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## **Assessment of the impact of the Economic Partnership Agreement between the ECOWAS countries and the European Union**

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# ATPC

Work in Progress

**No. 29**



Economic Commission for Africa

## African Trade Policy Centre

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# Introduction

The West African region, as an entity comprising African, Caribbean and Pacific (ACP) and World Trade Organization (WTO) countries, is engaged in two principal negotiation processes, one of them multilateral, at the WTO, and the other within the framework of Economic Partnership Agreements (EPAs) with the European Union (EU) concerning four regional groupings in Africa.

The Cotonou Partnership Agreement (CPA) between the EU and the ACP countries expected to succeed the Lomé Agreement, envisages the signing of Economic Partnership Agreements (EPAs) by December 2007. The EPAs will be the new cooperative framework under the CPA and are expected to adopt an integrated approach based on partnership and promoting cooperation, trade and political dialogue between the EU and ACP countries. One of the essential characteristics of this multilateral partnership is that it hopes to combine trade (to respond to the challenge of globalization), development assistance (essential to ACP countries) and a strengthened political dimension. The key CPA principles are reciprocity; differentiation; deeper regional integration; and coordination of trade and aid.

The EPAs will address trade barriers, supply-side constraints in ACP countries, and the question of compatibility to WTO rules. EPAs are aimed at putting in place free trade area (FTA) arrangements to replace the non-reciprocal trading preferences currently advanced to the ACP countries by EU in compliance to the Lomé Conventions.

This report sets out to assess the economic impact of the trade component of the EPA between West African countries and the EU. To that end, we will adopt two complementary methodologies: one in general equilibrium and the other in partial equilibrium. The combination of these two approaches is due to the fact that general equilibrium analysis does not incorporate the impacts at the country level.

Analysis of trade policies presupposes the study of the implications of these instruments on the productive structure of the economies at the national and international levels. These instruments have direct and indirect effects on the relative prices of the goods produced in different sectors of a given country. Owing to the various sectoral interactions, general-equilibrium models need to be used in order to explore the economic consequences of modifying trade policy instruments, such as the consequences engendered by a partnership agreement of this nature.

However, most African countries are individually absent from the databases associated with this kind of model. Only a limited number are individually present, while the majority form part of aggregate groupings, as is the case with Economic Community of West African States (ECOWAS). The World Integrated Trade Solution (WITS/SMART) model therefore makes it possible to capture the general-equilibrium analysis which uses a database excluding national specificities.



The EPA negotiating framework, in our view, offers a number of liberalization options and three scenarios will be examined in a general-equilibrium framework.

The first assesses the implications of an EPA within a context where sub-Saharan Africa (SSA) applies the same preferential regime to the EU as that from which it currently benefits from the latter (full reciprocity).

Alongside the reciprocity principle, the CPA advocates for deepened integration between the ACP countries.

In the second scenario, we assess the impact for sub-Saharan Africa of deepened regional integration without immediate reciprocity to EU preferences. This scenario is explained by the fact that most African countries have not been able to utilize the preferences flowing from the Lomé Conventions owing to supply-side constraints. The scenario therefore presents an option whereby sub-Saharan African countries liberalize trade between them without immediate reciprocity to the EU, such that they are then able to compete with EU producers and exporters.

In the third scenario, we explore the option of a free trade area (FTA) arrangement by sub-Saharan Africa to the EU. In this scenario, all barriers to bilateral trade between sub-Saharan Africa and the EU (protocols on goods, non-tariff barriers, etc.) are eliminated. Indeed, even if African countries have preferential access to the EU market, there are still a number of significant barriers to African exports.

The results of the simulations show that the first scenario is clearly unfavourable to sub-Saharan Africa. While the deepened regional integration and the FTA scenarios have positive effects on sub-Saharan Africa, both in terms of GDP and welfare, it is the establishment of an FTA which would potentially most benefit sub-Saharan Africa. This result is explained by improved market access for African exports as a result of the elimination of customs tariffs, particularly on highly protected agricultural products and labour-intensive industrial products.

However, the tools employed in assessing the different scenarios do not really take into account the adjustment costs linked to this kind of liberalization. These costs are all the more important because the liberalization is ambitious, in that they are linked to reallocations of factors freed up by liberalization. It is the third scenario that would bring about the highest adjustment costs.

In order to gauge the magnitude of the variations in the main aggregates of total trade liberalization in each of the ECOWAS countries, we will simulate, in a partial equilibrium, the removal of duties applied by these countries on imports from the EU. This simulation will make it possible to gauge the magnitude of the adjustments that ECOWAS countries will be faced with in the event of the dismantling of their trade barriers.

The present study consists of eight sections. After the introduction, we present in the first section, the profile of the ACP-EU cooperation agreements from Lomé to Cotonou. We also show how a certain “grey areas” in the WTO rules on regional agreements can enable African countries to benefit more from the EPAs by taking advantage of greater flexibility. The next section presents some graphical data on Africa’s trade flows in general and on trade flows of ECOWAS in particular. The third section deals with the analytical framework in general equilibrium. It contains a presentation of the Global Trade Analysis Project (GTAP) model used for assessing the impact of different partnership agreement options. In the fourth section, we focus on the characteristics of African economies, which are drawn from the GTAP database and which play a key role in the operative interactions in this kind of liberalization. The fifth section deals with the analytical framework in partial equilibrium which is complementary to the general-equilibrium modelling. The assessments of the economic impacts of the EPAs for Africa, using the general-equilibrium model, are analysed in the sixth section, while those particularly concerning the ECOWAS countries, using the partial-equilibrium framework, are presented in the penultimate section. Finally, the last section comprises concluding remarks.

# I. From Lomé to Cotonou

The cooperation arrangement between Europe and sub-Saharan Africa are by no means recent. They go back to the period just after independence, when Europe sought to strengthen its relations with the former colonies and to bolster their development process. The cooperation entered a significant phase during the early 1970s when Europe endeavoured to put in place an innovative cooperation framework through the Lomé conventions. These agreements then represented a significant innovation in the context of international cooperation, particularly in terms of the support given to the process of diversification of Africa's economies and the efforts to stabilize the prices of primary commodities<sup>1</sup>.

However, Lomé was not able to achieve the objectives set, and Africa remained strongly dependent on primary commodities. Furthermore, Africa's share of European trade diminished. The limited results were at the root of a reworking of the conventions and the introduction of the reciprocity principle in the Cotonou Convention. The reciprocity principle was strengthened in the negotiated EPAs.

These developments represent a significant innovation in the spirit and the innovative principles incorporated from the early 1970s in the EU-SSA cooperation frameworks.

This section sets out to highlight some of the dimensions of the EU-SSA cooperation profile over time.

## 1.1 The Lomé Conventions: a brief overview

Observers agree that the Lomé Conventions represented an innovative model and an example to follow in the context of a North-South cooperation. Indeed, by laying an emphasis on the need for the countries of the South to develop autonomously and by enabling the ACP countries to formulate their own developmental choices, these agreements broke with a tradition that merely reproduced the colonial relationships and formed the basis of a new development cooperation paradigm.

A cursory overview of these agreements reveals considerable deviation between their content and the practice.

The Lomé Conventions concluded in 1975 between the ACP countries and the EU were characterized by their innovativeness. Placing at the forefront the freedom of the contracting States to formulate their development policies and choices, these agreements recognized the right of the ACP countries to formulate autonomous development models. It would appear that a combination of two factors resulted in that content.

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<sup>1</sup> H.Ben Hammouda, *Africa: Towards a New Development Contract*, Editions l'Harmattan, 2000.

First, there was the context of the time, characterized as it was by an upsurge in “Third World” demands for a new international economic order. The 1970s witnessed the emergence of a formidable sense of solidarity among developing countries, who were demanding the reform of the mechanisms and institutions governing the inner workings of the world economy, towards greater equity and equality. This upsurge of the “Third World” over that period was a factor that could not be overlooked.

The second factor was the formidable unity demonstrated by the ACP countries during the negotiations. These countries managed to maintain a cohesion and convergence of interests in the dealings with the EU, despite their considerable diversity. This factor was broadly noted by commentators at the time. The Times article covering the negotiations, for example, was entitled, “Africans agree united approach to EEC”<sup>2</sup>, and P.Lemaître, the Le Monde correspondent at the negotiations, noted that “the myth of unity, African unity which was unassailable, but also unity of the ACP group of countries which, despite their geographical heterogeneity, had become very real, and finally won the day over the usages of expression and behaviour that had separate associates and associables at the outset”. Finally, Claude Cheysson, in his presentation to the Economic and Social Council of the Communities, underscored this upsurge of ACP solidarity when he stated: “... I can tell you that they remained united to the end, under quite formidable circumstances”<sup>3</sup>. Thus, by dint of this remarkable solidarity, the ACP countries were able to bestow on the Lomé Conventions an innovative and original pro-development content. This content is manifested in the pertinent principles and agreements.

## **1.2 The principles: an innovating platform**

From the outset in the international negotiations, the ACP advocated a common platform comprising seven points that summed up their perspectives on economic cooperation with the EU in the spheres of trade, industry and finance. The EU, for its part, formulated a point-by-point response to the ACP proposals in a memorandum. At the close of negotiations lasting 18 months, the two partners arrived at a common ground and were able to formulate an agreed platform which constitute the overall framework of the Lomé Conventions. This platform comprises a number of new principles in North-South multilateral cooperation. It refers to:

- The right of each State to determine its political, social, cultural and economic choices;
- The need for ACP countries to develop self-focused development policies;
- Agricultural development to ensure food self-sufficiency;

<sup>2</sup> P. Bouvier, *l'Europe et la coopération au développement; un bilan, la convention de Lomé*, University of Brussels Press, 1980, p.39.

<sup>3</sup> P. Bouvier, *op.cit.*, p.39.

- Industrialization, which would have to play a key role in development policies;
- The need to diversify production in these economies and to depart from excessive specialization, and
- Developing cooperation and trade between them

These principles, taken together, made the Lomé Conventions the example of the new cooperation relations between North and South. However, the innovative nature of the Lomé Conventions go beyond the platform established, but also relate to the mechanisms which have been put in place under the agreements.

### **1.3 The mechanisms: new areas of cooperation**

Over and above the declaration of a set of general principles, the Lomé Conventions also define new areas of cooperation. We will consider, in turn, industrial cooperation, the STABEX system, and trade cooperation.

#### **1.4 Industrial cooperation**

The Lomé Conventions are distinguishable from the Yaoundé Conventions in that the former confer centrality to the sphere of industrialization which consequently becomes the key objective of the Lomé Conventions, agriculture had a key role in the Yaoundé Conventions. The new attention given to industrialization is reflected in the wording, where in the preamble itself, the contracting States affirm their determination to promote industrial development in the ACP countries through expanded cooperation actions between these countries and the member States.

In the financial sphere, even though the Lomé Conventions did not envisage new financial arrangements for industry, they expanded the scope of the European Development Fund (EDF) and the European Investment Bank (EIB) – the financial instruments of the system – so as to enable them to intervene in industrial development projects<sup>4</sup>. To that end, they have effected a division of labour: the EDF is concerned with infrastructure development while the EIB intervenes in the establishment or expansion of industrial enterprises. The Conventions also provided for mobilization of private and public capital to finance energy research, exploration and development projects.

To foster industrial cooperation, the Lomé Conventions put in place two institutions, namely, the Industrial Development Committee and the Industrial Development Centre. The Committee is charged with fostering industrial cooperation and monitoring the activities of the Centre. The Centre is a body charged with a number of functions, including information dissemination and organizing contacts between business entities and industrial policy officials in the EU and ACP countries, conducting feasibility studies to accelerate the creation of industrial enterprises in the ACP countries, identifying and utilizing opportunities for joint ventures and for subcontracting, and seeking possible sources of financing.

<sup>4</sup> M.P. Roy, *la CEE et le Tiers-Monde: les conventions de Lomé*, Notes et Etudes documentaires. La documentation française, No. 4795, 1985.

Thus, both the financial arrangements and agreements and the institutions established show that the Lomé Conventions paid particular attention to industrial development in the ACP countries. From that point of departure, the industrial development initiated by the conventions can be examined, in order to establish, in particular, whether it has enabled these countries to fundamentally transform their production structured towards diversification.

## 1.5 The STABEX system

During the negotiations under the Lomé Conventions, the question of stabilization of commodity export revenues from agricultural and minerals emerged as the main area of concern for the ACP countries. It was essential for these countries to ensure the stability of those revenues, which constitute their main source of development financing.

The Lomé Agreements introduced the STABEX system, the objective of which was to remedy the adverse effects of unstable export revenues and to try to guarantee stable revenues on exports from the ACP countries to the EU and other destinations of commodities on which their economies depend, which are affected by fluctuations in price, quantity or both.

STABEX, which dealt with export revenues relating to 49 agricultural commodities, had two thresholds:

- A threshold of dependency on the commodity in question *vis-à-vis* the total exports of the economy, initially set at 7.5 per cent and subsequently scaled down to 6 per cent, which constitutes the first condition of applicability of STABEX;
- A threshold of release, the second condition of applicability of STABEX, initially set at 7.5 per cent and also subsequently scaled down to 6 per cent. If the export revenues of an ACP fall by more than 6 per cent by reference to the four preceding years, the EEC would set in motion a compensatory transfer in the form of a loan (a grant in the case of the LDCs) to be repaid when the reverse situation materializes.

The stabilization mechanism for export revenues was reinforced by the establishment, under Lomé II, of a system known as SYSMIN which fulfils the same role in respect of mineral commodities as STABEX does for agricultural commodities.

Even though the operation of these stabilization mechanisms for export revenues has attracted a measure of criticism, they have been seen by developing countries as a gain that has enabled them to stem the tide of price fluctuations and to be able to count on fairly stable foreign exchange inflows.

## 1.6 Trade cooperation

In terms of trade cooperation, the main innovation of the Lomé Conventions by reference to the Yaoundé Conventions was the departure from the reciprocity principle on trade preferences. The Yaoundé Conventions had allowed exemptions on customs duties and taxes and dismantled all quantitative barriers to the movement of merchandise between African countries and the EU. However, the Lomé Conventions removed this clause under pressure from the ACP countries, so that the right of free admission was no longer recognized for European exports to ACP countries. The abandonment of these principles has attracted a measure of criticism, from both developed countries and developing countries that were not part of the Conventions. The developed countries, and in particular, Japan and the United States of America<sup>5</sup>, levelled criticism at the agreements in the international forums, seeing them as being incompatible with the ground rules of international trade. On their part, the non-beneficiary developing countries, for fear of losing out on the disparate treatment resulting from the Lomé Conventions, took exception to the departure from the reciprocity principle for only one set of countries and demanded that the same should be extended to “Third World” countries as a whole. However, the hopes placed in the Conventions have waned, and there is a considerable gap between the principles embodied in the Conventions and their actual application.

## 1.7 The outcome of the Conventions

We will examine, in turn, the operation of STABEX and cooperation in the spheres of trade, industry and finance.

## 1.8 Industrial cooperation

The question under consideration here is whether the Lomé Conventions have helped the ACP countries set in motion a process of industrialization that has helped diversify the production base.

At the same time, it should be underscored that since independence, some African countries embarked on a major effort to diversify their industrial structures in order to depart from the dominance of agro-based export commodities. These countries integrated import-substitution strategies through the introduction of industrial activities aimed at meeting the basic needs of their people. However, these experiments soon came to a dead end owing to the narrowness of domestic markets in most of the continent's economies. In addition, technological and financial dependence limited their room for manoeuvre. During the 1980s, structural adjustments and the closure of many industrial plants in African countries put a damper on the industrial modernization efforts. It is true that the responsibility for Africa's industrial development does not rest with the Lomé Conventions. However, it must be underscored that the Conventions have

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<sup>5</sup> M.P.Roy, *op.cit.*

not boosted the development of the continent and the formation of coherent and competitive industrial structures.

## 1.9 The STABEX mechanisms

The main shortcoming of the STABEX mechanism was the inadequacy of financial resources available for responding to falling prices. The system worked well initially, but was shaken by falling prices starting from the early 1980s. This was manifested in a wide deficit within the STABEX system, and by a decrease in the rate of coverage for the drop in export revenues. In 1980, nearly 53 per cent could be covered from available resources, but this rate stood at only 24.7 per cent by 1981<sup>6</sup>.

This trend vindicates the presentiment of A. Emmanuel<sup>7</sup>, who had stated, way back in 1976, that the STABEX objectives were not apt to check the drop in commodity prices, but to spread out their impacts over time. This perception was founded on the fact that the reference period was fluid, in that today's revenues become the norm tomorrow: consequently, the drop in revenues is merely deferred and the price trend in the long term is not really taken into account under STABEX. In general terms, STABEX views the commodity prices to be stabilized as being normal. It does not take into consideration changes in value of these prices and addresses even less the whole issue of price formation in developing countries by reference to development.

It has become increasingly clear that this question is central to the management of growth phenomena in the developing countries, and that it is necessary for them, in the context of development, to put commodity price stabilization schemes into place. In sum, STABEX has not allowed for an effective stabilization of the price system.

## 1.10 Trade cooperation

The provisions of the Lomé Conventions pertaining to trade cooperation have not had much impact on trade flows in the ACP countries. This limited impact is noticeable in four respects. First, in the dimension of trade between the ACP countries and the rest of the world: the share of the ACP countries in world trade remains marginal and was in fact on a downward trend during the period from the mid-1970s to the early 1980s. This proportion decreased from 3.5 per cent in 1970 to 2.8 per cent in 1981<sup>8</sup>.

Secondly, the share of ACP countries in developing-country trade diminished significantly during the 1970s. Their exports decreased from 18 per cent of developing-country exports as a whole to 9 per

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<sup>6</sup> S.Pré, *op.cit.*

<sup>7</sup> A. Emmanuel, *La stabilisation, alibi de l'exploitation internationale*, *Third World Review*, vol. XVII, April-June 1976.

<sup>8</sup> M.P. Roy, *op.cit.*



cent over the period 1970-1981<sup>9</sup>. Imports exhibited the same downward trend in comparison with developing-country imports as a whole: the share of imports into ACP country imports fell from 16 per cent in 1970 to 9 per cent by 1981<sup>10</sup>.

The share of the ACP in EEC trade also diminished. Even though the value of this trade increased, there was a net fall with regard to their share in the EU's international trade as a whole. The value of EU imports from the ACP countries had increased from \$US 4.7 billion in 1970 to nearly \$US 27 billion in 1980, which represents an annual rate of growth of 20 per cent, but over the same period, their share in total imports from the EU decreased from 7.8 per cent to 7.1 per cent. Exports from the EU countries into the ACP countries increased in value from \$US 3.5 billion to \$US 22 billion over the period 1970-1980, but the share of these exports in total exports from the EU decreased from 7.2 per cent to 6.3 per cent.

Finally, to take the composition of EU-ACP trade by commodity mix, it emerges that exports from the ACP countries consisted largely of a set of primary commodities: the share of primary commodities in exports stabilized around 95 per cent whilst the share of industrial commodities varied only slightly, from 2.3 per cent in 1975 to 3.6 per cent in 1980<sup>11</sup>.

In sum, it is clear that the Lomé Conventions, and in particular, the arrangements relating to trade cooperation, have had little impact on the trade relations with ACP countries, which have not been able to avoid the deterioration of their share in the trade flows, nor the persistence of agro-based exports in their trade structures. Consequently, the various arrangements have not enabled the ACP countries to reverse the trend of specialization in agro-based exports in the international economic arena, and continue to play the role of suppliers of primary commodities to Europe.

## **1.11 Financial cooperation**

The arrangements under the Lomé Conventions relating to financial cooperation have not prevented heavy indebtedness on the part of the ACP countries. Indeed, the drop in the prices of primary commodities which began during the late 1970s was manifested, for the ACP countries, in a massive recourse to international debt. From around 1984, the ACP countries were faced with a debt crisis: their arrears reached \$US 12 billion in 1986 and was increasing at a rate of \$US 4 billion annually.

The EEC subsequently focused on Africa's debt crisis. Starting from 1987, it formulated a special programme on debt within the framework of the Lomé Conventions, which was designed to supplement the structural adjustment programmes (SAPs) of the IMF and the World Bank, and was aimed at

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<sup>9</sup> M.P. Roy, op.cit.

<sup>10</sup> M.P. Roy, op.cit.

<sup>11</sup> M.P. Roy, op.cit.

providing export assistance to the ACP countries<sup>12</sup>. Under this programme, the EEC distinguished two categories of countries:

- Those that had applied SAPs, supported by the World Bank and the IMF. In this case, EEC intervention was incorporated into these programmes and pursues the same objectives through the formulation of overarching programmes or programmes specifically focused on import assistance;
- Those that had not applied the SAPs. The EEC would then urge these countries to adhere to them in order to be able to benefit from import assistance from the EU.

Thus, within the context of the debt crisis of the ACP countries, an element of complementarity on the ground is observable between the IMF and the EEC.

This trend was buttressed by the signing of Lomé IV in December 1989, under which the EEC imposed the conditionality of structural adjustment for the provision of assistance to ACP countries. These new arrangements gave rise to opposition and criticism in some quarters, and in particular, those by Edgar Pisani, Commissioner for Cooperation and Development during the negotiations under the third Lomé Conventions, who stated that Lomé would no longer be Lomé if there was to be a commitment along the path of adjustments, and that Lomé was a pro-development instrument.

Consequently, the track record of the Lomé Conventions is fairly modest. First, a wide gap is observable between the stated principles and the practical dimension of these arrangements. Additionally, despite the arrangements, the financial aid and the industrial-development support flowing from them, African countries have not been able to put in place a robust and competitive growth impetus.

## **1.12 New proposals for EU/ACP cooperation**

The failure of the Lomé Conventions led to a broad review of these arrangements and to an attempt to develop a new cooperation model between Europe and African countries.

The new proposals and the options of the European Commission are contained in a “Green Paper” published in 1997.<sup>13</sup> This “Green Paper” starts by recalling the context in which the new round of negotiations will operate – i.e. the emergence of the internal market and the adoption of a single currency, which make it necessary for Europe to embark on a major institutional review. The Commission goes on to state “that the development of the internal market and the prospect of the adoption of a single currency, review of the Treaty and other institutional reforms under discussion within the framework of the Intergovernmental Conference, formulation of a new financial order in the medium term, and the

<sup>12</sup> FRESEA, Ajustement structurel de la CEE sur le FMI, September 1988.

<sup>13</sup> COM (96) 570 final of 20 November 1996 “Green Paper on relations between the European Union and the ACP countries on the eve of the 21st century; challenges and options for a new partnership”.

prospect of enlargement to the associated countries of Central and Eastern Europe, to the Baltic States, to Cyprus and Malta, constitute so many milestones in the coming years, and prepare Europe to face the challenges of the 21<sup>st</sup> century”.

In this context, Europe sought to embark on a debate on the future of the Lomé Conventions while taking into consideration two important questions. The first was the phenomenon of globalization and the need to fit cooperation arrangements into new realities. The Commission stressed that a new economic plan, the extension of the market economy and the end of exclusive or privileged relations have modified the conditions of supply and demand in the global markets. The conclusion of trade negotiations under the Uruguay Round created a new multilateral context, accelerating the process of globalization of the economy brought about by technological developments and by the liberalization of economic policies commencing in the 1980s. Interdependence was also perceived to be growing and expanding beyond the economic and financial spheres, into the social and environmental spheres.<sup>14</sup> In this view, Europe sought to integrate the new Convention into the framework of globalization. The Commission moreover asserted that at the dawn of the 21<sup>st</sup> century, a thoroughgoing reflection was called for on the future orientation of the relations between the European Union and the ACP countries. The closeness of the expiry of the current Convention in February 2000, the contractual obligation to embark on negotiations between the two parties at least 18 months before that date, as well as the need to define, within the context of the strengthened disciplines of the WTO, a trade cooperation framework wholly in conformity with the new multilateral rules, provided a unique opportunity for EU and ACP countries to embark on a broad debate on the future of relations between them.<sup>15</sup>

The EU sought to redefine its relationship with developing countries and stated that: “These new policies are the Union’s response to the political and economic changes under way on the international scene and reflect the fact that the Union’s external relations are not only global in scope but tailored to specific circumstances”<sup>16</sup> In addition therefore to normalizing its relationship with ACP countries, the EU embarked on initiatives with other developing countries in Eastern Europe, the Mediterranean and Latin America.

On this basis, Europe embarked on two main objectives for a new EU/ACP Convention. The first related to increasing the effectiveness of aid in the light of the criticisms that have been levelled in recent years at the track record of the ACP Agreements. Indeed, the Commission pointed out in its Green Paper that “in view of the patchy achievements of ACP-EU cooperation and a degree of scepticism about the scope for developing the ACP countries against the background of tight budgets and an inward looking tendency borne of social difficulties in Europe, partners on both sides are now seeking to place more emphasis on the effectiveness of cooperation and to review their priorities with an eye to reflecting better the concerns

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<sup>14</sup> European Commission, *op.cit.*, p.I.

<sup>15</sup> European Commission, *op.cit.*, p.II.

<sup>16</sup> European Commission, *op.cit.* p.I

of European and ACP societies”.<sup>17</sup> In parallel with increasing the effectiveness of aid, the Commission underscored the greater differentiation of the ACP countries which calls for specific treatment and an enhanced adaptability of Europe’s cooperation strategies with the ACP countries.

Consequently, cooperation agreements that made aid more effective and more relevant to developing countries required, in the Commission’s view, the development of a market economy and greater integration of the ACP countries into global processes. The Commission Green Paper stresses the fact that “in a rapidly changing global and regional environment, the ACP countries have to face up to many challenges: halting their economic marginalization and integrating into international trade, implementing the domestic, political and social changes needed to build a democratic society and a market economy, and creating the conditions for sustainable development and poverty alleviation in a context of still high population growth”.<sup>18</sup>

Europe therefore appeared to be set on the path of a new framework for its cooperation relationship with sub-Saharan African countries. In this context, it envisaged four scenarios in its future relationship with the ACP countries:

- The first scenario was the status quo, under which the overall agreement between the EU and the ACP countries was maintained, but with minor adjustments;
- In the second scenario, differentiation between the ACP countries would be taken a step further, while at the same time the overall agreement would be supplemented by more specific bilateral agreements;
- The third scenario consisted of splitting up the EU/ACP Convention into regional agreements. In this view, the agreement between the EU and sub-Saharan Africa would also embrace South Africa. However, the agreements with the Caribbean and Pacific countries would be integrated into an enlarged cooperation framework between Europe, Latin America and Asia; and
- The fourth scenario would comprise a specific agreement for the least developed countries of the ACP and possibly open to other LDCs.

These general proposals embodied Europe’s determination to normalize its relationship with the ACP countries and to weave this into the overall framework of economic liberalization and integration into the globalization process. The existence of a formal agreement had hitherto resulted in Europe effecting specific treatment to ACP countries in order to help them build competitive growth dynamics. Through the review of the Lomé Conventions, Europe’s objective is to unify its policy vis-à-vis the developing countries and to integrate the ACP countries into the same reciprocal approach as its other partners.

The shift in the cooperation perspectives is embodied in the trade proposals formulated by Europe vis-à-vis the ACP countries. The Commission notes that the ACP countries have not been able to benefit

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<sup>17</sup> European Commission, op.cit.p.III

<sup>18</sup> European Commission, op.cit. p.IV

from the non-reciprocal preferences granted them by Europe. It points out that “ACP exports to the EU have been no exception to those countries’ generally poor trade performance and their share of the EU market has declined appreciably dropping from 6.7 per cent in 1976 to 2.8 per cent in 1994”<sup>19</sup>. There are accordingly various EU options relating to external economic cooperation with the ACP countries:

- The first option consists in maintaining the status quo with the present system of differentiated but non-reciprocal preferences;
- The second option relates to the application of the Community’s generalized scheme of preferences (GSP) on a bilateral or multilateral basis;
- The third option reposes in the application of uniform reciprocity with the freeing- up, after a transitional period, of the markets of the ACP countries to EU products. This option, the Commission points out, would be the one most in line with WTO Rounds; and
- The fourth option consists in the application of differentiated reciprocity between the EU and different groups of countries or between the EU and individual countries.

Thus, the EU proposals – with the exception of the first one, which is by no means preferred by European experts – are inclined towards the elimination of non-reciprocal preferences applied by the EU to ACP countries. These trade agreements were sufficiently ingrained into the EU orientations during the 1970s to impart a new content into its cooperation relations with African countries. At present, however, the Commission seems to be treating free trade and respect for WTO rules as the framework for its new cooperation relationship with the ACP countries.

This perspective embraces capita movements to the extent that the Commission has sought to integrate them into new agreements on the protection of foreign investment. Thus, the Commission states in its Green Paper that “international agreements are being negotiated and the Commission is pushing for progress in the WTO context. Negotiations are also under way in the Organization for Economic Cooperation and Development (OECD) with a view to a Multilateral Agreement on Investment”<sup>20</sup>. It is well known, however, that the Multilateral Agreement on Investment has not made much headway.

Consequently, the patchy achievements of the Lomé Conventions led Europe to propose a major renewal of these arrangements. The EU cited the ineffectiveness of the conventions and the increasing differentiation between countries as the basis for proposing the discontinuation of non-reciprocal treatment and for a reworking of EU-ACP cooperation to reflect the realities of globalization. This integration, and greater trade liberalization, would allow for better allocation of resources in the ACP countries and improved effectiveness of European cooperation and aid.

The EU perspective on the status of the Lomé Conventions is not shared by ACP countries. In regard

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<sup>19</sup> European Commission, *op.cit.*, p.IX

<sup>20</sup> European Commission, *op.cit.*, p. IX

to aid effectiveness, experts hold the view that the Lomé trade protocols have enabled some countries to improve their economic performance. Carl Greenidge, Deputy Secretary – General of the ACP Group, observes: “it cannot be denied that the ACP share of the European market has declined. But the trouble is that very often, the analysis stops there, which I think is unsatisfactory. If you look more carefully, you get a different picture. Certain countries notably those that have special access via the protocols like Mauritius, Jamaica and Côte d’Ivoire, have done well”<sup>21</sup>. Moreover, African experts lay emphasis on the fall in prices of export commodities from ACP countries to underscore the limitations of these initiatives. It is estimated that between 1980 and 1992, losses from the collapse in commodity prices of exports from developing countries were equivalent to about twice the volume of EU aid going to these countries.

On the issue of the growing divergences within the ACP Group, experts from the ACP countries stress that the present Convention has always taken account of the diversity between countries. C. Greenidge observes that the Convention as it stands is a multi-faceted tool which allows for differentiation by sector, country or region<sup>22</sup>.

The main issue, however, remains that of maintenance of preferential treatment for ACP countries. The EU proposals are geared towards free trade aimed at opening up the borders of ACP countries. However, this perspective attracts a number of criticisms related to the fact that the productivity differential between African economies and the EU area, is such that liberalization would jeopardize the continent’s manufacturing sector “How can you say you are going to have a poverty-focused cooperation programme”, C. Greenidge asks, “and, at the same time, destroy the trade regime which is a lifeline for many of the countries in question?”<sup>23</sup>.

The ACP countries too, have raised policy issues pertaining to the deliberations on renewing the Lomé Conventions. The first question relates to splitting up of the Conventions in to regional agreements. Such splitting up would, in the view of experts from ACP countries, result in a weakening of these countries vis-à-vis Europe and further marginalize their vital interests in negotiations. In this regard, C. Greenidge points out: “from my own experience as a negotiator on the ACP side ... I believe that the current structure and size of the Group has assisted it in negotiating with the EU. I would be surprised if the ACP Group were to find negotiations in smaller groups more effective. In negotiations, the Group provides a countervailing power, if you like, to Europe”<sup>24</sup>.

Clearly, these proposals, apart from their openness, are underpinned by a fundamental perspective, which is to consider that the impediments and drawbacks to growth are linked to a formidable interventionism in internal economic systems and in international economic relations. In this context, internal liberalization

<sup>21</sup> The Courier, Africa, Caribbean, Pacific, European Union, No. 162, April-March 1997, p.19

<sup>22</sup> The Courier, op.cit., p.20.

<sup>23</sup> The Courier, op.cit., p.20

<sup>24</sup> The Courier, op.cit., p.20

can, just like international integration processes, revamp supply and streamline integration at the global level. It was the intention of the Commission, as far back as 1997, to weave these cooperation agreements with the ACP countries into that perspective.

### **1.13 The Cotonou Cooperation Agreement**

At the end of two years of negotiations between the ACP countries and the EU, a new agreement known as the Cotonou Agreement was signed in Cotonou, Benin, in June 2000.

The Cotonou Agreement, which entered into force on 1 April 2003, was aimed at re-establishing macroeconomic equilibria, developing the private sector, improving social services, promoting regional integration, promoting equality of opportunity between men and women, protecting the environment and gradually and reciprocally eliminating trade barriers. The Cotonou Agreement will run for a period of 20 years, with possible revisions every five years. It rests on five interdependent pillars:

- A comprehensive political dimension consisting in an enhanced dialogue, and a special focus on conflict prevention and resolution, as well as on governance issues and the respect of human rights and the rule of law;
- A set of participatory approaches, including greater emphasis on the role of civil society;
- A focus on poverty reduction, and a central role for the private sector and regional integration in development strategies;
- A new framework for trade and economic cooperation in conformity with the World Trade Organization (WTO) arrangements in order to integrate the ACP countries into the global economy, and put regional integration at the forefront of priorities; and
- A reform of financial cooperation aimed at ensuring, in particular, simplification, coherence, enhanced flexibility and continued adaptability of aid to the specific conditions of each country.

As far as trade is concerned, the Cotonou Agreement does not really detail the provisions for the future. It does however offer the pursuit of Lomé non-reciprocal trade arrangements until 2008 at the latest, and offer a framework of negotiations for future trade arrangements after that date. The agreement stipulates clearly that after this deadline, a trade agreement compatible with WTO rules will have to be put in place. This arrangement was validated by WTO members during the Doha WTO Ministerial Conference in September 2001.

### **1.14 Compatibility with WTO rules**

One of the most basic WTO principles – the Most Favoured Nation (MFN) treatment – stipulates that a trade concession granted by a member State to another should be automatically extended to all other WTO members (Article 1 of the General Agreement on Tariffs and Trade). There are two main exceptions

to this MFN principle. The first one allows preferential treatment when based on development concerns; the second one is with regard to free trade areas (FTAs).

As we have seen in the introduction (*supra*), the first exception has to respect the principle of non-discrimination between countries at the same level of development. In regard to the FTAs, Article XXIV of the General Agreement on Tariffs and Trade (GATT) defines the modalities under which WTO members may waive the MFN clause. The rationale which underpins this derogation from the MFN principle is that, under certain conditions, free-trade agreements benefit not only the members, but also the global economy, through trade creation which engenders an enhanced global well-being. Agreements such as the EPAs would fall into this category if they are reciprocal in nature (both parties offer each other symmetrical preferential treatment).

However, ACP countries might want to explore possibilities of maintaining a certain degree of asymmetry in their future agreement with the EU. Article XXIV leaves room for manoeuvre with regard to this point. In particular, article (8-b) stipulates that duties and other restrictive regulations – are to be eliminated on “substantially all the trade” between the members of a preferential agreement. The exact meaning of “substantially all the trade” is strongly debated. How much trade may not be liberalized is a crucial question, and could be important for African countries willing to maintain some protection on some of their trade with the EU in the context of an EPA. It is generally thought that at least 90 per cent of the trade has to be liberalized under a free trade agreement, but there is no legal confirmation for that figure. The EU-South Africa free trade agreement, for example, did interpret Article XXIV in a manner allowing for some protection within the 90 per cent limit, in a non-reciprocal manner. Under this free trade agreement, the EU agreed to extend liberalization on 95 per cent of its trade with South Africa, while South Africa agreed to liberalize “only” 86 per cent of its imports from the EU.

The agreement, by mentioning “a reasonable length of time” (Article XXIV), maintains some ambiguity in the implementation schedule. Again, there is no legal or official interpretation on what a reasonable length of time might be, although it is conventionally thought to be 10 years. For example, South Africa was offered 12 years to implement liberalization, which was longer than the length of time the EU is allowed to liberalize its imports from South Africa. Thus, this ambiguity can be utilized to maintain a certain degree of asymmetry.

Within the framework of the EPAs, the length of time for implementation can be a very important consideration for African countries, because it determines the time frame necessary for embarking on internal adjustments before complete liberalization. As we shall see below, African countries cannot benefit from the EPAs unless:

- Full reciprocity is preceded by deepened regional integration; and
- The implementation time frames are long enough to allow for the necessary internal adjustments and absorption of the adjustment costs that such liberalization entails.



Finally, an important consideration for African countries (and also for other developing countries) is that the Doha Declaration (paragraph 29) launched an effort to clarify the understanding of Article XXIV and the role of special and differential treatment in regional trade agreements. These points of negotiations under the WTO will be of crucial importance and could determine what form the EPAs will take in the future, as well as the degree of flexibility that could flow from it for African countries. An adequate degree of flexibility would consequently make it possible to propagate the innovative spirit launched under the Lomé Conventions.

In sum, it appears that the EPAs tie in with a process that was launched under the Cotonou Agreements. This process is set apart from the innovative spirit of the Lomé Conventions and embodies cooperation relations between Europe and the ACP countries within the framework of deepened trade liberalization incorporating the reciprocity principle at the heart of the new agreements. It is this change of perspective that we seek to analyse in this section on West Africa.

## II. Africa and ECOWAS in international trade: facts and figures

While the total volume of trade has virtually doubled over the past few decades, Africa's share of world trade has steadily declined, from over 7 per cent after World War II to around 2 per cent in 2002.

An effective means by which African countries can increase their share of world trade is through increased intra-African trade. In 2002, intra-African trade accounted for only 8 per cent of total trade flows to and from Africa. However, when only exports of manufactured and agricultural goods are considered, the share of intra-African trade comes close to 15 per cent (or \$US 8.5 billion). Historical data reveal that the greater part of international trade is realized within geographical areas that have attained a certain level of political and economic integration, such as the EU, the North American Free Trade Area (NAFTA), and the Association of South-East Asian Nations (ASEAN).

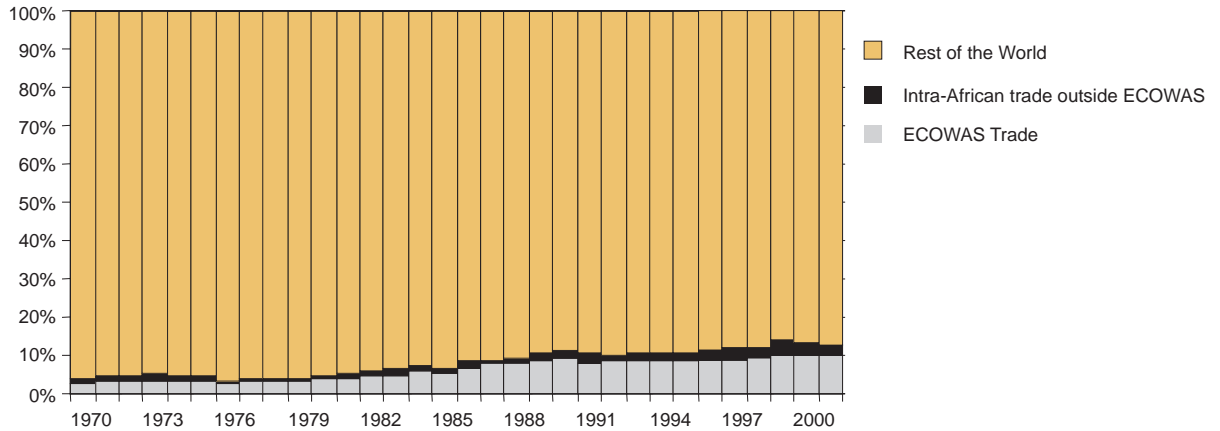
The modest performance of intra-regional trade in Africa is attributable to a number of factors, including:

- Inadequate or unsuitable infrastructure, which limits the cross-border trade potential as well as the movement of people;
- Structural constraints linked to the fact that many countries within the same region produce similar goods, which means that countries seek to export towards other regions; and
- The effects of regional conflicts which dampen confidence between members of the same region, and thereby create an unfavourable environment for integration.

### 2.1 The position of ECOWAS in international trade

Trade among the ECOWAS countries as a proportion of their total trade increased from 3 per cent in the early 1970s to over 10 per cent in 2001. The steady growth of the share of intra-ECOWAS trade in the total trade has to be viewed against the relative stagnation observed over the same period in regard to trade between ECOWAS countries and the rest of Africa.

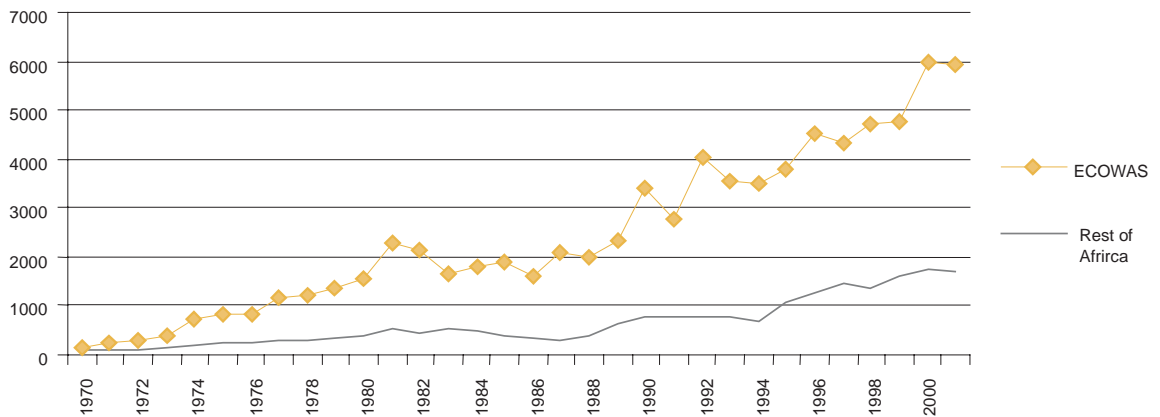
**Figure 1: Share of ECOWAS trade, % (1970-2001)**



source : UNCTAD Statistical manual, authors' computations

In terms of trade flows, trade between ECOWAS and the rest of Africa witnessed relatively robust growth during 1970-2001. (In value terms, it increased 18 times during that period). However, it is in intra-ECOWAS trade where the greatest increase was observed, with a 36-fold increase during 1970-2001 (see Fig.2).

**Figure 2: ECOWAS trade in Africa in millions of dollars (1970-2001)**

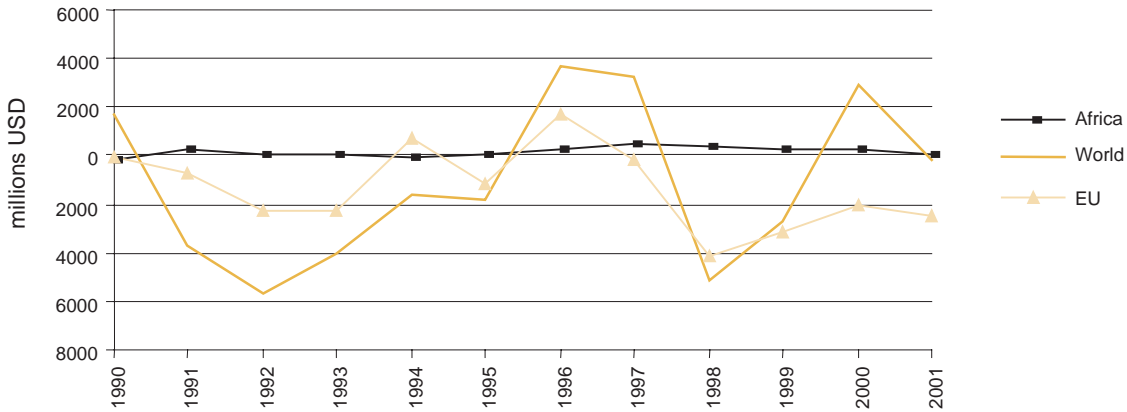


source : UNCTAD Statistical manual, authors' computations

It might be supposed at first that the multilateral trade negotiations in which ECOWAS countries were involved would vitiate this trend, because of the increase in the volume of trade with other countries. However, that is not as evident as it seems. The dynamic effects of the process of “opening-up” can foster new opportunities for intra-regional trade, particularly within the framework of strengthened integration.

**Trade relations between ECOWAS and the EU**

**Figure 3 : ECOWAS balance of trade**



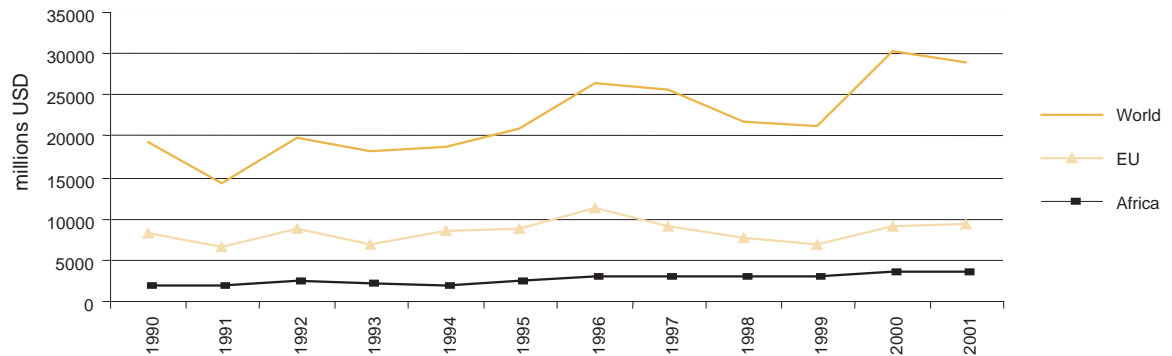
source : UNCTAD Statistical manual, authors' computations

The trade balance between West African countries and the EU declined sharply from around 1996. From a trade surplus of around \$US 1.7 billion in that year, it had stabilized at around \$US 2.5 billion by 2001. The overall trade balance has been very volatile. Although nearing equilibrium towards the end of the period under consideration, it witnessed significant fluctuations throughout. It is noteworthy that with regard to the rest of Africa, the region has been in equilibrium.

**2.2 Exports**

In terms of exports, the region did not register any significant export growth towards the EU during the 1990s. A slight decline in exports towards the EU around the mid-1990s was followed by a shift back to the levels reached at the beginning of the decade, i.e. around \$US 3.2 billion.

**Figure 4: ECOWAS exports**



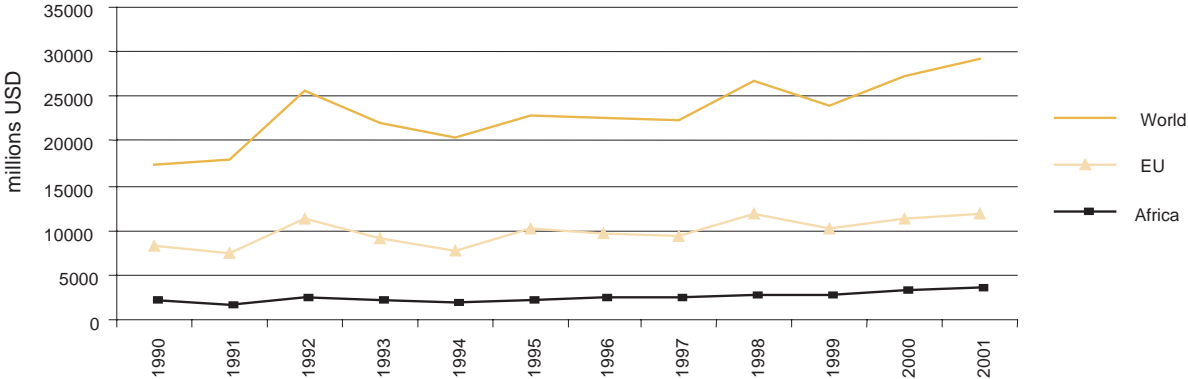
Source: UNCTAD Statistical manual, authors' computations.

-Exports towards the rest of Africa remained stable at the relatively low level of around \$US 3 billion. Total exports from the region, however, increased noticeably, from over \$US 19 billion to nearly \$US 30 billion towards the end of the 1990s. Exports towards the EU remained relatively stable at around \$US 10 billion. However, while the export volumes to the EU had accounted for around half of total exports from the region during the early 1990s, the proportion decreased to just one-third a decade later. This underscores the development of diversification of the destinations for ECOWAS exports.

## 2.3 Imports

ECOWAS imports from the EU increased fairly modestly (40 per cent over the whole period under consideration), from over \$US 8 billion in 1990 to nearly \$US 12 billion a decade later. A similar trend, although more marked, is observable in regard to total imports, which is easily explained by the fact that the EU is the region's main supplier. However, as with the exports, the imports have been coming from increasingly varied suppliers.

Figure 5 : ECOWAS imports



source : UNCTAD Statistical manual authors' computations

## III. General equilibrium analytical framework-the GTAP model

### 3.1 Why a general equilibrium model?

Trade policy analysis largely involves analysing implications of trade policy instruments on the production structure in economies at the national and global level. Trade policy instruments such as tariffs and quotas have direct and indirect effects on the relative prices of commodities produced in a given country. As the mix of goods and services produced changes, so does the demand for factors of production. Consequently, in any given economy, it is difficult to conceive a situation where the change in trade policy would affect only one sector. Due to the forward and backward linkages and their related strengths existing in a particular economy, the result is always one in which the relative mix of sectoral outputs changes. This by extension, affects the relative mix of the different sectors.

The country-level effects on output mix and demands for factors of production can in the context of international trade be extended to the global economy. Changes in relative prices of outputs and inputs resulting in a given country's change in trade policy are transmitted to the industries and input markets of other economies that the country trades with. Therefore, for trade policy analysis to be meaningful and for robust results to be produced, the interactions that prevail among different sectors as a result of a change in a given country's (or group of countries) trade policy instruments must be taken into account. The general equilibrium methodology provides an analytical framework that allows these inter and intra sectoral changes in output mix, and by extension the demand for different factors of production, to be captured.

However, these models are not perfect, especially the static ones. This is because they fail to take account of the dynamic effects that accompany changes taking place from 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). 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 allocation 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.

### 3.2 Description of the data and aggregation

The GTAP model is used together with the GTAP database. The database, like the model, captures different individual and composites of countries. In this exposition, Version 5 of the database is utilized.

The base year for this version is 1997 and recognizes regions as well as 57 sectors and five factors of production. Thus, for each individual or composite region, there are 57 sectors whose data is captured in the overall GTAP database. As already pointed out, 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 of the database. The majority of African countries are captured through one or other regional composites. Thus, the ECOWAS countries fall under the “rest of sub-Saharan Africa” aggregates.

Bilateral trade data is a critical component of the GTAP database. It is this element of bilateral trade flows that transmits policy and growth shocks between countries. Indeed, trade shares are important in explaining the simulation results. The 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 the International Monetary Fund (IMF), Food and Agriculture Organization (FAO) and the World Bank.

Another important subcomponent of the GTAP database is the protection data. This set of 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. Merchandize tariffs on the other hand are available from the World Integrated Trade Solution project of the World Bank and United Nations Conference on Trade and Development (UNCTAD) (details of WITS are presented in the section below discussing the SMART methodology). 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.

In this study, the 66 regions have thus been aggregated into 12 regions with the various African countries or composites of countries available (table A in the annex). In regard to the sectors, the aggregation should be at a level that allows for analysis of the implications of the EPA in terms of primary commodities, light industries, heavy industry, trade and services. Consequently, from 57 GTAP sectors, we have come down to 13 sectors.



## IV. The characteristics of the African economies in the GTAP database

### 4.1. Macroeconomic and trade characteristics

Table 3 gives a summary of the macroeconomic and trade characteristics of the African economies based on the 1997 base year data in the GTAP database. Clearly, the African economies are generally small in size with a GDP of less than \$US 10 billion. The breakdown of factors in terms of value-added shows the preponderance of unskilled labour. This may have implications on the concentration and quality of goods.

The key aspect in the context of this study is probably the level of dependence of these economies on trade (table 2). Thus, for example, the rest of sub-Saharan Africa (SSA), which includes the ECOWAS countries, has a trade dependence<sup>25</sup> of 57.5 per cent of GDP, which is the exact average figure for Africa.

**Table 2: Macroeconomic characteristics of the African and non-African countries**

CODE pays (See annex 1)	EU	XSC*	XSF**	XSS***	ROW
<b>GDP and trade flows (final demand, billion US\$ 1997)</b>					
GDP	8254.2	139.1	50.9	156.6	20381.0
Exports	2577	34.9	16.9	41.2	3739.2
Imports	2509.9	32.2	16.1	48.9	3802.2
<b>Trade dependence (shares, %GDP)</b>					
Exports	31.2	25.1	0.33	26.3	18.3
Imports	30.4	23.2	0.32	31.2	18.7
<b>Factor shares (% of value added)</b>					
Land	0.4	0.5	3.23	2.2	1.3
Unskilled labour	33.4	40.7	36.78	41.7	35.8
Skilled labour	21.8	19.6	9.36	10.7	20.9
Capital	44.1	37.3	47.09	40.6	41.1
Natural resources	0.3	1.9	3.55	4.8	0.9

Source: GTAP Database Version 5 Aggregation

\*South Africa and Namibia

\*\* Southern Africa: Angola, Botswana, Malawi, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe

\*\*\* Rest of Sub-Saharan Africa (including ECOWAS)

<sup>25</sup> Share of total exports and imports by reference to GDP.

In terms of production structures, the agro-processing sector accounts for sizeable share for the rest of sub-Saharan Africa (XSS), which includes ECOWAS. The competitiveness of such industries would be an important question for the EPAs.

Trade and services appear to be crucial sectors in all the countries. They account for at least one-third of the production structures. These sectors are likely to be key areas of interest in the EPA negotiations.

**Table 3: Structure de la production (% de la production)**

	EU	XSC*	XSF**	XSS***	ROW
Cereals	0.3	0.5	4.0	4.9	0.9
Vegetables	0.5	0.6	4.6	2.3	0.9
Oil seeds	0.1	0	0.4	0.5	0.2
Sugar	0.1	0.1	0.9	0.5	0.1
Cotton	0	0	0.6	0.8	0.1
Other crops	0.3	0.4	5.8	3.4	0.3
Livestock	1.3	1.9	2.4	2.9	1.3
Natural resources	0.8	5.6	9.5	11.7	2.5
Agro-processing	5.7	7	10.0	11.4	5.2
Light manufactures	5.5	5.8	4.3	5	6
Industry	23.9	22.9	9.1	9.9	23.2
Trade	16.4	18.6	19.4	20.8	16.9
Services	45.2	36.5	29.2	25.9	42.4
Total	100	100	100.0	100	100

Source: GTAP Version 5

\* South Africa and Namibia

\*\* Africa Australia: Angola, Botswana, Malawi, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe

\*\*\* Rest of Sub-Saharan Africa (including ECOWAS)

## 4.2 Trade by sectors

Tables 4 and 5 show the export and import shares by sectors of the total exports and imports of goods and services respectively in each of the economies. For the rest of sub-Saharan Africa cluster, natural resources predominate in exports. To a lesser extent, industrial based exports are substantial as well.

**Table 4: Share of exports by sector (% of total exports)**

	<b>EU</b>	<b>XSC*</b>	<b>XSF**</b>	<b>XSS***</b>	<b>ROW</b>
Grains	0.3	0.7	0.7	0.1	0.7
Vegetables	0.7	2.1	2.3	1.6	0.6
Oil seeds	0.1	0.1	0.5	0.4	0.4
Sugar	0	0	0.1	0	0
Cotton	0	0.1	3.5	2.9	0.2
Other crops	0.4	0.5	22.9	9.8	0.7
Livestock	0.4	0.6	0.5	0.3	0.4
Natural resources	1.2	11.7	19.1	48	8.2
Agro-processing	5.9	4.1	8.3	5.2	3.9
Light manufactures	10.6	7.7	5.8	3.8	10.5
Industry	61.8	57.2	16.5	13.5	56.6
Trade	7.4	8.9	8.9	6.9	8.5
Services	11.2	6.4	11.1	7.3	9.4
Total	100	100	100.0	100	100

Source: GTAP Database Version 5

\* South Africa and Namibia

\*\* Africa Australia: Angola, Botswana, Malawi, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe

\*\*\* Rest of Sub-Saharan Africa (including ECOWAS)

The import shares are also an important starting point in understanding the potential implications of the EPAs. Table 5 shows the total imports of the various commodities into each of the countries in the aggregation. The import structure in the rest of sub-Saharan Africa (XSS) is very similar to the export structure. Natural resources predominate in the imports (the XSS aggregation does not only comprise the ECOWAS countries). However, the most important imports information would be the distribution of these imports in terms of source and type. In other words, data on the imports from the EU into each of these countries would be more informative with respect to EPAs analysis particularly on the issue of reciprocity as this would have a bearing on the revenue implications.

**Table 5: Share of imports by sector (% of total imports)**

	<b>EU</b>	<b>South Africa</b>	<b>AA</b>	<b>XSS</b>	<b>RDM</b>
Cereals	0.4	0.9	0.8	0.1	1
Vegetables	0.8	2.9	2.6	2.1	0.8
Oil seeds	0.1	0.2	0.7	0.6	0.5

	EU	South Africa	AA	XSS	RDM
Sugar	0	0	0.1	0	0
Cotton	0	0.1	3.3	2.9	0.2
Other crops	0.4	0.5	23.2	10.3	0.7
Livestock	0.4	0.6	0.5	0.3	0.4
Natural resources	1.2	12.7	18.6	47.6	8.1
Agro-processing	6.7	5.3	10.8	6.5	5
Light manufactures	10.8	8	6.0	3.9	11.2
Industry	61.6	55.3	16.0	12.9	55.8
Trade	7	7.9	7.8	6.2	7.7
Services	10.6	5.7	9.8	6.6	8.6
Total	100	100	100.0	100	100

### 4.3 Level and structure of protection: the base for the EPAs

The level and structure of protection as captured in the GTAP database provides the initial conditions or the benchmark from which the trade liberalization aspects of the EPAs would have to be assessed. This benchmark in respect to trade liberalization analysis needs to be seen at two levels. The first level is the prevailing protection against imports from the European Union. The second level pertains to the intra-African protection structure.

**Table 6: Ad valorem tariffs (%) on imports from the EU**

	XSC*	XSF**	XSS***
Grains	38.8	19.2	11.1
Vegetables	25.6	18.4	18.4
Oilseeds	38.2	21.9	9.8
Sugar	0.2	6.1	0
Cotton	17.1	16.7	3.5
Other crops	9.2	14.0	16.6
Livestock	7.3	11.1	15
Natural resources	0.1	12.2	7.6
Agro-processing	71.4	32.3	22.9
Light manufactures	12.1	21.5	20.9
Industry	7.2	16.9	14.7
Trade	0	2.0	1.4
Services	0	2.5	4.1

	<b>XSC*</b>	<b>XSF**</b>	<b>XSS***</b>
Average (excl. trade and services)	20.7	17.3	12.8
Average (incl. Trade and services)	17.5	15.0	11.2

Source: GTAP Database Version 5

\* South Africa and Namibia

\*\* Southern Africa: Angola, Botswana, Malawi, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe

\*\*\* Rest of sub-Saharan Africa (including ECOWAS)

Table 6 shows the average applied tariffs on goods imported from the EU. It can be seen that on average, agro-processed and light manufactures are heavily protected as evidenced by the high tariffs. It should also be noted that the high tariffs are an important source of revenue for ECOWAS countries. Tariff reduction within the framework of full reciprocity to the EU could address the fragility of the broad macroeconomic equilibria.

Tables 7 and 8 indicate regional tariff structures. Table 7 shows the average intra-Africa trade ad valorem tariffs. It can be seen from this table that African countries levy substantial tariffs on intra-African trade. Thus, apart from the question of reciprocity to the EU, most of these intra-African tariffs will have to be eliminated accentuating concerns regarding de-industrialization and revenue shortfalls in most of the countries.

**Table 7: Average intra-Africa trade ad valorem tariffs (%)**

	<b>XSF</b>	<b>XSC</b>	<b>XSS</b>
XSF	12.7	14.1	12.8
XSC	9.8	0.0	14.3
XSS	13.5	15.2	7.8
Average tariff rate	12.0	9.8	11.6

Source: GTAP Database Version 5 Aggregation

**Table 8: Average commodity tariffs on intra-African trade (%)**

	<b>AA</b>	<b>South Africa</b>	<b>XSS</b>
Cereals	14.3	30.7	7.6
Vegetables	20.9	22.8	19.9
Oilseeds	18.3	34	18.4
Sugar	4.7	0.1	0
Cotton	6.3	9.5	3.6
Other crops	17.8	8.2	37.4
Livestock	6.7	5.1	12.3
Natural resources	10.6	0.7	10.3
Agro-processing	25.7	56.2	19.7
Light manufactures	22.2	13.3	17.1
Industry	17.1	4.9	17.8
Trade	2.0	0	1.2
Services	2.6	0	3

Source: ECA simulations, GTAP V.5.4

Most of the tariff barriers with respect to intra-African trade are levied on agro-processing and light manufactures (see Table 8). In the absence of reciprocity with the EU, there is potential for trade creation in the African trade if these tariff barriers were to be eliminated.<sup>26</sup>

<sup>26</sup> Deepened regional integration, through the elimination of tariffs on intra-Africa trade and non-tariff barriers, is one of the principles of the EPAs.

## V. The partial equilibrium modelling framework – the WITS/SMART model

### 5.1 Why a partial equilibrium model?

General equilibrium models are an important methodological tool in trade policy analysis, because they measure not only the direct effects of the simulated changes, but also the indirect (second-round) effects, which include inter-industry effects and macroeconomic adjustments. However, the majority of the African countries are not individually captured in the general equilibrium modelling and database frameworks due to lack of data disaggregation at the country level. Only a few are individually captured, while the majority are part of composites of countries, *viz.* the “rest of SACU”, the rest of Southern Africa”, and the “rest of sub-Saharan Africa”, which includes ECOWAS. Consequently, the partial equilibrium modelling framework emerges as a second-best option for those countries that are not captured individually in the GTAP database.

This section therefore describes the partial equilibrium modelling methodology that was used in the study to complement the GTAP results. The main distinction that should be noted at the outset is that as a partial equilibrium model, the intersectoral implications (second-round effects) of a trade policy change are not taken into account. Similarly, the inter regional implications such as within a REC setting are also ignored in a partial equilibrium framework. It is still possible within a partial equilibrium model to analyse the trade policy effects on trade creation and diversion, welfare and even on tariff revenues.

Milner et al. (2002) provide a simple analytical framework explaining the theory behind partial equilibrium modelling. They note that to adequately capture the interactions between sectors and elasticities of substitution between factors, and to simulate dynamic effects in their EPA study, a general equilibrium model would be desirable. However, due to scarcity of individual and regional CGE models for developing countries, they consider that partial equilibrium models would be alternative choices. Milner et al. also raise a valid observation that the database for general equilibrium models lacks the commodity detail to take account of the specific sensitive and special products that are of interest to both African countries and the EU. Despite its shortcomings, a partial equilibrium framework is more suitable as it allows the utilization of widely available trade data at the appropriate level of detail to capture the principle of special and differential treatment in the simulation analysis. Partial equilibrium models have the advantage of working at very fine levels of details.

A detailed analysis of the model is presented in the annex.

## VI. Economic and welfare impact of EPAs on African Economies

### 6.1. The general equilibrium analysis

In this section, we present the results of the general equilibrium simulations for sub-Saharan Africa (SSA) as a whole. Several scenarios are considered, each representing a possible option for EPA negotiations.

#### 6.1.1 The baseline scenario

The Cotonou Partnership Agreement specifies January 1, 2008 as the date by which the EPAs should take effect. Before that date, various international agreements will have been implemented with important implications on the global economic landscape. The main events that will precede the launch of the EPAs are: the enlargement of the European Union; the elimination of quotas on textiles and clothing; the implementation of the Uruguay Round Agreement on domestic support and export subsidies; the full accession of China into the WTO; and the conclusion of the Doha Round.

It is not yet clear how the Doha Round is likely to impact on the EPAs. Therefore, it has not been built into the baseline of the EPAs as yet. Instead, four major developments will be taken into account.

**Enlargement of the EU :** A harmonized and integrated trade policy is expected to be in place in the EU by the time the EPAs come into effect. In order to capture this integration, we have eliminated all tariffs and export subsidies as well as non-tariff barriers between the EU-15 and the new 10 members. We have also left out trade barriers among the 10 new EU members. Finally, all sectors in the EU-10 have the same level of protection against the rest of the world as found in the EU-15 at the time of the accession. This means that some of the tariff rates that the new EU members charge third countries have been increased or reduced to the existing levels of the old EU members.

**Table 9: Required change (%) on prevailing CEEC tariffs for a harmonized enlarged EU CET**

	NAM	Japan	SSA	China	ROW
Cereals	169.7	251.25	22.35	128.93	181.44
Vegetables	-16.18	-9.38	20.83	-22.46	-29.61
Oilseeds	-100.00	-100.00	-100.00	-100.00	-100.00
Sugar	1521.94	1576.00	1521.94	1511.54	1598.65



	NAM	Japan	SSA	China	ROW
Cotton	-100.00	-100.00	-100.00	-100.00	-100.00
Other crops	-77.04	-69.00	-71.82	- 80.00	-70.75
Livestock	7.33	23.23	24.07	18.83	50.00
Animal products	-75.74	-0.67	-63.79	-78.69	-69.29
Fishing	83.67	1.4*	700.00	52.17	-12.20
Other natural resources	-86.96	-95.24	-100.00	-86.21	-33.33
Agro-processing	-24.92	43.06	-8.80	-6.73	16.27
Textiles	-22.33	-8.14	159.52	-25.78	-2.15
Clothing	16.67	31.46	112.28	-42.49	-9.41
Low tech. industries	-57.63	-35.21	-61.19	-44.06	-3.33
Medium tech. industries	-47.95	-38.67	16.67	-36.90	-53.06
Heavy industries	-60.98	-49.51	-66.67	-54.37	-69.47

Source: ECA simulations, GTAP V.5.4;

\*Tariff rate of 1.4% on fish imports from Japan

***Elimination of MFA quotas (implementation of the Agreement on Textiles and Clothing):*** 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 necessary to capture its likely effects. As with other studies on the subject, the elimination of the MFA was captured through elimination of the export tax equivalents of the textile and clothing quotas in the developed-country markets in particular.

***Implementation of the Uruguay Round Agreement:*** The European Union has traditionally amply used domestic support and export subsidies especially in agriculture. While the Doha Round negotiations are expected to culminate in an agreement that will have dramatic impacts on how these two instruments are applied, there are still outstanding issues from the Uruguay Round. The baseline scenario envisages a 20 per cent reduction for developed-country domestic support, and a rate of 13 per cent for the developing countries. In the case of the agricultural export subsidies, the reductions are 36 per cent and 24 per cent for developed and developing countries respectively.

***China accession to the WTO:*** The full accession of China to the WTO is expected to have important implications for both developed and developing countries. At full accession, all WTO members will be expected to impose import tariffs on Chinese goods on an MFN basis. This was captured in the baseline

by reducing tariffs on Chinese products to the level of the MFN tariffs applied by **WTO members**<sup>27</sup>.

### 6.1.2 Scenarios for the EU-SSA Economic Partnership Agreements

**Scenario 1 – SSA reciprocity to EU preferential tariffs:** One of the key principles of the EPAs is reciprocity. This scenario assesses the EPAs implications in the case of the SSA reciprocating on the favourable tariffs it is currently receiving from the EU.

Is full reciprocity feasible under the EPAs? As shown in table 10, the EU generally applies low tariffs<sup>28</sup> on imports from the SSA. Consequently, all tariffs applied by sub-Saharan Africa above those applied by the EU on African products are reduced to the level of the latter (full reciprocity). The general idea is that EPAs should be negotiated essentially in order to establish a partnership compatible with the WTO and not necessarily to create a free-trade area, which would require full trade liberalization<sup>29</sup>.

Conversely, for sectors such as agro-processing, cereals, sugar, livestock and fishing, SSA tariffs would have to be raised to bring them to the level of EU tariffs. However, we will not do so in this scenario, for two reasons. First, in the case of agro-processing, there are the beef and sugar protocols which the aggregation for the EU takes into account and which are very specific. Secondly, the EU tariffs are above the SSA tariffs owing to tariff peaks and escalation which are distinct negotiating questions. The protocols, peaks and escalation can be part of the EPA negotiations, but not as element of full reciprocity. On the basis of the table below, reciprocation will be a main issue in sectors such as textiles and clothing; industrial sectors; and other primary producing sectors.

**Table 10: Per cent change on SSA tariffs for reciprocity purposes.**

	EU tariffs rates on SSA	SSA tariffs rates on EU	SSA reciprocation (% change)
Cereals	41.6	10.5	296.2
Vegetables	14.5	17.1	-15.2
Oilseeds	0.0	9.6	-100.0

<sup>27</sup> On the basis of the tariffs currently applied on Chinese goods, the following sectors have proved to be the most important in regard to the accession of China to the WTO:

- Cereals and low-tech. industrial products in the case of the ROW;
- Cereals, other natural resources and medium-tech. industries in the case of North America;
- Other natural resources, low-tech. and medium-tech. industries in the case of Japan; low-tech. and medium-tech. industries in the case of the enlarged European Union.

<sup>28</sup> Owing to aggregation of the various products and regions, most of the tariffs that the EU levies on imports from the SSA are divergent from zero. Preferences do not necessarily imply duty-free access. The Lome Convention granted duty-free access in respect of 95 per cent of the tariff lines of members of the ACP group. Over time, however, non-tariff barriers accumulated and their tariff equivalent was taken into account in the GTAP database whenever possible.

<sup>29</sup> A free-trade area between the EU and sub-Saharan Africa is presented as an alternative scenario in the event that the negotiations would subsequently envisage the establishment of an FTA rather than what is now seen as the objective.

	<b>EU tariffs rates on SSA</b>	<b>SSA tariffs rates on EU</b>	<b>SSA reciprocation (% change)</b>
Sugar	251.4	1.5	16660.0
Cotton	0.0	3.6	-100.0
Other crops	3.1	16.1	-80.7
Livestock	36.6	11.7	212.8
Animal products	6.3	9.9	-36.4
Fishing	12.0	9.3	29.0
Energy	0.0	9.5	-100.0
Other natural resources	0.0	13.1	-100.0
Agro-processed goods	39.4	23.9	64.9
Textiles	10.9	16.4	-33.5
Clothing	12.1	29.6	-59.1
Low tech. industries	2.6	23.5	-88.9
Medium tech. industries	2.1	15.4	-86.4
Heavy industries	1.4	15.8	-91.1

Source: GTAP V.5.4 and authors' simulation baseline

Scenario 2 – Deeper regional integration without reciprocity: The Cotonou Partnership Agreement advocates for deeper integration among ACP countries. In this scenario, the principle of deeper regional integration within Africa is discussed. The rationale behind this second scenario is that the reason why most African countries have not been able to exploit the preferences under the Lomé Agreements is the lack of supply capacity. These countries need to build this capacity. This scenario presents an option where the SSA countries liberalize trade among themselves without immediate reciprocation on the preferences granted by the EU, such that they can eventually be able to compete with the EU producers and exporters.

Scenario 3 – EU – SSA free trade area: Scenarios 1 and 2 did not necessarily consider the option of establishing a partnership that would culminate in a free trade area. Thus, in scenario 1, the assumption is that in order for the partnership to be WTO compliant, the SSA countries must reciprocate on the preferential treatment that they are currently receiving from the EU. For its part, the EU takes no action on the commodity protocols and non-tariff barriers. The objective of the second scenario is to provide room for building production capacity within the SSA regions before reciprocation. In this third scenario, the option for an EU-SSA Free Trade Agreement is explored. In this scenario therefore, all the bilateral trade barriers between the SSA and EU are eliminated.

### 6.1.3 Results of the simulations

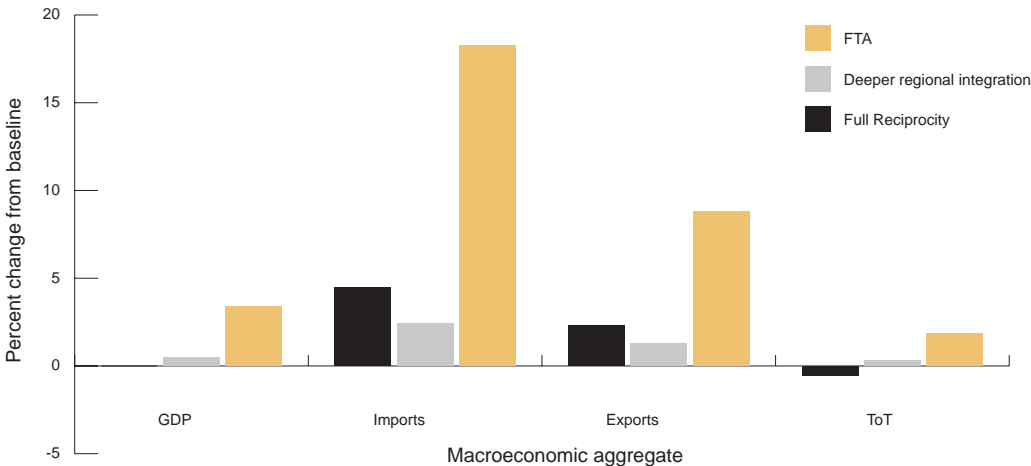
#### Macroeconomic, trade and welfare variables: aggregate effects

The detailed results of the three scenarios are presented in the table contained in the annex.

S1. The results indicate that under full reciprocity, the impacts on the volume of GDP are negative for all the regions other than the EU (Figure 6). SSA's income marginally declines. The effect of SSA's reciprocation is more pronounced in the effects on trade and welfare (as measured through equivalent variation). SSA's imports grow faster than its exports and combined with the deterioration in the terms of trade, its balance of trade declines by \$US 1, 868 million. The marginal effect on GDP, combined with worsening trade balance and deteriorating terms of trade, result in loss of welfare for the SSA region under full reciprocity.

S2. Trade barriers among African countries evidently limit the realization of the economic and welfare gains. The elimination of the tariff and non-tariff barriers (scenario 2) have the potential of raising incomes and welfare in the SSA region. As shown in Figures 6 and 7, a scenario where the SSA countries liberalize trade among themselves in an EPA without immediate reciprocity, results in gains both in terms of GDP and improved welfare. While the change in balance of trade still indicates deterioration, the other indicators are positive in the SSA region. The terms of trade which under full reciprocity register deterioration, improve in a deepened regional integration scenario.

**Figure 6 : Income and trade effects of EPAs scenarios**

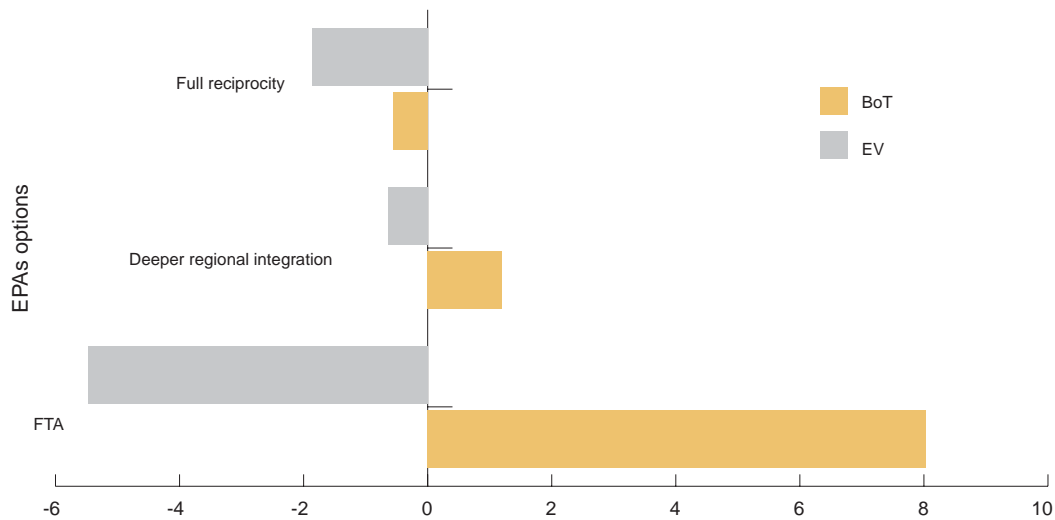


Source: GTAP V.5.4, ECA simulation baseline

S3. The SSA region reaps the largest gains from EPAs that take the form of FTAs rather than partnerships that do not address all the trade barriers with EU. The SSA's GDP would expand by an additional 3.4 per cent in an FTA agreement. The terms of trade would also be more favourable.

Whereas welfare gains and the balance of trade outcomes would be more positive in an integrated SSA region that does not immediately reciprocate, it is an FTA that provides the highest gains to the region (over \$US 8 billion). These gains would, however, come at a major macroeconomic adjustment cost, particularly in the terms of trade.

**Figure 7 : Effects on trade balance and welfare (\$US million)**



Source: GTAP V.5.4, ECA simulation baseline

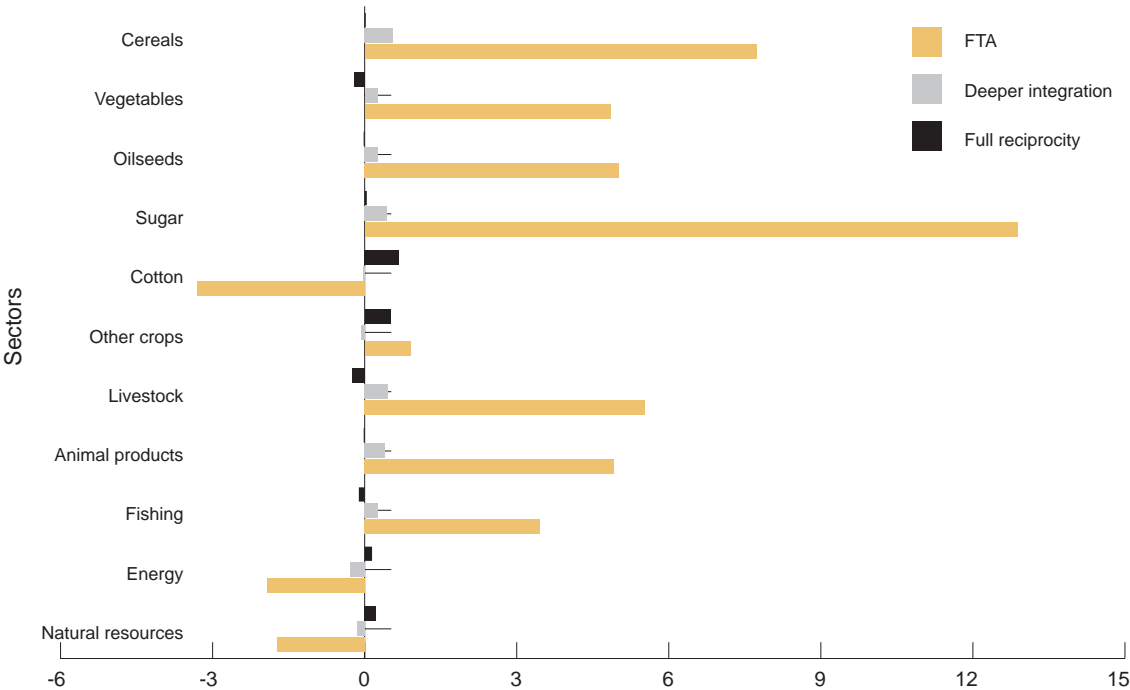
### Industry structure in SSA: EPAs options

Most of the sub-Saharan African countries have put in place industrial policies that endeavour to achieve more diversification in their economies. Among the explanations that are given for the marginalization of SSA in global trade is lack of exports diversification. As a result, the impact of EPAs on the industrial structure of these countries is important. The table in annex 2 indicates the likely impacts of the reciprocity principle on industries in SSA. Deeper regional integration could potentially provide the space for diversification in production and exports to take place. Unlike in scenario 1 where SSA region would specialize in production of primary commodities, deeper regional integration allows the emergence of high-value-added non-primary commodity production.

The region can build up production capacities in different industrial sectors. However, it is in textiles and clothing where deepened trade in the region could provide a solid foundation for diversification of the region's economies. These sectors will see their outputs expand by 1.2 – 2.7 per cent compared to contractions that could be registered in the event of scenario 1. Another important result is the positive effect for some primary producing sectors (such as vegetables, oilseeds, livestock and animal products) that could otherwise decline under full reciprocity.

Figures 8 and 9 indicate that even for the primary sectors, scenario 1 is unfavourable for sub-Saharan Africa, whereas these sectors – with the exception of natural resources exploitation – actually grow in the case of scenarios 2 and 3.

**Figure 8: Production structure in SSA under different EPAs options**



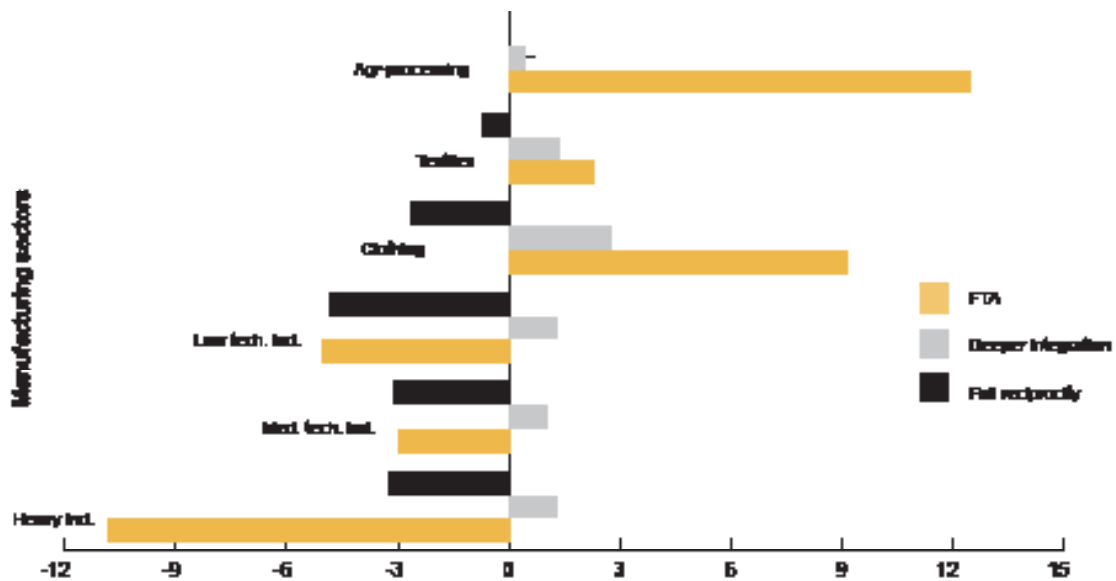
Source: GTAP V.5.4, ECA simulation baseline

Clearly, most industrial sectors in sub-Saharan Africa would experience a decline in output under full reciprocity. This contraction will be more pronounced in the sectors that are seen as the bases of

industrialization, namely, low- and medium-technology industries; heavy industries; and clothing and textiles. Apart from cotton, energy, natural resources, other crops, and agro-processing, which could register a slight expansion, SSA's industrial sectors could significantly decline.

Thus, the risk of de-industrialization is an important consideration if the principle of reciprocity under the EPAs is applied. The only industrial sector likely to survive the effects of such an arrangement is agro-processing, and that is because no tariff changes have been effected for this sector. These impacts on the industrial structure are amplified in the case of an FTA. De-industrialization is clearly a risk even for low-technology industries. However, under an FTA, there will be noticeable expansion for agro-processing and clothing and textiles.

**Figure 9 : De-industrialization risk under the EPAs**

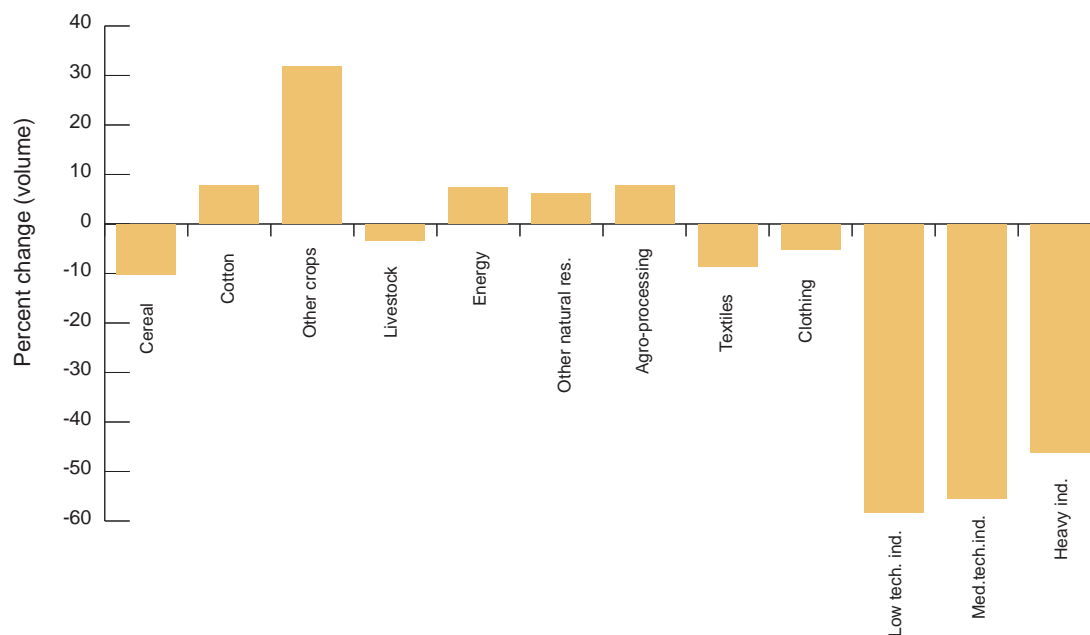


Source: ECA simulation baseline GTAP V.5.4.

### Demand for and returns to factors of production

The three scenarios would have varying levels of adjustment costs in terms of endowments utilization. Figure 10 shows that, in scenario 1, the demand for unskilled labour contracts sharply in the sectors where there is more value added. Conversely, this demand increases in sectors such as cotton, other crops, energy, natural resources and agro-processing. The contractions could prove to be very costly, as returns to labour tend to be higher in these contracting sectors than in the primary sectors.

**Figure 10 : Volume change in unskilled labour employment**



Source: Simulations CEA, GTAP V.5.4

**Table 11 : Demand for endowment factors in primary and manufacturing sectors in SSA under a EU-SSA FTA (per cent deviation from baseline%)**

	Land	Unskilled labour	Skilled labour	Capital	Natural Resources
Cereals	2.3449	9.0177	7.2315	7.0138	0.0368
Vegetables	0.0548	6.0083	4.2714	4.0597	0.0251
Oilseeds	0.2072	6.2081	4.4679	4.2558	0.0259
Sugar	6.4283	14.4232	12.5484	12.3198	0.0572
Cotton	-6.436	-2.4318	-4.0304	-4.2253	-0.0098
Other crops	-3.0492	1.9554	0.2849	0.0813	0.0087
Livestock	0.6094	6.7356	4.9868	4.7736	0.0279
Animal products	0.1196	6.0933	4.355	4.1431	0.0254
Fishing	1.9935	7.5047	6.016	5.8343	0.0366
Energy	-5.4413	-1.8293	-3.1887	-3.3547	-0.0086



Other natural resources	-4.6468	-0.8387	-2.2118	-2.3794	-0.0036
Agro-processing	-4.2477	19.79	10.7919	9.7325	0.0167
Textiles	-9.7968	7.6427	-1.41	-2.4699	0.0064
Clothing	-6.9228	15.5495	5.8319	4.6941	0.012
Low tech. industries	-12.7499	-0.1578	-8.5545	-9.5376	0.0004
Med tech. industries	-11.2978	3.6367	-5.079	-6.0995	0.0034
Heavy industries	-14.7534	-5.2645	-13.2317	-14.1646	-0.0037

Source: ECA simulations, GTAP V.5.4

The demand for the different factors is shown in Table 11. Demand for most of the factors of production grows in the primary sectors, except for cotton. The increased demand is consistent with the expansion of these sectors as the region specializes more on primary raw-materials production. The variations in labour and capital demand are less homogeneous in the manufacturing sectors. The low- and medium-technology industries show a sharp contraction. A similar result occurs in the heavy-industry sector. By contrast, the agro-processing and clothing sectors would generally register increased labour and capital demand under the FTA.

It is useful, however, to note that the more important results relate to the realized returns to these factors.

**Table 12: Real returns to factors of production in SSA (per cent deviation from base %)**

	<b>Deeper integration</b>	<b>FTA</b>
Land	1.3223	25.0395
Unskilled labour	-0.3219	-1.9728
Skilled 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, integration in SSA also results in positive returns to some of the crucial factors of production. Real returns to land, skilled labour and capital are positive.

Similar outcomes but on a higher scale are observable in the case of an EU-SSA FTA. However, due to its abundance, real returns to unskilled labour fall. Unlike the other factors of production whose supply is fixed, unskilled labour is abundant in the SSA region. The fall in the real returns indicates that the nominal wage does not increase as fast as the other factors as a result of this abundance.

The returns to the factors of production and also the overall economic performance of the SSA region have welfare implications. Thus, the SSA region loses from full reciprocity but gains from both the deepened-integration and FTA scenarios. The next section affects a breakdown of the determinants of the welfare change under each of these scenarios, in order to highlight the potential implications of each.

### **Sources of welfare changes: breakdown**

At the aggregate level, full reciprocity entails welfare losses for all regions, with the exception of the EU. Sub-Saharan Africa is likely to suffer a welfare loss of \$US 564 million. Table 13 shows the determinants of this welfare loss. The worsening terms-of-trade that the SSA region faces explains more than half of the deterioration in welfare. In other words, the inability of the exports to pay for the imports-boost flowing from reciprocity will result in the African countries being worse-off in an EPA with full reciprocity. Moreover, the region will also experience a welfare loss emanating from deterioration in the investment – savings balance. The only positive determinant of the welfare is the \$US 45.7 million resulting from the endowment changes<sup>30</sup>. This is attributable to a net increase in demand for the unskilled labour.

<sup>30</sup> The macroeconomic closure in the GTAP scenarios discussed here allows the supply for unskilled labour to be endogenous by fixing the nominal wage for the same labour category. The endowment change creating a positive impact on welfare is in this case associated to the endogenous unskilled labour rather than the other factors of production.

**Table 13: Source of welfare changes by region (\$US million)**

		<b>Efficiency</b>	<b>Endowment changes</b>	<b>Terms of trade</b>	<b>Investment savings balance</b>	<b>Total</b>
	Reciprocity	347.4	0	1412.8	-11.5	1748.8
EU15	Integration	-34	0	-116.9	0.4	-150.5
	FTA	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
	FTA	8.8	0	-124.9	-15.7	-131.8
	Reciprocity	-12	0	-91.3	20.2	-83.2
NAM	Integration	-0.6	0	-46.4	-11.2	-58.2
	FTA	-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
	FTA	-55.5	0	-364.7	107.1	-313.1
	Reciprocity	-71.6	45.7	-323	-215.1	-563.9
SSA	Integration	168.6	844.7	174.4	16.7	1204.3
	FTA	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
	FTA	-28.5	0	-149.2	33.5	-144.2
	Reciprocity	-201.7	0	-775	55.2	-921.5
ROW	Integration	-12.8	0	46.1	-6.2	27.1
	FTA	-274.6	0	-620.1	11.1	-883.6

Source: GTAP V.5.4, and ECA computations

The intra-SSA trade barriers impose a substantial cost to the region. Their elimination, in an EPA whose objective is to create competitiveness through deepened regional integration, would lead to the region reaping around \$US 1,204 million in welfare gains. This gain would emanate mainly from the change in endowments utilization, better terms of trade in the region and removal of distortions that currently result in inefficient allocation of the endowments utilized.

## 7. Evaluation of the impact of the EU-ECOWAS Economic Partnership Agreement using a partial equilibrium model

In this chapter we analyse the results of a simulation representing full liberalisation of EU imports in ECOWAS countries, using a partial equilibrium model, WITS-SMART<sup>31</sup>. A full fledged free trade agreement need not be the outcome on the EPA negotiations, as Article XXIV of the GATT leaves some leeway for less than full reciprocity. Nevertheless we choose to simulate the impact of a complete dismantlement of tariffs in order to clearly expose the effects of trade liberalisation on all the products in ECOWAS countries. This is therefore an “extreme scenario” which aims at delineating the general trends of the impact of liberalisation of West-African economies under the EPA.

The chapter is divided in three sections. The first section describes the simulation results on levels of EU exports to ECOWAS. A second section analyses the simulation’s results on intra-ECOWAS trade, including the products that would be most affected by trade diversion. Finally a third section looks at the results of the model on tariff revenues and welfare in the West-African countries.

### 7.1. Simulating the EPA impact on ECOWAS imports from the EU

This section looks at the trade creation effect enjoyed by EU countries under full liberalisation of ECOWAS imports and at how these additional EU exports would be spread. This may provide some useful insights to ECOWAS countries, in view of the EPA negotiations.

#### **Increased EU exports to ECOWAS:**

For negotiations purposes, it is interesting to look at which EU countries are bound to benefit the most from the ECOWAS tariff elimination. In total, the 25 EU countries could gain more than 1.87 billion US\$ of increased exports to ECOWAS countries<sup>32</sup>.

Table 14 shows clearly that the largest gainer would be France (26% of the additional exports, at just under 500 millions US\$ of increased exports), followed by the UK (almost 17% of total export gains). Together, these two countries plus Germany (15.5%), Italy (11.4%) and Belgium (9.7%) should reap-up more than 80% of the increased exports to ECOWAS.

<sup>31</sup> A detailed presentation of the WITS-SMART model is available in annex.

<sup>32</sup> In this paper and when in the context of partial equilibrium analysis, we are using the denomination “ECOWAS region” for those countries of this region that have provided statistical information to the WITS database. Therefore, the denomination excludes Cape Verde, Guinea, Liberia and Sierra Leone. On the other hand it includes Mauritania, which –although not an ECOWAS Member State is associated with it in the EPA negotiation process.

On the contrary, the ten newly acceded countries, as well as Denmark, Portugal, Austria, Greece, Finland, Ireland and Luxembourg would obtain less than 1% each of this increase in exports.

**Table 14: Increase in exports after EPA for individual EU countries**

EU member	Total export gains in US\$ '000	Share in the total increased exports (%)	Increase in country's total exports
France	494 701.682	26.35%	0.135%
United Kingdom	317 568.463	16.92%	0.104%
Germany	290 904.736	15.50%	0.039%
Italy	214 476.41	11.43%	0.070%
Belgium	181 499.797	9.67%	0.071%
Spain	155 843.714	8.30%	0.100%
Netherlands	128 380.381	6.84%	0.050%
Sweden	21 443.278	1.14%	0.021%
Denmark	17 732.954	0.94%	0.027%
Portugal	10 302.314	0.55%	0.034%
Ireland	9 875.546	0.53%	0.011%
Greece	9 802.571	0.52%	0.074%
Austria	5 679.704	0.30%	0.006%
Poland	5 526.02	0.29%	0.010%
Czech Republic	3 605.06	0.19%	0.007%
Luxembourg	3 447.433	0.18%	0.034%
Finland	2 549.182	0.14%	0.005%
Hungary	1 838.327	0.10%	0.004%
Cyprus	799.151	0.04%	0.087%
Malta	639.962	0.03%	0.025%
Slovenia	318.949	0.02%	0.002%
Estonia	99.47	0.01%	0.002%
Lithuania	95.195	0.01%	0.001%
Slovak Republic	85.232	0.00%	0.000%
Latvia	1.045	0.00%	0.000%
Total	1 877 216.6	100.00%	0.062%
%	100.00%		

Source: simulation WITS-SMART, CEA, and UNCTAD handbook of statistics 2004.

Such information might be of interest for ECOWAS countries to identify which EU countries could have the greatest stakes in negotiating an EPA with them. These EU countries will have a decisive role in the negotiations on the non-trade aspects of the EPA, including the aid package.

The importance of the increased exports remains very limited for EU countries. As is observed in table 14, the size of the increase in exports is marginal relatively to the overall EU exports. For example, France would only see her overall exports increase by 0.135% under an EPA.

**Geographical repartition of EU’s increased exports in ECOWAS**

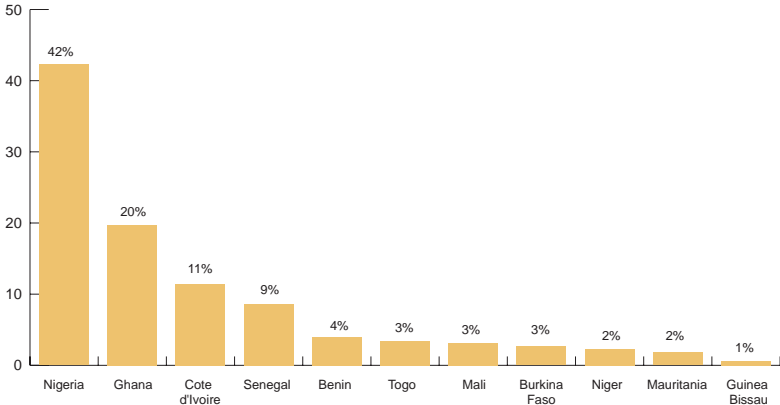
- Repartition in ECOWAS of EU’s increased exports

It is also noteworthy to check the relative importance of each ECOWAS country in the total additional exports from the EU in case of EPA. This shows where in ECOWAS the EU country will gain additional exports. This is also informative for the negotiations process as it shows each ECOWAS country its relative bargaining power in the negotiations.

As can be infererd from graph 11, the relative importance of Nigeria is very obvious, with 42% of additional EU exports. Ghana comes second at 20% of the increased exports. Thus, Nigeria and Ghana together represent 62% of the increased exports for the EU, they will therefore probably enjoy a relatively important negotiating power in the negotiations on EPA.

Côte d’Ivoire and Senegal would take up respectively 11% and 9% of the EU’s gains in exports to the region. The other countries joined together would represent an increase of 18% of exports to the West-African region.

**Graph 11: geographical repartition of increased EU exports in ECOWAS**



Source: WITS-Smart, simulation CEA.

- Increase in EU's exports by ECOWAS countries

We are also able to show the progression of EU exports to each ECOWAS country after the EPA. For the region on average, EU exports would increase by some 15%. The progression of EU exports seem to be the strongest in Ghana (37%), perhaps reflecting relatively high tariffs in that market prior to liberalisation<sup>33</sup>.

**Table 15: Increase in EU exports to individual ECOWAS countries after EPA (%)**

Country	EU exports before EPA (US\$'000)	Increase after EPA (US\$'0001)	Increase after EPA in %
Benin	281,275.142	75,176.31	26.73%
Burkina Faso	199,397.396	49,663.50	24.91%
Cote d'Ivoire	1,054,655.75	215,269.49	20.41%
Ghana	984,692.63	369,687.10	37.54%
Guinea Bissau	49,181.79	10,974.08	22.31%
Mali	282,561.925	59,163.39	20.94%
Mauritania	158,541.664	33,808.49	21.32%
Niger	154,115.26	43,804.61	28.42%
Nigeria	8,150,738.806	793,311.17	9.73%
Senegal	772,894.729	161,531.91	20.90%
Togo	285,470.605	64,826.52	22.71%
Total/Average	12,373,525.7	1,877,216.58	15.17%

Source : simulation ECA, WITS-SMART

Among ECOWAS countries, the differences in the relative increases in EU exports are not very important (approximately 17% difference between the two extreme Ghana and Côte d'Ivoire). Apart from Ghana the other ECOWAS countries would all experience an increase in their exports from the EU ranging between 20 and 30%.

However, it is important here to recall that for West-African countries, the largest share of imports comes from the European Union (cf. section 2). EPA would therefore strengthen the dependence of ECOWAS countries on the EU as a source of imports.

The next section analyses the impact of an EPA on intra-ECOWAS trade.

<sup>33</sup> According to a rough proxy (simple average applied tariff), Ghana has the second highest tariffs in the zone (14.82%), second to Nigeria only (27.27%).

## 7.2. Trade diversion in ECOWAS countries

This section looks at the possible trade diversion impact of the EPA on ECOWAS countries. It starts with a presentation of the losses in intra-regional trade incurred by the ECOWAS countries, due to the substitution of intra-regional exports by EU products. Then, it will attempt to identify which products could be most affected by losses of intra-regional trade. These products are the one that would suffer the most intensively from EU competition. A country by country description of vulnerable products is provided in annex.

Trade diversion is the quantity of exports that is being replaced by EU products after liberalization. We assume here that the effect of the elimination of the tariff is fully transmitted to consumer prices.

Table 16 provides information on trade diversion in ECOWAS in the case of a total liberalisation of EU imports.

**Table 16: Trade diversion in West-Africa in case of EPA**

ECOWAS member	Total trade diversion (US\$ '000) <sup>a</sup>	Magnitude in trade diversion (%)	Intra-regional trade diverted <sup>b</sup> (US\$'000)	Variation in intra-regional trade (%)
Nigeria	-175,576.17	-6.23%	-4,565.93	-4.17%
Ghana	-101,924.75	-10.08%	Error! Not a valid link.	-17.06%
Cote d'Ivoire	-26,441.89	-4.23%	-1,771.99	-4.44%
Senegal	-16,937.44	-4.14%	0.00	0.00%
Benin	-14,119.14	-4.07%	-2,695.30	-2.76%
Burkina Faso	-9,180.22	-3.00%	-2,883.31	-2.05%
Togo	-6,494.01	-2.95%	0.00	0.00%
Mauritania	-5,301.69	-3.12%	-248.05	-5.40%
Mali	-4,454.20	-4.75%	0.00	0.00%
Niger	-4,271.86	-9.20%	0.00	0.00%
Guinea Bissau	-669.02	<u>-4.68%</u>	0.00	0.00%
<b>Total</b>	<b>-365,370.39</b>	<b>-6.03%</b>	<b>-35,662.67</b>	<b>-6.73%</b>

Source: Simulation WITS-SMART, ECA

(a): Loss of exports from non-EU countries to ECOWAS; (b): Loss of exports from ECOWAS countries to other ECOWAS countries.

In total, net trade diversion amounts to US \$ 365 millions. The part of this trade diversion that represents forgone exports of Western African countries to the rest of the region amounts to US\$ 35.6 millions, or about 9.8% of the total trade diversion. This amount is significantly higher than for other African

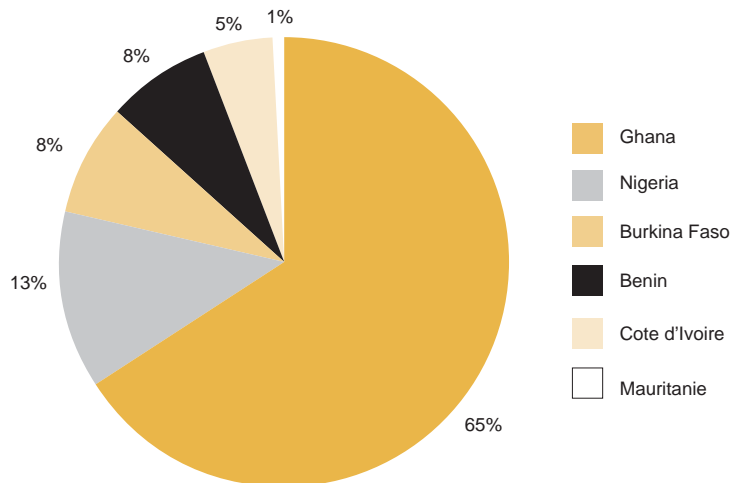


RECs<sup>34</sup>, which may mean that in the case of ECOWAS, the EPA could have a more negative impact on regional integration than in other African regions.

It is interesting for ECOWAS policy makers to identify in more details how this reduction of intra-regional trade could take place. The products affected will be listed in the next section and the annexes show a country by country detailed analysis.

It is also important for trade policy makers to know clearly in which ECOWAS countries their exports will decline the most sharply. Graphich 12 shows that nearly two third of the intra-regional trade diversion would occur in Ghana (US\$ 23 millions out of 35).

**Graph 12: geographical repartition of the fall of intra-ECOWAS trade (by destination market)**



Sources: WITS-SMART simulations, ECA.

ECOWAS countries would also lose exports in Nigeria (approximately US\$ 4.5 millions), in Burkina Faso (approximately US\$ 2.9 millions), in Benin (approximately US\$ 2.7 millions), in Côte d’Ivoire (approximately 1.8 million), and to a lesser extent, in Mauritania (approximately US\$ 250,000). It appears that no intra-regional trade would be replaced in other West-African countries. This may be accountable to the low complimentarity of production structures in West-Africa, but it could also be due to the fact that a large part of intra-regional trade in Africa takes place informally and is thus not

<sup>34</sup> According to our calculations using WITS-SMART, the share of intra-regional trade in overall trade diversion is approximately 6% in the case of ESA, 2% in the case CEMAC and only 1% in the case of SADC. See “Economic and Welfare impacts of the EU-Africa Economic Partnership Agreements”, By Stephen Karingi, Rémi Lang, Nassim Oulmane, Romain Perez, Mustapha Sadni-Jallab and Hakim Ben Hammouda.

recorded officially<sup>35</sup>. This fact can also be alleged to the variable quality of the TRAINS data which are used in WITS-SMART simulations. Indeed, for some of these countries, COMTRADE data show higher intra-regional trade, which may lead to think that our data underestimate the impact of the EPA on intra-regional trade diminution.

It seems, therefore that full trade liberalisation would contradict the EPA's objective of strengthening regional integration, through a significant diminution of intra-regional trade (-9.8%). ECOWAS policy makers may therefore want to consider measures aiming at mitigating intra-regional trade losses. This could include programmes aiming at strengthening the competitiveness of the concerned enterprises. For those most sensitive sectors, the tariff dismantlement should be conducted gradually and under a longer time schedule than for non sensitive products. Safeguards measures should also be available in ECOWAS to protect national as well as regional producers in case of a surge of imports from the EU. Finally it should be stressed again that there is scope under the multilateral rules for less than full reciprocity.

### **Intra-regional trade diversion in West-Africa: which countries are affected and for what products?**

The section above showed the market in ECOWAS where intra-regional trade diversion could occur, according to our simulations. This section identifies the ECOWAS countries that are bound to loose market shares in the region.

Results detailed at the country level are available in annex, including for each country, a list of vulnerable products. In this section, results are aggregated at the regional level and at the HS 2 level.

In order to obtain exporter's losses, we checked for declared diminution in imports from each ECOWAS countries available. As a number of countries are not available in the WITS model<sup>36</sup>, it is likely that these numbers are under-estimated.

Table 17 presents the details of trade diversion for ECOWAS countries seen from the exporters point of view, in case of the elimination of all tariffs on EU imports. It appears that Togo would be the greatest loser, in absolute terms, of the EPA (US\$ -11.5 million), followed by Côte d'Ivoire (approximately US\$ - 9 millions).

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<sup>35</sup> These might be the case, among other examples of Ghanaian exports to Côte d'Ivoire, which are not recorded for the year selected in Côte d'Ivoire.

<sup>36</sup> As Cape Verde, Guinea, Liberia, and Sierra Leone are not available in WITS-SMART, we do not know if other ECOWAS countries suffer a loss in exports to them after EPA.

**Table 17: Diminution of intra-regional exports in ECOWAS after an EPA**

Exporter	Exports to ECOWAS before the EPA in US\$'000	Variation of exports to ECOWAS after EPA in US\$ '000	Variation of exports to ECOWAS in %	Share in the overall regional exports diminution
Benin	30266.08	-3528.994	-11.66%	9.90%
Burkina Faso	33662.243	-2038.364	-6.06%	5.72%
Cape Verde	393.558	-45.704	-11.61%	0.13%
Cote d'Ivoire	179563.204	-8911.388	-4.96%	24.99%
Gambia	741.491	-31.873	-4.30%	0.09%
Ghana	25565.798	-1202.477	-4.70%	3.37%
Guinea	1476.302	-114.734	-7.77%	0.32%
Guinea-Bissau	621.682	-20.667	-3.32%	0.06%
Liberia	860.39	-126.459	-14.70%	0.35%
Mali	3540.064	-475.268	-13.43%	1.33%
Mauritania	53029.969	-1654.508	-3.12%	4.64%
Niger	27406.863	-2384.88	-8.70%	6.69%
Nigeria	40423.675	-1890.117	-4.68%	5.30%
Senegal	61478.927	-1717.134	-2.79%	4.81%
Sierra Leone	445.726	-22.296	-5.00%	0.06%
Togo	70904.469	-11497.993	-16.22%	32.24%
Grand Total	530380.441	-35662.856	-6.72%	100.00%

Source: ECA, WITS-SMART.

The fall in exports to the region would be hardest for Togolese exporters (-16.22%). The last column of table 17 also shows that Togo would account for nearly one third (32.24%) of the total loss in regional exports. Exports to the rest of the region would also decrease in the case of Liberia (-14.70%), Mali (-13.43%), Benin (-11.66%) and Cape Verde (-11.61%). All of these countries are LDCs. On the other hand, Cote d'Ivoire, Gambia, Guinea Bissau, Mauritania, Nigeria and Senegal seem rather less exposed to a fall in their exports to ECOWAS in case of EPA. This might be due to low levels of exports to the region, to low elasticity of demand for the goods they export as well as little competition from the EU on some of the goods traded regionally.

The fact that some countries may experience significant diminution of exports in the region also calls for measures to hasten deeper integration as soon as possible and before the dismantlement of tariffs on EU goods.

Overall however, the magnitude of these exports losses seems relatively benign for ECOWAS countries,

when compared to their total exports levels. Table 18 below shows that on average, total exports from ECOWAS countries would fall by only 0.10%. The country where the fall would be highest is Togo, with a fall of overall exports of a low magnitude (-1.87 %).

Here again, we are only looking at the effect of the EU-ECOWAS EPA. EPAs between the EU and other African regions (CEMAC, ESA, SADC) are also likely to create trade diversion to the detriment of ECOWAS exporters. Further intra-African trade liberalisation could be a useful to prevent such potential losses. In addition, one has to take into account that ECOWAS exporters may benefit from improved market access to the EU under the EPA.

**Table 18: Comparing the loss after EPA to total exports of ECOWAS countries**

<b>ECOWAS country</b>	<b>Total exports in 2003 in US\$ '000</b>	<b>Fall after ECOWAS EPA</b>	<b>Export diminution in %</b>
Benin	554,000.00	-3528.994	-0.64%
Burkina Faso	326,000.00	-2038.364	-0.63%
Cape-Verde	13,600.00	-45.704	-0.34%
Côte d'Ivoire	5,843,940.00	-8911.388	-0.15%
Gambia	6,980.00	-31.873	-0.46%
Ghana	2,105,500.00	-1202.477	-0.06%
Guinea	516,520.00	-114.734	-0.02%
Guinea-Bissau	68,650.00	-20.667	-0.03%
Liberia	230,000.00	-126.459	-0.05%
Mali	929,960.00	-475.268	-0.05%
Mauritania	343,000.00	-1654.508	-0.48%
Niger	338,610.00	-2384.88	-0.70%
Nigeria	22,213,960.00	-1890.117	-0.01%
Senegal	1,330,520.00	-1717.134	-0.13%
Sierra Leone	92,250.00	-22.296	-0.02%
Togo	615,690.00	-11497.993	-1.87%
Total	35,529,180.00	-35662.856	-0.10%

Sources: WITS-SMART simulations, UNCTAD handbook of statistics (2004)

### **Vulnerable products at the regional level.**

Using WITS-SMART, we isolated the products that may be exposed to the steepest decline in exports to the rest of the region for ECOWAS exporters. This allows the trade authorities to consult with the concerned members of the private sector to inform them of the challenges induced by the EPA and possibly to set up measures to facilitate the adaptation of the private sector.

We gathered in table 19 the products that seem to experience the largest diminution in intra-regional trade. These groups of products account for approximately 85% of the total loss in intra-regional exports. We also show some categories of products at the bottom of the table for which the fall in exports is large proportionally to the volumes exported before the EPA, albeit the volumes exported are quite low and account for a small fraction of the overall total export loss. For example meat and meat offal would see their exports fall by 22%, even through they account for only 0.3% of the overall export loss.

**Table 19: Most vulnerable products to trade diversion in case of EPA in ECOWAS**

H.S. chapter	Description (HS-2)	Exports before EPA (US\$'000)	Change in exports (\$ '000)	Variation in exports in%	Share of each HS chapter in total export loss
HS.27	Mineral fuels, oils & product of their distillation	127699.262	-19404.009	-15.20%	54.41%
HS.03	Fish & crustacean, mollusc & other aquatic invert	54995.081	-1657.476	-3.01%	4.65%
HS.52	Cotton.	32750.892	-1318.707	-4.03%	3.70%
HS.11	Products .milling .industry; malt; starches; insulin; wheat g	6351.449	-982.784	-15.47%	2.76%
HS.38	Miscellaneous chemical products.	21112.759	-831.937	-3.94%	2.33%
HS.87	Vehicles o/t railway/tramway roll-stock, pts & access	8534.886	-783.811	-9.18%	2.20%
HS.04	Dairy prod; birds' eggs; natural honey; edible pr	3544.213	-782.353	-22.07%	2.19%
HS.21	Miscellaneous edible preparations.	18889.323	-706.943	-3.74%	1.98%
HS.63	Other made up textile articles; sets; worn clothing	6237.468	-643.097	-10.31%	1.80%
HS.39	Plastics and articles thereof.	10087.896	-591.749	-5.87%	1.66%
HS.85	Electrical machinery equip parts thereof; sound record	8835.123	-519.222	-5.88%	1.46%
HS.19	Preparation .of cereal, flour, starch/milk; pastry cooks'	4688.247	-514.768	-10.98%	1.44%
HS.24	Tobacco and manufactured tobacco substitutes	19915.278	-511.254	-2.57%	1.43%
HS.22	Beverages, spirits and vinegar.	2388.745	-336.825	-14.10%	0.94%
HS.20	Prep of vegetable, fruit, nuts or other parts of	1325.182	-280.206	-21.14%	0.79%

H.S. chapter	Description (HS-2)	Exports before EPA (US\$'000)	Change in exports (\$ '000)	Variation in exports in%	Share of each HS chapter in total export loss
HS.33	Essential oils & resinoids; perfumes, cosmetic/toilet	2326.002	-262.542	-11.29%	0.74%
HS.94	Furniture; bedding, mattress, matt support, cushion	1530.945	-189.05	-12.35%	0.53%
HS.02	Meat and edible meat offal	482.668	-106.794	-22.13%	0.30%
HS.83	Miscellaneous articles of base metal.	737.472	-87.466	-11.86%	0.25%
HS.69	Ceramic products.	626.703	-77.681	-12.40%	0.22%
HS.37	Photographic or cinematographic goods.	367.785	-42.871	-11.66%	0.12%
Grand Total		530380.441	-35662.856	-6.72%	100.00%

Source: WITS-SMART simulation, ECA.

From our simulations, it appears that more than half of the overall decline in export revenue in case of an EPA would happen for fuels and oil products (HS chapter 27). Most of this loss would occur in the market of Ghana. The HS. 6 line involved is 27 10 00<sup>37</sup>.

Other products for which West Africa could be subject to a sizeable fall in its export revenues due to trade diversion include:

- fish and crustacean (-1.6 million dollars),
- cotton (-1.3 million dollars)<sup>38</sup>
- products of the milling industry (almost a million dollars),
- miscellaneous chemical products (-831 000 dollars),
- vehicles (-780 000 dollars)<sup>39</sup>,
- dairy products and eggs (-782 000 dollars),
- miscellaneous edible preparation (-706 000 dollars),

Some of these products may have a significant content in local input, and their demise on local markets might very well have important negative consequences up-stream in the production chain of the region (fish, edible preparations, dairy, other agro-food products). The decline in exports in these products could also have a significant negative impact on the poorest categories of Western-Africans, including on rural workers.

Such potential effects ought to be further investigated to determine if the EPA's impact on poverty.

<sup>37</sup> Petroleum oils and oils obtained from bituminous minerals, other than crude; preparations not elsewhere specified or included, containing by weight 70% or more of petroleum oils or of oils obtained from bituminous minerals.

<sup>38</sup> Mainly textile products and fabrics containing cotton.

<sup>39</sup> These are likely to be either used vehicles or re-exports.

### 7.3 Impact in terms of revenues and welfare

#### Revenue implications

As would be expected, the elimination of tariffs on imports from the EU is shown to harm the government revenues in West African countries. The extent of revenue shortfall varies across the countries as indicated in table 20.

It is in the large and most open economies that the revenue reduction is highest. Nigeria will have to forego up to US\$ 427 million and Ghana US\$194 million.

**Table 20: Revenue implications of a EU-ECOWAS EPA (US\$)**

Country	Revenue Shortfall
Nigeria	-426,902,557.50
Ghana	-193,683,365.00
Cote d'Ivoire	-112,236,538.00
Senegal	-80,203,188.50
Benin	-39,523,104.00
Togo	-35,471,728.00
Mali	-33,141,747.00
Burkina Faso	-22,003,937.50
Niger	-20,487,214.00
Mauritanie	-14,572,779.00
Guinea-Bissau	-7,170,527.00
Total	-985,396,685.50

Source: simulation WITS-SMART, ECA.

Due to lower levels of imports in smaller economies, their loss in tariff revenues is logically smaller. For example, Guinea-Bissau would according to our simulations forego only about US\$7 million.

It is important to note however that the revenue loss indicated by our simulations relates to imports tariff revenues. In reality, the increased imports presented earlier resulting from trade creation are in most countries subject to indirect taxes such as the VAT. As such, as long as there is rapid increase in the volume and value of imports into the ECOWAS countries, and these countries have indirect taxes such as VAT, then the revenue shortfall described will be mitigated. However, unless the elasticity of the VAT and indirect taxes is significantly higher than that for import duties, it is unlikely that the addition indirect taxes revenues will outweigh the revenue foregone from the import tariffs.

In some cases, the bulk of the loss of revenues comes from the elimination of tariffs on goods that could easily be taxed otherwise (excise duty for example). For example, mineral fuels and oils could be submitted to an excise tax in Ghana to countervail the drastic fall in revenue this country would experience on oil products..

Nevertheless, in terms of evaluating the EPAs for ECOWAS countries, it can be noted that the revenue foregone is likely to have negative impacts on other government programmes. When this is combined with the feature of undermining regional integration, one is left with a picture that goes beyond the normal international trade theory arguments. The question about the significance of non-economic reasons for integration comes into play.

It is therefore necessary to look closer at the real weight of such a revenue loss on Government's finance.

Table 21 shows how much of their total revenue the West African Governments could loose after the EPA<sup>40</sup>. To design this table we compared the loss in tariff revenue provided by our simulation to the total budget revenues (excluding grants) for the ECOWAS countries, for the same years as the ones for which the simulations were ran.

Table 21 shows that on average, if the EPA entails full liberalisation of EU imports, ECOWAS countries would have to forgoe tariff revenues amounting to almost 4% of their budget. However, one can also observe significant disparities among countries concerning the relative importance of their tariff revenue loss,

**Table 21: fall in total government revenues after EPA**

Country	Revenue diminution in US\$'000	Loss in total budget revenues in%
Guinea-Bissau	-7,170.53	-19.38%
Ghana	-193,683.37	-19.15%
Togo	-35,471.73	-12.53%
Niger	-20,487.21	-7.63%
Mauritania	-14,572.78	-7.08%
Benin	-39,523.10	-6.73%
Burkina Faso	-22,003.94	-6.06%

<sup>40</sup> We used different sources to compile total government revenue (excluding grants), depending on availability of data matching the year selected for the simulation. Benin: IMF 2003, Burkina Faso: IMF 2002, Côte d'Ivoire: IMF 2002, Ghana: Bank of Ghana (<http://www.bog.gov.gh/>), Guinea Bissau: IMF 2003, Mali: BCEAO: "Evolution de la situation économique, financière et monétaire dans les Etats Membres de l'UEMOA en 2004 et perspectives pour l'année 2005", Mauritania: IMF 2001, Niger: IMF 2003, Nigeria: IMF 2003, Senegal: Ministère de l'Economie et des finances, Projet de Loi de finance 2003 (<http://www.finances.gouv.sn/loifmt03.html>), Togo: BCEAO opus cite. For exchange rates, historical interbank rates have been used: <http://www.oanda.com/convert/classic>.



Country	Revenue diminution in US\$'000	Loss in total budget revenues in%
Senegal	-80,203.19	-6.00%
Cote d'Ivoire	-112,236.54	-5.62%
Mali	-33,141.75	-4.46%
Nigeria	-426,902.56	-2.34%
Total ECOWAS	-985,396.69	-3.93%

Source: simulation WITS-SMART, ECA.

Although the loss of revenue for Guinea Bissau was the lowest in our sample in absolute terms, it is the highest in terms of its share of total Government revenues: 19.38%.

Our data also shows large losses in overall budget resources for Ghana (19%). In the case of this country the year used for the simulation was 2000. Recent data seem to show that the Ghanaian authority have reached some success in diversifying their overall budget resources away from tariff revenue, therefore more recent data could show a smaller loss.

Togo also displays a significant fall in total budget resources: -12%. Most of the other countries seem to be loosing between 5 and 7% of budget revenue. Nigeria would only experience a loss of 2%, due to the large share of oil royalties in the total government resources.

For most of these countries, the losses in overall budget revenue seems significant. Clearly, the countries that will commit to trade liberalisation in the EPA context will need to build a new fiscal base to be able to cope with the loss in tariff revenue. Some African countries, such as Senegal have scored some success in developing a new fiscal regime, based on VAT. Nevertheless, ECOWAS countries will probably need assistance from the EU in building a new fiscal system to replace the budget revenue losses incurred after the EPA. ECOWAS countries will also probably need to lower their tariffs on EU imports in a gradual way so as to smoothen the fall in their budget revenues.

## Welfare implications

Consumer surplus is shown in Table 22.

**Table 22: Welfare (consumer surplus) implications of a EU-ECOWAS EPA (US\$)**

Country	Consumer Surplus
Nigeria	113,346,061.50
Ghana	71,478,699.50
Cote d'Ivoire	16,206,072.00

<b>Country</b>	<b>Consumer Surplus</b>
Senegal	12,470,439.50
Bénin	6,595,922.00
Togo	5,462,732.50
Mali	4,482,770.00
Niger	3,904,466.00
Burkina Faso	3,834,553.00
Mauritania	2,471,498.50
Guinea-Bissau	221,876.00

Source: WITS/SMART Simulations, ECA.

The consumers in the ECOWAS countries will derive significant gains from the EPAs as they will have access to goods at lower prices. To this point, it is assumed that the EU producers and exporters will not be pricing to market. In other words, there is an implicit assumption that the EU exporters and the ECOWAS importers will pass on the benefits of the tariffs reduction to the ECOWAS consumers. If the benefits for tariff dismantlement are not passed on to the ECOWAS consumers but are captured by the exporter or the importer, it is possible that there will be no increase in consumer welfare.

It is therefore crucial to ensure that the welfare is transmitted to consumers that competition policy ensure that there would be no abuse of potential dominant positions or no collusion from large importers. Competition policy capacities and the judicial system supporting it should therefore be strengthened to ensure that EPA's deliver their potential benefits.

However, it should be noted that the overall economic welfare effects are not clear within a partial equilibrium modelling framework since producer surplus changes especially due to supplanting of domestic producers by the EU producers has not been captured in this analysis.

Nonetheless, the big economies of ECOWAS that is, Nigeria, Ghana and Côte d'Ivoire could experience substantial consumer surplus gains. Besides, Senegal and other countries are also likely to obtain some significant improvement in their consumer welfare.

While recognising the weakness of the consumer surplus as a proxy for welfare implications of the EPAs, the partial equilibrium results tell only part of the story. Indeed, increased imports through trade creation do not only benefit consumers in the ECOWAS region. In addition to this are potential gains likely to emanate from embodied technologies in some of the imports, that might eventually be welfare enhancing. This will however depend on whether capital equipments and machineries and such imports that tend to have embodied technologies are already zero-rated as tends to be the case in most countries or not.

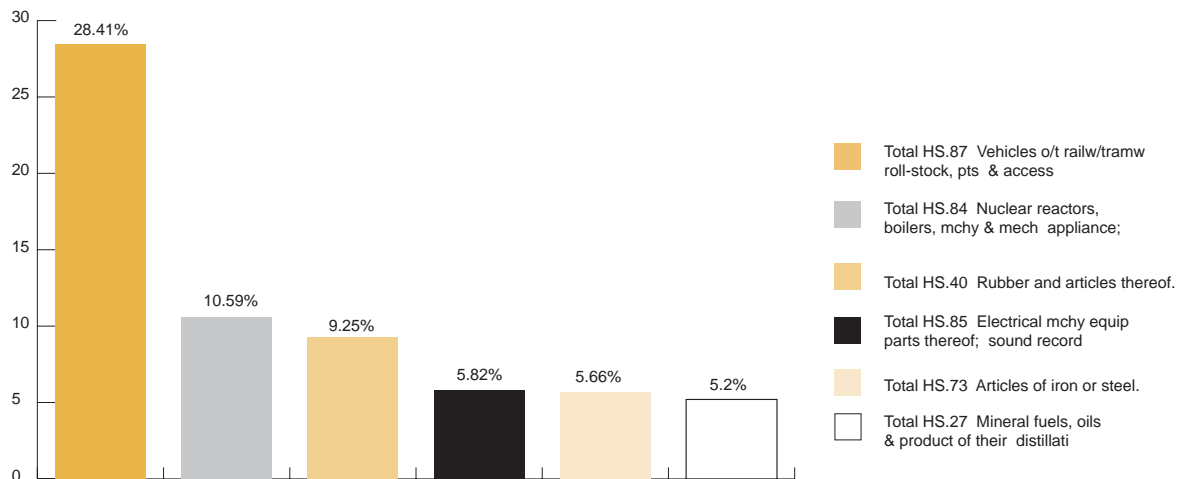
Like in the case of trade effects (creation and diversion), the outcomes through EPAs reciprocity will depend on the initial conditions. Therefore, for countries like Burkina Faso and Mauritania, which have been fast trade liberalisers, the welfare implications might seem small because the required changes in the reciprocation to the EU preferences are not major.

Ultimately though, all the ECOWAS region countries are likely to experience positive consumer welfare and whether the net welfare gain will remain positive, depends both on whether the supplanted producers in the region experience welfare gains outweighing producer surplus losses. The overall welfare will also include the losses of tariff revenues for the Governments.

### Welfare effects of liberalisation at the regional level, product analysis

Graph 13 displays the Harmonised System Chapters (HS02) yielding the highest welfare gains for the ECOWAS countries plus Mauritania. Together, these 6 products groups account for more than 65% of the total welfare gains of the region, in case of liberalization of the trade with the EU.

**Graph 13: Product categories yielding the largest consumer surplus in case of EPA**



Sources: WITS-SMART simulations, ECA.

By far, the group of products yielding the highest welfare gains are vehicles (28.41%), followed by rubbers and articles of rubbers (10.59%).

An approximate categorization<sup>41</sup> of the products in 3 categories (manufactured, primary, and food products) shows the overwhelming importance of manufactured goods in the welfare gains (more than 85%). The following tables shows the welfare changes for all products, by categories.

**Table 23: Welfare changes in ECOWAS by categories of products**

Types of goods	Manufactured goods	Primary products	Food products
Welfare change in %	85.67%	8.36%	5.96%

Sources: WITS-SMART simulations, ECA.

It would be interesting to investigate further which social categories are bound to benefit most of such changes. This would imply reviewing the consumption baskets of different social categories according to revenue, and looking at the impact of the EPA on the tariff of these goods.

For example, the modest decline in food products is bound to affect in different ways the situation of the urban versus the rural poor, with the former probably benefiting more than the latter.

**Conclusions from partial equilibrium simulations:**

Our partial equilibrium simulations show that imports from the EU to ECOWAS would increase by approximately 1.87 billion US\$. France and the UK would be the two main beneficiaries on the EU side, other studies have found similar results<sup>42</sup>. Nigeria and Ghana are projected to absorb the bulk (two-thirds) of the increased imports from the EU.

In the case of ECOWAS, the trade diversion effects seems relatively significant (-7%). Importantly, intra-regional trade diversion is also notable (-6.7%), which shows a negative effect on regional integration. The two principles of reciprocity and deeper regional integration are likely to pull in different directions. There is therefore a case for differentiation and less than full reciprocity in the EPA negotiations.

Most of the intra-regional trade diversion occurs in Ghana, which shows that other ECOWAS countries will need to consult with this country to ensure that it times its opening to the EU imports in such a way as to grant enough time to ECOWAS firms to adapt to increased competition on this market.

On the other hand, ECOWAS countries that would experience the largest fall in their exports to the rest of the region are Togo, Cote d’Ivoire and Benin. However, even for these countries the total level of

<sup>41</sup> The categorization is done at the HS-02 level.  
<sup>42</sup> See “The impact of ACP/EU Economic Partnership Agreements on ECOWAS countries: an empirical analysis of the trade and budget effects”, Busse, Borrmann and Grossmann, HWWA, Friedrich Ebert Institute, Hamburg 2004.

exports remains only marginally affected, due to the fact that most of their exports are geared towards developed countries markets.

Petroleum products seem to be by far the most sensitive products to intra-regional trade diversion, followed by fish, some textile and products of the milling industry. ECOWAS countries will have to consult intensively with these potential losers to mitigate such potential negative impacts.

Although tariff revenue falls are highest in Nigeria in absolute (\$) terms, the countries that will be the most affected by them are Ghana and especially Guinea-Bissau, which could lose up to 20% of its Government budget revenues in case of a full liberalisation of EU imports.

Finally, our model shows some results, albeit incomplete concerning welfare gains. It seems that consumer surplus would mainly be improved through the lowering of price of industrial goods such as cars, machines and equipments.

## Conclusion

The purpose of this study has been to assess the economic impact of the economic partnership agreement between West African countries and the European Union. To that end, we have used two complementary methodological approaches, namely, the general equilibrium model, which is the ideal theoretical framework for this kind of assessment; and the partial equilibrium model, owing to the lack of data within the framework of the first approach.

Owing to this problem of lack of data, the general equilibrium analysis has been effected by reference to aggregates such as sub-Saharan Africa. The partial equilibrium analysis, on the other hand, has been conducted by reference to the ECOWAS countries.

The EPAs negotiations framework, in our view, offers several liberalization options. We have used three scenarios within a general equilibrium framework. The first has examined the implications of an EPA where sub-Saharan Africa applies the same preferential regime to the EU as that which it enjoys from the latter (full reciprocity). In the second scenario, we have assessed the impact for sub-Saharan Africa of deepened regional integration without immediate reciprocity to the preferences granted by the EU. In this scenario, sub-Saharan African countries liberalize trade between them without immediate reciprocity to the EU. In the third scenario, we have examined the option of a free trade area (FTA) between sub-Saharan Africa and the EU.

A number of observations emerge from this study. First, an analysis of the characteristics of African economies reveals their trade dependency and their vulnerability to external shocks.

When one looks at the protection structure of these countries vis-à-vis the EU, it appears that on average, the agro-processing industries and light manufactures are heavily protected. This may be attributed to the industrial policies of these countries. Another perspective on the high tariffs on European products is to consider them as a source of revenue.

In the intra-African context, one may note the importance of trade barriers. No doubt, the deepening of regional integration may accentuate the fear of losing customs revenue. However, there is on the other hand a real potential for intra-African trade creation if these barriers were to be eliminated.

The results of the simulations show that the first scenario is clearly unfavourable to African countries. It emerges that with full reciprocity, the impact on sub-Saharan Africa will be negative in terms of GDP, balance of trade, terms of trade, as well as welfare. In respect to industrial structure, it is clear that for most of the SSA's industries, their industrial production will decline under full reciprocity. The risk of de-industrialization is therefore important if the reciprocity principle is fully applied.

The second scenario has positive consequences in respect of GDP and welfare. Terms of trade will improve, but the trade balance remains in deficit. Finally, the third scenario, which is the most ambitious in that it takes account of all the EU trade barriers, will entail the highest gains for sub-Saharan Africa (over \$US 8 billion in terms of welfare).

However, these gains would be realized at the price of considerable and costly macroeconomic adjustments. Indeed, the analytical tools used in assessing the impacts of the different scenarios do not really take account of the adjustment costs stemming from this kind of liberalization. These costs tend to rise proportionately the more ambitious the liberalization happens to be, because they are linked to reallocations of factors flowing from liberalization. The implementation time frame for such agreements is also a key element for African countries, because it is a relevant consideration in regard to their capacity to handle the adjustment costs associated with such liberalization.

In order to gauge the magnitude of the variations in the main aggregates of total trade liberalization for the ECOWAS countries, we have analysed in partial equilibrium the impact of elimination of the duties applied by these countries on imports from the EU. This simulation gives us an idea as to the magnitude of the adjustments the ECOWAS countries will face in the event of elimination of their trade barriers.

The ECOWAS countries are likely to register a substantial expansion in imports from the EU. A considerable part of these imports will be deflected to the detriment of other trading partners, including indeed ECOWAS countries on occasion. Even though it is still not of much consequence, this phenomenon does not augur well for greater regional integration.

The fact that intra-ECOWAS trade might be negatively directed is a question that should be seen as a high priority. This region is among the least integrated on the continent. Consequently, the principle of deeper integration needs to be placed at the fore, in relation to the reciprocity principle, in EPA negotiations for this region.

Finally, the positive gains realized by consumers in the ECOWAS area, as a result of the elimination of trade barriers, should be put in perspective, by reference both to the loss of domestic businesses crowded out of the market by new imports from more competitive European businesses, and the significant losses in customs revenue. Given that these losses cannot be recouped instantly, the situation calls for concrete measures aimed at ensuring fiscal sustainability.

# Annex 1

**Table A: Regional aggregates (GTAP version 5)**

Code		GTAP regions
EU <sup>1</sup>	European Union	Australia, Belgium, Denmark, Finland, France, Germany, UK, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, Hungary, Poland, Rest of Central Europe
BWA	Botswana	Botswana
XSC	Rest of SACU	Namibia and South Africa
MOZ	Mozambique	Mozambique
MWI	Malawi	Malawi
TZA	Tanzania	Tanzania
ZMB	Zambia	Zambia
ZWE	Zimbabwe	Zimbabwe
UGA	Uganda	Uganda
XSF	Rest of South Africa	Other Southern Africa (Angola)
XSS	Rest of SSA	Rest of SSA, incl. ECOWAS
ROW	Other regions	Australia, New Zealand, China, Hong Kong, Japan, Korea, Taiwan, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam, Bangladesh, India, Sri Lanka and Rest of South Asia, Canada, United States of America, Mexico, Central America, Caribbean, Colombia, Peru, Venezuela, Rest of Andean Pact, Argentina, Brazil, Chile, Uruguay and Rest of South America, Switzerland, Rest of EFTA, Former Soviet Union, Turkey, Rest of Middle East, Morocco, Rest of North Africa, Rest of World

**Table B: Aggregates by sector (GTAP version 5)**

Code	Aggregate sector	GTAP sector
Cereals	Grains	Paddy rice, wheat, cereal grains nec
Vegetables	Vegetables and fruits	Vegetables, fruits and nuts
Oilseeds	Oilseeds	Oilseeds
Sugar	Sugar	Sugar cane, sugar beet
Cotton	Cotton	Plant-based fibres
Other crops	Other crops	Crops nec



<b>Code</b>	<b>Aggregate sector</b>	<b>GTAP sector</b>
Livestock	Animals and animal products	Cattle, sheep, goats, horses, animal products nec, untreated raw milk, wool, silk-worm cocoons
Natural resources	Natural resources	Forestry, fishing, coal, oil, gas, minerals nec
Agro-processing	Agro-based industries	Meat, cattle, sheep, goats, horse; meat products nec vegetable oils and fats, dairy products, processed rice, sugar, food products nec, beverages and tobacco products.
Light manufacturing	Light industries	Textiles, wearing apparel, leather products, wood products, paper products, publishing.
Industry	Industrial sectors	Petroleum, coal products, mineral products nec, chemicals, rubber, plastics, ferrous metals, metals nec, metal products, motor vehicles and parts, transport equipment nec, electronic equipment, machinery and equipment nec, manufactures nec.
Services	Utility services	Electricity, gas--extraction and distribution, water, construction, communication, financial services nec, insurance, business services nec, recreation and other services, dwellings, pub.admin/defence/health/education
Trade	Trade facilitation	Trade, sea transport, air transport.

Source: Aggregations, GTAP Version 5 database

## Annex 2

### Impacts of the different scenarios on the main aggregates (simulations in general equilibrium)

Table C					\$US million	
	GDP	Imports	Exports	Terms of trade	BC	BE
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
NAM	-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
SSA	-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
ROW	-0.003	-0.0864	-0.0032	-0.0406	850.6011	-921.4965
Scenario 2 : Deeper intra-SSA 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
NAM	0	-0.0078	0.0092	-0.0042	150.7274	-58.1692
Japan	-0.0001	-0.0106	0.0186	-0.0083	98.9025	-45.1652
SSA	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
ROW	-0.0002	-0.0045	0.0014	0.0024	161.0926	27.1114
Scenario 3: Free trade area						
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
NAM	-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
SSA	3.3890	18.2476	8.8278	1.8336	-5484.2998	8028.7661
China	-0.0032	-0.1236	0.0051	-0.0557	144.5395	-144.1505
ROW	-0.0040	-0.1205	0.0072	-0.0327	1870.0596	-883.5765

Source: ECA simulations, GTAP V.5.4

## Annex 3

### Variations in production levels in SSA (%) under different EPA scenarios

	<b>Full reciprocity</b>	<b>Deeper integration</b>	<b>Free trade area</b>
Cereals	0.0213	0.5554	7.7333
Vegetables	-0.2063	0.2536	4.8533
Oilseeds	-0.0199	0.2588	5.0238
Sugar	0.0423	0.4369	12.8798
Cotton	0.6788	-0.0293	-3.2957
Other crops	0.5084	-0.0616	0.9048
Livestock	-0.2478	0.4614	5.5269
Pdts.Orig.Anim	-0.0189	0.4063	4.9162
Fishing	-0.1151	0.2612	3.4621
Energy	0.1458	-0.2934	-1.9289
Natural resource	0.2248	-0.1383	-1.7175
Processing	0.0885	0.4376	12.482
Textiles	-0.6989	1.3384	2.3047
Clothing	-2.6639	2.7493	9.1321
Low-tech.industry	-4.8511	1.2875	-5.0218
Medium-tech.industry	-3.0865	1.0426	-2.9961
Heavy industry	-3.2136	1.2986	-10.7966

Source: ECA, simulations GTAP V.5.4

## WITS-SMART simulation results at the country level

### BENIN

Our simulations show that imports of Benin from the EU would rise by \$US 61 million, that is, 9.72 per cent. Exports from Benin to other West African countries would fall by more than \$3.5 million in case of EPA, that is, about 12 per cent. This amount would be about 11.6 per cent of the country's exports to the region and about 0.016 per cent of its total exports.

### Loss in exports to ECOWAS

The table below shows the rates and amounts of export loss to West Africa.

#### Reduction in Benin's exports to the rest of West Africa in case of EPA

Country	Reduction in Benin's exports (\$US ,000)	Rate of reduction of initial exports	Share of each market in the total export reduction
Ghana	-3137.047	- 39.89%	88.89%
Nigeria	-267.882	-1.37%	7.59%
Burkina Faso	-23.909	-1.39%	0.68%
Côte d'Ivoire	-100.156	-9.43%	2.84%
Total	-3528.994	-11.66%	100.00%

Source: WITS-SMART simulations, ECA

The bulk of the decrease would be in Benin's exports to Ghana (88 per cent).

It seems that while Benin's exports to Burkina Faso and Nigeria would be a little affected, those to Côte d'Ivoire and, especially Ghana, would be heavily affected.

### Vulnerable products

#### Products vulnerable to the deviation in Benin's trade in case of EPA

Chapter SH 2	Description	Reduction in revenues from exports to the region(\$US ,000)	% of overall reduction in exports
HS.27	Mineral fuel, oils, and products of their distillation	-3159.138	89.52%
HS.38	Miscellaneous chemical products	-200.325	5.68%

Source: WITS-SMART simulations, ECA

The table above shows that the biggest export loss in monetary terms would be from mineral fuel and some chemical products, particularly refined petroleum and herbicides (S.H-6).

It is also important to list those products whose export would be most affected by the decrease. For certain tariff areas, some export products of Benin would be completely replaced by those from Europe, resulting in an export decline of 100 per cent for those products. The products are:

- Canned tomatoes; and Some textile products (cotton and synthetic materials).

Fortunately, the export volumes of these products are currently very low and, therefore, they would have limited impact on the country's economy<sup>43</sup>.

### Loss of tariff revenues by product

For Benin, the simulations show that revenue loss across various categories of products is relatively evenly distributed (HS-2).

Chapter HS 2	Description	Loss of tariff revenue	Share in overall revenue loss	Cumulative loss
HS.02	Meat and other meat products	-8487.313	21.47%	21.47%
HS.63	Other ready-made textile materials	-4665.415	11.80%	33.28%
HS.87	Cars, tractors, cycles and other vehicles, etc.	-2569.401	6.50%	39.78%
HS.84	Nuclear reactors, boilers, machines, instruments and gadgets	-1816.777	4.60%	44.38%
HS.52	Cotton	-1720.313	4.35%	48.73%
HS.04	Milk and milk products, eggs, and natural honey	-1632.252	4.13%	52.86%
HS.20	Preparation of vegetables, fruits or other plant parts	-1411.586	3.57%	56.43%
HS.40	Rubber and rubber works	-1314.982	3.33%	59.76%
HS.11	Products of the flour industry; malt; starch, inulin...	-1164.884	2.95%	62.70%
HS.48	Papers and cardboard papers, art in cellulose paste	-1161.481	2.94%	65.64%

Source: WITS-SMART simulations, ECA

Meat and textiles account for a third of the total revenue loss.

<sup>43</sup> More detailed information can be obtained from the United Nations Economic Commission for Africa.

# BURKINA FASO

In case of EPA, Burkina Faso’s imports from the EU would increase by about \$US 40 million, that is about 8 per cent, compared to current levels. The country’s exports to other West African countries could experience an overall decline of more than \$US 2 million, that is, a little more than 6 per cent of the country’s current exports to the region and about 0.008 per cent of its total exports.

The table below shows the decline of Burkina Faso’s exports to West Africa in case of EPA.

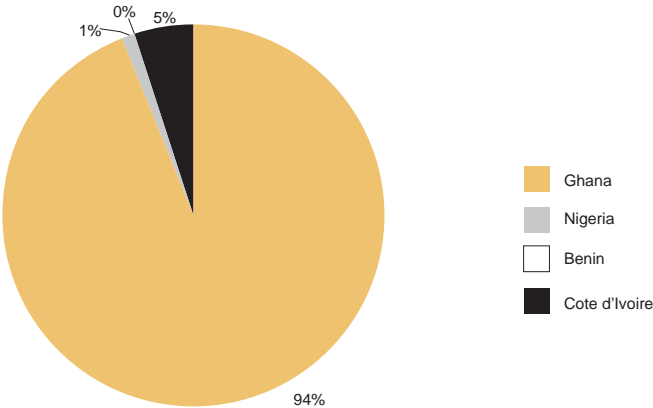
## Reduction in Burkina Faso’s exports to ECOWAS in case of EPA

Country	Reduction in exports Millions of \$US	Reduction in exports compared to initial level
Ghana	-1914.556	-6.74%
Nigeria	-10.631	-9.73%
Benin	-4.073	-10.25%
Côte d’Ivoire	-109.104	-2.14%
Average	*	-6.06%
Total	-2038.364	*

Source: WITS-SMART simulations, ECA

According to the graph below, although the rate of reduction would be higher in Burkina Faso’s exports to Benin, most of the reduction in export volumes would actually occur in the country’s exports to Ghana.

## Geographical distribution of Burkina Faso’s export loss in case of EPA



Source: simulations WITS-SMART, ECA

This export situation can be explained by the fact that Burkina Faso enjoys preferential treatment in Benin under UEMOA, but the erosion of this preferential treatment, by EPA, would result in a high rate of reduction in Burkina Faso's exports to Benin.

## Vulnerable products

The table below shows those products of Burkina Faso that are vulnerable, that is, those that would contribute most to the country's overall export loss after EPA.

Chapter SH 2	Description	Amount of export reduction	% of overall export reduction
HS.04	Milk and dairy products, eggs, and natural honey	-320.739	15.74%
HS.84	Nuclear reactors, boilers, machines instruments and gadgets	-194.641	9.55%
HS.87	Cars, tractors, cycles and other vehicles, etc.	-188.064	9.23%
HS.24	Tobacco and manufactured substitutes	-146.433	7.18%
HS.22	Drinks, liquid alcohol and vinegar	-135.381	6.64%
HS.15	Fats, animal and vegetable oil; and their cleavage products	-130.919	6.42%
HS.19	Cereal-based preparations, flour, starch Products, milk, pastries	-126.23	6.19%
HS.63	Other ready-made textile materials	-91.923	4.51%
HS.40	Rubber and rubber products	-87.777	4.31%
HS.20	Vegetable, fruit and other plant products	-51.639	2.53%
HS.85	Electrical machinery, instruments, materials and their spare parts, etc.	-47.196	2.32%
HS.27	Mineral fuel, oils, and products of their distillation	-44.803	2.20%
HS.72	Smelting, iron and steel	-39.107	1.92%
HS.73	Articles of cast, iron and steel	-32.612	1.60%
HS.94	Household as well as medical and surgery furniture, bedding materials	-30.76	1.51%
HS.69	Ceramics	-28.255	1.39%
HS.59	Stuffed skins, covered objects, art and techniques in mat, textiles	-27.228	1.34%
HS.07	Edible vegetable plants, roots and tubers	-24.511	1.20%
HS.11	Products of the flour industry, malt, starch and inulin	-22.982	1.13%
HS.30	Pharmaceuticals	-22.565	1.11%
HS.38	Miscellaneous products of the chemical industry	-21.152	1.04%

Source: WITS-SMART simulations, ECA

As shown, the distribution of the vulnerable products of Burkina Faso is even. This means that a wide range of the country's export products could be affected by the reduction.

However, some products account for the overall reduction in exports. These are, in particular, certain processed and semi-processed, agricultural products, namely:

Dairy products and eggs: 15.7 per cent;

Installations of boilers and mechanical instruments (S.H.84): 9.55 per cent;

Vehicles 9.23 per cent;

Tobacco products: 7.18 per cent;

Drinks: 6.64 per cent;

Animal fats: 6.42 per cent;

Flour- and cereal-based preparations: 6.19 per cent.

The fact that some of these products certainly have local inputs, particularly those products of the agro-food industry, raises genuine concerns about the impact that the EPA would have on the rest of Burkina Faso's economy, especially as regards the most disadvantaged social groups who work in the agricultural sector.

## Loss of revenue by product

Burkina Faso could lose more than \$22 million in tariff revenues if the EPA should take the form of a total liberalization. The table below gives a summary view of the loss in tariff revenue by product.

### Burkina Faso: Loss of tariff revenue

Chapter SH 2	Description	Loss of tariff revenue (\$US ,000)	Share in overall loss of tariff revenue	Cumulative loss
HS.85	Electrical machinery, instruments, materials, and their spare parts, etc.	-4603.578	20.92%	20.92%
HS.87	Cars, tractors, cycles and other vehicles, etc.	-2889.529	13.13%	34.05%
HS.84	Nuclear reactors, boilers, machines instruments and gadgets	-1996.601	9.07%	43.13%
HS.27	Mineral fuel, oils, and products of their distillation	-1173.089	5.33%	48.46%
HS.21	Miscellaneous food preparations	-1043.399	4.74%	53.20%
HS.72	Articles of cast, iron and steel	-1016.509	4.62%	57.82%



<b>Chapter SH 2</b>	<b>Description</b>	<b>Loss of tariff revenue (\$US ,000)</b>	<b>Share in overall loss of tariff revenue</b>	<b>Cumulative loss</b>
HS.17	Sugar and sugar confectionary	-927.949	4.22%	62.04%
HS.73	Articles of cast, iron and steel	-727.629	3.31%	65.34%
HS.11	Products of the flour industry, malt, starches and inulin...	-580.612	2.64%	67.98%
HS.19	Cereal-based preparations, flour, starch products, milk, pastries	-556.849	2.53%	70.51%
HS.90	Optical instruments gadgets and photography equipment, etc.	-525.985	2.39%	72.90%
HS.48	Papers and cardboard papers, art in cellulose paste	-442.188	2.01%	74.91%

Source: WITS-SMART simulations, ECA

## CAPE VERDE

Since Cape Verde did not provide TRAINS with data, we could not assess the impact of EPA on the country's imports and tariff revenue variation.

From our simulations based on data provided by ECOWAS member countries working with TRAINS, Cape Verde's exports to the other ECOWAS countries could decrease by more than \$US 347 000 in case of EPA.

According to the data used by WITS-SMART, Cape Verde's exports to the other ECOWAS countries were only to Nigeria and Ghana. Nigeria alone accounted for 99 per cent of these exports.

In percentage terms, Cape Verde's export to the rest of the region would decrease by 12 per cent in case of EPA. This would be higher than the average (about 9 per cent).

### Vulnerable products

The table below shows the vulnerable products of Cape Verde in case of EPA. These products would be responsible for most of the overall reduction in Cape Verde's revenue earnings from exports to ECOWAS countries in case of EPA.

#### Cape Verde's products vulnerable to trade deviation in case of EPA

Chapter SH 2	Description	Export reduction (\$US ,000)	Share in overall reduction in exports to the region
HS.69	Ceramic products	-25.27	55.29%
HS.87	Cars, tractors, cycles and other vehicles, etc.	-5.323	11.65%
HS.94	Household as well as medical and surgery furniture, bedding materials	-2.655	5.81%
HS.68	Art of stone, plaster, cement, etc... or similar materials	-2.565	5.61%
HS.39	Plastics and plastic materials	-2.082	4.56%
HS.38	Miscellaneous products of the chemical industry	-2.016	4.41%
HS.84	Nuclear reactors, boilers, machines instruments and gadgets	-1.581	3.46%
HS.83	Miscellaneous ordinary iron works	-1.243	2.72%
HS.25	Salt, sulfur, soil and stones; plasters, lime and cement	-0.719	1.57%
HS.40	Rubber and rubber products	-0.656	1.44%
HS.96	Miscellaneous works	-0.028	1.18%

Source: WITS-SMART simulations, ECA

The table shows that the reduction in export revenues would be caused mainly by the following products:

Ceramics: 55.29 per cent of the overall export reduction;

Vehicles: 11.65 per cent;

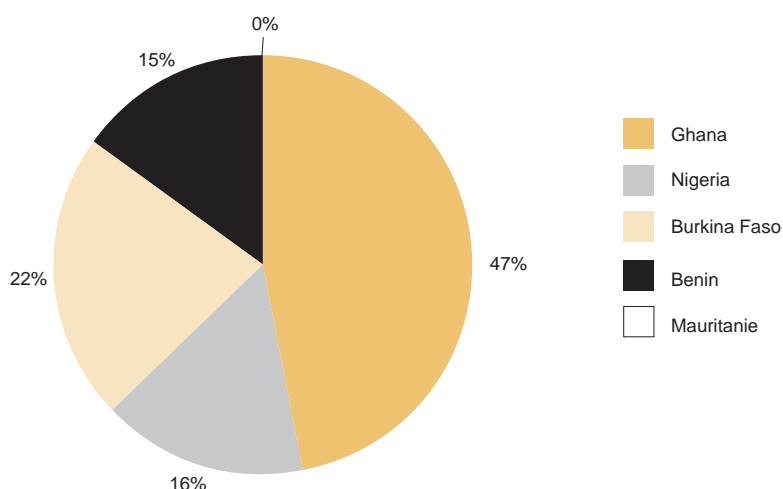
Furnishing and bedding materials: 5.81 per cent.

## COTE D'IVOIRE

Our simulations show that Côte d'Ivoire's imports from the EU could increase by \$US 188 million, that is, about 11.2 per cent. It also seems that Côte d'Ivoire would lose almost \$US 9 million, which is about 0.19 per cent of its total exports to the whole world. The ECOWAS region's share of this loss would be about 5 per cent of current levels.

The graph below shows the market distribution of this loss in the region

### Geographical distribution of the total reduction in Côte d'Ivoire's exports in case of EPA



Source: WITS-SMART simulations, ECA

Ghana would account for about half (47 per cent) of Côte d'Ivoire's trade reduction in case of EPA. Côte d'Ivoire's export to Burkina Faso would also be considerable (22 per cent of the total decrease). The shares of Nigeria and Benin in this decrease would be 16 per cent and 15 per cent, respectively.

### Reduction in Côte d'Ivoire's exports in case of EPA (rate and distribution of reduction)

Côte d'Ivoire to	Export reduction(\$US ,000)	% of export reduction	% of overall reduction of exports
Ghana	-4146.316	-26%	47%
Nigeria	-1442.076	-9%	16%
Burkina Faso	-1981.921	-2%	22%
Benin	-1323.756	-3%	15%
Mauritania	-17.319	-1%	0%

Average		-5%	-
Total	-8911.388	-	-

Source: WITS-SMART simulations, ECA

The table below shows the main products of Côte d'Ivoire that are vulnerable in case of EPA. These products are responsible for the lion share of the total reduction in exports to the rest of the region.

### Vulnerable products of Côte d'Ivoire in case of EPA

Chapter SH 2	Description	Export reduction	% of overall export reduction
HS.27	Mineral fuels, oils and products of their distillation	-4922.876	55.24%
HS.52	Cotton	-637.472	7.15%
HS.21	Miscellaneous food preparations	-481.356	5.40%
HS.38	Miscellaneous products of the chemical industry	-455.47	5.11%
HS.63	Other ready-made textile materials	-280.706	3.15%
HS.39	Plastics and plastic products	-225.67	2.53%
HS.17	Sugar and sugary confectionary	-211.909	2.38%
HS.19	Cereal-based preparations, flour, starch products, milk, pastries	-198.001	2.22%
HS.48	Papers and cardboard papers, art in cellulose paste	-149.141	1.67%
HS.24	Tobacco and manufactured substitutes	-134.657	1.51%
HS.33	Essential oils and resin products. Perfumes	-129.757	1.46%
HS.15	Fats, animal and vegetable oils; and their cleavage products...	-124.665	1.40%
HS.85	Electrical machinery, equipment and parts thereof	-123.792	1.39%
HS.34	Soaps, organic floor agents, washing and polishing preparations...	-96.172	1.08%

Source: WITS-SMART simulations, ECA

It is clear that fuel and hydrocarbon products (55.24 per cent) have the larger share of the total reduction in exports. Other products with a significant share of the total reduction of Côte d'Ivoire's exports to the rest of the region are:

Cotton: 7.15 per cent;

Various types of food (HS.21): 5.4 per cent; and

Various chemical products: 5.1 per cent.

## Loss of tariff revenue by product

Côte d'Ivoire's total loss of tariff revenue would be more than \$US 112 million. The table below shows the products that would be responsible for the biggest loss of tariff revenue for Côte d'Ivoire. It can be seen from the table that the loss is evenly distributed among various sectors.

### Categories of products responsible for the biggest loss of tariff revenue for Côte d'Ivoire

Chapter SH 2	Description	Loss of tariff revenue	Share in overall loss of revenue	Cumulative loss
HS.87	Cars, tractors, cycles and other vehicles, etc..	-12688.691	11.31%	11.31%
HS.84	Nuclear reactors, boilers, machines & mechanical appliances	-10461.665	9.32%	20.63%
HS.85	Electrical machinery, equipment and parts thereof	-7894.707	7.03%	27.66%
HS.03	Fish and crustaceans, molluscs and other aquatic invertebrates	-7233.974	6.45%	34.11%
HS.48	Papers and cardboard papers, art in cellulose paste	-5900.259	5.26%	39.36%
HS.73	Articles of cast, iron and steel	-4546.639	4.05%	43.41%
HS.27	Mineral fuels, oils and products of their distillation	-4137.952	3.69%	47.10%
HS.39	Plastics and plastic materials	-3789.716	3.38%	50.48%
HS.22	Drinks, alcoholic liquid and vinegar	-3429.591	3.06%	53.53%
HS.04	Milk and dairy products, eggs and natural honey	-2913.443	2.60%	56.13%

Source: WITS-SMART simulations, ECA

## GAMBIA

Data for Gambia is not available from the TRAINS database. Therefore we were not able to compute any simulation for Gambia neither on trade creation nor on revenue losses. Nevertheless it was possible to use other countries data to compute Gambia's fall in exports to the rest of ECOWAS. According to our simulations using the WITS-SMART model, the decline in Gambia's exports to the West-African region could amount to up to almost 32 000 US\$, about 4.3% of current levels.

Due to the heavy concentration of Gambia's exports to ECOWAS, 80% of this fall would occur in export to Nigeria, which would decrease by 4.72%.

### Fall in exports of Gambia after EPA (decline rate and repartition in ECOWAS).

Country	Fall in export revenues, in US\$ ('000)	Variation of exports (%)	Share in total export revenue loss
Ghana	-4.142	-6.95%	13.00%
Nigeria	-25.631	-4.72%	80.42%
Benin	-2.012	-1.45%	6.31%
Mauritania	-0.088	-10.15%	0.28%
Total	-31.873	-4.30%	100.00%

Source: WITS-SMART: ECA

The table below shows the most vulnerable products for Gambia in case of an EPA.

These products are those that account for the largest shares of the total decline in exports to West Africa, due to trade diversion.

### Vulnerable products for Gambia in case of EPA

Chapter HS 2	Chapter description	Fall in export revenue (US\$ '000)	Variation of exports in %	Share in the overall export loss
HS.76	Aluminium and articles thereof.	-24.789	-4.64%	77.77%
HS.52	Cotton	-1.804	-1.82%	5.66%
HS.63	Other made up textile articles; sets; worn clothing	-1.223	-32.68%	3.84%
HS.41	Raw hides and skins (other than fur skins) and lea	-1.208	-2.94%	3.79%

Source: WITS-SMART simulation, ECA.

The most vulnerable products are clearly "Aluminium and articles thereof", which account for 77.4% of the total revenue fall.

## GHANA

In the case of Ghana, the year used for the simulation is 2000. Our simulation show a surge in imports of approximately 267 million US\$, an increase of 13 %. Ghana could loose at least 1.2 million US \$ in export to the rest of the region in case of EPA. This is equivalent to a loss of 4.7% or present exports to the region and only 0.0006% of Ghana's export to the whole World in 2002.

In our sample, four West African countries reported imports from Ghana: Benin, Burkina Faso, Mauritania and Nigeria. It is highly likely that there are actually exports from Ghana to other countries of the sub-region, at least to its two neighbours, Côte d'Ivoire and Togo, so our representation of Ghana's export loss is probably under-estimated.

### **Ghana's export loss in case of EPA (diminution by country in % and repartition of total export diminution)**

<b>Country</b>	<b>Loss in export revenue (US \$ '000)</b>	<b>Fall in exports (in %) compared to situation prior EPA</b>	<b>Share in total export loss (%)</b>
<b>Burkina Faso</b>	-174.247	-3.24%	14.49%
<b>Mauritania</b>	-0.001	-0.05%	0.00%
<b>Benin</b>	-478.832	-7.78%	39.82%
<b>Nigeria</b>	-549.397	-3.91%	45.69%
<b>Total</b>	<b>-1202.477</b>	<b>-4.70%</b>	<b>100.00%</b>

Source : WITS-SMART simulation, ECA.

As indicated in the above table, the fall in export would be most severe in Benin (- 7.78% of present level).

45.69% of the total downfall in export revenues would happen on Nigeria's market. Benin, would also account for a large part of the total export forgone : 40%.

### **Vulnerable products:**

The table on the following page represents the vulnerable products of Ghana, in case of an EPA with the EU. These are the products that account for the largest share of Ghana's export revenue reduction in case of EPA.

The list includes agriculture and agro-processed goods, as well as raw industrialised goods such as plastics



and consumable goods that are probably re-exported.

Exports of Cotton would represent a third of the total trade diversion for Ghana, Boilers, machinery and mechanical appliances would represent 10% of these lost exports, Miscellaneous edible preparations represent 7% of the loss, and Plastics would represent more than 5.5% of the total loss of exports to the region.

**Ghana: categories of products most affected by regional trade diversion.**

HS Chapter	Product description	Fall in export revenue (US\$ '000)	% of total export revenue loss
HS.52	Cotton.	-388.481	32.31%
HS.84	Nuclear reactors, boilers, mchy & mech appliance;	-120.584	10.03%
HS.21	Miscellaneous edible preparations.	-86.684	7.21%
HS.39	Plastics and articles thereof.	-67.113	5.58%
HS.76	Aluminium and articles thereof.	-42.951	3.57%
HS.37	Photographic or cinematographic goods.	-39.949	3.32%
HS.48	Paper & paperboard; art of paper pulp, paper/pape	-38.833	3.23%
HS.27	Mineral fuels, oils & product of their distillation	-35.082	2.92%
HS.34	Soap, organic surface-active agents, washing prep	-34.174	2.84%

Source : WITS-SMART simulations, ECA.

## GUINEA

The WITS-SMART model does not propose data for Guinea. Therefore, it was not possible for us to assess the impact of EPA on the imports, income or welfare of Guinea. From our simulations based on the WITS-SMART model, Guinea could lose \$US 114 000 in exports to the rest of ECOWAS, a little less than 8 per cent of the country's current exports to the region.

The value of Guinea's world exports would increase to about \$US 700 million in 2002<sup>44</sup>, and the loss in export would be 0.02 per cent in case of EPA.

### **Reduction in Guinea's exports to the rest of the region in case of EPA (rate and geographical distribution of reduction)**

Country	Decrease in exports (\$US ,000)	Rate of export Reduction by country	% of overall export reduction
Ghana	-1.389	-19.40%	1.21%
Nigeria	-104.551	-7.49%	91.12%
Burkina Faso	-4.148	-9.59%	3.62%
Benin	-0.703	-11.82%	0.61%
Côte d'Ivoire	-3.931	-16.45%	3.43%
Mauritania	-0.012	-3.76%	0.01%
Total	-114.734	-7.77%	100.00%

Source: WITS-SMART simulations, ECA

Exports to Nigeria would be responsible for the bulk of this decrease (91.12 per cent of the total decrease). This is relatively due to the larger volumes of Guinea's exports going to Nigeria, compared to other countries of the region.

In terms of proportion, Ghana and Côte d'Ivoire would have the largest shares in the export decrease (19.40 per cent and 16.45 per cent, respectively).

### **Vulnerable products**

The table that follows shows those products whose export to the rest of the region, is most likely to decrease in case of EPA with the EU.

The products of Guinea most vulnerable to the trade deviation are:

<sup>44</sup> Source: World Bank, African Development Indicators

- (a) Vehicles: -\$US 38627;
- (b) Fish and crustaceans: -\$US 26929;
- (c) Leather products, paints (chapter 32 of the S.H): -\$US 24543;
- (d) Various food items: -\$US11276.

**Products of Guinea vulnerable to trade loss in case of EPA**

<b>Chapter SH 2</b>	<b>Description</b>	<b>Variation in export revenues (\$US ,000)</b>	<b>% of overall loss of export revenue</b>
HS.87	Cars, tractors, cycles and other vehicles, etc.	-38.627	33.67%
HS.03	Fish and crustaceans, molluscs and other aquatic invertebrates	-26.929	23.47%
HS.32	Tanned or dyed extracts; tannins and their derivatives, pigments, etc	-24.543	21.39%
HS.21	Miscellaneous food preparations	-11.276	9.83%
HS.23	Wastes from food industries; animal feeds	-5.875	5.12%
HS.40	Rubber and rubber works	-1.957	1.71%
HS.16	Preparations of meat/fish/crustaceans/ molluscs, etc	-1.449	1.26%

Source: WITS-SMART simulations, ECA

## GUINEA-BISSAU

Our simulations show that Guinea-Bissau's imports from the EU could increase by \$US 10 million, that is, more than 16 per cent. The country would lose up to \$20 000 worth of exports to the West African region.

This amount is a little more than 3 per cent of Guinea-Bissau's current exports and 0.0405 per cent of the country's exports to the World.

Of the countries named in Wits-Smart's data only Nigeria stated its imports from Guinea-Bissau.

The table below shows the major export-based products of Guinea Bissau likely to be replaced by European products in case of EPA.

### Vulnerable products of Guinea-Bissau in case of EPA

Chapter SH 2	Description	Variation in export revenues (\$US ,000)	% of overall loss of export revenue
HS.03	Fish and crustaceans, molluscs and other aquatic invertebrates	-13.808	66.81%
HS.48	Papers and cardboard papers, art in cellulose paste	-5.348	25.88%
HS.69	Ceramics	-1.013	4.90%
HS.84	Nuclear reactors, boilers, machines & mechanical appliances	-0.291	1.41%

Source: WITS-SMART simulations, ECA

The products that would be most threatened by the trade deviation are fish products. They account for two thirds of the total export revenue loss.

Paper and paper products would also be highly threatened as they are responsible for more than a quarter of the loss in exports to the rest of the region.

### Loss of tariff revenue

As shown in the report, Guinea-Bissau seems to be our sample country with the biggest revenue loss.

The table below shows the 10 categories of products (HS-2) with the biggest loss in financial revenue.

### Guinea-Bissau: The 10 categories of products (HS-2) with the biggest revenue loss

Chapter SH 2	Description	Variation in export revenue (\$US ,000)	% of overall export revenue loss	Cumulative loss
HS.22	Drinks, alcoholic liquid and vinegar	-1157.879	16.15%	16.15%
HS.68	Art of stone, plaster, cement, asbestos, or similar materials	-665.143	9.28%	25.42%
HS.87	Cars, tractors, cycles and other vehicles, etc.	-646.946	9.02%	34.45%
HS.11	Products of the flour industry, malt; starch, inulin...	-619.903	8.65%	43.09%
HS.27	Mineral fuels, oils and products of their distillation	-596.238	8.32%	51.41%
HS.15	Animal/plant fats & oils & their cleavage products...	-433.381	6.04%	57.45%
HS.84	Nuclear reactors, boilers, machines & mechanical appliances	-330.689	4.61%	62.06%
HS.85	Electrical machinery, equipment and parts thereof	-209.128	2.92%	64.98%
HS.94	Building and hospital furniture: bedding, mattresses	-199.791	2.79%	67.76%
HS.21	Miscellaneous food preparations	-198.461	2.77%	70.53%

Source: WITS-SMART simulations, ECA

The revenue loss is relatively evenly distributed and the products most affected are processed products, including food products. A more subtle analysis concerning S.H. 6 shows that in some chapters the revenue loss is confined to certain items. For example, in S.H. 6, there are big losses on drinks such as beer and wine. Diesel cars, certain cement works, wheat flour, soya oils and various machines-appliances such as deep-freezers, or workshop machines (chapter 84) also suffer considerable losses<sup>45</sup>.

<sup>45</sup> For more detail, consult the Trade and Regional Integration Division of the Economic Commission for Africa.

## LIBERIA

The WITS-SMART database does not have information for Liberia. Therefore we could not evaluate the impact of an EPA for Liberia's tariff revenue, imports or welfare.

Using mirror data, we showed that Liberia could loose at least US\$ 126 459 of revenues of exports to West Africa, under an EPA with the EU. This is 15% of present exports to the region.

Only three countries of the region – Benin, Ghana and Nigeria- have reported exports from Liberia in our simulation. As Sierra Leone and Guinea- two neighbours of Liberia – have not provided data to WITS-SMART, it is highly likely that our results underestimate the potential export loss for Liberia.

As shown in the table below, Liberia's exports to Nigeria are those that would take the hardest hits, they would decline by more than 19% of their present level, and they would account for more than 80% of the forgone export revenue.

### Loss in exports for Liberia under an EPA with full liberalisation of EU imports.

Country	Exports before EPA in \$US '000	Exports Change In Revenue (\$ '000)	decline in exports	% of the total loss in export revenues
Ghana	299.198	-24.252	-8.11%	19.2%
Nigeria	530.05	-102.006	-19.24%	80.7%
Benin	31.142	-0.201	-0.65%	0.2%
<b>Total</b>	<b>860.39</b>	<b>-126.459</b>	<b>-</b>	<b>100%</b>
<b>Average</b>	<b>-</b>	<b>-</b>	<b>-14.70%</b>	<b>-</b>

Source : WITS-SMART simulations, ECA.

On the other hand, the loss in exports to Benin would be much more modest.

Our simulations show that the two most vulnerable categories of products are industrialized goods that are probably re-exported from Liberia : vehicles and electrical machinery.

### Liberia: products undergoing strong trade diversion to ECOWAS

Product	Description	Exports before EPA ('000\$)	Variation in exports (\$ '000)	Variation in exports in %	Share in overall export's loss	Cumulated loss
HS.87	Vehicles o/t railw/tramw roll-stock, pts & access	324.109	-74.865	-23.10%	59.2%	59.2%
HS.85	Electrical mchy equip parts thereof; sound record	234.914	-24.73	-10.53%	19.6%	78.8%
HS.70	Glass and glassware.	83.278	-6.117	-7.35%	4.8%	83.6%
HS.55	Man-made staple fibres.	3.758	-2.648	-70.46%	2.1%	85.7%

Source : WITS-SMART simulations, ECA.

These two categories of products would represent more than three quarter of the total reduction in export revenue for Liberia. Other products that could experience some reduction in exports to the rest of the region include mainly manufactured intermediate goods.

## MALI

Our simulations show that Mali's imports from the EU could increase by more than \$US 54 million, that is, an increase of over 14 per cent. Income from exports to the rest of the region could fall by more than \$US 475 000, a decrease of about 13 per cent of current exports.

West African countries that reported imports from Mali are Benin, Burkina Faso, Ghana, Mauritania and Nigeria.

As shown by the table below, Ghana would account for more than 90 per cent of Mali's export reduction. Three quarters of Mali's current exports go to Ghana. However, Benin seems to be the country where Mali's export loss (more than 18 per cent) would be deepest, compared to the initial levels. In contrast, only 3 per cent of Mali's exports to Burkina Faso would be affected.

Reduction in Mali's exports to the rest of West Africa after ECOWAS has fully opened up to EU exports

Country	Current exports (\$US ,000)	Reduction in exports after EPA (\$US ,000)	% of export reduction	% share in total reduction of exports
Ghana	2748.932	-429,828	-15.64%	90.44%
Nigeria	197.743	-24.752	-12.52%	5.21%
Burkina Faso	578.01	-19.851	-3.43%	4.18%
Benin	0.917	-0.167	-18.21%	0.04%
Mauritania	14.462	-0.67	-4.63%	0.14%
Total	3540.064	-475.268	-13.43%	100.00%

Source: WITS-SMART simulations, ECA

## Vulnerable products

The table in the following page shows the categories of Mali's products most vulnerable in case of EPA. These products would be responsible for much of the decrease in export revenues after the markets have been opened up to European products.

Fuel and other petroleum products would be responsible for more than three quarters of Mali's export revenue loss. Various food preparations would also suffer a loss of more than \$US 24 000 dollars, that is, about 5.15 per cent of the total export reduction.



### Mali: categories of products whose export to the rest of the region would fall in case of EPA

Chapter SH 2	Description	Exports before EPA	Export variations (\$US ,000 )	% of export variations	Share in overall export loss
HS.27	Mineral fuels, oils and products of their distillation	905.962	-369.434	-40.78%	77.73%
HS.21	Various food preparations	88.106	-24.499	-27.81%	5.15%
HS.90	Optical instruments, appliances, photographic instruments etc.	139.62	-13.842	-9.91%	2.91%
Grand Total		3540.064	-475.268	-13.43%	100.00%

Source: WITS-SMART simulations, ECA

### Tariff revenue loss

The distribution of export revenue loss across the various categories of imports is fairly even. However, the table below shows that 10 categories of products out of 97 account for 70 per cent of the revenue loss.

### Mali: loss of tariff revenue by product

Chapter SH2	Category of product	Tariff revenue variation (\$US ,000)	Share in overall revenue loss	Cumulative loss
HS.52	Cotton	-6449.38	19.46%	19.46%
HS.87	Cars, tractors, cycles and other vehicles, etc.	-4494.457	13.56%	33.02%
HS.84	Nuclear reactors, boilers, machinery and mechanical appliances	-3400.056	10.26%	43.28%
HS.85	Electrical machinery; equipment parts thereof; sound record	-2731.371	8.24%	51.52%
HS.11	Products of the flour industry; malt; starch inulin...	-1978.006	5.97%	57.49%
HS.38	Miscellaneous chemical products	-863.054	2.60%	60.09%
HS.19	Preparations of cereal, flour, starch/milk; pastries	-859.841	2.59%	62.69%
HS.17	Sugar and sugary confectionery	-811.584	2.45%	65.14%
HS.73	Articles of cast, iron or steel	-722.726	2.18%	67.32%
HS.04	Milk and dairy products, eggs and natural honey	-720.555	2.17%	69.49%

Source: WITS-SMART simulations, ECA

In the table, there is a predominance of manufactured and food products. A more subtle analysis at the S.H. 6 level shows this for chapter 52, under the paragraph on other bleached cotton materials containing at least 85 per cent of cotton with a maximum weight of 200g/m<sup>2</sup>. Chapter 84 contains various machinery-appliances.

## MAURITANIA

Based on our simulations, Mauritania's imports from the EU could increase by more than \$US 28 million, that is, about 8 per cent. But the country could lose \$US 1.6 million in exports to ECOWAS in case of EPA with the EU. This amount is about 3.12 per cent of Mauritania's current exports to West Africa, and 0.005 per cent of its exports to the whole world.

The table below shows that almost all of Mauritania's export revenue loss (98.6 per cent) would be from its exports to Nigeria.

Reduction in Mauritania's exports to the rest of West Africa and the geographical distribution

Country	Exports to ECOWAS prior to EPA (\$US ,000)	Loss in exports to ECOWAS after EPA (\$US ,000)	Export loss as % of initial levels	Share in overall revenue loss
Nigeria	50,458.76	-1,630.63	-3.23%	98.56%
Burkina Faso	136.52	-0.40	-0.29%	0.02%
Benin	2,434.69	-23.48	-0.96%	1.42%
Total	53,029.97	-1,654.51	-3.12%	100.00%

Source: WITS-SMART simulations, ECA

## Vulnerable products

As can be seen from the table below, fish and crustaceans would account for almost all the reduction in exports.

### vulnerable products for Mauritania

Chapter SH 2	Description	Reduction in exports to the region (\$US ,000)	% of export revenue loss
HS.03	Fish and crustaceans, molluscs and other aquatic invertebrates	-1573.891	97.25%
HS.31	Fertilizers	-44.511	2.75%

Source: WITS-SMART simulations, ECA

As stated earlier on, almost all these products are exported to Nigeria.

## Loss of tariff revenue

Mauritania could lose more than \$US 14 million in customs revenues.

The 10 categories of products (chapters of the harmonized system) which could seriously reduce Mauritania's customs revenues are shown in the table below.

**Mauritania: 10 categories of products responsible for the biggest customs revenue loss**

Chapter SH 2	Description	Loss of tariff revenue (\$US ,000)	% of share in overall loss	% of cumulative loss
HS.87	Cars, tractors, cycles and other vehicles, etc.	-2693.068	18.48%	18.48%
HS.84	Nuclear reactors, boilers, machinery and mechanical appliances	-2552.975	17.52%	36.00%
HS.73	Articles of cast, iron or steel	-1309.088	8.98%	44.98%
HS.85	Electrical machinery; equipment parts thereof; sound record, etc.	-799.753	5.49%	50.47%
HS.11	Products of the flour industry; malt; starch inulin.	-753.287	5.17%	55.64%
HS.17	Sugar and sugary confectionery	-644.721	4.42%	60.06%
HS.15	Animal/plant fats & oils & their cleavage products	-608.398	4.17%	64.24%
HS.27	Mineral fuel, oils, and products of their distillation	-566.906	3.89%	68.13%
HS.40	Rubber and rubber works	-453.353	3.11%	71.24%
HS.04	Milk and dairy products, eggs and natural honey	-361.954	2.48%	73.72%

Source: WITS-SMART simulations, ECA

It should be noted that these products are made up mainly of manufactured products and basic food products such as sugar, flour and dairy products.

## NIGER

It can be seen from our simulations that the Niger's imports from the EU would increase by about \$US 40 million, or 19 per cent. The Niger could also lose almost \$US 2.4 million dollars in case of an EPA with the EU. This loss would be equal to 8.7 per cent of the country's current exports to the rest of West Africa, and 0.008 per cent of its total exports.

The table below shows that about 70 per cent of the export reduction would occur in the Niger's exports to the Ghanaian market. Côte d'Ivoire's market would account for more than one quarter of the loss. However, the deepest fall in exports compared to current levels would be in the Niger's exports to Nigeria (fall of -18.72 per cent) while the smallest fall would be in its exports to Burkina Faso (less than -3 per cent).

### Reduction in the Niger's exports to the region and geographical distribution

Country	Exports to the region prior to EPA (\$US ,000)	Export reduction after EPA (\$US ,000)	% of export reduction	Geographical distribution of export reduction
Ghana	20,340.81	-1,664.29	-8.18%	69.79%
Côte d'Ivoire	6,417.25	-628.44	-9.79%	26.35%
Nigeria	462.98	-86.68	-18.72%	3.63%
Burkina Faso	175.74	-5.22	-2.97%	0.22%
Benin	0.17	-0.01	-7.83%	0.00%
Total	27,396.94	-2,384.65	-8.70%	100.00%

Source: WITS-SMART simulations, ECA

### Vulnerable products

The products of the Niger most vulnerable in case of an EPA with the EU are given in the page that follows. These products are responsible for the country's biggest export revenue losses.

Prominent among these products are:

Products of the flour trade industry: -\$US 600 000;

Edible vegetable: -\$US 438 000;

Dairy products and eggs: -\$US 374 000; and

Sugar and sugary confectionery: -\$US 134 976.

This list contains numerous agricultural and agro-food products, a fact that raises concerns that there might be a negative impact on the other sectors of the Niger's economy, particularly for the poorest social

groups whose income come from rural activities.

**The 10 categories of products (HS-2) whose export to the rest of the region could be most affected by the reduction (\$US)**

Chapter SH 2	Description	Exports prior to EPA(\$US ,000)	Export variation (\$US ,000)	% of export variation	% of share in overall export loss
HS.11	Products of the flour industry, malt, starch and inulin...	2908.61	-612.153	-21.0%	25.67%
HS.07	Edible vegetable plants, roots and tubers	3021.966	-439.345	-14.5%	18.42%
HS.04	Milk and dairy products, eggs, and natural honey	1218.358	-374.01	-30.7%	15.68%
HS.17	Sugar and sugary confectionary	5009.633	-151.296	-3.0%	6.34%
HS.87	Cars, tractors, cycles and other vehicles, etc.	714.489	-96.673	-13.5%	4.05%
HS.52	Cotton	2,553.41	-92.353	-3.6%	3.87%
HS.28	Inorganic chemical products; inorg/organ compounds. Precious metals ...	1327.036	-92.007	-6.9%	3.86%
HS.27	Mineral fuel, oils, and products of their distillation	910.821	-87.978	-9.7%	3.69%
HS.20	Vegetables, fruits and other plant preparations	321.304	-66.176	-20.6%	2.78%
HS.19	Cereal-based reparations, flour, starch products, milk, pastries	669.394	-51.033	-7.6%	2.14%

Source: WITS-SMART simulations, ECA

**Loss of tariff revenue**

The Niger could lose more than \$US 20 million in import revenues. The share of vehicles in the overall loss is huge (almost half). Machinery and appliances (chapter 84) also account for about 10 per cent of the overall loss.

### Niger: Main categories of products responsible for the loss of tariff revenues

Chapter SH 2	Description	Tariff revenue loss (\$US ,000)	% share in overall loss	% of cumulative loss
HS.87	Cars, tractors, cycles and other vehicles, etc..	-9937.021	48.50%	48.50%
HS.84	Nuclear reactors, boilers, machines instruments and gadgets	-1993.949	9.73%	58.24%
HS.63	Other ready-made textile materials	-1018.836	4.97%	63.21%
HS.11	Products of the flour industry; malt; starch, inuli...	-957.136	4.67%	67.88%
HS.85	Electrical machines, instruments, materials, their spare parts, etc.	-932.465	4.55%	72.43%
HS.73	Articles of cast, iron and steel	-738.847	3.61%	76.04%
HS.17	Sugar and sugary confectionery	-417.293	2.04%	78.08%
HS.90	Optical instruments, appliances, photographic instruments etc..	-325.696	1.59%	79.67%
HS.20	Vegetables, fruits and other plant preparations	-320.866	1.57%	81.23%
HS.39	Plastics and plastic materials	-318.211	1.55%	82.78%

Source: WITS-SMART simulations, ECA

## NIGERIA

According to our simulations, Nigeria would see imports from the EU increase by more than 617 million US\$, an increase of 11%. Nigeria could also lose at least 1.9 million dollars of export revenues to the rest of the region. This amount is equivalent to about 4.7% of current exports to West Africa, and about 0.00012 % of Nigeria's total exports to the World.

In our database, only three countries of the sub-region declared imports from Nigeria : Benin, Burkina Faso and Ghana. The table below represents the diminution of exports to ECOWAS, under an EPA. Although only about 21 % of Nigeria's exports go to Ghana today, it would be on this market that Nigerian exporters would experience their greatest losses.

Exports to Ghana would decrease by about 15%, and about 70 % of the total exports forgone would be on that market, under an EPA.

### Nigeria : fall in export under an EPA and repartition in West Africa.

Country	Exports to the region before EPA (US\$ '000)	Forgone exports under EPA (US\$ '000)	% of reduction of exports	Repartition of export revenue fall, as % of total reduction
Ghana	8,649.16	-1,324.18	-15.31%	70.06%
Benin	27,384.32	-448.63	-1.64%	23.74%
Burkina Faso	4,390.19	-117.32	-2.67%	6.21%
<b>Total</b>	<b>40,423.68</b>	<b>-1,890.12</b>	<b>-4.68%</b>	<b>100.00%</b>

Source : WITS-SMART simulations, ECA.

In comparison, it appears that Nigeria's exports to Benin and Burkina Faso would be less affected.

### Vulnerable products :

The table on the next page shows the vulnerable products for Nigeria in case of total liberalisation of EU imports into ECOWAS (our scenario in this report). The categories of products listed here are those that would account for the largest part of the total loss in export revenues for Nigeria's exporters.

It appears that the most vulnerable products would be fuel and oil products, which would account for more than 46% of the total loss in export revenues.

The other main vulnerable products are manufactured goods such as textile (HS. 63), and vehicles (HS 87).



Finally, for a country the size of Nigeria, and given its geographical location, it would be interesting to analyse the trade diversion impacts of EPAs between the EU and other RECs, especially in neighbouring CEMAC.

### Nigeria: product categories experiencing the highest trade diversion in ECOWAS

Chapter HS	Product description	Variation of exports to ECOWAS (US\$ '000)	Share of the total reduction in export revenues to ECOWAS
HS.27	Mineral fuels, oils & product of their distillation	-877.235	46.41%
HS.63	Other made up textile articles; sets; worn clothing	-188.655	9.98%
HS.87	Vehicles o/t railw/tramw roll-stock, pts & access	-99.926	5.29%
HS.85	Electrical mchy equip parts thereof; sound record	-60.511	3.20%
HS.84	Nuclear reactors, boilers, mchy & mech appliance;	-44.346	2.35%
HS.83	Miscellaneous articles of base metal.	-43.495	2.30%
HS.94	Furniture; bedding, mattress, matt support, cushion	-39.59	2.09%
HS.48	Paper & paperboard; art of paper pulp, paper/pape	-38.951	2.06%
HS.68	Art of stone, plaster, cement, asbestos, mica/sim	-38.665	2.05%
HS.52	Cotton.	-37.341	1.98%
HS.28	Inorgn chem; compds of prec mtl, radioact element	-37.279	1.97%
HS.70	Glass and glassware.	-36.616	1.94%
HS.39	Plastics and articles thereof.	-33.138	1.75%
HS.15	Animal/veg fats & oils & their cleavage products;	-31.904	1.69%
HS.73	Articles of iron or steel.	-31.738	1.68%
HS.19	Prep.of cereal, flour, starch/milk; pastrycooks'	-29.201	1.54%
HS.76	Aluminium and articles thereof.	-26.168	1.38%
HS.72	Iron and steel.	-24.99	1.32%
HS.19	Prep of vegetable, fruit, nuts or other parts of	-18.72	0.99%

Sources: WITS-SMART simulations, ECA.

### Tariff revenue losses:

The loss of tariff revenue would amount to almost 427 millions US\$ for Nigeria.

The table below shows the 10 categories of products (HS-2) that would incur the largest falls in tariff revenue.

### Nigeria: 10 product categories for which the tariff revenue fall is largest

Product category (HS-2)	Loss in tariff revenue ('000 US\$)	Share in total tariff revenue loss	Cumulated tariff revenue loss
HS.85 Electrical mchy equip parts thereof; sound record Total	-55164.975	12.92%	12.92%
HS.84 Nuclear reactors, boilers, mchy & mech appliance; Total	-54297.004	12.72%	25.64%
HS.87 Vehicles o/t railw/tramw roll-stock, pts & access Total	-51560.848	12.08%	37.72%
HS.21 Miscellaneous edible preparations. Total	-26905.599	6.30%	44.02%
HS.24 Tobacco and manufactured tobacco substitutes Total	-23381.341	5.48%	49.50%
HS.73 Articles of iron or steel. Total	-19925.526	4.67%	54.17%
HS.30 Pharmaceutical products. Total	-19028.424	4.46%	58.62%
HS.72 Iron and steel. Total	-13395.902	3.14%	61.76%
HS.27 Mineral fuels, oils & product of their distillation Total	-12446.423	2.92%	64.68%
HS.17 Sugars and sugar confectionery. Total	-11287.62	2.64%	67.32%

Source: WITS-SMART simulations, ECA.

One can observe that the tariff revenue loss will be the largest for manufactured goods such as electrical machinery (chapter 85), machines and mechanical appliances (chapter 84) vehicles (chapter 87). Some food products may also cause some large tariff revenue losses (edible preparations, tobacco, sugar).

## SENEGAL

Our simulations show that Senegal's imports from the EU would rise by \$US 144 million, or 12 per cent, but Senegal could also lose more than \$US 1.6 million in exports to West Africa. This amount is about 2.85 per cent of the country's current exports to the region and about 0.0015 per cent of its total exports.

The table that follows shows the reduction in Senegal's exports in case of EPA, and the distribution of this across the region.

### Trade diversion to the disadvantage of Senegal: export loss and geographical distribution

Country	Current exports (\$US ,000)	Reduction in exports after EPA(\$US ,000)	% of reduction in exports	Geographical distribution Of total reduction in exports
Ghana	6,895.93	-139.14	-2.02%	8.51%
Nigeria	487.12	-21.90	-4.50%	1.34%
Benin	20,962.59	-413.39	-1.97%	25.28%
Côte d'Ivoire	25,894.52	-831.73	-3.21%	50.86%
Mauritania	3,080.70	-229.27	-7.44%	14.02%
Total	57,320.86	-1,635.43	-2.85%	100.00%

Source: WITS-SMART simulations, ECA

The fall in Senegal's exports to the subregion is almost evenly distributed, except for Mauritania where the fall is slightly sharp (-7.44 per cent).

Half of Senegal's export loss would come from its exports to Côte d'Ivoire, and about a quarter from its exports to Benin.

### Vulnerable products

The table below indicates the categories of products most vulnerable to trade deviation in case of an EPA.

Unlike many other countries of the region, the loss in Senegal's export revenues seem to be relatively evenly distributed among various categories of products. No product accounts for more than 12 per cent of the total export loss.

The main products affected are, first and foremost, manufactured products or semi manufactured products like plastics, iron and steel articles, essential oils and fertilizer. The export of tobacco and fuel could also be seriously affected (-12 and -8,8 per cent, respectively).

It is therefore feared that, to some extent, EPA might run to counter Senegal's economic diversification and industrialization objectives. It can only be hoped that Senegal's exporters could make the best of the new opportunities to export to the EU, thus, on the whole, bring the benefits of EPA to the country.

### Senegal: Categories of products vulnerable to trade diversion in case of EPA

Chapter SH 2	Description	Variation in exports (\$US ,000)	Share in total export revenue loss
HS.24	Tobacco and manufactured substitutes	-197.33	12.07%
HS.39	Plastics and plastic materials	-155.524	9.51%
HS.27	Mineral fuel, oils, and products of their distillation	-144.145	8.81%
HS.31	Fertilizers	-142.489	8.71%
HS.85	Electrical machines, instruments, materials, their spare parts, etc.	-142.388	8.71%
HS.73	Articles of cast, iron or steel	-125.817	7.69%
HS.87	Cars, tractors, cycles and other vehicles, etc.	-124.986	7.64%
HS.33	Essential oils and resin products. Perfumes	-83.953	5.13%
HS.34	Soaps, organic floor agents, washing and polishing preparations	-70.409	4.31%
HS.38	Miscellaneous chemical products	-49.715	3.04%

Source: WITS-SMART simulations, ECA

### Loss of tariff revenue

We estimate that the total loss of customs revenues, in the case of Senegal, could exceed \$US 80 million. This loss is relatively well distributed across the various categories of products, even though it can be seen from the table that 10 of the 97 harmonized system's chapters account for 60 per cent of the total revenue loss.

### Senegal: loss of customs revenue by main product category

Chapter SH 2	Description	Variation in tariff revenue (\$US ,000)	Share in overall tariff loss revenue	Cumulative loss
HS.87	Cars, tractors, cycles and other vehicles, etc...	-10562.021	13.17%	13.17%
HS.84	Nuclear reactors, boilers, machines instruments and gadgets	-9454.783	11.79%	24.96%

<b>Chapter SH 2</b>	<b>Description</b>	<b>Variation in tariff revenue (\$US ,000)</b>	<b>Share in overall tariff loss revenue</b>	<b>Cumulative loss</b>
HS.85	Electrical machines, instruments, materials; their spare parts, etc	-6645.46	8.29%	33.24%
HS.27	Mineral fuel, oils, and products of their distillation	-5827.246	7.27%	40.51%
HS.73	Articles of cast, iron and steel	-2831.001	3.53%	44.04%
HS.39	Plastics and plastic materials	-2768.704	3.45%	47.49%
HS.04	Milk and dairy products, eggs, and natural honey	-2702.216	3.37%	50.86%
HS.94	Household as well as medical and surgery furniture, bedding materials	-2554.213	3.18%	54.04%
HS.15	Animal/plant fats & oils & their cleavage products...	-2377.277	2.96%	57.01%
HS.48	Papers and cardboard papers, art in cellulose paste	-2302.761	2.87%	59.88%

Source: WITS-SMART simulations, ECA

Here, there is big contribution from manufactured products such as vehicles (chapter 87), machinery (chapter 84), electrical appliances (chapter 85), fuels (chapter 27) as well as some food products to the potential reduction in customs revenue.

## SIERRA LEONE

Data for Sierra-Leone is not available in the WITS-SMART model. Consequently, we were not able to evaluate the impact of the EPA on tariff revenue, level of imports from the EU and consumer surplus. However, we were able to use mirror data to evaluate the impact of the EPA on Sierra Leone's exports to the rest of the ECOWAS. According to our simulations Sierra Leone's exports to Western Africa after the EPA would fall by 22,000 US\$, which amounts to about 5% of current level.

In our database, only three countries declared imports from Sierra Leone : Benin, Ghana and Nigeria.

As displayed in the table below, the fall in exports would mostly take place in Ghana, which is already the main regional importer of Sierra Leone's goods.

### Sierra Leone : fall in exports under an EPA and its repartition in the region

Country	Current exports (US\$ '000)	Fall in exports after EPA (US\$ '000)	Fall in exports after EPA (%)	Repartition in the region of the total fall in exports
Ghana	74.65	-17.42	-23.33%	78.57%
Benin	336.78	-0.12	-0.04%	0.55%
Nigeria	27.39	-4.63	-16.90%	20.88%
<b>Total</b>	<b>438.81</b>	<b>-22.17</b>	<b>-5.05%</b>	<b>100.00%</b>

Source : WITS-SMART simulations, ECA.

Thus, exports to Ghana would go down by 23.33%, and this would represent over 78% of Sierra Leone's total decline in exports to ECOWAS.

### Vulnerable products :

As is shown on the table below, most of the decline in export revenues (77%) is to be expected from tobacco products, in the case of Sierra Leone. Preparation of vegetables, fruits and nuts (HS 20) could also see their exports to fall by 11.8% under an EPA.

There might be negative repercussions from the fall in exports from these categories of products, especially if they are products transformed from national agricultural inputs. The fall in export revenue might be transmitted to national agricultural producers.

### Sierra Leone: product categories incurring the largest fall in exports to ECOWAS

H.S. Chapter	Description	Change In export revenues (\$ '000)	Share of total export loss	Cumulated loss
HS.24	Tobacco and manufactured tobacco substitutes	-17.138	77.31%	77.31%
HS.20	Prep of vegetable, fruit, nuts or other parts of	-2.625	11.84%	89.15%
HS.85	Electrical mchy equip parts thereof; sound record	-1.007	4.54%	93.69%
HS.87	Vehicles o/t railw/tramw roll-stock, pts & access	-0.432	1.95%	95.64%
HS.39	Plastics and articles thereof.	-0.257	1.16%	96.80%

Source: WITS-SMART simulation, ECA.

## TOGO

According to our simulations, Togo's imports from the EU could increase by more than \$US 58 million, or about 11.5 per cent higher than current levels. We therefore found from our studies that the fall in Togo's exports to West Africa could be the biggest, possibly exceeding \$US 11.4 million. This reduction is about 16.2 per cent of Togo's current exports to the region and 0.03 per cent of its overall exports.

As can be seen from the table below, much of Togo's total loss (93 per cent) would come from its export to Ghana, its neighbouring country. Togo's export to Ghana would decrease by more than 23 per cent.

### **Togo's loss of exports to ECOWAS in case of EPA (% of loss, and distribution by country)**

<b>Regional importer</b>	<b>Exports prior to EPA (\$US ,000)</b>	<b>Variation in exports after EPA (\$US ,000)</b>	<b>% of export variation</b>	<b>Share in overall export reduction</b>
Ghana	46088.666	-10694.881	-23.2%	93.0%
Burkina Faso	18886.918	-474.576	-2.5%	4.1%
Côte d'Ivoire	1445.693	-98.616	-6.8%	0.9%
Mauritania	2.918	-0.461	-15.8%	0.0%
Nigeria	4480.273	-229.459	-5.1%	2.0%
Total	70904.468	-11497.993	-16.2%	100.0%

Source: WITS-SMART simulations, ECA

## **Vulnerable products**

The following table shows the categories of products that would be most affected by trade deviation in case of EPA. These products would be responsible for the lion share of the loss of Togo's export revenues.

Fuels and petroleum products would be particularly affected (84 per cent of the total reduction, and amounting to about \$US 9.7 million).

While the reduction in the export of these products is by far bigger, it will be ill-advised to overlook the reduction in the export of other products some of which can contribute immensely to the local value-added.

For example, exports of the flour trade industry could decline by more than \$US 300 000. Drinks, animal fats, vegetable-fruit- and nut-based preparations as well as cotton are among the many other categories of products whose fall in export to the region could result in a loss of more than \$US 100 000, a considerable loss for a small country like Togo.



## Togo: Categories of products vulnerable to the deviation of trade with ECOWAS

Chapter SH 2	Description	Reduction in exports to ECOWAS (\$US ,000)	Share in overall export reduction
HS.27	Mineral fuel, oils, and products of their distillation	-9762.766	84.91%
HS.11	Products of the flour industry, malt, starch and inulin	-334.388	2.91%
HS.22	Drinks, liquid alcohol and vinegar	-142.338	1.24%
HS.15	Fats, animal and vegetable oil; and their cleavage products	-124.613	1.08%
HS.20	Vegetables, fruits and other plant preparations	-123.318	1.07%
HS.52	Cotton	-115.382	1.00%

Source: WITS-SMART simulations, ECA

## Tariff revenue loss

Customs revenues from tariffs could fall by \$US 35 million in Togo.

The following table shows the 10 categories of products (S.H.2) responsible for the highest loss of customs revenues.

### Togo: 10 categories of products responsible for the highest loss in customs revenues

Chapter SH 2	Description	Loss of tariff revenue (\$US ,000)	% share in overall loss of revenue	% Cumulative loss
HS.87	Cars, tractors, cycles and other vehicles, etc.	-9289.38	26.19%	26.19%
HS.20	Vegetables, fruits and other plant preparations	-3273.471	9.23%	35.42%
HS.17	Sugar and sugar confectionary	-2382.141	6.72%	42.13%
HS.84	Nuclear reactors, boilers, machines, instruments and gadgets	-2218.065	6.25%	48.39%
HS.27	Mineral fuel, oils, and products of their distillation	-1871.712	5.28%	53.66%
HS.22	Drinks, liquid alcohol and vinegar	-1669.443	4.71%	58.37%
HS.85	Electrical machines, instruments, materials; their spare parts, etc.	-1560.742	4.40%	62.77%
HS.02	Meat and other meat products	-1123.276	3.17%	65.93%
HS.63	Other ready-made textile materials	-1075.887	3.03%	68.97%
HS.19	Cereal-based preparations, flour, starch products, milk, pastries	-907.77	2.56%	71.53%

Source: WITS-SMART simulations, ECA

In this table, there is a predominance of vehicles (chapter 87). Also, products of the agro-food industry seem to contribute highly to the loss of customs revenue in Togo.

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