaring, that “the extension of World market-economy, and the end of an era of exclusive rights, and privileged relations, had modified the global conditions of demand and supply worldwide”. Trade negotiations, known as the “Uruguay Round”, has paved the way for a new global compact, based on stronger bilateral and multilateral relations, accelerating the processes of globalization, in this World of growing economic interdependence. Economic concerns are more glaring than ever, and have spread beyond social, political and financial boundaries, to the realm of Mankind and his environment.<sup>3</sup>

Europe’s intension was manifested, in its designs to integrate this new agreement, into the framework of an increasingly Globalized World, at the onset of the 21<sup>st</sup> Century. Thus, preliminary negotiations, spearheaded by the EU, had led to the creation of a new cooperation framework agreement between themselves and the ACP countries, duly signed, in the Republic of Benin, in June 2000, and known as the “Cotonou Agreement”.

The main objectives of the Cotonou Agreement were to restore macro-economic balances, develop the private sector, improve social services, support regional integration, promote gender equality, protect the environment and progressively eliminate all trade barriers between ACP Members and the EU, on a reciprocal basis. This Agreement, which entered into force on 1<sup>st</sup>. April 2003, has a lifespan of twenty years, with scheduled revisions every five years. Its mission relies on five interdependent pillars: Policy dialogue, trade promotion and financial cooperation,, the involvement of civil society, the fight against poverty and the compliance with the World Trade Organization (WTO) With regards to this last pillar, Signatories of the Cotonou Agreement, agreed to abide by the rules and regulations of WTO. There are however, only some guidelines, on the procedures to be followed, in so-doing, even though there provisions for the continuation of the non-reciprocal treatment, outlined in the Lome Convention, up-until early 2008, latest. Under the terms of this Agreement, after this deadline, all trade arrangements, shall have to be compatible with the rules and regulations of WTO, and all of its Members, who had signed the Cotonou Agreement, further endorsed its stipulations in September 2003, during the ministerial conference, referred-to as “The Doha Round”, in September 2003.

One of the guiding principles of the WTO rules and regulations - the Most Favoured Nation (MFN) treatment – calls for trade concessions, granted by one of its Member to another, to be extended automatically to all other Members of WTO. There are two exceptions to this clause however: The first, being the dispensation from this clause, on the basis of development priorities, of concern to one of its

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2 European Commission “ green paper” : The relations between the European Union and ACP countries at the dawn of the 21st century, Challenges and options for a new partnership- Brussels, 1997

3 European Commission, op cit, p.I.

Members, and the second, which exonerates WTO Members, from the MFN clause, whenever there is a Free Trade Zone (FTZ), between several of them.

As noted in the introduction of this study, the first exception calls for compliance with the principle of non-discrimination only between Members, at the same level of development. Therefore, with regards to a Free Trade Zone (FTZ) between WTO Members, as indicated in Article XXIV of the General Agreement on Trade and Tariffs (GATT), would create the conditions under which, Members of the COMESA sub-region, would be exonerated from the Most Favoured Nation (MFN) clause, whenever such exemption is based-on existing free trade agreements benefit, not only the contracting Parties, but enhances the overall economic situation in that region, through trade creation, which results in an increase in general welfare. Economic Partnership Agreements (EPAs), between the COMESA countries and the European Union (EU), would fall under this category, should they be based- on reciprocity, preferential treatment on tariffs, applied symmetrically.

Nevertheless, ACP countries might want to look into possibilities, of maintaining some degree of asymmetry in their future EPAs with the EU, as the provisions of Article XXIV of GATT, are somewhat ambiguous on the point of “symmetrical reciprocity”. In paragraph 8(b) of said Article, it is stated, that customs duties would be phased-out, by the time of full reciprocity (2008), and that all other restrictive regulations on trade activities, be dismantled for “most of the trade” between members. The exact meaning of “most of the trade”, has been debated at length, and it is generally believed to refer to a minimum of 90 % of domestic trade, which must be liberalized by the end of a free-trade arrangement respectively. This interpretation however, has not been confirmed on any legal basis, so far. The free-trade agreement between South Africa and the European Union (EU) for example, translated Article XXIV, in a non-reciprocal terms, and by the expiration of their free-trade agreement, the EU had consented to liberalize 95% of its trade with South Africa, whilst South Africa had consented to liberalize 86% “only”, of its imports from Europe.

Furthermore, with reference to “a reasonable period of time for implementation”, the provisions of Article XXIV are not specific, with regards to this time-frame. Once again, there is no legal basis for formal interpretation of what should be considered as “reasonable period of time”, although it is believed to be a 10-year duration. In the example of the free trade agreement above-mentioned, South Africa had proposed a 12-year implementation plan as acceptable, which is longer than that of the EU. Therefore, this ambiguity could serve as a tool, in introducing some degree of asymmetry in EPA’ s.

The time-frames of implementation are crucial to the COMESA countries, and whenever negotiating these EPAs, one should bear in mind that this duration limits the time-frame allotted the COMESA countries for internal structural adjustments, with regards to market liberalization.. However, as we shall see later in the results of various simulations of case scenarios, African countries will not be able to take advantage of EPAs unless:

- Full reciprocity is preceded by intensified regional integration;
- Time limits for implementation are sufficiently long, to carry-out required internal adjustments and absorb the costs of same; as intrinsic to trade liberalization.

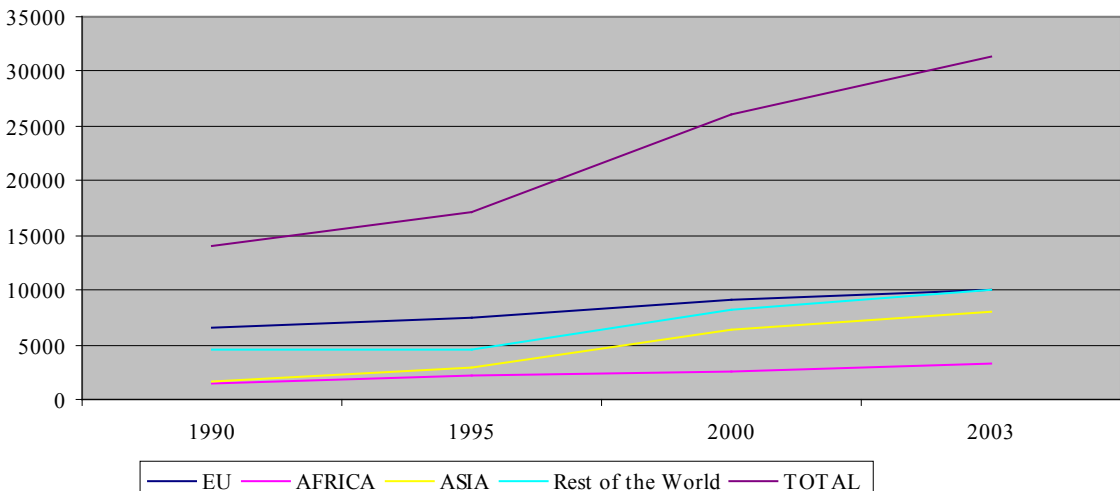
Finally, an essential tool in multilateral trade for African countries (and also for other developing countries), is the “Doha Declaration”, which prescribes in its paragraph-29, that efforts should be made to clarify the provisions of GATT’s Article XXIV, as well as the interpretation of “special and differentiated treatment in all regional trade agreements”. These points of WTO negotiations, could become crucial in determining the framework of future EPAs, as well as the degree of flexibility in their terms, so as to benefit African countries. The greater the margin of flexibility, the more latitude will be afforded them, in rekindling the innovative spirit, born in Lome.

## 1.2 What prospects await the COMESA sub-region?

The COMESA sub-region is, like elsewhere in Africa, characterized by significant marginalization in global markets, by low intra-regional trade levels and balances, and by deficient domestic economic structures.<sup>4</sup> Can EPAs make a difference and change these trends?

Since 1970, COMESA’s total share of World exports, have fallen from 1.3% to 0.4%.

Figure 1: Structure of exports (USD Millions)



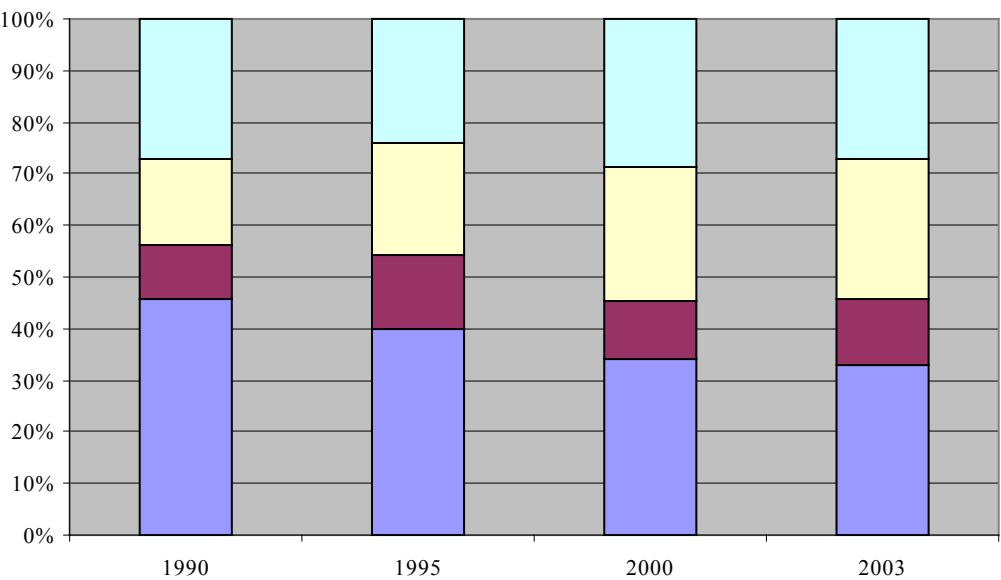
Source: Handbook Statistics of the UNCTAD (2004).

<sup>4</sup> See Hakim Ben Hammouda, Pourquoi l’Afrique s’est-elle marginalisée dans le commerce international?, Center Africain pour les politiques commerciales, Working Paper, number 20. (Why has Africa been marginalized in international Trade?, African Trade Policies Centre).

In spite of efforts made to intensify regional integration, of the COMESA countries, most of its trade activities, still take place with non-African countries. Trade liberalization in that sub-region, has not changed this trend, and existing trade dynamics, derive mostly from exchanges, with the EU and Asian countries, and with other developed Nations. Even between Members and non-members of COMESA, there no signs of significant changes in trade relations. Since the early Nineties, trade has grown disproportionally, between the two groups, in Sub-Saharan Africa.

At this time , Asian countries seem to be the privileged partners of the COMESA countries, and could soon become their principal trading partners, to the detriment of the European Union (EU) Members. Statistical data indicate that, between 1990 and 2003, the market share of Asia,<sup>5</sup> in the sub-region, moved from 17% to 27%, while that of Europe dropped from 46% to33%.

Figure 2: Trade partners of the COMESA countries

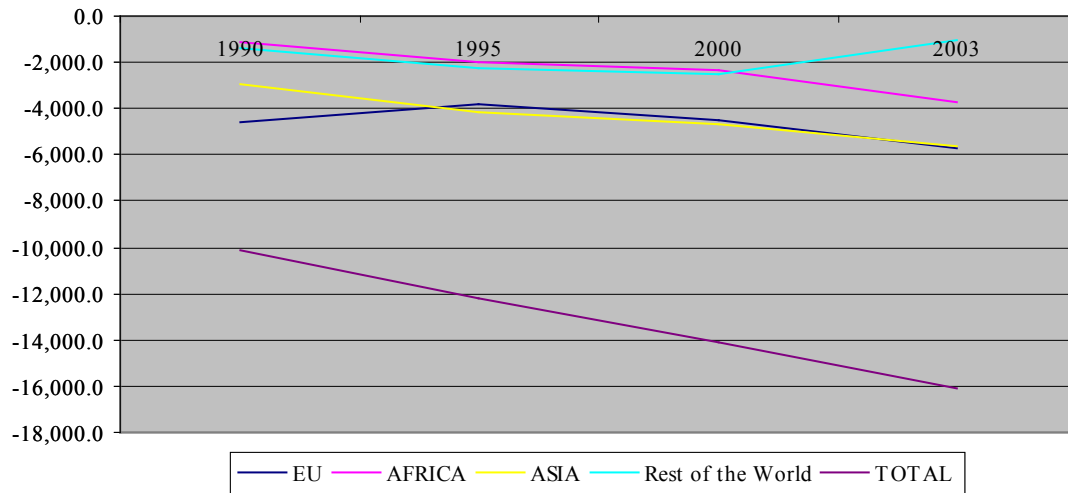


Source: Statistics Handbook of UNCTAD.

COMESA has a trade balance shortfall, as compared to both, the developed countries and the rest of African States. The growth of imports, originating in Asian countries, has been particularly fast, at an average annual rate of 8.6% between 1990 and 2003, which has led to the downturn of bilateral trade balances between COMESA and Asia. This bilateral trade deficit, amounted to USD 5,632 million as at the end of 2003, which is almost equal to the trade deficit between COMESA and the EU (USD 5,703 million), and accounted for 35% of the total trade deficit of the COMESA countries.

5 Measured through the total exports and imports of this region with COMESA over the total exports and imports of COMESA.

Figure 3: Trade balances (USD millions)



Source: Statistics Handbook of UNCTAD, 2004.

The results of the ratio-coverage analysis, confirm this assumption, in terms of the imports to exports coverage, by region. Evidently, the trade balance is in favour of the Asian exports, to the COMESA countries, than it is with those from EU countries, or from other developed nations. It should be emphasized that trade with the rest of Africa, is also unbalanced. Unlike trade with Asia or the EU, which tends to rebalance itself since 1990, intra-African trade is becoming increasingly unfavourable to COMESA.

Table 1: Rate of bilateral coverage (total exports over total imports by region)

Year	European Union	Africa	Asia	Rest of the world	TOTAL
1990	58%	57%	36%	76%	58%
1995	66%	53%	42%	67%	59%
2000	67%	52%	57%	76%	65%
2003	64%	47%	58%	90%	66%

Source: UNCTAD, Statistical Handbook, 2004.

## II. General approach to trade analysis

### 2.1 Why use a general equilibrium model?

Trade policy-analysis, involves reviewing possible implications, on the productive structure of various economies, at national, regional and global levels. Trade policy instruments, such as tariffs or quotas, have direct and indirect effects on the relative costs, of goods produced in a given country. Given that the factors of national production, in terms of goods and services, may vary, the demand factors of production, shall also vary. Consequently, in a given economy, it is difficult to assess the effects of any modification in trade policies, might have in a given sector. Because various sectoral interactions and the relative strength in an economy, there will always be some effect from any change, affecting the production level of a sector. This, by extension, affects the relative structure of various production factors, in various sectors.

This modification in the volume of sectoral production, may at the national and international level of trade, be extended to the overall economy. Changes in the relative cost-factors of production, may be induced by a modification of trade policy instruments of that country, and transmitted to the industrial sector, as well as to markets, with which this country has trade links. Consequently, for trade policy analysis to be relevant, and for the results to be sound, it is advisable to take into account those sectoral interactions, which could result from a trade policy modification, in one or several countries. The general equilibrium approach, offers an analytical framework, that makes it possible to take into account intra-sectoral changes in production, and by extension, variations demand for various factors of production.

This method has limits however, particularly with regards to taking into account, the dynamic effects induced by a change in the trade policy. The Global Trade Analysis Project (GTAP) model, is the most commonly used method for such analysis. The GTAP method, is a multi-regional computable general equilibrium (CGE) model, designed for comparative statistical analysis of trade policy issues (Adams et al. - 1997). Besides, it is now possible to evaluate trade dynamics, using different versions of this model. It has the advantage of overcoming the effects of policy changes, at national, bilateral or multilateral levels, on production levels, input factors, volumes of trade and other induced influences on welfare. Given that the GTAP model is centered on the reallocation of resources between the sectors of the economy, it is an appropriate instrument for identifying the sectors and countries which gain or which lose with the change of policy induced by the trade section of the EPA.

### 2.2 Why use a partial equilibrium model?

The general equilibrium model, is an important methodological tool, in evaluating the impact of trade-related issues, because it can be applied, not only to calculate the direct effects of modifications, derived from various simulations, but also the indirect /secondary effects, which include industrial interactions



and macro-economic adjustments. However, the majority of African countries are not individually present in the databases of such global models due to the lack of disaggregated data in these countries. Hence, the use of a partial equilibrium model, which is an alternative solution for those countries, that are not individually present in the general equilibrium base.

The main distinction, that should be noted from the onset, is that in a partial equilibrium model, the intersectoral implications (secondary effects) in any policy change, will not taken into account in this method. The same goes for interregional implications, that might occur within the regional Community. With partial equilibrium models, it is possible to analyze the effects of trade policies in trade creation and diversion, on welfare and even on revenues.

In spite of its imperfections, the partial equilibrium method, is an adequate tool to address the principle of special and differentiated treatment (S&D) in a detailed analysis of trade data<sup>6</sup>. Thus, our simulations derive from this partial equilibrium method, and by applying the WITS-SMART<sup>7</sup> formula, we have obtained more detailed information, and applied the general equilibrium model, such as the GTAP, for the assessment of trade creation and diversion, on a country-by -country basis.

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<sup>6</sup> On this point, see Milner et al. (2002).

<sup>7</sup> See a description of the model used in the annex

### III. General equilibrium analysis

In this section, we present the results of general equilibrium simulations for the whole of sub-Saharan Africa. Several scenarios are presented. Each one relates to a possible option of EPA negotiations.

#### 3.1 The reference scenario

The Cotonou agreement indicates that EPAs should come into effect on January 1st, 2008. Various international agreements, will have been implemented, prior to this date, with all indications of constituting, important landmarks in the economic landscape. Global events, that are expected to precede the signing of EPAs are: The extension of the EU- membership to twenty-five countries; the dismantling of trade quotas for textiles and clothing; the implementation of the “Uruguay Round” Agreement on Domestic Support and Export Subsidies; the complete accession of China to WTO and the conclusion of the Doha Round trade negotiations.

Presently, one cannot anticipate the outcome of the Doha Round of trade negotiations, nor their impact on the EPAs. Consequently, we have not integrated them into the reference scenario. On the other hand, we will take into account four other important developments, which are as follows:

***The Extension of the EU-membership:*** Harmonized and integrated trade policies will be put in place by the EU, before the EPAs are expected to into force. In taking this fact into account, we have removed all tariffs and export subsidies, as well as non-tariff barriers between EU-15 and the ten new members. We have also eliminated all trade barriers between the ten new members of the EU. Finally, all the sectors of the new members, were given the same level of protectionism, with regards to the rest of the world (ROM), as that of EU-15 at the time of their accession. This means that some of the tariffs levied by the new EU-members, would have increased, or would have been reduced, to the level of those previously charged by the old EU-members.

***Cancellation of quotas, under the terms of the “Multifibre” Agreement, and establishment of a new Textile-Clothing Agreement:*** It is expected that the phasing-out of the “Multifibre” Agreement on textiles and clothing, will have significant implications for developing countries. It was therefore important for this to be taken into account. As in other studies on the subject-matter, this cancellation of textiles and clothing quotas, has been taken into account, by eliminating the equivalent export-duty, particularly in the developed countries.

***Implementation of the “Uruguay Round” Terms of Trade:*** By tradition, the EU is a large consumer of export subsidies, and grants for domestic production, particularly in the area of agriculture. While the “Doha Round” is expected to pave the way for an agreement, that will have some effects on these two pillars, used in the reference scenario, a 20 % reduction on domestic support in the developed countries,

has been applied, and 13% in the developing countries. In the case of export subsidies for agriculture, the reductions are respectively 36% and 24% for developed and developing countries.

***Accession of China to the WTO:*** The complete accession of China to WTO should have major consequences both on developed countries and on developing countries. Upon acceding to the EU as full members, these new members will have to impose, the WTO Most Favoured Nation's (MFN) tariffs, on Chinese products. This was taken into account, in the reference scenario by reducing tariffs on Chinese products, to the level of MFN tariffs, as applied by the members of WTO<sup>8</sup>.

### **3.2 Possible Scenarios for the Economic Partnership Agreements between the European Union and Sub-Saharan Africa**

In this study, we attempted to assess the impacts of EPAs in the following three scenarios.

***Scenario 1 – Reciprocity on preferential tariffs between Sub-Saharan Africa and the European Union:*** Reciprocity is one of the guiding principles in EPAs. This scenario assesses the implications of the EPAs in the case of Sub-Saharan African countries, which would apply the same preferential treatment to the European Union, as that from which they currently benefit from.

The question of full reciprocity in the framework of EPAs, readily comes to mind. The European Union generally applies low tariffs<sup>9</sup> on imports from Sub-Saharan Africa. Consequently, all the tariffs reported for that Zone, are higher than those applied in the European Union for African products, and gradually to that level to reflect full reciprocity. The general idea is that, EPAs will be concluded primarily to establish an economic association, which would be compatible with the WTO framework, and not necessarily aimed-at the future creation of a free-trade zone, which implies full trade liberalization<sup>10</sup>.

Conversely, in sectors such as the food- processing industry, and agricultural production of cereals and sugar, livestock farming and fish products, expected tariffs applied in Sub-Saharan Africa, would be increased to the level of those in the European Union. However, we did not take that approach not

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8 On the basis of tariffs, currently applied on goods originating in China, the following sectors are expected to be of great relevance, to the accession of China to WTO:

- Animal products, clothing, low and average technology industrial products, in the case of sub-Saharan Africa;
- Cereals and low-technology industrial products, in the case of the rest of the world;
- Cereals, other natural resources and average technology industrial products, in the case of North America;
- Other natural resources, low and average technology industrial products, in the case of Japan; low and average technology industrial products, in the case of the expanded European Union (EU-25).

9 Because of aggregations of various products and regions, the majority of customs' tariffs, which the European Union levies on imports, originating in Sub-Saharan Africa, is higher than zero. Preferential tariffs, do not necessarily imply the duty-free access. The Lome Convention calls for 95% duty-free access to products under the headings, of ACP countries. However, non-tariff barriers have accumulated over time, and their equivalent values have been taken into account, whenever compiling GTAP databases.

10 A free-trade zone between the European Union and sub-Saharan Africa is presented as an alternative scenario if the negotiations would thereafter aim at the establishment of an FTZ rather than what is currently perceived as the objective.

in this scenario, for two reasons: First, in the case of the food- processing industry, there already exist relevant Protocols on beef and sugar, which are very specific, and had to be taken into account, when compiling the EU aggregations. The second reason, is that the EU tariffs are higher than those of Sub-Saharan Africa' because of various peaks in production, and tariff escalation, which must be negotiated as special particular elements of EPAs. Protocols, peak production and tariff escalation, will most likely, be discussed during the negotiations of EPAs, but not necessarily as elements of full reciprocity. By basing ourselves on the graphs and tables below, we believe that reciprocity should play an important role, in industrial sectors, such as textiles and clothing, and in most of the of primary production sectors.

**Scenario 2 –Intensifying regional integration without reciprocity:** The Cotonou Agreement calls for the intensification of intra-regional cooperation and integration among ACP-countries. In this scenario, the principle of intensified regional integration in Africa, is taken into account. The reasoning that underlies this second scenario is that, because most African countries were unable to take advantage of the preferential tariffs, within the framework of Lome, was mainly due to constraints related to their market supply capacity. Evidently, these countries will need to develop this capacity. This scenario presents an option, in which the Sub-Saharan African countries accept to liberalize trade between them, without immediate reciprocity, but by replicating the tariff preferential treatment, they are presently granted by the European Union, which would enable them to compete with European producers and exporters.

**Scenario 3 – Establishment of a Free Trade Zone between Sub-Saharan Africa and the European Union:** Scenarios 1 and 2 did not take into consideration, that EPAs would lead to the establishment of a Free Trade Zone (FTZ). Thus, in order for Sub-Saharan African (SSA) countries, to be compatible with the WTO rules and regulations, these countries would have to undertake some economic reforms and structural adjustments, to apply the preferential treatment, they are currently receiving from the European Union (EU). In these scenarios, the EU does not have to make any adjustments, in view of existing Protocols on certain products, and non-tariff barriers. The objective of the second scenario was to provide a space in the analysis, for production capacity development in the countries of Sub-Saharan Africa, before reciprocity. In the third scenario, we explore the option of establishing a FTZ between Sub-Saharan Africa and the European Union. In this scenario, therefore, all bilateral trade barriers, between the SSA and EU countries, are eliminated.

### 3.3 Results from scenario-simulations

#### Macroeconomic variable in, trade and welfare: The compound- effects

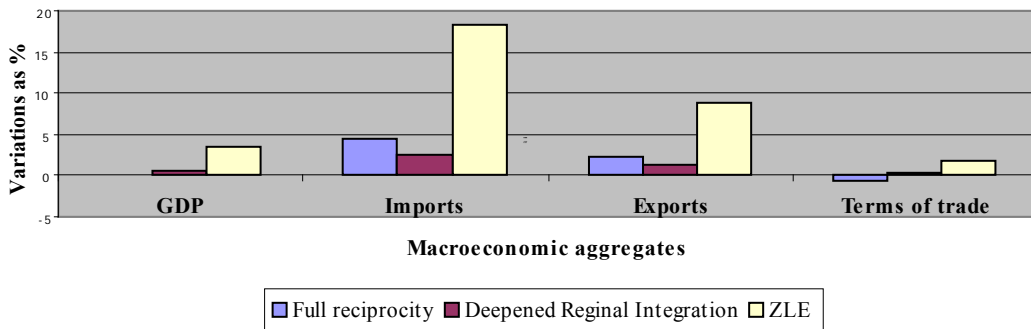
Detailed results of these three scenarios, are presented in Table-10, in annex to this study.

S1- The results indicate, that within the framework of full reciprocity, the effects on the volume of the gross domestic product (GDP), are negative for all regions other than the European Union (Figure-4). Revenues in sub-Saharan Africa, decline marginally, and the consequences of reciprocity there, more

significant, in terms of trade and general welfare (calculated by the equivalent percentage of the variation). Imports into the Sub-Saharan African countries, increase more steadily, than their exports and, together with the progressive deterioration in relations, trade balances decrease by USD 1,868 million. Besides the marginal effects on the GDP, and the overall shortfall in trade balance, resulted in gradual deterioration of general welfare, whenever full reciprocity is implemented in the SSA-region.

S2- Trade barriers among African countries, obviously limit the economic potential, and the possibility of improving general welfare. By overlooking tariff and non-tariff obstacles in scenario-2, revenue potential increases, and there is noticeable improvement in general welfare. As depicted in Figures-4 and 5, if African countries, agree to liberalize their markets, within the framework of EPAs, but without the immediate implementation of reciprocity, resulting benefits in terms of GDP and welfare, will be derived. Even though the trade balance continues to fall, other economic indicators remain positive for the region. Thus, the terms of trade, the trends which are negative under full reciprocity, become positive, in a scenario intensified regional integration.

Figure 4: Effects of various scenarios on revenue-generating trade

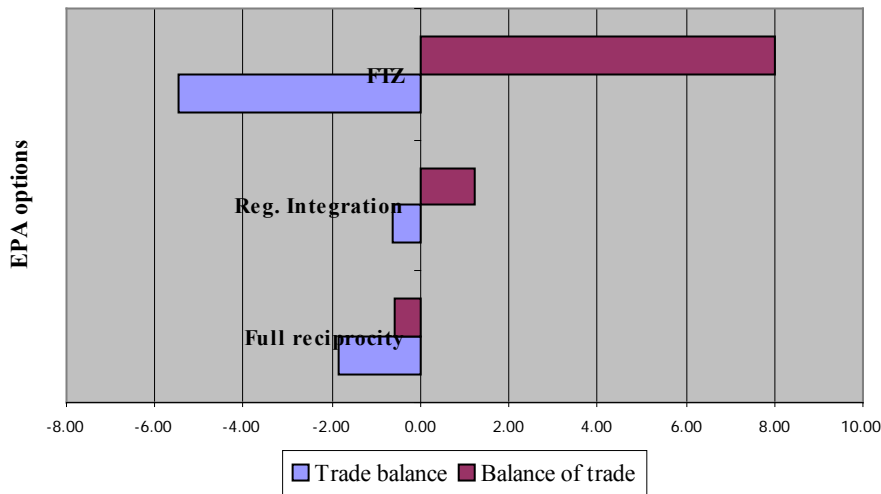


Source: ECA, GTAP V.5.4 simulations.

S3- The sub-Saharan region, could derive most of its benefits, through the establishment a FTZ, with the European Union, under the terms of EPAs.. The GDP of Sub-Saharan Africa, could increase by a margin of 3.4 %, under a FTZ association with the EU. The terms of trade would also be more favourable.

If general welfare and trade development, were to become more favourable, in an integrated sub-Saharan setting, which implies immediate reciprocity within the framework of an EPA, it is evidently the establishment of a FTZ, that provides the greatest benefits to the region (over USD 8 billions). However, these gains, could only be realized, at the high cost of macroeconomic adjustments and particularly, in terms of the trade balance.

Figure 5: Effects on the trade balances and general welfare (USD billions)



Source: Simulations ECA, GTAP V.5.4.

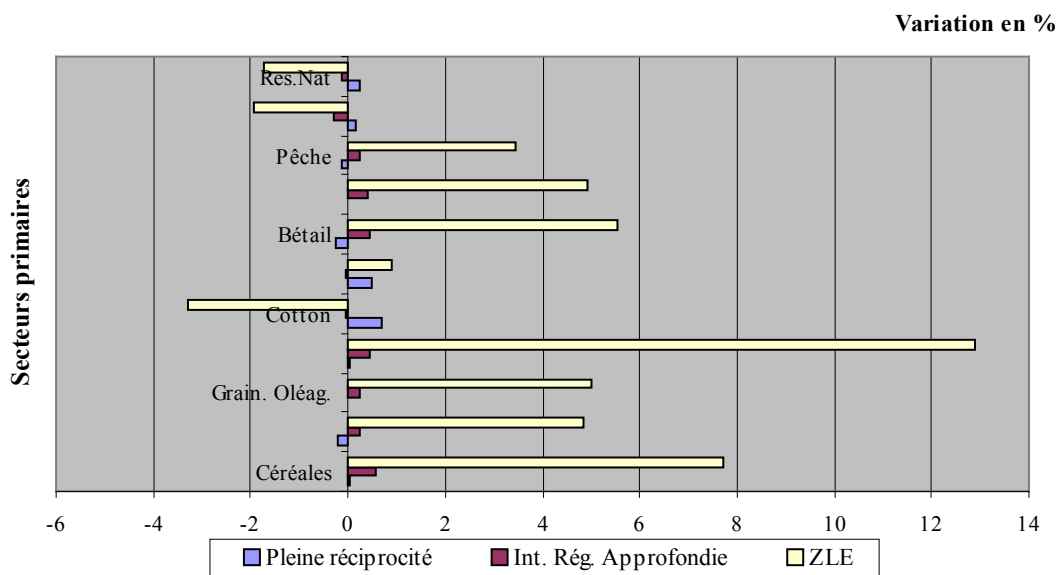
### Industrial structure in Sub-Saharan Africa: Options of EPAs

The majority of African countries have put in place, structures aimed-at diversifying their economies. One of the reasons given, for the marginalisation of Africa in global trade, is the limitation of its export diversification process. Consequently, the impact of EPAs on the industrial structure of these counties, is significant. The Table in Annex-2, give some indications on the magnitude of those impacts, mostly derived from the implementation of reciprocal treatment in the industrial sectors of Sub-Saharan Africa. Advanced regional integration would have the potential of providing a space, for the diversification in export production. The difference with scenario 1, in which Sub-Saharan African countries would specialise in the production of primary products, lies in the intensification of regional integration, enabling African countries, to produce value-added non-primary products.

The SSA region has the capacity of developing its export production capacity, in several industrial sectors. But it is in textiles and clothing, that the development of regional exchanges, could prove to be an important lever for economic diversification in the Region. The expected growth rate in these sectors could be between 1.2% and 2.7%, as compared to the market contractions, that they would experience under the first scenario. Another positive result, could be derived from several other primary production sectors( vegetables, oleaginous grains, cattle and animal products), which had total reciprocal negative growth, in other scenarios..

Figures 6 and 7, indicate that even within the primary sectors, scenario-1 is unfavourable to Sub-Saharan countries, while in scenarios-2 and -3, these sectors have a growth trend, with the exception of natural resources' mining activities.

Figure 6 : Production structure in Sub-Saharan African countries, with different EPA options

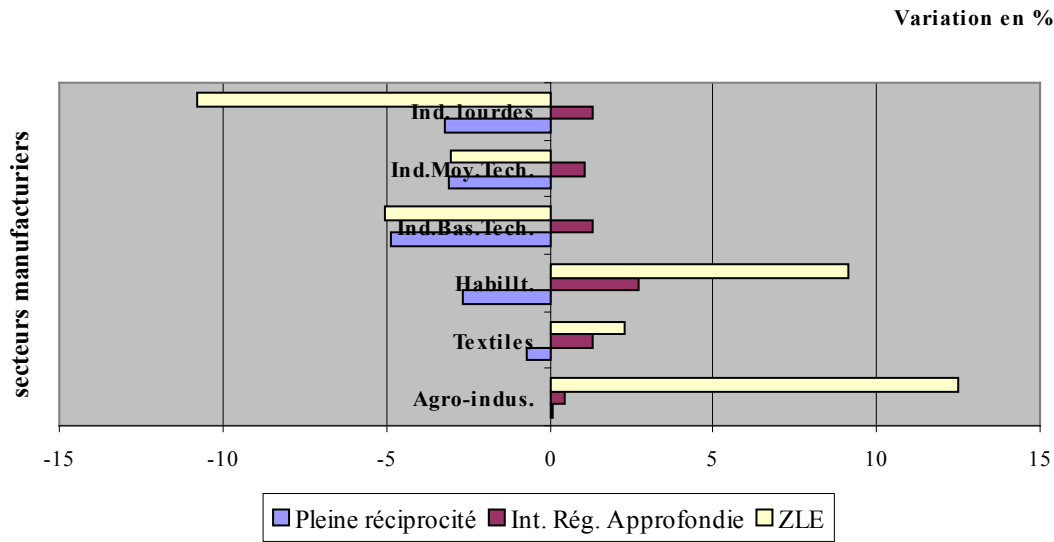


Source: ECA Simulations, GTAP V.5.4.

Clearly, the majority of industries in Sub-Saharan Africa would experience a reduction in their production, under full reciprocity. This contraction would be more pronounced, in sectors that are generally considered, as the primary producers in the industrialisation process, namely low and intermediate technologies industrial sectors, the steel industry, and in textiles and clothing. With the exception of the cotton industry, energy production, mining of natural resources, fish catches and agro-industry, which could have a marginal expansion, the industrial sectors in the Sub-Saharan countries, would contract significantly.

Hence, the risk of de-industrialisation, is a major factor to be considered during EPA negotiations, especially if the principle of reciprocity is applied. The only industrial sector likely to survive in such an environment, is the agro-industry, because there would be no changes in tariffs under the EPA arrangement. The impacts on the industrial structure, are amplified, in the event of a Free Trade Zone being established. De-industrialisation is clearly a risk even for low technology industries. However, within the context of a FTZ, agro-industry, textiles and clothing would have discernible growth trends.

Figure 7: The risk of de-industrialisation under the terms of EPAs



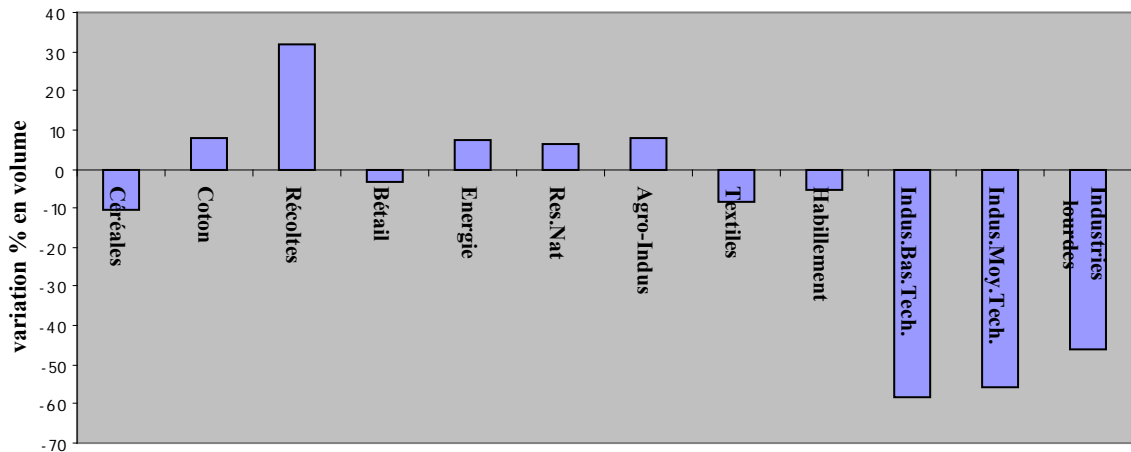
Source: Simulations ECA, GTAP V.5.4.

**Demand and returns on inputs**

The three scenarios, have various levels of cost-adjustments, in terms of inputs. Figure-8 indicates that, in scenario-1, the demand for unskilled workers, is in sharp contrast in sectors, where value-added production takes place, such as cotton, fish catches, energy production, mining of natural resources and agro-industry. These contractions could prove very costly, since remuneration for workmanship, tends to be higher in the contracting sectors, than in the primary sectors.



Figure 8 : Sectoral variations in the demand for unskilled labour



Source: ECA Simulations, GTAP V.5.4

Table 2 : Income-generating factors in Sub-Saharan Africa (variations in %)

	Intensified integration	FTZs
Land	1.3223	25.0395
Skilled labour	-0.3219	-1.9728
Unskilled labour	0.7898	5.1056
Capital	0.8745	6.0111
Natural resources	-0.9176	-2.509

Source: ECA Simulations, GTAP V.5.4.

In addition to facilitating diversification in the industrial structure, intra-African integration entails the increase of returns, on some essential inputs. Actual returns on land and capitalization, as well as skilled labour entitlements, are positive.

The results are similar, but more evident, in the case of a FTZ, between Sub-Saharan Africa and the EU. However, because of the availability of unskilled labourer in that region, remuneration costs are relatively low. In contrast to the cost of other inputs, with fixed costs, unskilled workers are presumed to be readily available, in to be in the sub-Saharan region. The decrease in terms of actual remuneration, is an indication of their availability, and therefore the basic rates would not rise as sharply, as that for other inputs.

Returns on inputs, as well as the overall economic performance in the Region, will have implications on general welfare. Consequently, the sub-Saharan countries would be disadvantaged in a scenario, which calls for full reciprocity, (scenario-1). In the two other scenarios (intensified integration and the establishment of a FTZ, respectively), SSA-countries could have some advantages. The following section analysis, those factors which are indicators of changes in general welfare, according to each of these three scenarios, better illustrating possible implications of EPAs in Sub-Saharan Africa.

### **Sources of the welfare variations: Analysis**

On the aggregate, full reciprocity entails welfare losses for all regions, with the exception of the EU. Sub-Saharan Africa would lose 564 million dollars. Table 3 shows the determinants of these welfare losses. The deterioration of terms of trade that Sub-Saharan Africa is faced with explains more than a half of the welfare losses. In other terms, the incapacity of exports to pay for the increase in imports induced by reciprocity will have the consequence of a<sup>11</sup>deterioration in the position of African countries within the context of an EPA with full reciprocity. In addition, the region will be faced with a welfare loss emanating from the deterioration in the investments-savings equilibrium. The only positive effect on welfare (45.7 million USD) results from a change in grants. A free-trade zone between the European Union and sub-Saharan Africa is presented as an alternative scenario if the negotiations would thereafter aim at the establishment of an FTZ rather than what is currently perceived as the objective.. This is explained by the net increase in the demand for unskilled labour.

The hindrances to intra-regional trade are imposing a substantial cost on the region. Their elimination in an EPA whose objectives will be to create competitiveness through major regional integration will bring to the region a major gain in welfare, which would rise to 1204 million USD. This gain would mainly emanate from the reallocation of grants, better exchange rates in the region and removal of the distortions that today have the consequence of an inefficient allocation of grants.

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<sup>11</sup> A free-trade zone between the European Union and sub-Saharan Africa is presented as an alternative scenario if the negotiations would thereafter aim at the establishment of an FTZ rather than what is currently perceived as the objective.

Table 3: Sources of the variations in general welfare by region (million US\$)

		Effects of	Chg. Grants	Exchange rates	Inv-Svings balance	Total
	Reciprocity	347.4	0	1412.8	-11.5	1748.8
EU15	Integration	-34	0	-116.9	0.4	-150.5
	FTZ	628.9	0	503.9	-16.4	1116.3
	Reciprocity	5.4	0	-22.9	14.9	-2.5
CEEC	Integration	-1.4	0	-2.1	-1.8	-5.3
	FTZ	8.8	0	-124.9	-15.7	-131.8
	Reciprocity	-12	0	-91.3	20.2	-83.2
North America	Integration	-0.6	0	-46.4	-11.2	-58.2
	FTZ	-24.9	0	-360.5	-53.5	-438.9
	Reciprocity	-19.2	0	-125.8	99.2	-45.8
Japan	Integration	-6.3	0	-41	2.1	-45.2
	FTZ	-55.5	0	-364.7	107.1	-313.1
	Reciprocity	-71.6	45.7	-323	-215.1	-563.9
Sub-Saharan Africa	Integration	168.6	844.7	174.4	16.7	1204.3
	FTZ	878.2	6112	1104.3	-65.8	8028.8
	Reciprocity	-16.1	0	-77.3	36.1	-57.3
China	Integration	-2	0	-14.4	-0.1	-16.5
	FTZ	-28.5	0	-149.2	33.5	-144.2
	Reciprocity	-201.7	0	-775	55.2	-921.5
RDM	Integration	-12.8	0	46.1	-6.2	27.1
	FTZ	-274.6	0	-620.1	11.1	-883.6

Source: ECA Simulations, GTAP V.5.4.

The analysis of the general equilibrium has permitted us to estimate the global impact of EPAs on the African continent under different scenarios. To complete this analysis, it is apt to now analyse the potential impact of these agreements on the COMESA countries. To do this, we shall utilise a partial equilibrium approach.

## IV. Partial equilibrium analysis

### 4.1 The trade liberalisation scenario

The objective of this simulation of partial equilibrium is to evaluate, for each COMESA country, the effect of total liberalisation of its trade. The estimated amounts give us an idea of the magnitude of the direct effects, and that is without taking into account the sectoral interactions (feedback effects) of a reduction to zero of the duties applied by the COMESA countries on imports emanating from the EU.

### 4.2 Trade creation and export diversion to other export markets

The effects of reciprocal preferential agreements between EU and COMESA countries, as illustrated in a partial equilibrium mode, are presented in Table- 5, the results of which indicate, as predicted, that in all the countries the creation of trade in favour of the EU should take place. As a whole, and also with all things being equal, the principle of reciprocity of EPAs should translate into an increase in trade. In no country is the diversion of trade of a higher scale than the creation of trade, which signifies that the EPAs will have positive commercial effects in each country. The creation of trade shown in table 5 is in favour of increased exports from the EU to the COMESA countries. The creation of trade, taken in its classic acceptance, implies the supplanting of internal production within the COMESA countries.

Moreover, the trade diversion represents the level of trade that is diverted from the rest of the world, particularly the COMESA countries, to the benefit of European producers. With equitable conditions, the COMESA countries would produce more effectively this part of the diverted trade, but because of the tariff reductions emanating from Europe, the most efficient producers of the EU are favoured in comparison to the most efficient producers from the rest of the world.

It is possible to interpret the results of Table-5, by taking the case of Burundi. If this country were to dismantle the tariff that it imposes on imports from 25 EU countries, that would imply a trade creation in favour of these countries worth 12.4 million dollars. This creation of trade would be to the profit of Burundian consumers, in the sense that more efficient EU producers would replace inefficient Burundian producers. This is considered as the harbinger of a raise in well-being since it improves the surplus of the consumer and generates a net trade surplus of 1.6 million dollars. Of this figure, 17% corresponds to some of the trade that had beforehand concerned COMESA the regional trade community that Burundi belongs to. The dismantling of the trade tariffs in Burundi, well as it might permit the expansion of trade, potentially has two negative effects. To begin with, the diverted trade will result in the lowering of general welfare, elsewhere in the World, in the sense that that it came from more efficient non-European producers initially. In addition, there will be significant losses within the regional economic community.

### **Increase in exports originating in the E U and passing through COMESA**

In total, the 25 EU countries could earn more than 1,152 million dollars through the increase in their exports to COMESA. countries..

Table 4 clearly shows that the main beneficiaries in Europe would be the United Kingdom (21.7% of the additional exports, for a sum of 244.7 million dollars from the supplementary exports), followed by France(19%) Together, these two countries, plus Germany (15,6%), Italy (12,4%) and Belgium (9,4%) could gain more than 72% of the increase in exports to COMESA.

On the contrary, the ten countries that recently joined EU, such as Denmark, Portugal, Austria, Finland, Ireland and Luxemburg would obtain a very small potion from the increase in exports.

When we examine table 5, it emerges that the essential for the creation of trade in COMESA countries in favour of the EU will be found in Kenya, Sudan, Ethiopia and Mauritius. In the case of Kenya and Mauritius, the effects of the tariff falls and the volumes involved explain the impact observed. The major effects in Ethiopia are more due to the initial level of protectionism, which, once dismantled, would create major opportunities for the EU. It therefore appears clear that, without taking into account the effects of the general equilibrium, the EPAs will be favourable for the development of trade, but at the expense of regional integration.

Table 4: Share of each EU country in additional exports to the COMESA sub-region

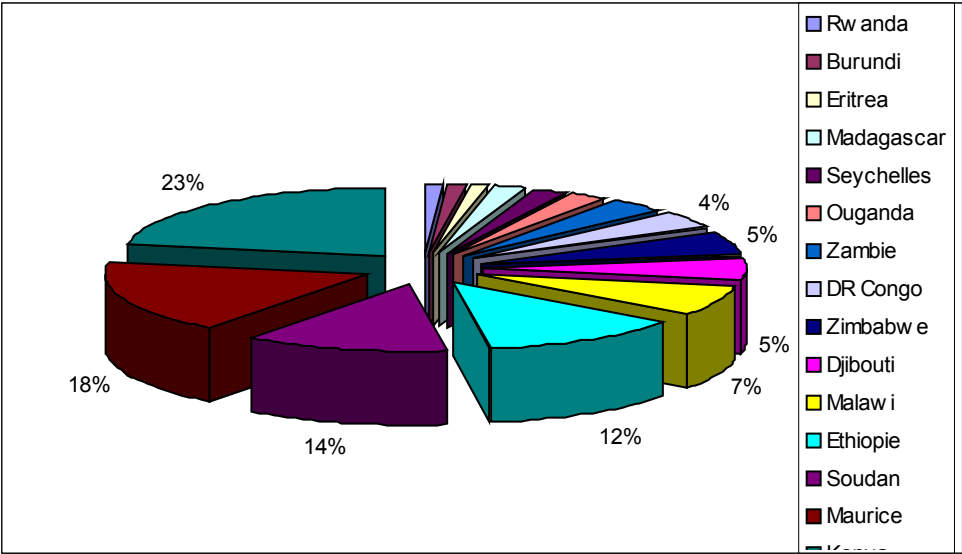
Exporters	Additional X. ('000\$)	% of total X
United Kingdom	244716,764	21,7%
France	214476,072	19,0%
Germany	176094,103	15,6%
Italy	139736,488	12,4%
Netherlands	80483,163	7,1%
Belgium	106076,403	9,4%
Spain	37007,02	3,3%
Sweden	22095,162	2,0%
Total	1128990,69	100,0%

Source: Simulations of ECA, WITS-SMART.

### **Geographical distribution of EU surplus exports to COMESA**

It is equally possible to evaluate the respective share of each COMESA country, in the additional EU exports in the event of trade liberalisation. This simulation shows in which COMESA country, the EU countries had most benefits, accruing from the increase in exports. Figure-9 shows the respective share of COMESA countries, in the increase in exports from EU countries..

Figure 9: Geographical distribution in the COMESA sub-region, of the increase in European exports, after total liberalisation



Source: Simulations of ECA and WITS-SMART.

Kenya with 23% of the increase in trade with the EU occupies a dominant place. Mauritius, Sudan and Ethiopia follow, with an increase of 17,4, 12,6 et 12,5% respectively.

### Trade diversion as detrimental to the COMESA countries

This section, analysis the probable impacts of the trade diversion, created by an EPA in the COMESA countries. It begins with a presentation of losses in intra-regional trade, followed by an attempt to identify the vulnerable products in the COMESA countries, and which must be carefully considered during the EPA negotiations. These products are those that would be the most affected by EU competition, and could be displaced from the COMESA markets altogether, by imports from the EU. A county-by-country description of some vulnerable products, is included in annex to this document.

Tradediversion, means the volume of export products, being diverted to other markets in the World, after trade liberalization comes into effect. EU products become better marketed and can therefore replace locally produced goods on the domestic markets or originating in other COMESA countries, or even from elsewhere in the world.

The table below highlights the probable results of liberalization, and the diversion of trade from the COMESA markets, in the event of EPAs, and market flooding by imports from the EU.

Table 5: Trade diversion from the COMESA markets, in the event of EPAs

Country	Trade Creation	Net trade diversion	Diversion of intra-COMESA trade	Commercial gains for the EU
Burundi	12352687	-1590623	-269314	13943310
DRC	45389815	-6839450	-134193	52229265
Ethiopia	120678556	-31151559	-3285650	151830115
Eritrea	13137093	-1381481	-26814	14518574
Djibouti	56456321	-9564476	-215526	66020797
Kenya	211271997	-60498415	-2426328	271770412
Madagascar	16555404	-4086557	-248092	20641961
Malawi	15124010	-6545835	-331744	21669845
Mauritius	166926856	-44739919	-2864042	211666775
Rwanda	10552742	-3056649	-749240	13609391
Seychelles	25349172	-2726566	-371749	28075738
Zimbabwe	45604361	-17633252	-253778	63237613
Sudan	119558097	-33493487	-1232861	153051584
Uganda	19166664	-9017648	-1236647	28184312
Zambia	31748630	-10358152	-433072	42106782
Total COMESA	909872405	-242684069	-14079050	1152556474

Source : Simulations of ECA and CEA.

Estimated diversion of intra-regional trade, could reach USD 242 million, which is nearly a quarter of the total trade created in favour of the EU. Close to 5.8% of this diverted trade, involves intra-COMESA exchanges. It appears therefore, that full trade liberalization in the context of EPAs, would contravene regional integration, due to a major decrease in intra-regional trade (-5.8%). Comparatively speaking, this means that 10% of the diverted trade, would find its way to the ECOWAS region<sup>1</sup>, against 2% within the SADC region ,and only 1% within the ECCAS<sup>12</sup> region.

### 4.3 Impacts on revenues

The majority of COMESA countries, are to a large extent, dependent on customs duties for budgetary resources. This dependence, with relation to tariff earnings, risk becoming a major constraint for the funding infrastructural development activities in cases where these fiscal earnings are concentrated on

12 Voir Ben Hammouda, H., S. Karingi, R. Lang, N. Oulmane, R. Perez et M. Sadni-Jallab, 2005, "Economic and Welfare Impacts of the EU-Africa Economic Partnership Agreements", African Trade Policy Centre Paper, No. 10, Addis-Ababa

imports from several countries. The EU is the major source of imports from the COMESA countries, and is consequently an essential component of the customs fiscal base. The elimination of tariffs on imports from the EU is therefore an important parameter for the analysis of EPA. Table 6 reveals the probable losses of fiscal revenues suffered by each COMESA country due to the reciprocal preferential agreements with the EU. The results indicate the value of tariff earnings that the countries of ASE must truly lose because of these agreements.

In terms of their absolute value, the countries that will be affected the most by the elimination of tariff barriers to imports from Europe, are Kenya, Sudan, Mauritius, Ethiopia, DRC and Seychelles. The loss of revenue in itself represents a major challenge that the country will have to resolve to be able to give reciprocal preferences to the EU. In a certain number of these countries, dependence on customs duties results both from slow development of fiscal administration, but also on the consideration of industrial policy. Regarding the issues of weak fiscal development, it should be underscored that most of the COMESA countries will have problems compensating rapidly for the loss of revenue induced by the EPA countries.

Table 6: Revenue implications in the COMESA sub-region (USD)

Country	Revenue shortfalls
Burundi	-7,664,911.00
DRC	-24,691,828.00
Ethiopia	-55,126,359.00
Eritrea	-7,385,208.00
Djibouti	-37,523,124.00
Kenya	-107,281,328.00
Madagascar	-7,711,790.00
Malawi	-7,090,310.00
Mauritius	-71,117,968.00
Rwanda	-5,622,946.00
Seychelles	-24,897,374.00
Zimbabwe	-18,430,590.00
Sudan	-73,197,468.00
Uganda	-9,458,170.00
Zambia	-15,844,184.00

Source: Simulation of ACE-WITS/SMART.

#### 4.4 Implications on the welfare, in the event of EPAs

Market liberalisation, generally has positive effects in the overall wellbeing of populations. However, evaluating the conditions of general welfare, after trade liberalization, is a daunting task. There are



nevertheless, some empirical works, on various methods of calculating these effects, in spite of their complexity. Variations of welfare conditions, are proportional to the variation in fiscal revenue, as analysed below, by taking the consumer surplus over the production surplus.

Table 7: Implications on welfare ( consumer market surplus), in the event of EPAs (USD)

Country	Consumer market surplus
Burundi	1,825,590.00
DRC	3,832,716.00
Ethiopia	19,029,481.00
Eritrea	1,157,124.00
Djibouti	10,894,790.00
Kenya	30,657,688.00
Madagascar	863,988.00
Malawi	2,105,759.00
Mauritius	57,580,281.00
Rwanda	875,792.00
Seychelles	8,067,172.00
Zimbabwe	8,190,357.00
Sudan	19,157,950.00
Uganda	1,661,690.00
Zambia	3,389,191.00

Source: Simulations of the ECA-WITS/SMART.

Consumers in the COMESA sub-region, would benefit from the principle of reciprocity, called-for by EPAs. However this assessment of the implications on welfare, by-passes losses incurred by local producers, in the event of a market surplus, or due to the ejection of local producers from domestic markets, in favour of EU producers, in the wake of the sudden increase in European exports.

The probable benefits, derived from EPAs, in general welfare, depend to a large extent, on trade creation of competitive markets for consumer-goods. It is therefore not surprising that it is in countries such as Mauritius, or Kenya that most of these advantages will be felt, because these countries enjoy very strong trade relations and *in fine*, the consumers would gain significantly from EPAs with the EU. Hence, in terms of trade creation, and positive implications on welfare, the EPAs would be potentially beneficial for COMESA countries. However, these results are static and do not take into account the loss of the producer surplus with regard to which we can without any doubt agree on the extent to which firms established in the COMESA region but which will not be competitive with regard to European firms, shall be obliged to make losses. In addition, analysis on partial equilibrium ignore changes in the economic structure which in a dynamic perspective will tend to temper the potentially beneficial effects indicated in this analysis.

## Conclusion

The purpose of this study is to assess, inasmuch as possible, the impacts of Economic Partnership Agreements (EPAs), between the COMESA countries and those European Union (EU), on multilateral trade development. Two complementary methodologies were used in this analysis: The first, is based on a general equilibrium approach, which is an appropriate tool to evaluate the theoretical aspect of this type of agreement, while the second, is based on a partial equilibrium model, used in this case, because relevant data on the economic situation in the COMESA sub-region, are scanty. The partial equilibrium model, also has the advantage as it is in most Sub-Saharan African (SSA) countries, and also has the advantage of using data bases, which are not as specialized as that, otherwise needed in the general equilibrium model.

It is our considered opinion, that the concept of EPAs, offers sustainable options for trade liberalization in the SSA region. We have tested three different scenarios, based-on the general equilibrium approach. According to the results obtained, indicate that the first implications of relevance, which will have to be negotiated with the EU, relates to the issue of preferential treatment in tariff reduction and elimination, to be granted on a reciprocal basis, EU countries, and aligned with those tariffs, currently being applied on African exports to EU markets. In a second scenario, we analyzed the impact of accelerated regional integration, without immediate application of reciprocal treatment, but with preferential tariffs, being applied to imports, originating in the EU countries, In this scenario, the COMESA countries, would have to liberalize their markets, initially to intra-regional trade, but without immediate reciprocal treatment of EU imports. In a third scenario, we explored the options of creating a Free Trade Zone (FTZ), between the ACP and the EU countries.

Several lessons, can be learnt from this study. First of all, that African countries are heavily dependent on trade revenues, for their infrastructural development, and would therefore be highly vulnerable to external economic pressure, in the form of tariff reduction, or elimination. While considering the level of protectionism in the SSA countries, with respect to EU products, it was noticed that, basically, only food-processing and light industries, are strongly protected, in the Region, and which can serve as indicators of domestic industrial policies. Another interpretation of this high level of tariffs, imposed on European imports, is to consider them as a source of revenue.

At the level of intra-African trade, the significance of trade barriers, must be taken into account. As a result, intensified regional integration, there are growing fears related to loss of customs revenue, on one hand, and on the other, there is the real intra-Africa development potential through trade creation and economic diversification, once the trade barriers have been eliminated.

Results from simulations in the different scenarios, also confirm that the first one (S-1), would be unfavourable to Sub-Saharan Africa, because full reciprocity would impact negatively on the Sub-Saharan

African economies, both in terms of GDP, the trade balance. Trade relations and general welfare, would however, register positive trends, in contrast with the industrial sector, which is clearly impacted by a decrease in production levels, full reciprocity. The risk of de-industrialization, is therefore high, whenever the principle of reciprocity is fully applied.

The second scenario had positive results, in terms of GDP and general welfare. The terms of trade, also improve, but trade balances regress. Finally, in the third scenario, which is the boldest, inasmuch it takes into account, the dismantling of most trade barriers, in the EU markets, which would entail the highest gains possible, for the SSA countries (over USD 8 billion, in terms of improved general welfare).

However, these benefits can only be realized, at the cost of significant and extensive macro-economic adjustments. Indeed, the tools used to assess the impacts of EPAs in the three scenarios, did not take into account the cost of structural adjustments related to this widespread liberalization of SSA markets. These costs are all the more significant, as trade liberalization arrangements become expansive, and would entail reallocation of various economic factors, generated on the liberalized markets. The time-frame for implementation of agreements, such as EPAs, is therefore critical for African countries, because it must coincide with their ability to bear the costs of structural adjustments, growing-out of a market liberalization arrangement.

In order to have an idea of the magnitude of variations involved in the main aggregates of total trade liberalization processes, for each COMESA country, we used the partial equilibrium method, to evaluate the consequences of the elimination of customs duties, on imports from the EU. This simulation gives us thus, an idea of the magnitude of those adjustments, which the COMESA countries would have to make, in dismantling their trade barriers.

These countries would have to undergo serious losses in customs' revenue, on EU imports. Inevitably, a considerable portion of these imports, would be diverted from the COMESA markets, to the detriment of their other partners, and often to that of other COMESA Members. This phenomenon augur well for greater regional integration.

Finally, the positive effects of EPAs, which would benefit the consumers in COMESA countries, would have to be weighed against these probable losses in revenue, in private sector enterprises, crowded-out of local markets by more competitive European producers, besides the significant losses due to de-industrialization.. Since these losses are not easily recovered, and adjustments cannot be carried out instantaneously, concrete measures must be taken to ensure fiscal sustainability, as crucial to any Nation State..

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## Annex 1

### The WITS/SMART model

This study uses the framework of the WITS/SMART partial equilibrium model. The WITS (World Integrated Trade Solution) solution brings together various databases (bilateral trade, commercial flows of products, various levels and types of protection). WITS also integrates analytical tools. The SMART simulation model is one of the analytical tools of WITS. SMART contains analytical modules, which allow the analysis of trade policy such as the effects of multilateral tariff reductions, of preferential trade liberalization or of unilateral tariff changes. The fundamental theory, which underlies this analytical tool, is the partial equilibrium standard framework, which considers constant dynamic effects. Like any partial equilibrium model, it has this strong constraint, which at the same time makes possible the analysis of trade policy to be undertaken only for one country. In spite of this weakness, WITS/SMART can help to estimate the creation and trade diversion, welfare and the effects on the tariff revenue for the countries whose data are available.

### Trade creation

The theory underlying WITS/SMART is presented in detail in Laird and Yeats (1986). The trade creation represents the extension of trade resulting from liberalization and linked to the displacement of the inefficient producers in a given preferential trade area (a free-trade area, for example). It is assumed that there is full transmission of price changes when the tariff or non-tariff barriers (ad valorem equivalents) is reduced or eliminated. Laird and Yeats (1986) derive the equation, which can be used to estimate the effects of trade creation.

Given a basic trade model, made up of simplified functions for demand for imports and supply of exports and of identity allowing equilibrium:

The import demand function for country  $j$  from country  $k$  for good  $i$  is written:

$$M_{ijk} = f(Y_j, P_j, P_k) \quad (1)$$

The export supply function of good  $i$  from country  $k$  is written:

$$X_{ijk} = f(P_{ikj}) \quad (2)$$

The trade balance between the two countries is the standard equation of partial equilibrium:

$$M_{ijk} = X_{ikj} \quad (3)$$

In an environment of free trade, the domestic price<sup>13</sup> of product *i* in country *j* coming from the country *k* should vary with the variation of the customs tariff as follows:

$$P_{ijk} = P_{ikj}(1 + t_{ijk}) \quad (4)$$

To obtain the trade creation formula, Laird and Yeats (1986) differentiate price equation (4):

$$dP_{ijk} = P_{ikj}dt_{ijk} + (1 + t_{ijk})dP_{ikj} \quad (5)$$

Equations (4) and (5) are then substituted in the elasticity<sup>14</sup> of the import demand equation to obtain:

$$\frac{dM_{ijk}}{M_{ijk}} = \eta_i^m \left( \frac{dt_{ijk}}{(1 + t_{ijk})} + \frac{dP_{ikj}}{P_{ikj}} \right) \quad (6)$$

From the identity in equation (3)  $\frac{\Delta M_{ijk}}{M_{ijk}} = \eta_i^m \frac{\Delta P_{ijk}}{P_{ijk}}$  one can obtain the following expression for the elasticity of demand for exports:

$$\frac{dM_{ijk}}{M_{ijk}} = \frac{dX_{ikj}}{X_{ikj}} \quad \text{which, once used in equation 6, makes possible the calculation of the effect of trade creation, which from equation (3) is equivalent to the growth of exports from country } k \text{ of product } i \text{ to country } j:$$

$$TC_{ijk} = M_{ijk} \eta_i^m \frac{dt_{ijk}}{((1 + t_{ijk})(1 - \eta_i^m / \eta_i^e))} \quad (7)$$

If  $\eta_i^e \rightarrow \infty$ , then equation (7) can be simplified as follows:

$$TC_{ijk} = \eta_i^m M_{ijk} \frac{(1 + t_{ijk}^1) - (1 + t_{ijk}^0)}{(1 + t_{ijk}^0)} \quad (8)$$

<sup>13</sup> Insurance and transport costs are not explicitly reflected in the equation.

<sup>14</sup> The elasticity of import demand is

where  $TC_{ijk}$  is the sum of the trade created, in millions dollars, for products  $i$  affected by the change of tariff and  $\eta_i^m$  is the elasticity of the import demand for product  $i$  in the importing country.  $M_{ijk}$  is the current level of the import demand for a given product  $i$ .  $t_{ijk}^0$  and  $t_{ijk}^1$  respectively represent the tariff rates for product  $i$  at the initial and final period. Trade creation then depends on the current level of imports, on the elasticity of import demand for and the relative change of tariffs.

### Trade diversion

Trade diversion, as opposed to trade creation, can increase or reduce the total amount of trade. Trade diversion is a phenomenon which occurs, for example, in a free-trade zone where efficient producers from outside the free-trade zone are replaced by less efficient producers in the preferential area. If one considers an EPA between ECOWAS and the European Union, for example, trade diversion would appear if, because of the EPA, more efficient suppliers from the rest of the world (ROW) are replaced by less efficient European producers. If we assume the conclusion of an EPA which leads to the reduction of tariffs vis-à-vis the European Union without any change of the tariffs concerning the products of the rest of the world, the theory that underlies SMART makes it possible to apprehend trade diversion.

First, the expression of elasticity of substitution is given. Elasticity of substitution can be expressed as the variation of the percentage of the relative shares of imports from two different sources, due to a change of one per cent of the relative prices of the same product from these two sources:

$$\sigma_M = \frac{\Delta \left( \sum_k M_{ijk} / \sum_K M_{ijk} \right) / \left( \sum_k M_{ijk} / \sum_K M_{ijk} \right)}{\Delta (P_{ijk} / P_{ijk}) (P_{ijk} / P_{ijk})} \quad (9)$$

where  $k$  concerns imports from the European Union and  $K$  concerns the imports coming from the rest of the world. Equation (9) can be transformed to obtain the expression for trade diversion, which is written:

$$D_{ijk} = \frac{M_{ijk}}{\sum_k M_{ijk}} \frac{\sum_k M_{ijk} \sum_K M_{ijk} \frac{\Delta (P_{ijk} / P_{ijk})}{P_{ijk} / P_{ijk}} \sigma_M}{\sum_k M_{ijk} + \sum_K M_{ijk} + \sum_k M_{ijk} \frac{\Delta (P_{ijk} / P_{ijk})}{P_{ijk} / P_{ijk}} \sigma_M} \quad (10)$$

Equation (10) can be simplified in the case of an EPA. As Laird and Yeat note, the relative price variations in the equation are linked to the changes of tariffs or the ad valorem equivalent of the non-tariff barriers for the European Union and ROW. Consequently, the trade diverted in favour of the European Union,

denoted,  $TD^{EPA}$  can be apprehended by rewriting equation (10) above as follows:

$$TD^{EPA} = \frac{M^{EU} M^{ROW} \left( \frac{1+t_{EU}^1}{1+t_{EU}^0} - 1 \right)^{\sigma_M}}{M^{EU} + M^{ROW} + M^{EU} \left( \frac{1+t_{EU}^1}{1+t_{EU}^0} - 1 \right)^{\sigma_M}} \quad (11)$$

and  $M^{ROW}$  are the current imports, for a given region, respectively coming from the European Union and rest of the world.  $t_{EU}^0$  and  $t_{EU}^1$  are respectively the customs duties imposed on European products at the end and at the beginning of the period with.  $t_{EU}^1 < t_{EU}^0$ . The term  $\sigma_M$  represents the elasticity of substitution between imports coming from the European Union and those coming from the rest of the world, in the given region. Trade diversion then depends:

on the current level of imports coming from the European Union and the rest of the world; of the percentage of variation (reduction in this case) of the tariffs applied to imports from the European Union with unchanged tariffs for products coming from the rest of the world;

and on the elasticity of the substitution of the imports between the two sources. The higher the value of the elasticity of substitution is, the greater will be trade diversion.

### Effect on trade

The overall effect on trade can be obtained by adding up trade creation and trade diversion. As indicated by Laird and Yeats (1986), the adding up of equations (8) and (10) for a country can be made through the products and/or sources. It is also possible to carry out the summation for a group of importers for a product or a group of products as well as for only one source of supply or a group of suppliers.

### Effect on revenue

The quantification of the effect on revenue using the WITS/SMART model is relatively easy. Theoretically, tariff revenue is given as the product of the tax rate (tariff rate in this case) and of the tax base (the value of imports). Thus, before the variation of the ad valorem equivalent of barriers to trade (tariff and non-tariff), the tariff revenue is written:

$$R_0 = \sum_i \sum_k t_{ijk}^0 P_{ijk} M_{ijk}$$



After the variation of the tariffs, the new tariff revenue is written:

$$R_1 = \sum_i \sum_k t_{ijk}^1 P_{ijk} M_{ijk}$$

The loss of revenue resulting from the implementation of an EPA corresponds to the difference between the two values  $R_1$  and  $R_0$  and which is written:

$$R_1 = \sum_i \sum_k t_{ijk}^1 P_{ijk} M_{ijk} \quad (12)$$

### Effect on welfare

As with the effect on tariff revenue, the assessment of the effect on welfare is easy. It is the difference of equivalent variations in the general equilibrium. Essentially, the effect on welfare is mainly attributed to the benefits of lower import prices that the consumer draws in the importing country<sup>15</sup>. The consumer will substitute cheaper imported products to more expensive domestic or imported products because they are affected by the tariff reduction. Increases in imports entail a net gain of welfare for the consumer and is measured as follows:

$$w_{ijk} = 0.5(\Delta t_{ijk} \Delta M_{ijk}) \quad (13)$$

Coefficient 0.5 gives the average between the effect of barriers to trade before and after their elimination/reduction. Equation (13) assumes that the elasticity of supply on exportation is infinite. If this is not the case, import prices in the importing countries will drop less than proportionally to the fall in the tariff barriers. Consequently, while the equation can be used to measure the effect on welfare, it is no longer only a representation of the consumer's surplus but integrates some element of the producer's surplus (see Laird and Yeats 1986).

### The WITS database

The WITS database comes from various sources. The principal ones are the COMTRADE and TRAINS bases. It is complemented by data from EUROSTAT and as far as possible by national data.

<sup>15</sup> As Laird and Yeats (1986) emphasize, in the case of a preexistent level of imports, there is no net gain in terms of welfare. In fact, the tariff reduction entails simply a reallocation/transfer of government revenue to the consumers.

Table 8: Aggregation of regions (GTAP version 5)

Code	Aggregated regions	GTAP regions
1. EU <sup>16</sup>	European Union	Austria, Belgium, Denmark, Finland, France, Germany, United Kingdom, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, Hungary, Poland, Rest of the Association of Central Europe
2. BWA	Botswana	Botswana
3. XSC	Remain SACU	Namibia and South Africa
4. MOZ	Mozambique	Mozambique
5. MWI	Malawi	Malawi
6. TZA	Tanzania	Tanzania
7. ZMB	Zambia	Zambia
8. ZWE	Zimbabwe	Zimbabwe
9. UGA	Uganda	Uganda
10. XSF	Rest of Southern Africa	Other Southern Africa (Angola)
11. XSS	Rest of Sub-Saharan Africa	Rest of Sub-Saharan Africa, including the countries of CEMAC
12. ROW	Other regions	Australia, New Zealand, China, Hong Kong, Japan, Korea, Taiwan, Indonesia, Malaysia, the Philippines, Singapore, Thailand, Vietnam, Bangladesh, India, Sri Lanka and Rest of South Asia, Canada, the United States, Mexico, Central America, the Caribbean, Colombia, Peru, Venezuela, Rest of the Andean Pact, Argentine, Brazil, Chile, Uruguay and Rest of South America, Switzerland, Rest of EFTA, Former Soviet Union, Turkey, Rest of the Middle-East, Morocco, Rest of North Africa, Rest of the world

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16 In Version 5 of the GTAP database, the countries acceding the European Union are treated either individually (Poland and Hungary) or as members of the aggregate "Association of Central Europe". In this study, the European Union thus comprises the old European Union at 15 plus the 10 new members.

Table 9: Sectoral aggregation (GTAP version 5)

Code	Aggregated sectors	GTAP sectors
1. Cereals	Grains	Raw rice, wheat, cereals and nca grains
2. Vegetables	Fruit and vegetables	Vegetables, fruits, nuts,
3. Oilseeds	Oleaginous seeds	Oleaginous seeds,
4. Sugar	Sugar	Sugar cane, beet sugar,
5. Cotton	Cotton	Fibers
6. oCrops	Other harvests	Nca harvests
7. Livestock	Animals and animal products	Cattle, sheep, goat milk cheese, horses, nca animals, vitamin-enriched milk, wool, silkworm cocoons
8.	Natural resources	Forestry, Fishing, Coal, Oil, Gas, nca ores
9. Agroproc	Food-processing industries	Meat: cattle, sheep, goats, horse; nca meat products, vegetable oil and fats, dairy products, treated rice, sugar, nca foodstuffs, Drinks and tobacco products
10. Lightmanuf	Light industries	Textiles, clothing, leather products, wood products, paper products, publishing
11. Industry	Industrial sectors	Petroleum, coal products, nca mineral products, chemical products, rubber, plastic products, ferrous metals, nca metals, metal products, Motor vehicles and spare parts, transport facilities nca, Electronic appliances, Machinery and nca equipment, nca manufactured products
12. Services	Services of Utility	Electricity, manufacture and gas distribution, water, construction, communication, nca financial services, insurance services, leisure and other services, residences, Public admin. /Defense/Health/Education
13. Trade	Facilitation of the trade	Trade, maritime transport, air transport

Source: GTAP Version 5 database aggregations.

## Annex 2

Table 10: Impacts of different scenarios on the main aggregates (general equilibrium simulations)

Table C	Variation as %				Millions of \$	
	GDP	Imports		Real exchange rate	Trade balance	Balance of trade
Scenario 1: Full reciprocity						
EU15	0.0044	0.1095	0.05	0.0565	52.7352	1748.8019
CEEC	0.0019	-0.01	0.0211	-0.0058	23.4368	-2.5357
North America	-0.0001	-0.0317	0.0207	-0.0103	529.9121	-83.1632
Japan	-0.0005	-0.0574	0.0493	-0.0214	366.1649	-45.8012
Sub-Saharan Africa	-0.0129	4.4775	2.3152	-0.5477	-1868.361	-563.9485
China	-0.0018	-0.0671	-0.0115	-0.0282	45.5154	-57.3101
Rest of the World	-0.003	-0.0864		-0.0406	850.6011	-921.4965
Scenario 2: Intensified Sub-Saharan African integration without reciprocity						
EU15	-0.0004	-0.0082	0.0045	-0.0048	191.6676	-150.4622
CEEC	-0.0005	-0.0043	0.0049	-0.0018	11.8501	-5.3033
North America	0	-0.0078	0.0092	-0.0042	150.7274	-58.1692
Japan	-0.0001	-0.0106	0.0186	-0.0083	98.9025	-45.1652
Sub-Saharan Africa	0.4916	2.4112	1.2906	0.2996	-629.7655	1204.2651
China	-0.0002	-0.0113	0.0016	-0.0056	15.5255	-16.4879
Rest of the world	-0.0002	-0.0045	0.0014	0.0024	161.0926	27.1114
Scenario 3: Free-trade zone						
EU15	0.0079	0.2245	0.2331	0.0194	934.9118	1116.3458
CEEC	0.0030	-0.0696	0.1245	-0.0829	169.0720	-131.7854
North America	-0.0003	-0.0780	0.0751	-0.0349	1437.1685	-438.9070
Japan	-0.0013	-0.1163	0.1579	-0.0693	928.5612	-313.1068
Sub-Saharan Africa	3.3890		8.8278	1.8336	-5484.2998	8028.7661
China	-0.0032	-0.1236	0.0051	-0.0557	144.5395	-144.1505
Rest of the world	-0.0040	-0.1205	0.0072	-0.0327	1870.0596	-883.5765

Source: ECA, GTAP V.5.4 simulations.

## Annex 3

Table 11: Production variations in sub-Saharan Africa (variation as %)

	Full reciprocity	Full integration	Free-trade zone
Cereals	0.0213	0.5554	7.7333
Vegetables	-0.2063	0.2536	4.8533
Oleaginous seeds	-0.0199	0.2588	5.0238
Sugar	0.0423	0.4369	12.8798
Cotton	0.6788	-0.0293	-3.2957
Harvests	0.5084	-0.0616	0.9048
Livestock	-0.2478	0.4614	5.5269
Animal products	-0.0189	0.4063	4.9162
Fish	-0.1151	0.2612	3.4621
Energy	0.1458	-0.2934	-1.9289
Natural resources	0.2248	-0.1383	-1.7175
Food-processing industries	0.0885	0.4376	12.482
Textiles	-0.6989	1.3384	2.3047
Clothing	-2.6639	2.7493	9.1321
Low-technology industries	-4.8511	1.2875	-5.0218
Average-technology industries	-3.0865	1.0426	-2.9961
Heavy industries	-3.2136	1.2986	-10.7966

Source: ECA, GTAP V.5.4 simulations.

## Annex 4

Results of partial equilibrium simulations per country (COMESA)

Burundi (USD '000)

Table 12: Trade diversion in Burundi

Exporter to Burundi	Export
Total COMESA	-229.636
Kenya	-120.658
Uganda	-69.787
Zambia	-23.494
Mauritius	-10.568
Zimbabwe	-3.38
Rwanda	-1.749
Total Rest of Africa	-229.061
South Africa	-189.383
Tanzania	-39.678
Total Rest of the World	-1321.309

Table 13: Trade diversion in Djibouti (USD '000)

Exporter to Djibouti	Export
Total COMESA	-215.53
Kenya	-110.021
Egypt,	-75.361
Ethiopia (less Eritrea)	-29.047
Mauritius	-0.526
Uganda	-0.316
Madagascar	-0.255
Total Rest of Africa	-881.45
South Africa	-784.612
Tunisia	-93.807
Swaziland	-45.902
Morocco	-44.327
Senegal	-5.442
Benin	-0.692
Tanzania	-0.424
Togo	-0.051
Total Remains World	-9348.95

Source: WITS-SMART, ECA simulations.

Table 14: Trade diversion in Ethiopia (USD '000)

Exporter to Ethiopia	Export
Total COMESA	-3 285.65
Djibouti	-2 385.01
Kenya	-497.229
Egypt	-340.737
Sudan	-22.425
Zimbabwe	-19.563
Madagascar	-8.858
Uganda	-4.768
Zambia	-3.671
Rwanda	-2.416
Malawi	-0.901
Somalia	-0.075
Total Rest of Africa	-1 347.65
South Africa	-872.897
Swaziland	-315.109
Niger	-50.71
Senegal	-35.368
Tunisia	-23.529
Nigeria	-12.814
Mauritania	-11.961
Algeria	-7.002
Namibia	-5.409
Angola	-3.498
Tanzania	-2.656
Gambia	-1.72
Gabon	-1.109
Total Rest of the World	-20 385.65

Table 15: Trade diversion in Eritrea (USD '000)

Exporter to Eritrea	Export
Total COMESA	-26.814
Kenya	-22.572
Uganda	-3.056
Sudan	-0.992
Zimbabwe	-0.194
Total Rest of Africa	-79.757
South Africa	-76.438
Tunisia	-2.645
Morocco	-0.674
Total Rest of the World	-1274.91

Source: WITS-SMART, ECA.

Table 16: Trade diversion in Malawi (USD '000)

Exporter to Malawi	Export
Total COMESA	-331.74
Zimbabwe	-248.001
Kenya	-62.446
Zambia	-11.435
Uganda	-5.262
Mauritius	-2.4
Egypt	-1.624
Madagascar	-0.401
Ethiopia (less Eritrea	-0.175
Total Rest of Africa	-4080.02
South Africa	-3 933.76
Mozambique	-93.409
Tanzania	-18.07
Botswana	-14.366
Swaziland	-11.05
Senegal	-1.771
Nigeria	-1.535
Namibia	-1.432
Niger	-1.146
Total Rest of the World	-2133.61

Source: WITS-SMART, ECA simulations.



Table 17: Trade diversion in Zimbabwe (USD '000)

Exporter to Zimbabwe	Export
Total COMESA	-253.78
Zambia	-105.236
Mauritius	-53.063
Kenya	-35.493
Egypt	-30.663
Malawi	-27.574
Seychelles	-0.877
Sudan	-0.404
Uganda	-0.242
Congo, Dem. Reference mark.	-0.16
Ethiopia (less Eritrea)	-0.066
Total Rest of Africa	-11749.52
South Africa	-11 450.87
Botswana	-210.399
Swaziland	-44.119
Mozambique	-9.213
Nigeria	-8.158
Ghana	-7.215
Mali	-4.091
Senegal	-2.748
Tanzania	-2.586
Namibia	-2.08
Morocco	-1.874
Niger	-1.751
Gabon	-1.313
Total Rest of the World	-5629.953

Source: WITS-SMART, ECA simulations.

Table 18: Trade diversion in Zambia (USD '000)

Exporter to Zambia	Export
Total COMESA	-433.07
Zimbabwe	-289.687
Kenya	-68.053
Malawi	-24.691
Mauritius	-22.148
Egypt.	-16.057
Democratic Republic of Congo	-8.042
Ethiopia (less Eritrea)	-2.947
Uganda	-0.98
Sudan	-0.322
Rwanda	-0.073
Madagascar	-0.03
Eritrea	-0.023
Burundi	-0.019
Total Rest of Africa	-6544.85
South Africa	-6 413.25
Tanzania	-57.599
Botswana	-40.521
Swaziland	-6.436
Mozambique	-5.704
Namibia	-5.201
Lesotho	-4.791
Nigeria	-3.128
Tunisia	-2.794
Niger	-2.559
Gambia	-1.411
Total Rest of the World	-3380.23

Source: WITS-SMART, ECA simulations.

Table 19: Trade diversion in Uganda (USD '000)

Exporter to Uganda	Export
Total COMESA	-1236.65
Kenya	-1119.099
Egypt	-59.988
Mauritius	-31.371
Zimbabwe	-10.208
Malawi	-3.733
Ethiopia (less Eritrea)	-3.174
Eritrea	-3.055
Democratic Rep. of Congo	-2.971
Zambia	-1.31
Rwanda	-1.292
Sudan	-0.285
Madagascar	-0.153
Djibouti	-0.008
Total Rest of Africa	-1149.83
South Africa	-1 016.25
Tanzania	-72.243
Swaziland	-16.745
Nigeria	-8.277
Namibia	-6.615
Botswana	-5.089
Morocco	-4.539
Niger	-3.105
Mali	-3.036
Ghana	-2.686
Côte d'Ivoire	-2.598
Cameroon	-2.184
Republic of Congo	-1.702
Mozambique	-1.673
Total Rest of the World	-6631.17

Source: WITS-SMART, ECA simulations.

Table 20: Trade diversion in Sudan (USD '000)

Exporter to Sudan	Export
Total COMESA	1 232.86
Kenya	-1 168.87
Uganda	-63.784
Mauritius	-0.206
Total Rest of Africa	-871.33
South Africa	-780.061
Tunisia	-66.306
Morocco	-24.963
Total Rest of the World	-31 398.30

Source: WITS-SMART, ECA simulations

Table 21: Trade diversion in Seychelles (USD '000)

Exporter to Seychelles	Export
Total COMESA	-371.749
Mauritius	-331.606
Kenya	-36.182
Madagascar	-1.989
Zambia	-1.068
Zimbabwe	-0.618
Egypt	-0.286
Total Rest of Africa	-790.77
South Africa	-758.011
Swaziland	-31.641
Total reset of the World	-1564.04

Source: WITS-SMART, ECA Simulations.

Table 22: Trade diversion in Rwanda (USD '000)

Exporter to Rwanda	Export
Total COMESA	-749.24
Kenya	-451.414
Uganda	-209.007
Egypt	-63.429
Democratic Republic of Congo	-8.595
Burundi	-7.701
Zimbabwe	-2.927
Zambia	-2.409
Ethiopia (less Eritrea)	-2.276
Mauritius	-1.344
Madagascar	-0.11
Sudan	-0.028
Total Rest of Africa	-588.52
South Africa	-313.523
Tanzania	-245.505
Swaziland	-5.106
Cameroon	-5.069
Mozambique	-3.929
Nigeria	-3.51
Gabon	-2.712
Senegal	-2.382
Guinea	-2.26
Republic of Congo	-1.548
Mali	-1.099
Total Rest of the World	-1701.11

Source: Simulations, Wits-smart, ECA.

Table 23: Trade diversion in Mauritius (USD '000)

Exporter to Mauritius	Export
Total COMESA	-2 864.04
Egypt	-2 339.75
Madagascar	-268.539
Zimbabwe	-136.836
Kenya	-97.087
Seychelles	-21.194
Total Rest of Africa	-10222.01
South Africa	-9 765.89
Swaziland	-383.266
Morocco	-31.355
Namibia	-10.543
Tanzania	-8.651
Mozambique	-7.687
Tunisia	-4.521
Botswana	-2.457
Nigeria	-2.208
Sierra Leone	-1.322
Total Rest of the World	-31864.04

Source: WITS-SMART, ECA simulations.

Table 24: Trade diversion in Madagascar (\$USD 000)

Exporter to Madagascar	Export
Total COMESA	-248.092
Mauritius	-219.577
Egypt.	-15.681
Kenya	-11.946
Zimbabwe	-0.36
Uganda	-0.236
Seychelles	-0.222
Rwanda	-0.028
Zambia	-0.027
Burundi	-0.007
Democratic Rep. of Congo	-0.003
Djibouti	-0.003
Ethiopia (less Eritrea)	-0.002
Total Rest of Africa	-416.924
South Africa	-274.524
Swaziland	-49.238
Morocco	-44.77
Tunisia	-24.838
Côte d'Ivoire	-15.003
Senegal	-2.516
Tanzania	-1.924
Nigeria	-1.075
Total Rest of the World	-3421.541

Source: WITS-SMART, ECA simulations.

Table 25: Trade diversion in Kenya (USD '000)

Exporter to Kenya	Export
Total COMESA	-2 426.33
Egypt	-1 789.21
Zimbabwe	-350.116
Uganda	-112.162
Zambia	-58.107
Seychelles	-27.836
Sudan	-25.357
Malawi	-23.969
Ethiopia (less Eritrea)	-23.21
Rwanda	-9.818
Madagascar	-4.087
Eritrea	-1.953
Burundi	-0.459
Djibouti	-0.049
Total Rest of Africa	-10 344.25
South Africa	-9 265.14
Mauritania	-336.689
Tanzania	-327.971
Swaziland	-121.249
Namibia	-115.179
Nigeria	-29.073
Mozambique	-25.861
Senegal	-23.425
Morocco	-21.255
Guinea	-17.427
Republic of Congo	-13.646
Gambia	-13.366
Niger	-12.582
Sierra Leone	-7.767
Ghana	-3.012
Botswana	-2.558
Somalia	-1.858
Mali	-1.397
Cameroon	-1.175
Guyana	-1.045
Total Rest of the World	-47 727.84

Source: WITS-SMART, ECA simulations.



Table 26: Trade diversion in the Democratic Republic of Congo (USD ‘000)

Exports to the Dem. Rep. of Congo	Export
Total COMESA	-134.193
Uganda	-134.193
Total Rest of Africa	-4 571.00
South Africa	-4 571.00
Total Rest of the World	-2134.253

Source: WITS-SMART, ECA simulations