



United Nations
Economic Commission for Africa

Impact of The Economic Community of West African States Common External Tariff and European Union Economic Partnership Agreements



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Abbreviations

ACP	African, Caribbean and Pacific Group of States
ASYCUDA	Automated System for Customs Data
BCEAO	Central Bank of West African States
BOAD	West African Development Bank
CACID	African Centre for Trade, Integration and Development
CET	common external tariff
CRES	Consortium for Economic and Social Research
ECA	Economic Commission for Africa
ECOWAS	Economic Community of West African States
EPA	Economic Partnership Agreement
EU28	28 member States of the European Union
GSP	Generalized System of Preferences
HS	Harmonized Commodity Description and Coding System
ISIC	International Standard Industrial Classification of All Economic Activities
NANTs	National Association of Nigerian Traders
n.e.c.	not elsewhere classified
SAM	Social Accounting Matrix
UNCTAD	United Nations Conference on Trade and Development
VAT	Value Added Tax
WAEMUWest	African Economic and Monetary Union
WTO	World Trade Organization

Foreword

Concerned about the future of their nations and aware of the benefits of regional integration and cooperation, West African countries agreed in 1975 to form a regional economic community, namely the Economic Community of West African States (ECOWAS). ECOWAS has 15 member States, and, since its establishment, has sought to promote the implementation of treaties and agreements to liberalize trade. The opening for signature of the Treaty establishing the African Economic Community (Abuja Treaty) in 1991 marked a decisive step forward towards African integration. In 1993, the notion of integration evolved further. Integration was brought into reality through the signing of the Treaty of Lagos and facilitated through the adoption of the principle of solidarity among States and a common external tariff. The regional integration process has been further strengthened through the adoption of four key principles by the 15 member States, namely, first, a free trade area; second, a customs union; third, a common market; and, fourth, a monetary and economic union.

The ECOWAS economic stabilization framework is based on the West African Economic and Monetary Union (WAEMU) convergence criteria, whose applicability to ECOWAS has enabled the latter to make considerable progress, particularly with regard to the establishment of a customs union. The WAEMU and ECOWAS common external tariffs entered into force in 2000 and January 2015, respectively. In addition, the standards to be met in the context of the integration of ECOWAS member States have implications for international cooperation, for example among African, Caribbean and Pacific and European Union member States. The preferential concessions granted by the European Union, including those granted to ECOWAS, are reviewed and amended, where necessary, so that they comply with ECOWAS rules and are compatible with those established by the World Trade Organization (WTO). In July 2014, the

European Union concluded economic partnership agreements with a number of West African countries.

This report assesses the impacts of the implementation of the ECOWAS common external tariff and European Union economic partnership agreements on the structural transformation of economies and regional integration in West Africa. To that end, the authors used the Tariff Reform Impact Simulation Tool. The analysis covered four member States of the community, including three least developed countries, namely Benin, the Niger and Togo, and one developing country, namely Côte d'Ivoire. The benefits of tariff measures vary by country, import volume and types of products imported.

Despite its limitations, the present study will contribute significantly to scientific debate and will support a paradigm shift in the discourse of ECOWAS policy makers on the scope and appropriateness of trade reforms that have been implemented or are being formulated. Amendments to the ECOWAS common external tariff regime have already been endorsed by Heads of State and the ECOWAS Commission for adoption by all ECOWAS member States. In that context, the major challenge remains mobilizing the necessary support of these States. The entry into force of economic partnership agreements in the ECOWAS region is characterized, however, by a lack of consensus among member States, partly due to the range of economic, social and political gains envisaged from the potential entry into force of the amendments. In accordance with its mission of providing technical assistance to States through the provision of tools, instruments and knowledge products, the Economic Commission for Africa (ECA) has therefore formulated the present study to inform policymakers and development stakeholders throughout the subregion.

Indeed, the entry into force of the ECOWAS common external tariff should eventually lead to an increase in intra-ECOWAS trade and a decrease in imports from the European Union. In addition, by boosting trade among States, that trade liberalization mechanism, known as the Trade Liberalization Scheme, will promote and strengthen integration in the ECOWAS zone, and will enhance the profitability of large companies. Those gains will be achieved more through the reduction of input costs than through an increase in producer prices. On the other hand, the entry into force of economic partnership agreements – which have significant budgetary implications – will result in very marginal gains for ECOWAS commercial enterprises in the short term and will have a negative impact on manufacturing enterprises, thereby undermining local manufacturing indus-

tries and industrial employment in the long term. Furthermore, the implementation of economic partnership agreements substantially will reduce the fiscal space of ECOWAS States because they reduce customs revenues.

To ensure that results from the subregion are even more representative, ECA plans to extend the present study to cover all member States implementing European Union economic partnership agreements. Implementation of the amendments to the ECOWAS common external tariff began in January 2015, and an ex post evaluation impact assessment could be undertaken in 2020 with a view to taking appropriate corrective action in that regard.

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The work of the consultant was supervised by an Economic Affairs Officer at the ECA Subregional Office for West Africa, Mamoudou Sébégo. The report was reviewed and finalized by a team at the ECA Subregional Office for West Africa, which comprised Amadou Diouf, Bakary Dosso, Florent Melesse, Simon Neumueller and Jérôme Ouédraogo. The report also incorporated comments and contributions made by experts who took part in an ad hoc meeting of the West African Expert Group on the impact of the Economic Community of West African States common external tariff and European Union economic partnership agreements on West Africa, held in Ouagadougou on 16 and 17 May 2017.

That meeting was attended by representatives of regional economic communities, intergovernmental organizations, experts from member States, regional and international development institutions and representatives of civil society. Representatives of the following subregional

institutions also attended the meeting: Central Bank of West African States (BCEAO), ECOWAS, the Mano River Union, the Niger Basin Authority, WAEMU and the West African Development Bank (BOAD). ECOWAS was represented by experts from the following countries: Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo. Experts from the World Bank and the European Union Delegation in Burkina Faso also took part. The participants included representatives of the following civil society organizations from the subregion: African Centre for Trade, Integration and Development (CACID), Enda Third World Network, Senegal, National Association of Nigerian Traders (NANTS), Executive Secretariat of Civil Society Organizations for Development, Burkina Faso, and the West African Women's Network, Senegal.

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Overview

ECOWAS countries have taken charge of their common development destiny by promoting regional integration. To that end, member States have decided to take steps over time to create a common market and a monetary and economic union and have agreed to liberalize trade in their territories through the implementation of the ECOWAS Trade Liberalization Scheme, which provides for the creation of a free trade area. In addition, ECOWAS and WAEMU have agreed on a joint strategy to accelerate the integration process in West Africa. Thus, the WAEMU common external tariff served as the basis for the negotiations on the ECOWAS common external tariff, which entered into force in January 2015. Previous trade negotiations launched in October 2003 to ensure that member States' trade relations with the European Union were in line with WTO rules led to the conclusion of subregional economic partnership agreements for West Africa on 10 July 2014. It should be noted, however, that with regard to both the ECOWAS common external tariff and the economic partnership agreements, there is still no broad consensus at the subregional level on reforms to the tariff regimes governing the subregion's import markets, which has called into question whether those reforms will be implemented effectively by all Member States. In particular, some interest groups continue to express their opposition to those agreements, arguing that they will be detrimental to local producers and consumers.

The Trade Liberalization Scheme, the ECOWAS common external tariff and the economic partnership agreements can have varied repercussions and an impact on regional integration and the structural transformation of West African economies. In the short term, government budget revenues and the profitability of sectors that must compete with imports could decline, entailing economic, social and political costs.

The present study focuses on the implications for subregional markets of tariff reforms in connection with the three aforementioned regimes. Building on the results of previous studies the study analyses the situation in three countries to ascertain the size of any tariff revenue losses or gain, examines price change impacts and analyses repercussions on manufacturing enterprises profitability and employment. A more accurate assessment of potential quantitative and qualitative impacts can help decision makers enhance adaptation policies. It can also support efforts by institutions to accelerate structural transformation and promote well-being following implementation of the Trade Liberalization Scheme, the ECOWAS common external tariff and economic partnership agreements with the European Union.

This study made use of the Tariff Reform Impact Simulation Tool, which was developed by the World Bank for tax impact assessments and adopts a microsimulation methodology. The modelling tool was applied to four countries in the subregion: three least developed countries, namely Benin, the Niger and Togo, and one developing country, namely Côte d'Ivoire. Those countries were chosen because similar World Bank studies had been conducted in Ghana, Nigeria and Senegal. There are a number of advantages to using this methodology: the methodology uses fees and duties that are actually collected rather than statutory fees and duties; it takes into account value added tax (VAT) or sales tax and excise duties paid at borders; it does not make use of total reported gross imports, which include goods in transit, placed in deposit or destined for special economic zones; and it allows researchers to run extremely detailed income simulations using the Harmonized Commodity Description and Coding System at the 10-digit level.

Prior to the tariff reforms, ECOWAS countries still impose significant tariffs on imports from other

ECOWAS States: Benin imposes a 3.5 per cent tariff, the Niger imposes a 2.2 per cent tariff and Togo imposes a 7.6 per cent tariff. This has impeded implementation of the ECOWAS Trade Liberalization Scheme and efforts by ECOWAS member States to comply with the Scheme's rules of origin. Thus, regional exports do not fully benefit from the subregional duty-free import regime provided under the Scheme.

The tariff collection rate varies among the countries of the subregion. For example, the Niger collects 46 per cent while Benin collects 93 per cent. This is partly explained by differences in national policies on tax exemptions. This impedes the establishment of the customs union.

The simultaneous implementation of a zero tariff on imports from subregional countries and of a common external tariff on imports from outside the subregion will have an impact on trade and budgetary revenues. The size of that impact will depend on national exemption policies. Compared with the situation prior to the reform of tax exemption policies, tariffs will increase in Benin by 1.8 per cent, but will decrease in the Niger by 0.4 per cent, in Togo by 0.6 per cent and (very slightly) in Côte d'Ivoire by 0.1 per cent. This is partly because Benin imports less from other ECOWAS countries than the Niger or Togo, and also has a higher overall tariff collection rate. Thus, the application of a zero duty on imports from ECOWAS countries will have a smaller impact on revenue collection in Benin, while increases in the ECOWAS common external tariff will ensure relatively more revenues for Benin due to its high collection rate. For the Niger, Togo and, to a lesser extent, Côte d'Ivoire, the negative impact of the Trade Liberalization Scheme will outweigh the positive impact of the ECOWAS common external tariff. Overall, there would be a decrease in imports to Benin of between -0.9 and -2.5 per cent, and an increase in imports to the Niger of between +0.2 and +0.4 per cent and to Togo of between +0.2 and +0.5 per cent. The overall impact on total imports would be zero for Côte d'Ivoire. Imports from other ECOWAS partners would increase sharply, from 6 to 24.6 per cent in Benin, from 2 to 6.2 per cent in the Niger, from 7 to 22.8 per cent in Togo

and from 4.2 to 15.8 per cent in Côte d'Ivoire, at the expense of trade with the European Union, the rest of Africa and the rest of the world. As local manufacturing industries will face fierce competition from imported products, particular attention will need to be given to the promotion of infant industries in the subregion.

In addition, tariff revenues collected by the Government of Benin will increase marginally while revenues collected in the Niger and Togo will fall. Those changes in revenue collection will result because exports from non-ECOWAS countries will be replaced by exports from ECOWAS members and because of changing consumer demand patterns as a result of domestic price changes pursuant to the full implementation of the Trade Liberalization Scheme and the common external tariff regime.

The various stages of economic partnership agreements will ensure that changes in tariff protection resulting from implementation of the Trade Liberalization Scheme and the common external tariff occur gradually, and will slow changes to trade patterns, tariff revenue collection and the total government income. The slowdown will become more pronounced in the final stages of economic partnership agreement implementation. At the end of the economic partnership agreement tariff reform implementation period in 2035, tariff revenue will have declined (by between 7.9 and 8.4 per cent in Benin, between 19.9 and 21.3 per cent in Côte d'Ivoire, between 8.8 and 9.5 per cent in the Niger, and between 22.1 and 24.1 per cent in Togo), compared with the simulated tariff revenue under the Trade Liberalization and common external tariff regimes alone (without considering the effect of economic partnership agreement implementation – or "EPA net", as indicated in tables below).

With the implementation of the Trade Liberalization Scheme and the common external tariff, the average business in Benin will benefit from an increase in profitability, equivalent to 1.2 per cent of sales. This is explained by the fact that the sharp increase in the prices charged by producers following the imposition of higher protection

regimes will more than compensate for the much weaker negative impact of the increased prices of inputs and capital goods. For Côte d'Ivoire, there will be only a minor impact on the profitability of the average business, with profitability falling by between -0.28 and 0 per cent, and a negligible impact on the profitability of the median company, with profitability changing by between -0.06 and +0.01 per cent. For the Niger and Togo, where the Trade Liberalization Scheme and common external tariff will lead to a decrease in protection, there will be a slight increase in the profitability of the average company (from 0.92 to 1.10 per cent of turnover in the Niger, and from 0.21 to 0.34 of turnover in Togo), and of the median business (approximately 0.86 per cent of turnover in the Niger and from 0.24 to 0.33 per cent of turnover in Togo), thanks in particular to lower input prices. Increased profitability as a result of lower input prices is more favourable to structural transformation than increased profitability due to increased product prices. The short-term increase in profitability through the increase in the price of goods undermines the interests of consumers and price competition and can have a negative effect on productivity, innovation, and long-term growth and structural transformation.

Economic partnership agreements have mitigating effect on corporate profitability, notably because they lead to lower input and capital goods prices. Beyond their marginal short-term impact on corporate profitability, the envisaged gains attributable to those lower prices are very unlikely to support inclusive and sustainable growth over the long term or enhance the competitiveness of locally manufactured goods, because of competi-

tion from imports from outside the subregion or outside Africa.

With regard to job preservation, the businesses in Benin that will see a moderate decline in profitability following the implementation of the Trade Liberalization Scheme and the common external tariff are those operating in the food and beverage, publishing, printing and metalworking sectors, which currently provide the majority of jobs. The implementation of economic partnership agreements will result in a marginal increase in profitability for those companies. In the Niger, companies in these same sectors provide the majority of jobs and will experience a moderate increase in profitability following implementation of the Trade Liberalization Scheme and a marginal increase following implementation of the economic partnership agreements. In Côte d'Ivoire, large-workforce businesses that will experience a decline in profitability as a result of the implementation of the Trade Liberalization Scheme and common external tariff are those that manufacture clothing, food and beverage products, and those producing certain other products. Companies in the rubber and plastic products sector will create the most jobs following the economic partnership agreement reforms. The same scenario will be observed with those businesses that provide the most jobs in Togo, such as those in the rubber products sector and other sectors, in terms of improved profitability with the implementation of the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements.

1. Introduction

1. ECOWAS, which has 15 member States,¹ was established in 1975, pursuant to the Treaty of Lagos, in order to promote economic cooperation and integration and regional security. Cabo Verde joined ECOWAS in 1976 and Mauritania left the organization in 2000. The 15 ECOWAS member States agreed to liberalize trade in agricultural products in 1979 and trade in industrial products in 1990. The mechanism employed to that end, namely the Trade Liberalization Scheme, is a free trade agreement. The ECOWAS regional integration programme took a significant turn with the signing of the Abuja Treaty in 1991, which established the African Economic Community. In 1993, ECOWAS member States ratified the Treaty of Lagos, with the aim of adopting a common external tariff and promoting solidarity among States. There are four stages to the regional integration process, namely, the establishment of a free trade area, a customs union, a common market and a monetary and economic union.

2. The other major regional organization, WAEMU, achieved significant progress in the area of institutional reform prior to the efforts exerted by ECOWAS, including the establishment of a customs union (a WAEMU common external tariff, agreed in 1997, entered into force in 2000), a multilateral macroeconomic policy oversight mechanism, and an oversight mechanism for equity-based financing.² ECOWAS and WAEMU have agreed on a joint strategy to accelerate

the integration process in West Africa. Thus, the WAEMU common external tariff served as a basis for negotiations on the extension of the customs union to the entire ECOWAS region. The ECOWAS common external tariff entered into force in January 2015.

3. West African countries are included among the 77 African, Caribbean and Pacific countries. As such, they benefited over a period of 50 years from the non-reciprocal tariff reductions on their exports to the European market that they inherited from the Yaoundé, Lomé and Cotonou Conventions. In October 2003, West African countries agreed to move from non-reciprocal preferential arrangements to a WTO-compatible reciprocal agreement and launched ministerial-level negotiations on regional economic partnership agreements that would govern their future trade relations with the European Union. West Africa's subregional economic partnership agreements were concluded on 10 July 2014.

4. The three regimes, namely the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements, pose both operational and conceptual challenges. Most member States have missed deadlines or failed to comply with modalities related to the implementation of those regimes. Several reasons can be given for this. For example, if the immediate potential cost of lost budgetary revenues is not addressed, trade reforms are unlikely to be implemented or can be quickly reversed. Buffie (2001) cites at least 12 instances in developing countries in which budgetary revenue losses have led to partial or total policy reversals. The ECOWAS com-

¹ Benin, Burkina Faso, Cabo Verde, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone and Togo.

² The following States are members of WAEMU: Benin, Burkina Faso, Côte d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo.

mon external tariff had reduced the tariff on most medicines in Nigeria from 20 to 0 per cent by 2015, but the Nigerian Government has recently introduced an import adjustment charge of 20 per cent on these products.³ Reaching broad consensus on the need to implement reforms remains a significant challenge.

5. The objectives of the study, which was conducted with a view to supporting evidence-based dialogue and the dissemination of best practices, may be summarized as follows:

- To conduct a brief review of the key principles, implications and economic scope of the ECOWAS common external tariff and economic partnership agreements in West Africa
- To review the status of implementation of the ECOWAS common external tariff and economic partnership agreements in the subregion, including key steps in their negotiation and adoption processes and identify challenges related to their implementation
- To identify mechanisms for the implementation of the ECOWAS common external tariff and economic partnership agreements, in addition to their impact on the subregional integration process and the structural transformation of economies, including the production structure, export structure, employment figures, industrialization and intraregional trade of member States
- To review how West Africa will be affected by implementation of both the economic partnership agreements and the ECOWAS common external tariff
- To assess the potential quantitative and qualitative impacts of the full implementation of the ECOWAS common external

tariff and economic partnership agreements on key macroeconomic variables at the subregional level (in two stages: the impact of the common external tariff only, and then the impact of the common external tariff and economic partnership agreements combined)

- To assess the potential and empirical impacts of the full implementation of the ECOWAS common external tariff and economic partnership agreements on subregional integration and the structural transformation of West African economies, including the production structure, export structure, employment figures, industrialization and intraregional trade of States
- To formulate recommendations for ECOWAS, member States and ECA on the implementation of the ECOWAS common external tariff and economic partnership agreements with a view to accelerating the subregional integration process and the structural transformation of ECOWAS economies
- To present the provisional results of the study to the high-level meeting of experts from the subregion⁴

6. The remainder of the present study is organized into seven sections. A literature review is provided in section 2. This is followed in section 3 by an explanation of the methodology used in the study. Sections 4, 5, 6 and 7 present the results of the three case studies.

³ See, for example, www.NigeriaToday.ng/2017/03/import-adjustment-tax-and-rising-cost-of-essential-drugs/. Accessed on 2 March 2017.

⁴See the terms of reference of the study.

2. Literature review

2.1. Justifications, implications and economic scope

2.1.1 Rationale for trade policy options

7. Theoretical arguments concerning the benefits provided by a free trade area traditionally derive from the concept of efficient resource allocation. In a free trade area, resources are allocated to areas where members have a comparative advantage and move to supply sources located in areas where production costs are lower (Viner, 1950). Imperfect market competition in international or regional trade also favours free trade areas: in a protected domestic market in which a number of companies enjoy a dominant position, trade reform will lead to competition (Krishna, 1989).⁵ In the case of a customs union, members will have to make decisions on more than just a common tariff. The lower the level of trade, the lower the negative trade diversion effects will be.

8. Although theoretical consensus has been reached on the benefits of a free trade area and customs union, this is not in itself sufficient to understand the rationale for, and potential impact of the Trade Liberalization Scheme, the ECOWAS common external tariff and economic partnership agreements with the European in West Africa. The

⁵ Kala Krishna posits oligopoly situations in which certain companies are based in a country while others are based abroad. He demonstrates that the imposition of a voluntary import quota or restriction (for example through the imposition of a customs duty) by the economy concerned facilitates collusion among domestic and foreign companies operating in that market. Quota and voluntary import restrictions are referred to by Kala Krishna as “facilitating practices” because they oblige foreign companies to refrain from increasing their sales above an agreed level. The result of those practices is an increase in profits for all companies, regardless of whether or not they are based in the country concerned. As a result, consumers lose out.

geopolitical configuration of West Africa, like that of other African subregions, has been determined largely by the political forces of colonialism, and the borders of West African countries were drawn in order to delimit the colonies of the European powers (Ouattara, 2014). The outcome of that process is a fragmented region that includes 16 markets (including Mauritania) with only low-capacity road and rail infrastructure,⁶ 12 economies that are now classified as least developed countries,⁷ as defined by the United Nations Conference on Trade and Development (UNCTAD, 2016), and three landlocked countries. Fragmentation is associated with the absence of economies of scale in terms of the production and distribution of goods and services, and the absence of economies large enough to reduce the cost of public goods. Following the adoption of the Treaty of Lagos in 1975, which established ECOWAS, the subregion focused its efforts primarily on overcoming problems of scale and fragmentation, and sought to promote cooperation and development in all areas of economic activity (ECOWAS, 1975). That strategy is also supported by historical evidence, which shows that larger common markets tend to enjoy higher growth rates (Sachs, 2006). In order to achieve that objective, it was agreed to focus on, among other measures, the gradual elimination of customs duties among member States, the establishment of a common customs tariff, and the adoption of a common trade policy towards third countries (ECOWAS, 1993); steps were there-

⁶ McCord and others (2005) point out that road and rail infrastructure was designed in colonial times to transport primary products to seaports.

⁷ This category was created in 1971 in recognition of the fact that some countries need to overcome major obstacles to achieve the structural transformation necessary for their development.

fore taken to formulate the Economic Liberalization Scheme, ECOWAS common external tariff and economic partnership agreements.

9. The ECOWAS Economic Liberalization Scheme was created in 1979. At that time, it was decided that only agricultural products, artisanal handicrafts and unprocessed products would benefit from the Scheme. Later, in 1990, agreement was reached on extending the Scheme to cover approved industrial products. With the inclusion of industrial products, it became imperative to stipulate which products originated in the region that was covered by the Scheme. Rules of origin are set forth in ECOWAS Protocol A/P1/1/03 of 31 January 2003. With the full implementation of the Economic Liberalization Scheme, regional imports can foster competition in member States and mitigate the impact on domestic prices of tariffs imposed on goods from third countries.

10. From 2006 to 2009, ECOWAS member States applied, with few exceptions, the initial ECOWAS common external tariff, which was applied to 5,544 product lines of the 10-digit Harmonized Commodity Description and Coding System in four tariff bands: 0 per cent on essential social commodities; 5 per cent on raw materials and capital goods; 10 per cent on intermediate products; and 20 per cent on finished products. Those rates were based on those applied under the WAEMU common external tariff, which was introduced in 2000. States were entitled to draw up type A exception lists (products for which a State requests tax rates other than those prescribed under the common external tariff regime) and type B exception lists (products that a State wishes to place in a different category) for a period of up to two years (2006–2008). Following a request made by Nigeria, a fifth 35 per cent tariff band was proposed in 2009, approved in 2012 and entered into force on 1 January 2015.⁸ The views of certain stakeholders can help explain the rationale behind, and criticism of, that policy change. Some argue that, in order to promote the competitiveness of national business enterprises and maximize social well-being

throughout the region, an industrial policy to promote certain sectors that makes use, among other facilities, of specific trade policy instruments may be necessary. De Roquefeuil (2013) points out that agricultural producers in French-speaking West Africa saw the ECOWAS common external tariff as an opportunity to correct the rates established under the WAEMU common external tariff, which they considered far too low to promote local production. In a discussion paper on the coherence between the common external tariff process and the identification of sensitive products in the region, Oxfam International (2009) noted that breaking into domestic market was an essential alternative in the face of an almost inevitable contraction in exports, and that sufficient protection must be provided to ensure a return on investments in the agricultural, agrifood and industrial sectors, through the application of adequate customs duties in line with the specific characteristics and competitiveness of certain products. Coulibaly and Diouf (2009) argue that some States and social and professional organizations in the region doubt that a major trade opening can contribute to regional development and integration, and that their fears are in line with the lessons learned from the application of the WEAMU common external tariff. On the other hand, others argue that the protectionist evolution of the common external tariff runs counter to the growing consensus that twenty-first century regionalism must give way to “value chain segmentation”, in other words, participation in the global expansion of outsourcing (de Melo and Ugarte, 2013). These authors recall, for example, that the last two decades of unilateral tariff reduction in emerging Asian economies have been driven mainly by competition for foreign direct investment, originating, primarily, in Japan. That acceleration in global value chains explains why most tariff reductions have taken place unilaterally rather than multilaterally, in particular in fast-growing Asian economies.

11. The stated basis for economic partnership agreements between West African States and the European Union is broad and draws on article 34.1 of the Cotonou Agreement, which provides that economic and trade cooperation shall aim

⁸ Nigeria is the largest member of ECOWAS in terms of population and economic weight. It initially proposed a rate of 50 per cent for the fifth band.

at fostering the smooth and gradual integration of the African, Caribbean and Pacific Group of States into the world economy, with due regard for their political choices and development priorities, thereby promoting their sustainable development and contributing to poverty eradication in the African, Caribbean and Pacific Group of States. Facts from economic history provide a better understanding of that basis. trade relations between the European Union and African Caribbean and Pacific countries, which include West African countries, were historically governed by a series of conventions⁹ granting unilateral preferences to those countries in European Union markets. In the late 1990s, it was acknowledged that those conventions had failed to promote trade competitiveness, diversification and growth as expected (European Commission, 2016). The conventions were also perceived as violating WTO principles, as they discriminated among developing countries. An amendment was therefore necessary. Economic partnership agreements were thus the joint response of African, Caribbean and Pacific countries and European Union member States, in accordance with article 36 of the Cotonou Agreement.

2.1.2 Potential impacts

12. The Trade Liberalization Scheme, ECOWAS common external tariff and economic partnership agreements have numerous potential impacts. The study will, however, focus on analysing the implications of the tariff reforms resulting from those three instruments for the markets of the subregion. Like all tariff reforms, the impact of those instruments is felt in traditional areas, namely trade promotion, trade diversion and trade correction (see box 1). Those instruments also have other repercussions, however, that are not addressed by traditional analysis, including adjustment costs and incentives for structural transformation (i.e. the reallocation of resources to higher value-added activities).

13. Budget adjustment costs relate to the effect of the tariff change on customs revenue collected in addition to non-customs revenue collected at the border (VAT on imports, excise duties and other charges). Those costs are of concern to governments of the region because tariffs are an important source of their revenue.

Box 1: Trade generation, diversion and correction

Under the ECOWAS common external tariff regime, certain ECOWAS member States will need to revise the tariffs that they impose on certain products. This reform will result in a reduction of the national tariff on the product concerned. Other countries will increase their national tariffs on the same products. For an ECOWAS country that lowers the tariff that it imposes on a product, a proportion of its domestic production of that product (if any) will be replaced by imports of the same product from other more efficient producers, both in other ECOWAS countries and elsewhere in the world. That process will generate trade and increase prosperity in that country. But as the aim of the ECOWAS common external tariff is to strengthen regional integration by eliminating tariffs on intra-ECOWAS imports, imports from ECOWAS partners (where such imports exist) may replace imports from more efficient non-ECOWAS producers. As a result, the country concerned will pay more for the same product. That effect, which is called trade diversion, will be detrimental to the country concerned. The opposite of trade diversion can also occur. For example, if the ECOWAS Trade Liberalization Scheme already applies to a particular product (a zero per cent tariff is applicable to goods traded among ECOWAS countries), a proportion of the intraregional trade in that product will be substituted by imports of the same product from more efficient producers in non-ECOWAS partners as a result of the external tariff reduction. That effect, which will boost the country's prosperity, is called trade correction. For products that also benefit from tariff exemptions, including partial exemptions, an external tariff reduction could generate trade correction with regard to that product.

The same principles also apply to other mechanisms that provide for tariff reforms, such as economic partnership agreements.

Source : ECA.

⁹ Yaoundé Conventions (1967–1974), Lomé Agreements (1975–2000).

14. Policymakers in the subregion are also concerned about the non-budgetary adjustment costs of the common external tariff and economic partnership agreements, as they question whether companies that lose protection under tariff reform will go bankrupt or reduce their workforce and lay off workers. Indeed, in the short term, companies will be affected by the common external tariff and economic partnership agreements primarily through three price transmission channels, namely, the effect of domestic price changes on production, the change in the domestic price of the production inputs that they use, and the change in the domestic price of the capital goods that they buy. As a general rule, a lower tariff on a given imported product will lower its domestic price and reduce the profitability of the local companies supplying that products. That effect is often criticized by civil society stakeholders and by business lobbies that favour protection. Lower tariffs on intermediate inputs and capital goods for companies will, however, increase their profitability. That effect receives much less attention. Ultimately, a company's response to those changes will also depend on its level of profitability prior to the tariff reform. Companies operating in highly protected sectors often have considerable profit margins and can even continue or even increase their activities, even if their profit margin is slightly reduced due to tariff reform. Tybout (2003) concludes that price increases relative to marginal costs tend to decrease when firms face increased foreign competition and that the impact of that decrease in margins is unclear and highly dependent on the underlying market structure in the countries concerned.

15. The change in the profitability of companies¹⁰ can also foster structural transformation. Transformation can be triggered by the tariff reforms provided under the common external tariff and economic partnership agreements. In the long term, the number of companies that remain profitable even as their profitability falls

¹⁰ Or, more strictly speaking, capital return or productivity for the purposes of analyses which indicate that change in production, as a result of tariff reform, is due not only to changes in domestic prices but also to changes in quantities (reactions to price changes).

as a result of tariff reform is relatively high, and tariff reform will have only a marginal effect on the reallocation of resources towards the most productive companies in a country, (companies whose market share remains profitable or that maintain optimal employment levels). This could undermine the usual positive effect of liberal tariff reform on overall productivity. Such companies can more effectively contribute to structural transformation if policies are adopted to strengthen competitiveness. Similarly, the transmission of a tariff change to the domestic price of a product will depend on the strength of policies and institutions that promote competition and institutions in the countries of the subregion. Supportive policies and institutions can therefore play a key role in amplifying the impact of tariff reform on social and economic well-being and structural transformation.

16. As for the achievement of economies of scale through the regional integration process, economic partnership agreements are often seen as a means by which countries can catch up, so to speak, following the establishment of the common external tariff that was provided for in article 35 of the Revised Treaty of the Economic Community of West African States, in addition to the harmonization of three unilateral European Union trade preference systems (Everything But Arms, Generalized System of Preferences (GSP) and GSP+)¹¹ applicable to the subregion, whose heterogeneity means that it enjoys only limited visibility to businesspersons investing in regional and global production networks. According to some analyses, however, economic partnership agreements will fail to promote the development of diversified production networks within the subregion that can produce exportable products if progress is not made in reducing intraregional tariff and non-tariff barriers (Mevel and others, 2015).

17. All the aforementioned scenarios are based on analysis and empirical data. A better assessment of potential and empirical impacts can help policymakers promote effective institutional

¹¹ Everything But Arms Initiative for Least Developed Countries; Generalized System of Preferences (GSP) for Côte d'Ivoire, Ghana and Nigeria, and GSP+ for Cabo Verde.

change with a view to encouraging structural transformation and social and economic well-being following implementation of the Economic Liberalization Scheme, the ECOWAS common external tariff and economic partnership agreements.

2.1.3 Scope

18. The five-band ECOWAS common external tariff, which entered into force on 1 January 2015, applies to 5,899 product lines, as defined by the 10-digit Harmonized Commodity Description and

Coding System, adopted in 2012. The common external tariff was adopted as part of the broader ECOWAS regional integration process, which covers policy areas negotiated by WTO, including WTO-plus areas, namely those areas that fall within the current mandate of WTO and entail additional obligations, and WTO-X areas, which do not fall within the current WTO mandate). Tables 1 and 2 show the sectoral scope and enforceability of the ECOWAS Treaty and the economic partnership agreement concluded between the European Union and West Africa in 2014.

Table 1: WTO-plus policy areas covered by the Revised Treaty of the Economic Community of West African States and by the economic partnership agreements concluded between West African States and the European Union

	Revised Treaty of the Economic Community of West African States (1993)			Economic partnership agreements between West Africa and the European Union (2014)		
	Not covered or unenforceable	Covered and enforceable, but not subject to dispute settlement	Covered and enforceable	Not covered or unenforceable	Covered and enforceable, but not subject to dispute settlement	Covered and enforceable
Customs duties on industrial products						
Customs duties on agricultural products						
Customs administration						
Export taxes						
Sanitary and phytosanitary measures						
State trading enterprises						
Technical barriers to trade						
Countervailing measures						
Anti-dumping						
State aid						
Public procurement					Rendez-vous clause	
Investment and trade-related measures					Rendez-vous clause	
Trade in services					Rendez-vous clause	
Intellectual property rights					Rendez-vous clause	

Sources: WTO (2011b); Doumbouya (2016).

Table 2: WTO-X policy areas covered by the Revised Treaty of the Economic Community of West African States and by the economic partnership agreements concluded between West African States and the European Union

	Revised Treaty of the Economic Community of West African States (1993)			Economic partnership agreements between West Africa and the European Union (2014)		
	Not covered or unenforceable	Covered and enforceable, but not subject to dispute settlement	Not covered or unenforceable	Covered and enforceable, but not subject to dispute settlement	Not covered or unenforceable	Covered and enforceable, but not subject to dispute settlement
Combating corruption						
Competition policy					Rendez-vous clause	
Environmental legislation					Rendez-vous clause	
Other conventions on Intellectual property rights					Rendez-vous clause	
Measures on investments					Rendez-vous clause	
Labour market regulation						
Capital movements					Rendez-vous clause	
Consumer protection					Rendez-vous clause	
Data protection and privacy					Rendez-vous clause	
Agriculture						
Approximation of legislation						
Audiovisual						
Civil protection						
Innovation policy					Rendez-vous clause	
Cultural cooperation						
Economic policy dialogue						
Education and training						
Energy						
Financial assistance						
Health						
Human rights						
Illegal immigration						
Illegal drugs						
Industrial cooperation						
Information society						
Extractive industries						
Money laundering						
Nuclear safety						
Political dialogue						
Public administration						
Regional cooperation						
Research and technology						
Small and medium-sized enterprises						
Social issues						
Statistics						
Taxation						
Terrorism						
Visas and asylum						

Sources: WTO (2011b); Doumbouya (2016).

2.2. Key steps in the negotiations on the ECOWAS common external tariff and European Union economic partnership agreements, and the status of their implementation

19. The key steps in the negotiations on the ECOWAS common external tariff and European Union economic partnership agreements were the following :

ECOWAS common external tariff	European Union economic partnership agreements with West Africa
<ul style="list-style-type: none"> July 1993: Mandate under article 35 of the Revised Treaty of the Economic Community of West African States for the establishment of a customs union in 2000 (deadline not met) 12 January 2006: Decision of the thirtieth session of the ECOWAS Assembly of Heads of State and Government, held in Niamey, to extend the coverage of the four-tariff-band WAEMU common external tariff^a to all its members as of 1 January 2008, i.e. at the end of a two-year transition period 2009: End of the two-year transition period for the extension of the WAEMU common external tariff to ECOWAS countries; request by Nigeria for the creation of a fifth common external tariff band providing for the imposition of a 35 per cent tariff with a view to protecting certain ECOWAS products from potential threats that could arise following the conclusion of economic partnership agreements December 2012: Member countries agree to create a fifth common external tariff band for certain sensitive goods and set 1 January 2005 as the end of the new transition period for the implementation of the tariff by all ECOWAS member States^b June 2013: Adoption at Abidjan of the ECOWAS common external tariff and implementing regulations by the ECOWAS Council of Ministers 25 October 2013: The finalized structure of the ECOWAS common external tariff, its regulatory measures and its implementation date of 1 January 2015 were approved in Dakar 1 January 2015: The ECOWAS common external tariff officially enters into force 	<ul style="list-style-type: none"> October 2003: Launch in Cotonou of ministerial-level negotiations on the economic partnership agreements May 2004: Adoption of the road map for negotiations on the economic partnership agreements 2006: Start of negotiations on the text of the economic partnership agreements 31 December 2007: Expiry of Annex V of the Cotonou Agreement, under which economic partnership agreement regions benefitted from unilateral European Union trade preferences (end of WTO waiver on Annex V of the Cotonou Agreement) 2007: Côte d'Ivoire and Ghana foresee the failure to conclude the regional economic partnership agreements before the end of December 2007 and initiate separate negotiations to avoid a breakdown of their trade regime with the European Union 11 December 2008: WTO is notified of the interim economic partnership agreement on goods between Côte d'Ivoire and the European Union June 2009: West Africa and the European Union agree not to conduct simultaneous negotiations on goods and services and agree that negotiations on services will be held at a later time 6 February 2014: Economic partnership agreement negotiations are concluded by the chief negotiators in Brussels 30 June 2014: The economic partnership agreements are initialled at Ouagadougou by the chief negotiators 10 July 2014: The ECOWAS Heads of State Summit, held in Accra, endorses the economic partnership agreements and agrees that they should be signed and ratified 12 December 2014: The European Council agrees to sign and provisionally bring into force the economic partnership agreements 3 September 2016: Entry into force of the interim economic partnership agreement on goods between Côte d'Ivoire and the European Union 15 December 2016: Ghana begins to apply provisionally and in stages its economic partnership agreement with the European Union

^a The WAEMU common external tariff entered into force in 2000.

^b That agreement was adopted by ECOWAS Heads of State and Government in October 2013.

20. The current status of implementation of the ECOWAS common external tariff is as follows:

- 1 January 2015: Benin, Burkina Faso, Côte d'Ivoire, Mali, Senegal and Togo
- 10 April 2015: Niger
- 11 April 2015: Nigeria
- 1 February 2016: Ghana
- The six other States promise to implement the common external tariff in 2017: Cabo Verde, the Gambia, Guinea, Guinea-Bissau, Liberia and Sierra Leone.

21. The delay in implementation in the six other States is reportedly due to their specific economic and social priorities in 2015 and 2016, including efforts to combat Ebola in Guinea, Liberia and Sierra Leone, the late ratification by national legislatures, as well as the need to train and strengthen the capacities of relevant stakeholders and build consensus on the need to implement the common external tariff regime.¹² The application of the common external tariff in the nine countries that have initiated implementation has, in some cases, only been partial. For example, on 31 March 2015, Nigeria adopted transitional measures for the period 2015–2019 to facilitate adjustment to full implementation of the common external tariff from 2020 onwards, including the maintenance of a list of products that cannot be imported from outside ECOWAS, a list of products whose tariff rates are lower than envisaged under the common external tariff (the national consumer incentive list) and a list of products whose rates are higher than envisaged under the common external tariff due to the application of an import adjustment tax (a domestic production incentive).

22. As for the European Union, the approved economic partnership agreements must now be

signed and then submitted to the European Parliament for approval and to national parliaments for ratification. Similarly, in West Africa, and unlike the situation with the common external tariff, which is an ECOWAS mechanism, the economic partnership agreement ratification process at national level has yet to be completed.¹³ Pending the entry into force of the economic partnership agreements, a mechanism for provisional application is provided for in article 107(3) of the agreements. Provisional application aims, in particular, to allow the region which are not least developed countries, namely Cabo Verde, Côte d'Ivoire, Ghana and Nigeria, to enjoy free access to the European market¹⁴ and for least developed countries to be subject to more favourable rules of origin. It should be noted, however, that there is still no broad consensus at the subregional level on the tariff reforms planned for the region's markets, which creates uncertainty about their effective implementation by all member States. In particular, some interest groups continue to express their opposition to the ECOWAS common external tariff and the economic partnership agreements, which they argue will have negative impacts on local producers and consumers. Those impacts are discussed in more detail in the present section.

2.3. Potential impacts and transmission channels identified by previous impact studies

23. In the short term, government budget revenues and the profitability of sectors competing with imports is likely to decline, thereby generating economic, social and political costs. A better understanding of those effects is central to formulating complementary sector and region-specific adjustment policies to mitigate the short-term adjustment costs resulting from implementation of the ECOWAS common external tariff and the economic partnership agreements.

¹² In 2015, a number of stakeholders in the implementation of the ECOWAS common external tariff in Guinea-Bissau and Cabo Verde (both Portuguese-speaking countries) highlighted that much literature on the ECOWAS common external tariff had not been translated into Portuguese.

¹³ ECOWAS members have yet to delegate ratification powers to ECOWAS bodies. An analogous situation affects European Union member States.

¹⁴ It is not clear that this incentive will benefit Nigeria, given that its main exports, petroleum products, are not subject to tariff and non-tariff barriers in European markets. This is not the case for agricultural exports from Côte d'Ivoire and Ghana.

24. Several studies have examined available data and measurement strategies to quantify the impacts of trade policy reform. A number of strategies have been documented for that purpose, ranging from informal evaluations (such as expert opinions and peer reviews) to formal evaluations (such as econometric and economic simulation models).

25. Informal evaluation is highly controversial in the domestic policy debate and will not be discussed here. Formal evaluation using econometric approaches is mainly used for ex post evaluations. To date, there are no such ex post impact studies of the common external tariff and economic partnership agreements in West Africa. This is because the implementation of the common external tariff has not yet been completed in all countries and, as of 2016, only very preliminary lessons regarding long-term impacts could be learned from the experiences of the countries who have already implemented the tariff. Furthermore, no before and after surveys have been conducted to monitor short-term impacts. As for the economic partnership agreements, it will be at least 2020 before the first tariff reforms are implemented. While awaiting data regarding countries' implementation of the common external tariff and economic partnership agreements in the region, it should be noted that several studies have nonetheless examined ex post results by observing a range of countries (some less open and some more open to trade) over long time frames or by reviewing data from national surveys conducted to monitor short-term impacts. The overall conclusion of those studies is that significant evidence indicates that more open trade policy and more diversified and efficient international trade correlate with higher long-term economic growth.¹⁵ Evaluations of ex post data show that strengthening access to imported intermediate inputs increases firm productivity (Amiti and Konings, 2007),¹⁶ broadens

the range of products produced by companies (Goldberg and others, 2009) and ultimately leads to higher economic growth (Estevadeordal and Taylor, 2008). Similarly, Eaton and Kortum (2001) find that 25 per cent of productivity differences among countries can be attributed to differences in capital goods prices,¹⁷ and that almost half of those price differences are caused by trade barriers. Improved access to imported capital goods is therefore also associated with higher economic growth (Estevadeordal and Taylor, 2008).

26. It should be noted, however, that most of this quantitative econometrics-based evidence does not infer a causal relationship but merely reveals a degree of correlation. Indeed, there is consensus among studies that the direct relationship between trade and short-term well-being is more complex than the positive long-term relationship between trade openness and well-being, and that correlation is not significant (see box 2 on short-term transmission channels). Harrison (1990) monitored a panel of 287 companies in 1984 and 1986 in Côte d'Ivoire to assess how companies dealt with the shock resulting from the 1985 trade liberalization initiative and drew two key conclusions. First, price increases relative to marginal costs tended to decrease. That decline in margins was not, however, attributed solely to the fact that firms in Côte d'Ivoire faced increased foreign competition, as real exchange rates had also appreciated over the observation period. Second, the positive correlation between trade reform and productivity strengthened in certain sectors, while deteriorating in others. The main message of Harrison's results, confirmed by several other studies, is that there is a complex short-term relationship between trade reform and productivity and that studies using aggregate data across sec-

¹⁵ See Rodriguez and Rodrik (2000) for a critique of early studies that established a positive relationship between trade openness and growth. See Brückner and Lederman (2012) for a review of more recent evidence supporting the positive trade-growth relationship using new methodologies.

¹⁶ The theory tested is that improving access to those imported intermediate inputs (for example by reducing tariffs or unnecessary non-tariff measures imposed on them) has learning curve effects

resulting from the technology incorporated in these inputs, from the superior quality of those inputs, or from the wide variety of those inputs. Companies are thus able to boost their productivity.

¹⁷ Eaton and Kortum (2001) find that global research and development activity and global capital goods production are all concentrated in a small number of countries. Their research confirmed the hypothesis that the benefits of technological advances can be achieved everywhere through the importation of capital goods incorporating new technologies. They conclude that a country's productivity depends on its access to capital goods from around the world and its willingness and capacity to use those goods (for example by reducing trade barriers affecting those goods).

Box 2: The complex nature of transmission channels

In the short term, trade flows associated with an economy's production structure, income levels and consumption patterns determine which economic entities access global markets and how they are affected by trade shocks, including those caused by tariff reforms. For example, if the price of consumer goods rises, households consuming these final goods will incur a higher cost and may reduce their consumption. If, on the other hand, households and companies are involved in the production of a consumer good, the increase in prices would result in an increase in earnings. Nonetheless, if the same product is used as a production input, the higher cost of its production will increase the price of the final good, thus reducing demand for the product by domestic and international buyers. Workers will then be affected by a reduced demand for labour, resulting in lower earnings and reduced employment opportunities. The net effect of a trade-related price shock and how it is transmitted to households and businesses will therefore depend on whether the goods concerned are consumables or whether they are inputs that are used in domestic production or exported.

In the long term, reallocating resources to more productive and profitable companies and sectors is a key factor in a country's economic growth. Certain theoretical studies (Melitz, 2003) and a number of empirical studies have shown that trade liberalization has a positive effect on aggregate productivity (including with regard to market share and employment levels) and leads to the reallocation of resources to the most productive enterprises. At the same time, other studies provide evidence that these positive effects depend on the presence or absence of other non-commercial distortions. Those distortions, which include poor regulatory oversight, financial constraints or weak political and judicial institutions, in particular affect developing countries and hinder their structural transformation. A theoretical model that takes into account asymmetries among countries in terms of the effectiveness of their national governance institutions was recently developed by Fiorini and others (2015) to illustrate the effect of a trade policy change transmission channel on structural transformation. That transmission channel is associated with the following two intermediate outcomes: first, firms specialize endogenously, so that the best entrepreneurs decide to produce in sectors where there are more intermediate inputs (used in final products with a high degree of complexity); and, second, countries whose institutions are relatively weak can develop a comparative advantage in sectors that produce less complex goods. Given these trends, under a free trade agreement, countries with weak institutions will experience a reallocation of resources to less complex sectors, in which only the least performing firms are active, and this could reverse the usual positive effect of increased trade on productivity (Melitz, 2003). Such transmission channel analysis deepens understanding of the impacts of common external tariffs and economic partnership agreements on structural transformation and supports empirical studies that have found that the impact of a free trade agreement depends on the effectiveness of governance mechanisms. It also provides an understanding of why the scope of the ECOWAS Treaty and economic partnership agreements (see tables 1 and 2) extends beyond the imposition of tariffs to encompass institutional issues such as regulatory cooperation and State-State and investor-State dispute settlement mechanisms.

Source : ECA.

tors and countries cannot capture behavioural (i.e. productivity) changes at the individual firm level.

27. Formal evaluation using economic simulation models is used in studies to assess the ex ante impact of trade reform. Such models are very well suited to the context of the present study. Two types of impact are analysed: partial equilibrium impacts and general equilibrium impacts. The two analyses are complementary and do not run counter to each other. Indeed, a reform has two types of effects on the economy: a local effect and a general equilibrium effect. The local effect is the direct effect of the reform on the economic actors who are, as it were, mechanically affected by the reform. The general equilibrium effect is the overall effect of the reform on the economy, taking into account the reaction of all economic

actors to the reform in question.¹⁸ Studies conducted in the region to estimate local and direct ex ante effects of economic partnership agreements include Busse and others (2004), and Karingi and others (2005). Other examples include de Melo and others (2013), who looked at the direct ex ante impact of the common external tariff in Liberia, and von Uexkull and others (2014, 2015 and 2016), who looked at the direct effects of the common external tariff and economic partnership agreements in Ghana, Nigeria and Senegal. Studies conducted to estimate the general equilibrium effects of the common external tariff and economic partnership agreements include the Consortium for Economic and Social Research (CRES) (2011), Mevel and others (2015) and the European Commission (2016). Annex 2 provides

¹⁸ Annex 1 describes the strengths and weaknesses of these two evaluation methods.

an overview of the data, models and results of the aforementioned studies.

28. Other studies that are not referenced here are often cited, including by civil society organizations and other concerned groups. For example, in paragraph 11 of an October 2013 statement¹⁹ by a number of West African civil society organizations, the organizations declared that they rejected in advance the new offer of 75 per cent market access that was being validated by the Heads of State in Dakar: that offer, they said, was economically unsustainable and socially catastrophic for West Africa, and rigorous and hitherto irrefutable studies had underscored its negative repercussions, including in terms of trade diversion, reduced tax revenue and reduced household income. It would also exacerbate precariousness and posed a threat to employment and investment.²⁰

29. Some ex ante impact studies have led to economic policy recommendations. In examining the impact of the economic partnership agreements, Mevel and others (2015) find that they are in line with the expectations and concerns already expressed, namely: first, benefits are expected from economic partnership agreements, but those benefits are concentrated in non-least developed countries, and especially in non-industrial sectors; second, as is the case with any other trade liberalization reform, economic partnership agreements can undermine intraregional trade and reduce government revenues; third, if the establishment by African countries of the African Continental Free Trade Area prior to implementation of the economic partnership agreements will not only consolidate the gains resulting from those agreements, but will also mitigate their negative repercussions. Indeed, intra-African trade will be strongly stimulated, par-

ticularly in industrial products, thereby promoting structural transformation; and, fourth, reducing the costs of cross-border trade will further enhance the benefits of the African Continental Free Trade Agreement and economic partnership agreement reforms. The main economic policy recommendation of these authors is that Africa should seize the opportunity offered by the economic partnership agreement transition period to promote effectively the regional integration process. With regard to the common external tariff, de Melo and other (2013) express a number of concerns with regard to Liberia and point out that the current tariff regime (prior to implementation of the common external tariff) and its exemptions are appropriate for a country at its level of development that wishes to promote industrialization while protecting poor sectors of society through tariff exemptions. The tariff exemptions currently offered by Liberia cover key intermediate products, including agricultural equipment in addition to staples that constitute a significant share of the goods consumed by the poor (such as rice). They also noted that the average collection rate of 5.3 per cent (based on 2011 data) is slightly lower than the median rate of 7.5 per cent for the low-income quartile in a sample of 102 countries. Thus, moving towards the common external tariff average, which stands at 11 per cent, would place Liberia at the top of the interquartile range in that sample of countries. That finding and the analysis that supports it lead these authors to conclude that Liberia, with its very small domestic market and low income levels, must expand its market footprint through international trade. They note that, regardless of whether there is a significant increase in government revenues, the adoption of the common external tariff will be both costly and counterproductive for policies aimed at improving the involvement of Liberia in international trade, in particular if efforts undertaken by ECOWAS over the course of some 20 years to liberalize trade and promote market integration (the Trade Liberalization Scheme) are not concluded successfully. Nevertheless, they believe that, if the ECOWAS Trade Liberalization Scheme is fully implemented (certain tariff and non-tariff barriers have yet to be dismantled), accession to the ECOWAS common external tariff will promote market integration

19 Statement (in French) available at http://endacacid.org/latest/index.php?option=com_content&view=article&id=813:-declaration-de-la-societe-civile-de-l-afrique-de-l-ouest-sur-l-accord-de-partenariat-economique-ape-et-le-tarif-exterieur-commun-tec&catid=115:documents-de-positions-pour-la-societe-civile&Itemid=891. Accessed on 19 January 2017.

20 No references are given for the studies mentioned in the statement and it is therefore difficult to evaluate the methodologies that they used to formulate predictions of ex ante effects.

within the subregion. If, however, it is not implemented fully, the efficiency costs associated with switching to the common external tariff will result in the imposition of tariffs that are too high for a small, low-income country like Liberia.

regard to common external tariff and economic partnership agreement complementary adjustment policies, taking into consideration the impact of reforms at the local level. Box 3 provides an overview of their recommendations for Ghana.

30. The studies undertaken by von Uexkull and others (2014, 2015 and 2016) provide some of the clearest operational recommendations with

Box 3: Economic policy recommendations made on the basis of an ex ante assessment of the local impact of the common external tariff and economic partnership agreements in Ghana

The precise effect on consumer prices and firm profits, from the common external tariff and the economic partnership agreements, will depend on how competitive the import market and distribution networks are, as these will determine the extent to which a change in tariffs is passed through to prices. Policy makers can improve the extent to which prices are passed on to consumers by ensuring that consumers have access to information on what these tariff changes are, and by instituting policies to improve the competitiveness of the import markets and distribution networks.

The impact of the common external tariff and economic partnership agreements is relatively small compared with even a minor acceleration in productivity growth. Examples of potential productivity-enhancing policy reforms—which could form possible targets for economic partnership agreement development programme support, offset negative effects, and boost overall competitiveness—include reducing electricity outages and lowering transport costs. The key point is that the focus of attention should be on making the economy more competitive, which will in turn boost and diversify trade.

Policies to reduce the revenue loss impact of the economic partnership agreements include the reduction and simplification of tariffs and tax exemptions, which are pervasive in Ghana's customs structure. These policies would also reduce administration and compliance costs, as well as the potential for rent-seeking and corruption. Such simplifications are envisaged as part of the agreed common external tariff and should be fully implemented.

Although the average effects of the common external tariff and economic partnership agreements are not very large, both trade reforms and especially the common external tariff may lead to substantial adjustment dynamics with workers and capital likely eventually to move across sectors as well as across firms within given sectors. These dynamics create a policy challenge to ensure that such adjustment, on the one hand, can take place freely so the Ghanaian economy can take full advantage of new market opportunities. On the other hand, it will be equally important to ensure that adequate policy measures are in place to accompany the transition, ensure a socially equitable adjustment process, and prevent those who are affected negatively from dropping out of the labor market.

Source: E. von Uexkull, J. MacLeod and L. Shui, "Assessing the economic impact of the ECOWAS common external tariff and economic partnership agreement on Ghana", (Washington, D.C., World Bank, 2015).

3. Methodology

3.1. Assessment of budgetary costs and benefits of economic transition

31. Most previous studies conducted on the basis of formal evaluations have encountered challenges related to the development of methodologies for estimating the fiscal transition costs of proposed tariff reforms. Transition costs are understood here as losses of budgetary revenues related to the implementation of tariff reforms. Brenton and others (2011) published an article on a methodology and modelling tool to solve several of the problems encountered in previous studies. The present study uses the methodology developed by those researchers to estimate budgetary costs.

32. First, many developing countries make use of tariff exemptions. Those exemptions, which seek to encourage investment by eliminating the duties imposed on certain imported inputs, are generally granted to support exporters and beneficiaries of investment code privileges. To understand the impact of tariff reforms, accurate information on the extent and structure of those duty exemptions is essential. By considering statutory duties rather than the duties that are actually collected, however, it is possible to overestimate the impact of tariff reductions on trade flows, government revenues and corporate profitability.

33. Second, while customs duties are an essential source of revenue in developing countries, most countries also apply VAT or a sales tax and excise taxes at the border. Those taxes are often more important sources of income than customs

duties. Unlike tariffs, however, they are not discriminatory since they are applied to both local production and imports. In practice, the VAT base on the consumption of local production is very low compared to the VAT base on imports. It is therefore important to take into account changes in VAT and excise tax revenues resulting from reforms to customs duty regimes, as it is total trade revenues that are of interest to policymakers. It is also important to consider that, when tariffs are reduced and imports increase, revenues deriving from these other taxes will also be affected. Ex ante, it is difficult to understand the overall impact of those changes. The impact may be positive, due to the increase in imports, or negative, due to a reduction in the tax base if that base derives from VAT imposed on imports in addition to collected customs duties. Studies that focus only on tariff changes can only provide a partial picture in that regard.

34. Third, it appears that previous studies used total reported gross imports, which include goods in transit, deposited or destined for special economic zones. Customs duties, VAT and excise duties are not imposed on those goods. For that reason, multiplying gross imports by the legally mandated duty rate will result in a further increase in customs revenue and lead to an additional source of overestimation of customs revenue losses resulting from tariff reforms.

35. A partial equilibrium approach was adopted to allow the researchers to run extremely detailed income simulations using the Harmonized Commodity Description and Coding System at the 10-digit level. The main disadvantage is that this

methodology cannot model the impact of tariff reforms on the overall equilibrium of economies.

36. If consumers differentiate among imports of a particular product on the basis of where it is produced, imported products will act as imperfect substitutes. Because of a lack of detailed data on local production, which affects all other studies that adopt a partial equilibrium approach,²¹ domestic substitutability has not been analysed.

3.2. Assessment of the economic and social costs and benefits of transition

37. The aforementioned approach describes the mechanisms for evaluating the impact of tariff policy changes on government revenues and not their economic or social impacts. The latter are crucial for evaluating the merits of a policy change, while issues such as revenue loss are important for understanding the budgetary costs associated with the economic transition resulting from implementation of tariff policies.

38. To assess the economic and social costs of transition, the study calculated, in a first phase, the impact of the new common external tariff and economic partnership agreements on the distribution of imports among different suppliers. In the case of the economic partnership agreements, for example, tariffs on products from the European Union are reduced, which reduces the price of imports from the European Union compared with the price of imports from other supplier countries. This has an impact on the distribution of imports, as it increases demand for products from the European Union and reduces imports from other countries. Revenues will decrease, on the one hand, because lower duties will be imposed on imports from the European Union and, on the other hand, because imports from the European Union will substitute imports from other countries that pay non-preferential import duties. This is the

²¹ Computable general equilibrium models do not analyse domestic substitutability at a particularly detailed level (using the Harmonized Commodity Description and Coding System at the 8 or 10-digit level for example, as is the case for trade). Instead, they do so at a more aggregated level in line with the number of branches in the social accounting matrix, i.e., some thirty branches.

substitution effect among exporters. It is assumed that substitution effect among foreign exporters will apply to the various import sources, so that only one substitution elasticity value among exporters needs to be taken into account.

39. In a second phase, the study calculated the impact of the fall in the price of imports from the European Union on the aggregate or average price of imports, by weighting the change in price for each supplier by their share of total imports. This decrease in the aggregate price of imports leads consumers to increase consumption of the product concerned. In many studies, it is assumed that this effect is entirely directed to the source of imports whose prices have fallen (an assumption of income elasticity of less than 1). While taking those studies into account, the present study used a less restrictive approach whereby the demand effect is distributed among all suppliers according to their share of total imports (i.e. an assumption of unitary income elasticity of demand). The study then calculated the effects on revenues using pre- and post-reform import profiles as well as profiles of fees, including customs duties, excise duties and VAT, that are paid at the border before and after the enactment of the reform. VAT and excise revenues will tend to increase as lower tariffs encourage an increase in total imports. On the other hand, revenues from those sources will tend to decline as the revenue base shrinks as a result of lower customs duties on imports from the European Union.

40. In a third phase, the data generated in the partial equilibrium exercise on changes in the prices of production, petroleum products, other inputs and capital goods were fed into a micro-simulation model to assess the potential short-term effects on the distribution of corporate profitability and labour demand. Distribution analysis makes it possible to identify losers and winners, and to design policies that enable losers to benefit from the generally positive impact of winners on structural transformation. As mentioned above, general equilibrium effect of dynamic adjustment behaviour has not been analysed.²²

²² Little information is lost by ignoring general equilibrium effects. High unemployment rates suggest that factor markets are not com-

3.3. Evaluation of the scenarios analysed

41. Three scenarios were analysed in the study:

- (a) Sequential tariff changes in the common external tariff and economic partnership agreements in 2015, 2020, 2025, 2025, 2030 and 2035;
- (b) Eliminating tariff barriers among ECOWAS countries;
- (c) Strengthening regional competitiveness factors.

42. For scenarios (a) and (b), the study looked at imports from four key groups: ECOWAS member States (scenario (b)), non-ECOWAS African States (common external tariff scenario (a)), the European Union (common external tariff scenario in 2015 and economic partnership agreement scenario from 2020) and the rest of the world (common external tariff scenario (a)).²³

43. Unlike previous studies, which used hypothetical common external tariff and economic partnership agreement tariff rates, the present study uses the rates agreed in the regulation establishing the Common External Tariff within the framework of the economic partnership agreements, which was agreed at the ECOWAS conference of Heads of State and Government. In addition, and, again, unlike previous studies, the present study takes into account changes in tariff nomenclature prior to, between and after the implementation of sequential tariff reforms, namely, the common external tariff and economic partnership agreement rates after 5, 10, 15 and 20 years. The tariff nomenclature used prior to the

petitive and studies of the behaviour of wages and employment efficiency also suggest that those markets are uncompetitive. Thus, a change in labour demand may not cause a change in wages. The excess of arable land also suggests that land prices are not competitive. The general equilibrium effects of those changes on other sectors, through factor markets, may be small.

²³ The creation of the non-ECOWAS African States group was not necessary for the analysis of the common external tariff and the economic partnership agreements but will be useful in the analysis of future tariff scenarios envisaged under the African Continental Free Trade Area.

introduction of the common external tariff was that of the Harmonized Commodity Description and Coding System adopted in 2007, while the nomenclature used for sequential tariff reforms is set forth in the Harmonized Commodity Description and Coding System adopted in 2012. We therefore designed a 10-digit level Harmonized Commodity Description and Coding System comparison table for the two nomenclatures to facilitate comparison between the old and new customs duty rates.²⁴

44. The common external tariff rates applicable to West African countries are imposed in four phases from the date of entry into force of the agreement (T), namely from T+4 to the end of end T+9, from T+10 to the end of T+14, from T+15 to the end of T+19 and from T+20 onwards. Table 3 outlines the tariffs imposed during those phases and conditions. The ECOWAS common external tariff, which entered into force in 2015, was agreed on as a basis for tariff dismantling. The first column of the table splits the tariff lines into four groups (A, B, C and D).

45. In the sequential tariff reforms examined, the study assumes for each product (at the tariff line level) a duty collection rate (or exemption rate) equal to the rate observed prior to the reform. A change in that rate would be tantamount to a policy scenario of reduced exemptions: a different policy from a policy of commercial tariffs.

46. To simulate the short-term effects of regional integration, the study kept all intra-ECOWAS tariffs at zero.

47. Annex 3 provides an overview of the other policy scenarios examined in the study that would impact corporate profitability.

²⁴ The formulation of the comparison table was a challenging task and much of it needed to be done manually by comparing product descriptions. There are no international concordance tables at the detailed tariff line level (8–10 digits), but only at the 6-digit level.

Table 3: Calendar for the removal of tariffs under the economic partnership agreements

	Initial duty imposed	from T to the end of T+4	From T+5 to the end of T+9	From T+10 to the end of T+14,	From T+15 to the end of T+19	From T+20 onwards
Group A (37 % of tariff lines)	0	No change	All tariffs reduced by 50 %	0	0	0
	5					
Group B (19 % of tariff lines)	0	No change	No change	All tariffs reduced by 50 %	All tariffs reduced to 0 %	0
	5					
	10					
Group C (19 % of tariff lines)	5	No change	No change	All tariffs reduced by 50 %	All tariffs are further reduced by 50 %	All tariffs reduced to 0 %
	10					
	20					
Group D (25 % of tariff lines)	0	No change	No change	No change	No change	No change
	10					
	20					
	35					

Source: Annex C (part 1) of the economic partnership agreements, as processed by the author.

Note: T is the year of entry into force of the agreement. Group A includes essential social goods, basic necessities, basic raw materials, capital goods, and specific inputs. Group B mainly includes inputs and intermediate products. Group C mainly includes final consumption goods. Group D contains products that are sensitive for the region and whose trade will not be liberalized.

3.4. Collection and processing of basic data

48. A key part of the study was the collection and processing of new data on imports and revenues derived from customs duties, excise duties and VAT on these imports. Data were collected at the most detailed level for products and countries and for the most recent year available prior to implementation of the common external tariff, i.e. 2014. In many cases, these data are available because of a recent initiative to modernize and computerize customs procedures, namely, the Automated System for Customs Data (ASYCUDA).

49. Data were processed by using extended customs procedure codes (which include additional customs codes) to remove from the calculations all imports that do not enter the final consumption market, including goods in transit, deposited or destined for special economic zones. State-sponsored imports or goods imported under diplomatic privilege have been removed, as those goods are not destined for the domestic market but are imported for a specific and exclusive purpose. In general, those imports enter duty-free and to include them in the calculations

would result in an overestimation of the exemption levels (and an underestimation of the extent to which domestic markets are protected).

50. Detailed estimates of the elasticities required for the implementation of equilibrium models in the countries studied were not available. The study assumed that the true values of those elasticities would lie within a certain range, and then rigorously tested the sensitivity of key results to changes in the elasticity values at the lower limit (low elasticities) and upper limit (high elasticities) of that range.²⁵ The lower limit for export substitution elasticity among different suppliers (countries) for a given product was set at 1.5 (low substitution elasticity). With regard to demand effect elasticity, the study used a base value of 0.5 (low elasticity) and allocated the increase in overall imports that would accompany a decrease in aggregate import price to different suppliers in accordance with the market share of each supplier. The results of the study were also processed on the basis of high elasticity estimations (the upper limit of the range), using a value of 5

²⁵ This method is by far the most preferable because true elasticity values are never actually known, even if they can be estimated empirically using econometric methods.

for substitution elasticity among exporters and a value of 1 for demand effect elasticity.

51. The data used to simulate the local effects of the common external tariff and economic partnership agreements on corporate profitability come from the most recent World Bank surveys of companies in the countries concerned. Table 4 provides an overview of those survey data, which were used in the study to establish microeconomic baselines.²⁶

52. The ex ante evaluation uses business survey data in order to establish the microeconomic status of each firm, including their sales and types of products sold, domestic and imported inputs and capital goods and staff numbers, just prior to the tariff shock and in order to make projections on the basis of available information regarding changes in domestic sales, inputs and capital goods prices pursuant to the implementation of the common external tariff and economic partnership agreements. Table 4 also reveals the limitations of that approach: first, data are not available for the agricultural sector; and, second,

available data that can be used to assess the status quo prior to the implementation of the 2014 ECOWAS common external tariff reforms are from 2008 for the Niger and Côte d'Ivoire, and are perhaps of limited use when assessing the situation immediately before those reforms. It should be noted that, to determine outcome variables, the yearly business survey contains questions related to the previous year. Thus, the surveys in Benin and Togo conducted in 2016 provide information on the financial situation of companies in 2015, and that year could be considered as a good approximation of the situation immediately prior to the reforms.

53. The aforementioned methodology made use of the World Bank Tariff Reform Impact Simulation Tool to calculate changes in price, protection measures and import flows in the various tariff scenarios. The Tariff Reform Impact Simulation Tool is described in detail by Brenton and others (2011) and in brief in box 4. The changes calculated using the Tool are then used in the microsimulation model described in annex 3 to assess the effects of tariff scenarios on manufacturing firms.

Table 4: Survey data used in the study

Country	World Bank enterprise surveys	
	Date of the enterprise survey	Information provided by the most recent survey
Benin	July–October 2016 and May–September 2009	150 enterprises: manufacturing (70), services (80). Cities: Littoral (110), Atlantique, Borgou, Mono (40)
Côte d'Ivoire	October 2008–February 2009	526 enterprises: manufacturing (193), retail (106), other services (227). Cities: Abidjan (483), San Pedro (42), Yamoussoukro (1)
Niger	May–October 2009	150 enterprises: manufacturing (62), services (88). Cities: Niamey (135), Maradi (15)
Togo	July–November 2016 and July–October 2009	150 enterprises: manufacturing (45), services (105). Cities: Lomé (119), Plateaux, Centrale, Kara (31)

Source: www.enterprisesurvey.org.

²⁶ For further information, see: <http://www.enterprisesurveys.org/>. New studies were under way in 2016 in Côte d'Ivoire and the Niger, but their findings were not available at the time of writing this report.

Box 4: The theoretical basis of the Tariff Reform Impact Simulation Tool

The theoretical basis of the Tariff Reform Impact Simulation Tool is that a change in the duty or tax on a product affects its domestic price and, consequently, its level of imports and the revenues derived from them. The Tool makes the following assumptions:

- There is no substitution between products (each product is treated as a distinct market);
- The Armington assumption: there is an imperfect substitution between imports of products from trading partners A, B, C, etc. Varieties of the same product imported from different countries are considered;
- The importing country is a “price taker”: The importing country in question does not affect world prices when its demand for a good changes. This means that the elasticity of supply is considered infinite (exporters can supply any quantity requested);
- There are three types of elasticity: exporter substitution elasticity, domestic substitution elasticity and demand price elasticity.

The four Tariff Reform Impact Simulation Tool calculation steps are as follows:

- Price change: The Tool calculates the price change for each good and exporter and then models (in steps two to four) the import response of trade flows.

Example: Preferential reduction in the tariff on imports from country A:

- Exporter substitution effect: imports from other countries are replaced with imports from country A following a reduction in the domestic price of imports from country A. Total imports remain unchanged. The size of the effect is determined by the exporter substitution elasticity.
- Domestic substitution effect: domestic production is replaced with imports following a reduction in the average price of imports. Total domestic consumption remains unchanged. The size of the effect is determined by the domestic substitution elasticity.
- Demand effect: Total consumption increases following a reduction in the average domestic price. The size of the effect is determined by the demand elasticity.

Source: *Manual for the Tariff Reform Impact Simulation Tool (extract).*

4. Structure prior to the ECOWAS reform of foreign trade and protection

4.1. Foreign trade

54. By dividing the world into four regions (ECOWAS, rest of Africa, European Union and rest of the world), it can be seen that, in 2014, the year preceding the launch of the reform process under scrutiny, ECOWAS was importing far more goods from the rest of the world (53.8 per cent) and from the European Union (33.2 per cent) than from within the ECOWAS region itself (9.2 per cent) (see table 5). According to the International Standard Industrial Classification of all Economic Activities (ISIC), the top five merchandise imports in the subregion are those of the oil-refining industries (15.9 per cent of imports), food and beverages (15 per cent), machinery n.e.c.²⁷ (12 per cent), chemi-

cals (11.3 per cent) and the automotive sector (6.4 per cent).

55. Export earnings in the subregion come from the rest of the world (45.7 per cent of the total), the European Union (38.6 per cent), ECOWAS (8.6 per cent) and the rest of Africa (7.1 per cent). The five sectors that provide export earnings in the subregion are those of crude petroleum and natural gas (68 per cent), refined petroleum products (9.5 per cent), agriculture and hunting (6.6 per cent), metals (3.3 per cent) and food and beverages (2.6 per cent).

Table 5: Geographical and sectoral configuration of ECOWAS imports, 2014

Code	ISIC activity	ECOWAS	Rest of Africa	EU	Rest of the world	World
01	Agriculture and hunting	0.1%	0.2%	1.1%	2.5%	3.8%
02	Forestry and logging	0.0%	0.0%	0.0%	0.0%	0.1%
05	Fishing	0.0%	0.1%	0.1%	0.1%	0.3%
10	Coal	0.0%	0.1%	0.0%	0.0%	0.1%
11	Crude petroleum and natural gas	3.6%	0.0%	0.0%	0.3%	3.9%
12	Uranium and thorium	0.0%	0.0%	0.0%	0.0%	0.0%
13	Mining of metal ores	0.0%	0.0%	0.0%	0.0%	0.0%
14	Other mining and quarrying	0.0%	0.0%	0.1%	0.2%	0.4%
15	Food and beverages	0.8%	0.7%	4.0%	9.5%	15.0%
16	Tobacco	0.2%	0.0%	0.0%	0.0%	0.3%
17	Textiles	0.1%	0.0%	0.2%	1.2%	1.6%
18	Wearing apparel	0.0%	0.0%	0.0%	0.2%	0.2%
19	Tanning and dressing of leather	0.0%	0.0%	0.0%	0.3%	0.4%
20	Wood	0.1%	0.0%	0.1%	0.1%	0.3%
21	Paper and paper products	0.0%	0.1%	0.5%	0.8%	1.5%

²⁷ Machinery n.e.c. means machinery not elsewhere classified.

Code	ISIC activity	ECOWAS	Rest of Africa	EU	Rest of the world	World
22	Publishing and printing	0.0%	0.0%	0.2%	0.2%	0.5%
23	Refined petroleum products	2.8%	0.3%	10.3%	2.5%	15.9%
24	Chemicals	0.4%	0.8%	3.6%	6.5%	11.3%
25	Rubber and plastic products	0.1%	0.1%	0.6%	1.6%	2.3%
26	Non-metallic mineral products	0.3%	0.1%	0.6%	1.3%	2.3%
27	Manufacture of basic metals	0.1%	0.3%	0.9%	3.4%	4.7%
28	Fabricated metal products	0.1%	0.1%	1.1%	2.1%	3.3%
29	Machinery and equipment n.e.c	0.1%	0.2%	4.2%	7.5%	12.0%
30	Office machinery	0.0%	0.0%	0.6%	0.7%	1.4%
31	Electrical machinery	0.0%	0.1%	1.4%	2.3%	3.9%
32	Radio and television equipment	0.0%	0.2%	0.3%	1.2%	1.7%
33	Medical and optical instruments	0.0%	0.0%	0.3%	0.7%	1.0%
34	Motor vehicles	0.0%	0.2%	2.2%	3.9%	6.4%
35	Other transport equipment	0.0%	0.0%	0.6%	3.9%	4.5%
36	Furniture	0.0%	0.0%	0.2%	0.6%	0.7%
40	Electricity, gas, steam	0.2%	0.0%	0.0%	0.0%	0.2%
Total		9.2%	3.8%	33.2%	53.8%	100.0%

Source: ECA computations based on World Integrated Trade Solution data.

Table 6: Geographical and sectoral configuration of ECOWAS exports, 2014

Code	ISIC activity	ECOWAS	Rest of Africa	EU	Rest of the world	World
34	Motor vehicles	0.0%	0.0%	0.1%	0.0%	0.2%
35	Other transport equipment	0.1%	0.7%	1.1%	0.3%	2.2%
36	Furniture	0.0%	0.0%	1.2%	0.3%	1.6%
40	Electricity, gas, steam	0.1%	0.0%	0.0%	0.0%	0.1%
Total		8.6%	7.1%	38.6%	45.7%	100.0%
13	Mining of metal ores	0.0%	0.0%	0.3%	0.4%	0.7%
14	Other mining and quarrying	0.0%	0.0%	0.1%	0.1%	0.2%
15	Food and beverages	0.8%	0.1%	1.3%	0.4%	2.6%
16	Tobacco	0.2%	0.1%	0.0%	0.0%	0.3%
17	Textiles	0.1%	0.1%	0.5%	0.0%	0.7%
18	Wearing apparel	0.0%	0.0%	0.0%	0.0%	0.0%
19	Tanning and dressing of leather	0.1%	0.0%	0.3%	0.2%	0.6%
20	Wood	0.1%	0.0%	0.1%	0.1%	0.3%
21	Paper and paper products	0.1%	0.0%	0.0%	0.0%	0.1%
22	Publishing and printing	0.0%	0.0%	0.0%	0.0%	0.0%
23	Refined petroleum products	2.1%	0.7%	2.1%	4.6%	9.5%
24	Chemicals	0.4%	0.7%	0.1%	0.1%	0.7%

Code	ISIC activity	ECOWAS	Rest of Africa	EU	Rest of the world	World
25	Rubber and plastic products	0.3%	0.0%	0.0%	0.0%	0.3%
26	Non-metallic mineral products	0.3%	0.0%	0.0%	0.0%	0.3%
27	Manufacture of basic metals	0.5%	0.3%	0.1%	2.4%	3.3%
28	Fabricated metal products	0.0%	0.0%	0.1%	0.1%	0.2%
29	Machinery and equipment n.e.c	0.1%	0.0%	0.6%	0.1%	0.8%
30	Office machinery	0.0%	0.0%	0.0%	0.0%	0.0%
31	Electrical machinery	0.0%	0.0%	0.0%	0.0%	0.1%
32	Radio and television equipment	0.0%	0.0%	0.0%	0.0%	0.0%
33	Medical and optical instruments	0.0%	0.0%	0.0%	0.1%	0.1%

Source: ECA computations based on World Integrated Trade Solution data.

56. The impact of the reforms under consideration is mainly reflected in changes to the existing tariffs prior to the launch of the reforms.

4.2. Protection

57. The changes in the common external tariff and the economic partnership agreement tariffs have little effect on the tariffs imposed on exports from the region. The common external tariff relates to imports and the subregion enjoys tariff preferences in European Union markets: everything but arms for the region's least developed countries, while the other countries benefited from the

Cotonou tariff preferences. The challenge posed by tariff changes applied principally to the subregion's import market.

58. In 2014, the region's tariff was 11.6 per cent as a simple average and 11.1 per cent as a weighted average (by imports). The five most protected sectors are tobacco (32.9 per cent), wearing apparel (19.5 per cent), motor vehicles (19.5 per cent), furniture (17.9 per cent) and glass and pottery (non-metallic mineral products) (17.5 per cent). Apart from automotive engineering, none of these five sectors is among the five sectors that import the most.

Table 7: Sectoral configuration of the aggregated tariffs of the ECOWAS economies (in percentages), 2014

Code	ISIC activity	Import share	Simple tariff	Weighted tariff
01	Agriculture and hunting	3.8	14.2	6.7
02	Forestry and logging	0.1	7.9	5.2
05	Fishing	0.3	12.0	10.2
10	Coal	0.1	7.0	5.0
11	Crude petroleum and natural gas	3.9	3.1	0.0
12	Uranium and thorium	0.0		
13	Mining of metal ores	0.0	5.0	5.0
14	Other mining and quarrying	0.4	5.4	6.1
15	Food and beverages	15.0	16.5	12.6
16	Tobacco	0.3	19.4	32.9
17	Textiles	1.6	17.4	14.8
18	Wearing apparel	0.2	19.8	19.5
19	Tanning and dressing of leather	0.4	17.9	13.4

Code	ISIC activity	Import share	Simple tariff	Weighted tariff
20	Wood	0.3	14.9	15.3
21	Paper and paper products	1.5	11.6	8.3
22	Publishing and printing	0.5	11.4	8.9
23	Refined petroleum products	15.9	5.9	8.8
24	Chemicals	11.3	7.3	5.8
25	Rubber and plastic products	2.3	13.6	14.81
26	Non-metallic mineral products	2.3	16.2	17.5
27	Manufacture of basic metals	4.7	11.2	13.9
28	Fabricated metal products	3.3	16.1	15.8
29	Machinery and equipment n.e.c	12.0	7.7	6.4
30	Office machinery	1.4	11.0	6.2
31	Electrical machinery	3.9	10.7	9.9
32	Radio and television equipment	1.7	12.5	11.7
33	Medical and optical instruments	1.0	9.9	6.4
34	Motor vehicles	6.4	11.1	19.5
35	Other transport equipment	4.5	8.2	10.3
36	Furniture	0.7	18.5	17.9
40	Electricity, gas, steam	0.2	5.0	5.0
Total		100.0	11.6	11.1

Source: ECA computations based on World Integrated Trade Solution data.

59. It should be noted that table 7 conceals differences between the countries of the subregion in terms of their nominal tariff structure and that use of the nominal tariff to assess the level of protection in an economy can be misleading, if the authorities of that country use exemption systems (tariff exemptions or concessions) to reduce the costs of tariff protection. Since the subregion has no regional regulatory practices at its disposal for the harmonization of tariff exemptions, it is appropriate to conduct the analysis of the impact of tariff changes at the national level. Four case studies are presented here, in order to reflect the idea that the extent of the impact of tariff changes on the

national economies of the subregion depends on the national exemption policies, the authorities and the degree of integration of each economy compared to other economies of the subregion. Benin is a case of an economy where tariff exemptions are low (with a high tariff recovery rate) and imports from within the subregion are limited. Togo and the Niger are, by contrast, countries with relatively high tariff exemptions (low tariff collection rates) and imports from within the subregion are strong. Côte d'Ivoire, a developing and not a least developed country, has been added to see if there is a contrast between certain impacts on countries which are least developed and those which are not.

5. Case study reports

5.1. Situation prior to the reform in the three case-study countries

60. Table 8 presents the geographical configuration, just before the ECOWAS common external tariff reform, of imports and of the effectively applied tariff²⁸ in the countries under review. As indicated in the first two lines, the European Union accounts for 31.7 per cent of imports and 33.4 per cent of the total tariff revenue of Benin, as compared, respectively, to 16.3 and 18.4 per cent in the Niger, and 39.8 and 32.8 per cent in Togo. ECOWAS countries provide 7.9 per cent of the imports of Benin, but only 2.6 per cent of its total tariff income. The corresponding figures for the Niger are 26.4 and 10.5 per cent respectively, and, for Togo, 10.1 and 7.6 per cent. The physical location of the Niger, as a landlocked country, could explain the relatively high proportion of its imports from within the subregion.

61. Some tariffs applied to imports from within ECOWAS are still considerable: 3.5 per cent in Benin, 2.2 per cent in the Niger, 7.6 per cent in Togo. This probably reflects delays in implementation of the trade liberalization system or failure by the exports of ECOWAS members to comply with the rules of origin of that system. Accordingly, these exports do not benefit from the subregion's duty-free import regime.

²⁸ The effectively applied tariff (or collected tariff) is different from the legal or statutory tariff. It takes exemptions into account and is more relevant for the purposes of impact assessment as import transactions are made at the effectively applied tariff. It is calculated by dividing the receipts by the import value (for each product). In this way, the imports taken into consideration are those that enter the domestic market.

62. In Benin, the average weighted tariff applied to imports from the European Union is 11.1 per cent, slightly above the overall average of 10.5 per cent. In the Niger, the corresponding tariff is 6.2 per cent for the European Union, as against an overall average tariff of 5.4 per cent. By contrast, in Togo, the European Union enjoys a tariff of 8.3 per cent, which is better than the overall average of 10.1 per cent. Given that these three countries, as members of WAEMU, were already applying the same statutory tariff in 2014, the variations observed in the tariffs levied on European Union imports could be attributed to differences in demand for specific types of imports between countries, and also to differences in the countries' exemption policies.

63. The tariff collection rate in Benin is 94.8 per cent for the European Union, which is slightly above the collection rate of 93.1 per cent for all imports. In Togo, the corresponding figure is 83.8 per cent for the European Union and 84.9 per cent for the overall average. The rates are relatively low in the Niger: 64.7 per cent for the European Union and 46.1 per cent for the overall average. The discrepancies in these collection rates may be attributable, on the one hand, to differences in the countries' exemption policies and, on the other, to different levels of effort made to collect import duties. Differences in the collection rates applied by countries sharing a common external tariff represent an obstacle to the creation of a customs union between those countries.

64. There is considerable variation between the different sectors of the same countries in terms of tariff protection and the volume of imports.

Table 8: Geographical configuration of imports and tariffs levied in 2014

	Rest of the world	EU	ECOWAS	Rest of Africa	Total
Benin					
Import share	53.9%	31.7%	7.9%	6.5%	100.0%
Share in total tariff income	57.6%	33.4%	2.6%	6.1%	100.0%
Average tariff levied, import-weighted	11.3%	11.1%	3.5%	9.8%	10.5%
Average statutory tariff, import-weighted	12.3%	11.7%	4.1%	10.0%*	11.3%
Tariff collection rate	92.1%	94.8%	84.1%	98.8%	93.1%
Niger					
Import share	54.4%	16.3%	26.4%	3.0%	100.0%
Share in total tariff income	64.2%	18.4%	10.5%	6.9%	100.0%
Average tariff levied, import-weighted	6.4%	6.2%	2.2%	12.7%	5.4%
Average statutory tariff, import-weighted	10.4%	9.5%	15.8%	14.0%*	11.8%
Tariff collection rate	61.7%	64.7%	13.6%	90.3%	46.1%
Togo					
Import share	46.8%	39.8%	10.1%	3.3%	100.0%
Share in total tariff income	56.6%	32.8%	7.6%	2.8%	100.0%
Average tariff levied, import-weighted	12.2%	8.3%	7.6%	8.8%	10.1%
Average statutory tariff, import-weighted	13.3%	9.9%	13.6%	10.1%*	11.9%
Tariff collection rate	91.8%	83.8%	56.0%	87.1%	84.9%

Source: ECA calculations, based on ASYCUDA automated customs system data provided by customs authorities.

* As imports between the States of the subregion are still subject to customs duties, despite the existence of the Trade Liberalization Scheme, the most favourable statutory tariff has also been applied de facto to subregional imports.

Table 9 provides a snapshot of this variation by assigning imported products in accordance with their ranking to two positions of the third revision of the International Standard Industrial Classification of All Economic Activities (ISIC Revision 3). It follows that the seven largest import sectors common to the three least developed countries under consideration are: food and beverages; petroleum products (oil refining); chemicals; glass and pottery; machinery and equipment; metals; and motor vehicles. Among these, the most protected sectors are those of motor vehicles (14.1 per cent in Benin, 8.4 per cent in the Niger and 14.5 per cent in Togo); food and beverages (13.7 per cent in Benin, 9.5 per cent in the Niger and 14.4 per cent in Togo); and glass and pottery (non-metallic mineral products) (13 per cent in Benin, 2.2 per cent in the Niger and 10.6 per cent in Togo). Tariff protection in these countries does not necessarily meet the need to protect domestic production from foreign competition. The

motor vehicle sector is a good example, as the domestic production of those countries in this sector is virtually zero. Nevertheless, the levying of a high tariff in such situations provides Governments with substantial revenue.

65. Unlike the three least developed countries under consideration, the original structure (prior to the reform) of imports into Côte d'Ivoire shows a significant share held by agriculture and hunting (7.5 per cent), which are relatively more protected, with an actual rate of 7.2 per cent.

66. Table 10 presents the cost structure of manufacturing companies, production losses resulting from electricity cuts, the strength of their workforce, origin (domestic or foreign) of their supplies (inputs) and the market (national sales, indirect or direct exports) for their products in the countries under review. It shows the variability of firms in the same country (significant differences

Table 9: Sectoral configuration of imports and of tariffs levied in 2014

	Benin		Côte d'Ivoire		Niger		Togo	
ISIC activity	Protection	Import share	Protection	Import share	Protection	Import share	Protection	Import share
Agriculture and hunting	8.3%	0.6%	7.2%	7.5%	2.7%	2.2%	7.6%	0.8%
Food and beverages	13.7%	45.7%	10.7%	26.3%	9.5%	26.8%	14.4%	12.5%
Tobacco	13.4%	0.1%	0.7%	0.6%	0.1%	2.9%	11.9%	1.0%
Textiles	14.6%	3.2%	14.5%	2.1%	10.4%	1.6%	18.9%	5.4%
Wearing apparel	19.9%	2.6%	20.0%	1.0%	16.1%	0.6%	19.7%	2.1%
Tanning and dressing of leather	19.8%	0.7%	19.7%	0.5%	17.0%	0.5%	20.0%	1.8%
Wood	7.8%	0.2%	14.7%	0.1%	2.1%	1.2%	7.9%	0.2%
Paper and paper products	10.2%	0.9%	10.1%	1.7%	11.6%	0.4%	16.7%	1.2%
Refined petroleum products	2.2%	6.4%	8.6%	0.9%	5.9%	2.0%	8.4%	21.2%
Chemicals	4.3%	7.1%	4.6%	18.1%	1.4%	11.1%	6.2%	7.1%
Rubber and plastic products	10.9%	1.5%	13.4%	2.9%	6.5%	2.9%	11.2%	2.3%
Non-metallic mineral products	13.0%	3.5%	13.8%	4.5%	2.2%	8.9%	10.6%	7.6%
Manufacture of basic metals	4.1%	4.1%	7.1%	4.9%	2.7%	3.5%	4.3%	5.8%
Fabricated metal products	8.6%	1.5%	15.6%	2.4%	6.3%	2.0%	8.8%	3.0%
Machinery and equipment n.e.c	4.2%	4.1%	7.2%	7.8%	1.4%	12.6%	3.8%	8.1%
Electrical machinery	8.7%	1.5%	13.1%	3.0%	5.1%	3.4%	5.7%	6.4%
Radio and television equipment	2.9%	1.3%	13.7%	1.6%	7.6%	1.2%	12.8%	1.1%
Motor vehicles	14.1%	4.5%	14.8%	7.6%	8.4%	7.5%	4.5%	6.3%
Furniture	17.7%	0.5%	19.5%	1.0%	12.9%	0.9%	15.0%	0.8%
Other	5.6%	9.8%	7.8%	5.7%	4.4%	7.8%	9.0%	5.3%
Total	10.5%	100.0%	9.7%	100.0%	5.4%	100.0%	10.1%	100.0%

Source: ECA calculations, based on ASYCUDA automated customs system data provided by customs authorities.

between enterprises lying on the average, the minimum, the median and the maximum mark of various characteristics) and suggests that an impact analysis of the common external tariff and of the economic partnership agreements with the European Union countries should be careful not to assume any business uniformity. The table shows that the total input costs (materials, raw materials or supplies) and capital goods constitute some 30–40 per cent of the total annual turnover for mean and median businesses in Benin and Togo. For the Niger, the corresponding figure would be more than 60 per cent of total turnover and, for

Côte d'Ivoire, less than 20 per cent. Manufacturing firms in the countries under review purchase a relatively large quantity of inputs of foreign origin: on average, in Benin, 48 per cent of total purchased inputs are of foreign origin; in Côte d'Ivoire, 22 per cent; in Togo, 69 per cent; and, in the Niger, 90 per cent (second last column). This suggests that a reduction in customs duty is a mechanism that could be used to ensure the cheaper availability and lower cost of supplies and capital goods for manufacturing firms in the least developed countries under consideration. At the same time, because of the significant proportion of produc-

Table 10: Characteristics of manufacturing companies

	Share of input costs as percentage of turnover	Share of equipment costs (depreciation only) as percentage of turnover	Losses due to electricity cuts as percentage of turnover	Full-time employees	Share of inputs bought on domestic market	Share of domestic sales
Benin (2015)						
Mean	32.4%	7.7%	14.9%	36	52.0%	89.7%
Minimum	0.1%	0.0%	0.0%	4	0.0%	10.0%
Median	36.1%	4.0%	6.0%	16	50.0%	100.0%
Maximum	83.0%	20.0%	60.0%	350	100.0%	100.0%
Côte d'Ivoire (2009)						
Mean	19.4%	5.3%	5.8%	80	78.0%	91.0%
Minimum	0.0%	0.0%	0.0%	1	0.0%	0.0%
Median	14.7%	2.4%	6.1%	11	100.0%	100.0%
Maximum	80.0%	20.0%	30.0%	6148	100.0%	100.0%
Niger (2008)						
Mean	66.6%	14.9%	5.1%	31	10.0%	94.0%
Minimum	1.0%	1.5%	0.0%	5	0.0%	35.0%
Median	65.6%	20.0%	5.0%	14	0.0%	100.0%
Maximum	164.4%	20.0%	30.0%	178	100.0%	100.0%
Togo (2015)						
Mean	38.5%	5.6%	4.9%	115	29.0%	49.0%
Minimum	2.1%	0.0%	0.0%	5	0.0%	0.0%
Median	34.6%	2.8%	1.0%	31	7.0%	54.0%
Maximum	85.5%	20.0%	30.0%	1040	100.0%	100.0%

Source: ECA calculations using the world development indicators database of the World Bank.

Note: Companies whose responses, in the view of the researcher, are random and unreliable have been excluded from the calculations.

tion constituted by domestic sales (last column), the lowering of customs duties could increase the competitiveness of imports for companies in the subregion by reducing the prices of their products and undermining the profitability of manufacturing companies on domestic markets. Such a scenario could also entail the risk of loss of permanent jobs for the staff of such enterprises.

5.2. Conventional effects: nominal protection

67. Table 11 shows changes in the rates of customs duty at the end of the transitional period for the implementation of two reform scenarios: the joint Trade Liberalization Scheme and ECOWAS

common external tariff in 2020 and the economic partnership agreements in 2035.

68. This refers to changes in customs duties effectively applied by product group, on the assumption that the exemption policy applied prior to the reform (2014) for each product or product group and for each country will be maintained until the end of the reform process. Where the common external tariff and trade liberalization system are concerned, the tariff will rise for Benin (+1.8 per cent) and drop for Côte d'Ivoire (-0.1 per cent), the Niger (-0.4 per cent) and Togo (-0.6 per cent). This is due in part to the fact that, on the one hand, Benin imports less from within ECOWAS than the Niger and Togo and, on the other hand, its overall tariff collection rates are

Table 11: Tariff changes at the end of the implementation of the Trade Liberalization Scheme and common external tariff and the economic partnership agreements

	Branche CITI	Benin		Côte d'Ivoire		Niger		Togo	
Code		TLS+CET	TLS+CET+ EPA2035	TLS+CET	TLS+CET+ EPA2035	TLS+CET	TLS+CET+ EPA2035	TLS+CET	TLS+CET+ EPA2035
"01	Agriculture and hunting	0.0%	-2.7%	1.3%	-1.7%	-0.4%	-0.8%	0.0%	-1.7%
15	Food and beverages	3.3%	3.1%	1.1%	0.1%	0.3%	0.1%	-1.0%	-1.8%
16	Tobacco	-1.4%	-1.4%	-0.3%	-0.3%	-0.1%	-0.1%	-7.0%	-7.0%
17	Textiles	3.9%	3.8%	-0.6%	-0.9%	-0.7%	-0.8%	2.0%	1.9%
18	Wearing apparel	-0.9%	-0.9%	-3.5%	-3.6%	-2.1%	-2.1%	-0.1%	-0.1%
19	Tanning and dressing of leather	-2.2%	-2.2%	-9.1%	-10.5%	-4.8%	-4.9%	-3.0%	-4.9%
20	Wood	-2.0%	-2.5%	1.6%	-3.2%	-1.8%	-1.9%	-2.4%	-4.9%
21	Paper and paper products	0.2%	-1.7%	-0.2%	-4.0%	-0.6%	-2.9%	-0.5%	-1.2%
23	Refined petroleum products	2.9%	-0.6%	-0.3%	-4.4%	-2.3%	-3.3%	-0.6%	-5.1%
24	Chemicals	0.7%	-0.2%	-0.2%	-1.3%	-0.1%	-0.5%	-0.8%	-2.3%
25	Rubber and plastic products	-1.9%	-3.3%	0.4%	-1.7%	-1.3%	-2.1%	-1.8%	-3.5%
26	Non-metallic mineral products	0.0%	-4.4%	-0.2%	-4.1%	-0.8%	-1.0%	-0.6%	-5.4%
27	Manufacture of basic metals	1.3%	1.1%	-0.1%	-1.7%	-0.5%	-0.9%	-0.1%	-0.5%
28	Fabricated metal products	0.6%	-1.7%	-1.4%	-5.9%	-0.4%	-2.1%	0.2%	-1.9%
29	Machinery and equipment n.e.c.	0.3%	-2.3%	-1.0%	-4.4%	-0.2%	-0.7%	0.4%	-2.1%
31	Electrical machinery	0.1%	-2.8%	-0.3%	-5.5%	-0.3%	-1.7%	-0.3%	-1.1%
32	Radio and television equipment	0.3%	-0.7%	-0.2%	-5.9%	-0.1%	-2.6%	-2.2%	-4.5%
34	Motor vehicles	-0.5%	-1.5%	-2.3%	-3.3%	-0.8%	-1.3%	-1.2%	-2.7%
36	Furniture	0.0%	-4.0%	-0.8%	-4.2%	-0.6%	-1.5%	-0.7%	-3.1%
	Others	-0.1%	-1.8%	-0.1%	-2.9%	-1.5%	-2.4%	-0.5%	-2.4%
	Total	1.8%	0.8%	-0.1%	-2.1%	-0.4%	-0.9%	-0.6%	-2.4%

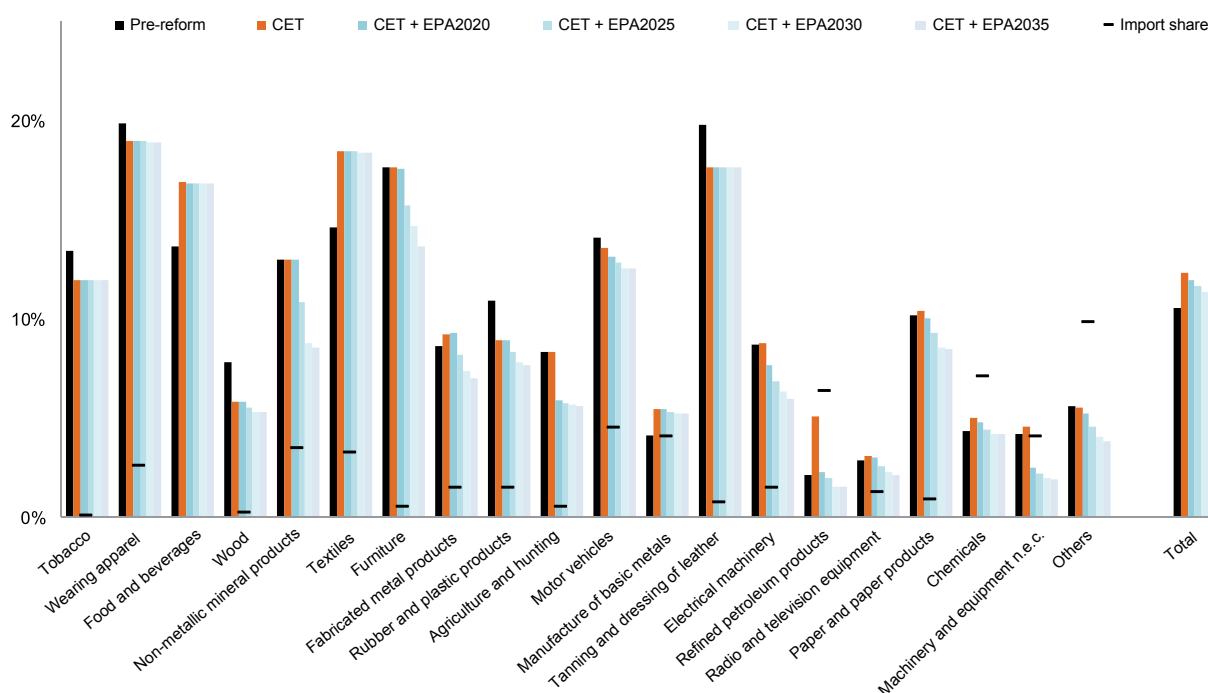
Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Note: All changes should be understood as based on the rate applied in 2014.

higher (see table 8). Accordingly, the application of a duty-free regime for imports from within ECOWAS would have relatively less effect on the revenue of Benin and the fact that the ECOWAS common external tariff is higher than the WAEMU common external tariff would boost its revenue

because of the high collection rate. For Côte d'Ivoire, the Niger and Togo, the downward effect of the trade liberalization system would prevail over the upward effect of the ECOWAS common external tariff. This notwithstanding, table 11 shows that there was greater variability by group

Figure 1: Benin: weighted average tariff with implementation scenarios of the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements with the European Union



Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Note: The food and beverage sector accounts for 45.7 per cent of imports in 2014.

of products,²⁹ which also masks variability across products.³⁰

69. Implementation of the economic partnership agreements at the end of the transition period in 2035 will accelerate the gradual reduction in tariffs that will be inherited from the combined reform of the Trade Liberalization Scheme and the common external tariff.

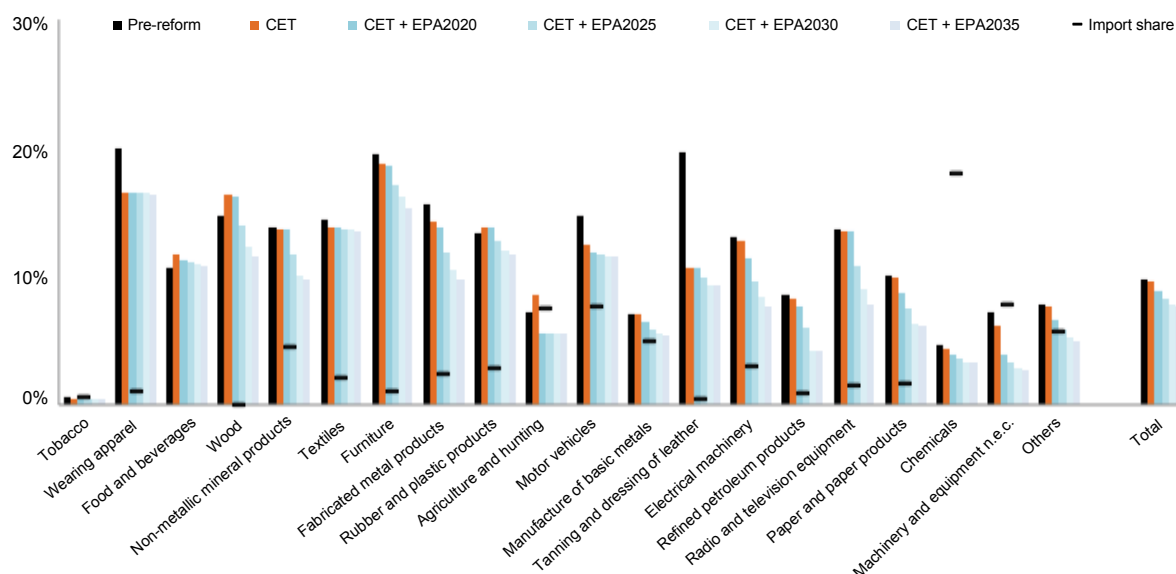
70. Figures 1-4 show the impact of all proposed reforms (Trade Liberalization Scheme, common external tariff, economic partnership agreements and the various categories of liberalization). The impact of economic partnership agreements

becomes more uniform as protection decreases in all sectors. The extent and sequencing vary, however, in accordance with the categories of liberalization of the economic partnership areas to which the products pertain and with the share of imports coming from the European Union.

²⁹ The product groups underlined are the groups that represent the largest imports.

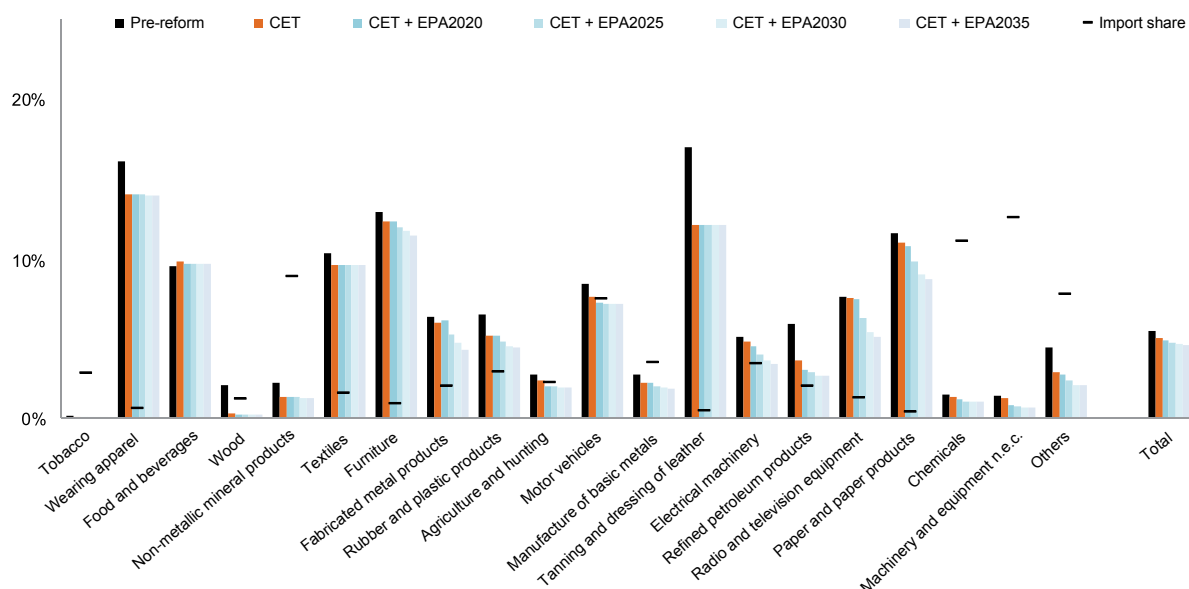
³⁰ To move beyond the photographic nature of the table and to understand why the duties levied on a product group will decline or grow as a result of tariff reform, it is necessary to bear in mind the theoretical mechanisms described in the methodology. The post-reform values of customs duties are calculated by dividing the receipts by the import value (per product). The change in the value of imports (and, by extension, of the proceeds) is explained by the arrangements for substitution among exporters, domestic substitution and the effect of demand. In this section low elasticity assumptions have been used.

Figure 2: Côte d'Ivoire: weighted average tariff with implementation scenarios of the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements with the European Union



Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

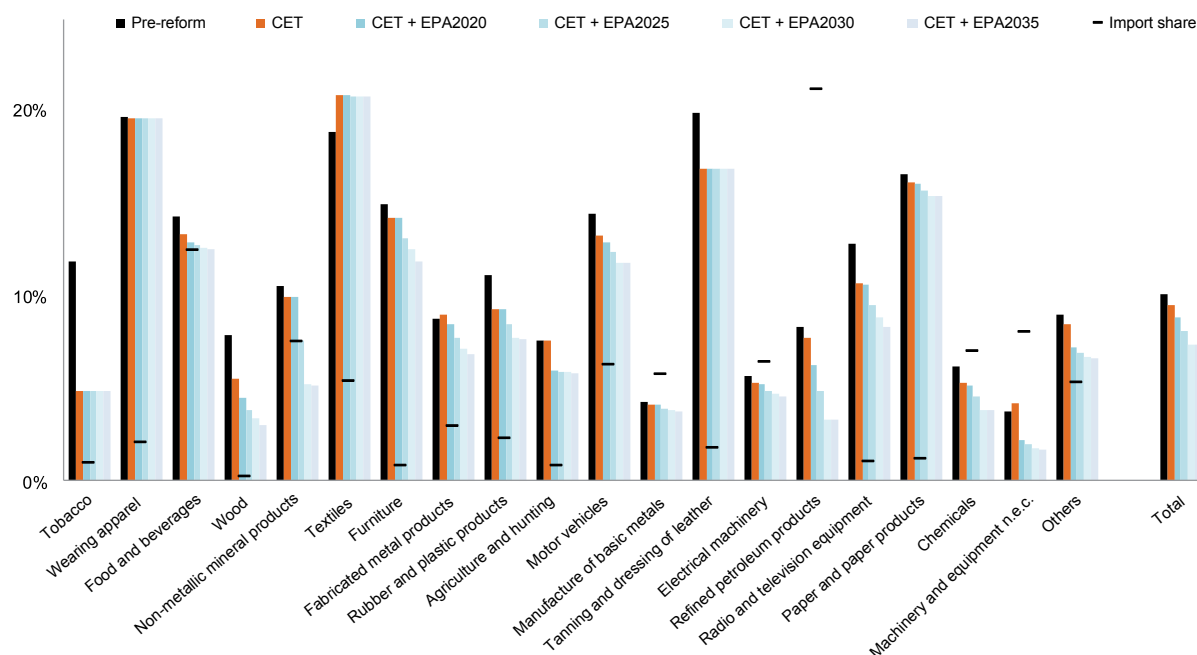
Figure 3: Niger: weighted average tariff with implementation scenarios of the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements with the European Union



Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Note: The food and beverage sector accounts for 26.8 per cent of imports in 2014.

Figure 4: Togo: weighted average tariff with implementation scenarios of the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements with the European Union



Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

5.3. Conventional effects: trade and income

71. Tables 12–15 show the results of aggregated simulations of the impact of the reforms of the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements on imports and budget revenues. As shown in the analysis in the methodology section, a scenario of low elasticity and a scenario of high elasticity are presented to illustrate the sensitivity to elasticity assumptions.

72. The Trade Liberalization Scheme and the common external tariff will lead to a drop in imports in Benin (from -0.9 to -2.5 per cent) owing to higher levels of protection, and to a rise in imports in the Niger (from +0.2 to +0.4 per cent) and Togo (from +0.2 to +0.5 per cent). In Côte d'Ivoire, the effect on total imports is not significant. Imports from ECOWAS partners will increase sharply (by from 6 to 24.6 per cent in Benin, 4.2 to 15.8 per cent in Côte d'Ivoire, 2 to 6.2 per cent in the Niger, 7 to 22.8 per cent in Togo) at the expense of trade with the European

Union (from -2.8 to -8.9 per cent in Benin, -0.5 to -1.3 per cent in Côte d'Ivoire, -0.5 to -1.4 per cent in the Niger, -0.6 to 1.9 per cent in Togo), the rest of Africa (from -0.3 to -1.0 per cent in Benin, -1.2 to 4.4 per cent in the Niger, -0.3 to 1.4 per cent in Togo) and with the rest of the world (from -0.9 to -2.9 per cent in Benin, -0.4 to -1.6 per cent in the Niger, -0.6 to -2.1 per cent in Togo). The Government's tariff revenues in Benin will grow (from 7.8 to 16.2 per cent) as the results are derived by higher tariffs and decline in Côte d'Ivoire (from -0.7 to -2.7 per cent), the Niger (from -7.8 to 11.6 per cent) and Togo (from -5.4 to 8.6 per cent) since the results are derived through the application of a zero tariff for subregional trade. It is understood, however, that these results can be analytically explained as the concatenation of arrangements for the replacement of exports originating from non-ECOWAS countries by ECOWAS exports in the domestic markets of Benin, Côte d'Ivoire, the Niger and Togo (substitution arrangements) and the effect of demand following sweeping domestic price fluctuations in Benin, the Niger and Togo resulting from implementation of the Trade Liberalization Scheme and the common external tariff.

73. The various stages in implementing the economic partnership agreements with the European Union will reduce the change in tariff protections resulting from the Trade Liberalization Scheme and the common external tariff (last line in tables 12–15) and slowdown in the pace of trade change (first line), and the change in income tariff and the total income of the Government. This slowdown will steadily increase as countries move towards the final stages of implementing the economic partnership agreements. In 2035, at the end of the implementation period of the reform of the economic partnership agreement tariffs, tariff-based income will drop (by some 7.9–8.4 per cent in Benin, 19.9–21.3 per cent in Côte d'Ivoire, 8.8–9.5 per cent in the Niger, and 22.1–24.1 per cent in Togo) by comparison to simulated tariff income under the Trade Liberalization Scheme and common external tariff

alone (economic partnership agreement net). That is the budgetary cost of implementing economic partnership agreements. For budget planning purposes, it will be important for the countries under review to anticipate these incremental downward trends during the long period of implementation of the economic partnership agreements and the common external tariff, to mobilize non-tariff revenue sources and to protect social spending. In the short term, the introduction of an adjustment tax on imports, authorized by the common external tariff regulations, will provide a solution for the period 2015–2019. The four countries under review have not yet made use of that instrument, as Nigeria has done. In the long term, new sources of finance may be considered, following the review of the effectiveness of tax incentives offered through exemptions.

Table 12: Benin: projected change of imports and income (in different stages of implementation of the tariff reform)

Baseline (in billions of CFA francs)		Reforms	CET		CET+EPA 2024		CET+EPA 2029		CET+EPA 2034		CET+EPA 2035		EPA net	
			Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε
Total imports	1127	% of import variability	-0.9%	-2.5%	-0.7%	-1.9%	-0.6%	-1.5%	-0.5%	-1.2%	-0.4%	-1.1%	0.5%	1.4%
ECOWAS	89	ECOWAS	6.0%	24.6%	4.9%	19.3%	4.7%	18.5%	4.6%	18.0%	4.6%	17.9%	-1.4%	-5.4%
EU	357	EU	-2.8%	-8.9%	-1.7%	-5.2%	-0.9%	-2.9%	-0.4%	-1.1%	-0.3%	-0.7%	2.6%	8.9%
Africa other than ECOWAS	74	Africa other than ECOWAS	-0.3%	-1.0%	-0.4%	-1.3%	-0.9%	-3.0%	-1.3%	-4.2%	-1.3%	-4.3%	-1.0%	-3.2%
Rest of the world	607	Rest of the world	-0.9%	-2.9%	-1.0%	-3.5%	-1.1%	-3.5%	-1.1%	-3.7%	-1.2%	-3.8%	-0.3%	-0.9%
Total tariff income	119	% of tariff income variability	16.2%	7.8%	12.5%	4.5%	9.8%	1.9%	7.5%	-0.6%	6.9%	-1.2%	-7.9%	-8.4%
Total income	273	% of total income variability	7.6%	2.1%	5.8%	0.9%	4.6%	-0.1%	3.5%	-1.2%	3.3%	-1.4%	-4.0%	-3.5%
		Former tariff collection rate	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	10.5%	12.4%	11.7%
		New tariff collection rate	12.4%	11.7%	11.9%	11.2%	11.6%	10.9%	11.4%	10.6%	11.3%	10.5%	11.3%	10.5%

ε = elasticity

Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Note: Except for the column "EPA net", figures on changes should be understood to relate to the situation prior to the reform (2014). The figures on changes in the "EPA net" column are understood to relate to the situation during implementation of the Trade Liberalization Scheme and common external tariff only.

Table 13: Côte d'Ivoire: projected change of imports and income (in different stages of implementation of the tariff reform)

Baseline (in billions of CFA francs)		Reforms	CET		CET+EPA 2024		CET+EPA 2029		CET+EPA 2034		CET+EPA 2035		EPA net	
			Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε
Total imports	2 427	% of import variability	0.0%	0.0%	0.4%	0.8%	0.6%	1.3%	0.8%	1.7%	0.9%	1.8%	0.9%	1.8%
EU	938	EU	-0.5%	-1.3%	1.0%	2.5%	2.0%	5.4%	2.8%	7.4%	3.0%	7.9%	3.5%	9.3%
ECOWAS	113	ECOWAS	4.2%	15.8%	4.1%	14.7%	4.0%	14.1%	3.9%	13.8%	3.9%	13.7%	-0.3%	-1.7%
Rest of the world	1375	Rest of the world	0.0%	-0.4%	-0.3%	-1.5%	-0.6%	-2.5%	-0.8%	-3.2%	-0.9%	-3.3%	-0.8%	-2.9%
Total tariff income	236	% of tariff income variability	-0.7%	-2.7%	-9.0%	-11.0%	-14.5%	-16.6%	-18.9%	-21.6%	-20.5%	-23.4%	-19.9%	-21.3%
Total income	603	% of total income variability	-0.4%	-1.2%	-3.8%	-4.3%	-6.1%	-6.5%	-8.0%	-8.4%	-8.7%	-9.2%	-8.3%	-8.1%
		Former tariff collection rate	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.7%	9.6%	9.4%
		New tariff collection rate	9.6%	9.4%	8.8%	8.6%	8.2%	8.0%	7.8%	7.5%	7.7%	7.3%	7.7%	7.3%

Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Table 14: Niger: projected change of imports and income (in different stages of implementation of the tariff reform)

Baseline (in billions of CFA francs)		Reforms	CET		CET+EPA 2024		CET+EPA 2029		CET+EPA 2034		CET+EPA 2035		EPA net	
			Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε
Total imports	662	% of import variability	0.2%	0.4%	0.2%	0.6%	0.3%	0.7%	0.4%	0.8%	0.4%	0.8%	0.2%	0.4%
ECOWAS	175	ECOWAS	2.0%	6.2%	2.0%	6.1%	1.9%	6.0%	1.9%	6.0%	1.9%	5.9%	-0.1%	-0.2%
EU	108	EU	-0.5%	-1.4%	0.3%	0.8%	1.1%	2.8%	1.6%	4.2%	1.7%	4.6%	2.2%	6.1%
Africa other than ECOWAS		Africa other than ECOWAS	-1.2%	-4.4%	-1.3%	-4.5%	-1.4%	-5.1%	-1.5%	-5.4%	-1.5%	-5.6%	-0.3%	-1.2%
Rest of the world	360	Rest of the world	-0.4%	1.6%	-0.5%	-2.2%	-0.6%	-2.2%	-0.7%	-2.4%	-0.7%	-2.4%	-0.2%	-0.9%
Total tariff income	36	% of tariff income variability	-7.8%	-11.6%	-10.7%	-14.6%	-13.3%	-17.0%	-15.2%	-19.1%	-15.9%	-20.0%	-8.8%	-9.5%
Total income	115	% of total income variability	-2.7%	-3.7%	-3.7%	-4.6%	-4.5%	-5.4%	-5.2%	-6.0%	-5.4%	-6.3%	-2.8%	-2.6%
		Former tariff collection rate	5.4%	50.4%	5.4%	5.4%	0.3%	0.7%	0.4%	0.8%	0.4%	0.8%	0.2%	0.4%
		New tariff collection rate	5.0%	4.8%	4.9%	4.6%	1.9%	6.0%	1.9%	6.0%	1.9%	5.9%	-0.1%	-0.2%

Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Note: Except for the column "EPA net", figures on changes should be understood to relate to the situation prior to the reform (2014). The figures on changes in the "EPA net" column are understood to relate to the situation during implementation of the Trade Liberalization Scheme and common external tariff only.

Table 15: Togo: projected change of imports and income (in different stages of implementation of the tariff reform)

Baseline (in billions of CFA francs)		Reforms	CET		CET+EPA 2024		CET+EPA 2029		CET+EPA 2034		CET+EPA 2035		EPA net	
			Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε	Weak ε	Strong ε
Total imports	636	% of import variability	0.2%	0.5%	0.5%	1.2%	0.8%	1.8%	1.1%	2.5%	1.2%	2.5%	1.0%	2.0%
ECOWAS	64	ECOWAS	7.0%	22.8%	7.1%	23.1%	6.8%	21.7%	6.5%	20.6%	6.5%	20.6%	-0.5%	-1.8%
EU	253	EU	-0.6%	-1.9%	0.7%	1.7%	2.0%	5.2%	3.2%	8.1%	3.3%	8.3%	3.9%	10.4%
Africa other than ECOWAS	21	Africa other than ECOWAS	-0.3%	-1.4%	-0.4%	-1.6%	-0.8%	-3.1%	-1.2%	-4.3%	-1.2%	-4.3%	-0.9%	-3.0%
Rest of the world	298	Rest of the world	-0.6%	-2.1%	-1.1%	-5.0%	-1.4%	-5.0%	-1.6%	-5.8%	-1.7%	-5.9%	-1.1%	-3.8%
Total tariff income	64	% of tariff income variability	-5.4%	-8.6%	-11.8%	-15.6%	-18.8%	-22.5%	-25.8%	-30.1%	-26.3%	-30.7%	-22.1%	-24.1%
Total income	180	% of total income variability	-2.2%	-3.2%	-4.7%	-5.7%	-7.4%	-8.2%	-10.1%	-10.9%	-10.3%	-11.1%	-8.2%	-8.2%
		Former tariff collection rate	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	10.1%	9.5%	9.2%
		New tariff collection rate	9.5%	9.2%	8.8%	8.4%	8.1%	7.7%	7.4%	6.9%	7.3%	6.8%	7.3%	6.8%

Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Note: Except for the column "EPA net", figures on changes should be understood to relate to the situation prior to the reform (2014). The figures on changes in the "EPA net" column are understood to relate to the situation during implementation of the Trade Liberalization Scheme and common external tariff only.

74. Tables 16–18 show the relevant specific aggregate estimates used to analyse other conventional effects of tariff policy changes (see box 1 for concepts). As in tables 12–15, the results are sensitive to elasticity assumptions. The Trade Liberalization Scheme and common external tariff would lead to a negative trade situation in Benin (between -0.9 and -2.5 per cent of imports), a positive trade situation in the Niger (0.2–0.4 per cent of imports) and Togo (0.2–0.5 per cent of imports), and trade diversion of a magnitude between 0.5 and 2.1 per cent of imports in Benin, between 0.4 and 1.3 per cent in the Niger and between 0.5 and 1.9 per cent in Togo. This is attributable to the discontinuation of intra-ECOWAS tariffs and the increase in average tariffs (for non-members of ECOWAS), the effect of which would be the redistribution of imports from non-members of ECOWAS to members of ECOWAS.

75. In Benin, the combined reform of the common external tariff and the economic partnership agreements will reduce the extent of the negative effect on trade creation, ranging between -0.4 and -1.1 per cent of imports. At the same time, however, it will encourage the diversion of trade and increase its extent from 0.7 to 2.4 per cent of imports. By contrast, it will stimulate the growth of trade in the Niger (from 0.3 to 0.8 per cent of imports) and Togo (from 1.2 to 2.5 per cent of imports), while increasing the extent of the diversion of trade (from 0.5 to 1.6 per cent in the Niger and from 1.2 to 3.9 per cent in Togo). There will be a limited correction at a level of between 0.0 and 0.2 per cent of imports in Benin and Togo, and between 0.1 and 0.4 per cent of imports in the Niger. This correction of trade will come primarily from imports from ECOWAS partners which previously benefited from customs duty exemptions.

Table 16: Benin: diversion, correction and creation of trade generated by the scenario of implementation of the common external tariff and the economic partnership agreements, as a proportion of total imports

	Trade diversion			Trade correction			Trade creation		
	Gain	Loss	Net	Gain	Loss	Net	Gain	Loss	Net
TLS and CET only, weak elasticities									
Rest of the world EMnde	0.0%	-0.2%	-0.2%	0.0%	0.0%	0.0%	-	-	-
EU28	0.0%	-0.3%	-0.3%	0.0%	0.0%	0.0%	-	-	-
ECOWAS	0.5%	0.0%	0.5%	0.0%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-	-
Total	0.5%	-0.5%		0.0%	0.0%		0.2%	-1.1%	-0.9%
TLS and CET only, strong elasticities									
Rest of the world EMnde	0.0%	-0.9%	-0.9%	0.1%	-0.1%	0.0%	-	-	-
EU28	0.0%	-1.2%	-1.2%	0.0%	0.0%	0.0%	-	-	-
ECOWAS	2.1%	0.0%	2.1%	0.0%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-	-	-
Total	2.1%	-2.1%		0.2%	-0.2%		0.7%	-3.2%	-2.5%
TLS, CET and EPA 2035, weak elasticities									
Rest of the world EMnde	0.0%	-0.4%	-0.4%	0.0%	0.0%	0.0%	-	-	-
EU28	0.3%	-0.1%	0.2%	0.0%	0.0%	0.0%	-	-	-
ECOWAS	0.4%	0.0%	0.4%	0.0%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-	-	-
Total	0.7%	-0.7%		0.1%	-0.1%		0.5%	-1.0%	-0.4%
TLS, CET and EPA 2035, strong elasticities									
Rest of the world EMnde	0.0%	-1.5%	-1.5%	0.0%	-0.1%	-0.1%	-	-	-
EU28	1.0%	-0.5%	0.5%	0.1%	0.0%	0.1%	-	-	-
ECOWAS	1.4%	0.0%	1.4%	0.0%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	-0.4%	-0.4%	0.0%	0.0%	0.0%	-	-	-
Total	2.4%	-2.4%		0.2%	-0.2%		1.7%	-2.8%	-1.1%

Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Table 17: Niger: diversion, correction and creation of trade generated by the scenario of implementation of the common external tariff and the economic partnership agreements, as a proportion of total imports

	Trade diversion			Trade diversion			Trade diversion		
	Gain	Loss	Net	Gain	Loss	Net	Gain	Loss	Net
TLS, CET and EPA 2035, weak elasticities									
Rest of the world EMnde	0.0%	-0.3%	-0.3%	0.0%	0.0%	0.0%	-	-	-
EU28	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-	-	-
ECOWAS	0.4%	0.0%	0.4%	0.0%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-	-	-
Total	0.4%	-0.4%		0.0%	0.0%		0.3%	-0.1%	0.2%
TLS and CET only, strong elasticities									
Rest of the world EMnde	0.0%	-0.9%	-0.9%	0.0%	-0.1%	0.0%	-	-	-
EU28	0.0%	-0.2%	-0.2%	0.0%	0.0%	0.0%	-	-	-
ECOWAS	1.3%	0.0%	1.3%	0.1%	0.0%	0.1%	-	-	-
Rest of Africa	0.0%	-0.2%	-0.2%	0.0%	0.0%	0.0%	-	-	-
Total	1.3%	-1.3%		0.1%	-0.1%		0.6%	-0.2%	0.4%
TLS, CET and EPA 2035, weak elasticities									
Rest of the world EMnde	0.0%	-0.4%	-0.4%	0.0%	-0.1%	-0.1%	-	-	-
EU28	0.1%	0.0%	0.1%	0.1%	0.0%	0.1%	-	-	-
ECOWAS	0.4%	0.0%	0.4%	0.0%	0.0%	0.1%	-	-	-
Rest of Africa	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-	-	-
Total	0.5%	-0.5%		0.1%	-0.1%		0.4%	-0.1%	0.3%
TLS, CET and EPA 2035, strong elasticities									
Rest of the world EMnde	0.0%	-1.3%	-1.2%	0.0%	-0.3%	-0.3%	-	-	-
EU28	0.4%	-0.2%	0.2%	0.3%	0.0%	0.3%	-	-	-
ECOWAS	1.2%	0.0%	1.2%	0.1%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	-0.2%	-0.2%	0.0%	0.0%	0.0%	-	-	-
Total	1.6%	-1.6%		0.4%	-0.4%		0.9%	-0.2%	0.8%

Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

Table 18: Togo: diversion, correction and creation of trade generated by the scenario of implementation of the common external tariff and the economic partnership agreements, as a proportion of total imports

	Trade diversion			Trade diversion			Trade diversion		
	Gain	Loss	Net	Gain	Loss	Net	Gain	Loss	Net
TLS and CET only, weak elasticities									
Rest of the world EMnde	0.0%	-0.3%	-0.3%	0.0%	0.0%	0.0%	-	-	-
EU28	0.0%	-0.2%	-0.2%	0.0%	0.0%	0.0%	-	-	-
ECOWAS	0.5%	0.0%	0.5%	0.0%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	-	-
Total	0.5%	-0.5%		0.0%	0.0%		0.4%	-0.2%	0.2%
TLS and CET only, strong elasticities									
Rest of the world EMnde	0.0%	-1.1%	-1.1%	0.0%	-0.1%	-0.1%	-	-	-
EU28	0.0%	-0.7%	-0.7%	0.0%	0.0%	0.0%	-	-	-
ECOWAS	1.8%	0.0%	1.8%	0.0%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-	-	-
Total	1.9%	-1.9%		0.1%	-0.1%		0.9%	-0.4%	0.5%

	Trade diversion			Trade diversion			Trade diversion		
	Gain	Loss	Net	Gain	Loss	Net	Gain	Loss	Net
TLS, CET and EPA 2035, weak elasticities									
Rest of the world EMnde	0.0%	-1.0%	-1.0%	0.0%	-0.1%	-0.1%	-	-	-
EU28	0.8%	-0.1%	0.7%	0.1%	0.0%	0.0%	-	-	-
ECOWAS	0.4%	0.0%	0.4%	0.0%	0.0%	0.0%	-	-	-
Rest of Africa	0.0%	-0.1%	-0.1%	0.0%	0.0%	0.0%	-	-	-
Total	1.2%	-1.2%		0.1%	-0.1%		1.3%	-0.2%	1.2%
TLS, CET and EPA 2035, strong elasticities									
Rest of the world EMnde	0.0%	-3.2%	-3.2%	0.0%	-0.2%	-0.2%	-	-	-
EU28	2.3%	-0.5%	1.8%	0.1%	0.0%	0.1%	-	-	-
ECOWAS	1.6%	0.0%	1.6%	0.1%	0.0%	0.1%	-	-	-
Rest of Africa	0.0%	-0.2%	-0.2%	0.0%	0.0%	0.0%	-	-	-
Total	3.9%	-3.9%		0.2%	-0.2%		2.8%	-0.3%	2.5%

Source: ECA computations based on results produced by the Tariff Reform Impact Simulation Tool.

5.4. Impact on competitiveness and employment

5.4.1 Effects by transmission route and impact on the distribution of corporate profits

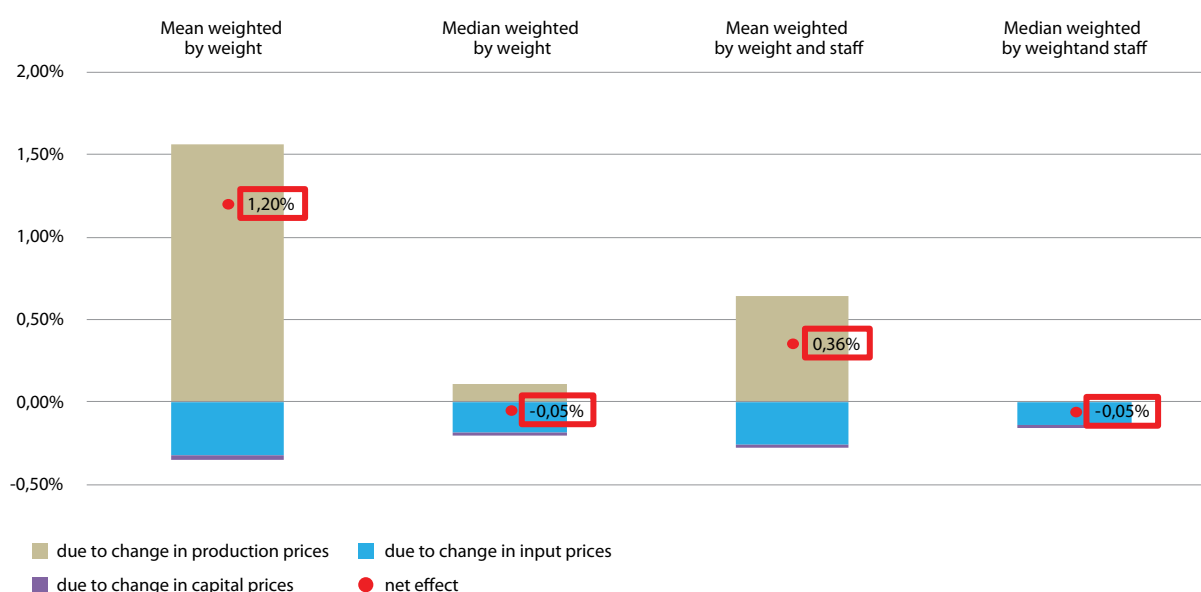
76. Figures 5 and 6 show short-term modelling results of the impact of each individual pricing channel (production price, input prices, capital goods prices). The figures show the relative importance of each of the three channels (grey: change in the price of production; blue: change in the price of inputs; purple: change in the price of capital goods) for the average business to business and median of the sample. As these are survey figures and not census data, due account should be taken of the representativeness of each enterprise if the aim is to identify a trend for all manufacturing firms in each country. Two measures of representativeness will be used: the weighting that may be inferred from the enterprise survey design, on the one hand, and the interrelation of this weighting with the number of employees of each enterprise, on the other. The numbers in the red bar represents the average (median) overall change in profitability. In accordance with the definition of the median, the overall change in profitability is not equal to the sum of the three component parts. For the average, all three components are added to the total change (red bars).

Trade Liberalization Scheme and the common external tariff

77. In Benin, the average business will see a boost in its profitability, equivalent to 1.20 per cent of sales for the average across firms or 0.36 per cent of sales by averaging across enterprises and jobs. This is explained by the fact that the significant increase in output prices due to higher levels of protection will more than offset the much weaker negative influence of the rise in prices of inputs and capital goods (columns 1 and 3 of figure 5). This result is not attested, however, for the median enterprise (columns 2 and 4), which will experience a slight decrease in productivity due to the dominant effect of the increase in prices of inputs and capital goods.

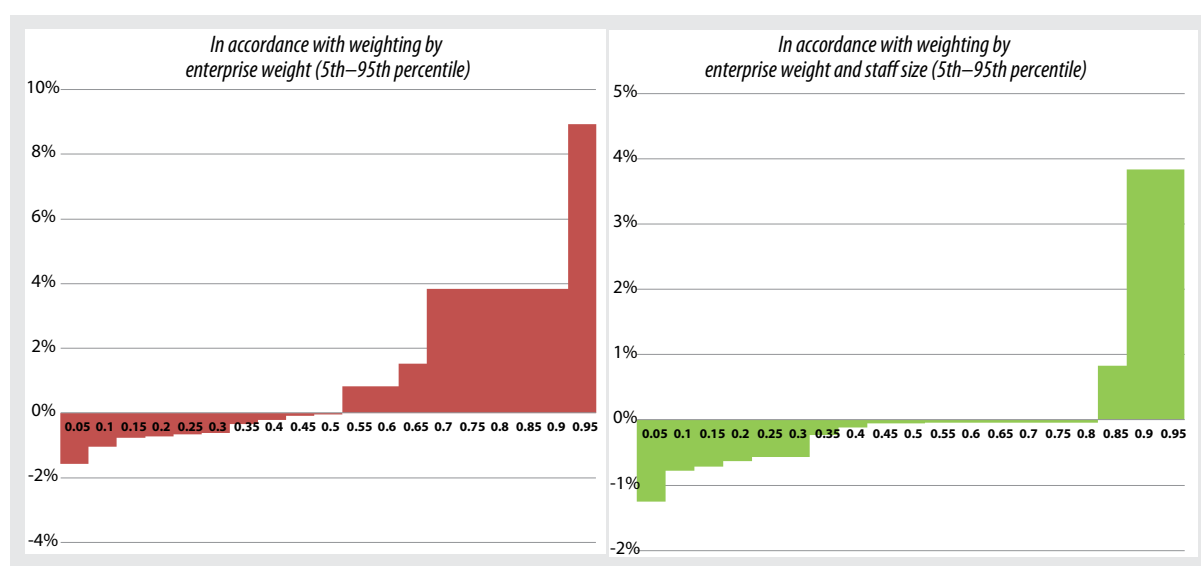
78. Figure 6, showing the distribution of profitability of all enterprises in Benin, gives a better understanding of the impact of the aforementioned results on the primary trends. It shows that only 45 per cent of enterprises will experience productivity growth (red bars) and only 15 per cent of employees work in enterprises that will experience an increase in productivity (green bars).

Figure 5: Benin: Trade Liberalization Scheme and common external tariff scenario – changes in corporate profitability



Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 6: Benin: Trade Liberalization Scheme and common external tariff scenario – distribution of net changes in corporate profitability

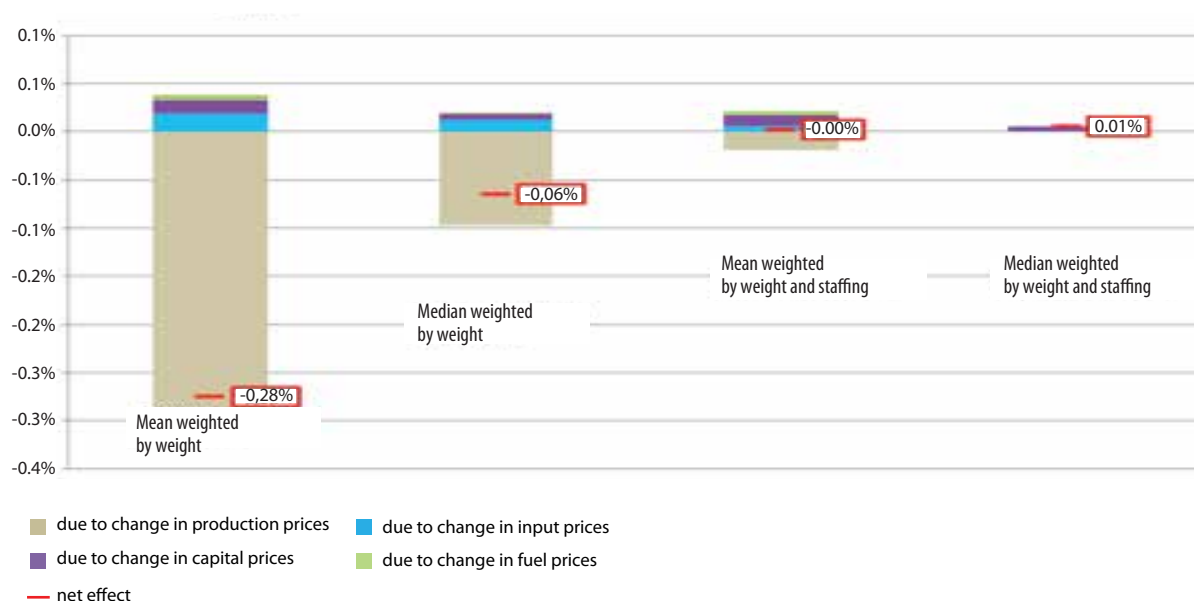


Source: ECA calculations based on micro-simulator as described in annex 3.

79. In Côte d'Ivoire, implementation of the Trade Liberalization Scheme and common external tariff will lead to a slight decline in the average enterprise profitability (-0.28 per cent) and median enterprise profitability (-0.06 per cent), owing to a lack of compensation for the lower output prices through savings related to the drop in the price of inputs.

80. In the Niger and Togo, implementation of the Trade Liberalization Scheme and common external tariff (figures 8 and 9) will result in a slight increase in average enterprise profitability (of between 0.92 and 1.10 per cent of turnover in the Niger; 0.21 per cent and 0.34 per cent in Togo, according to weighting) and median enterprise profitability (0.86 per cent of turnover in the Niger and between 0.24 and 0.33 per cent of turnover in Togo, according to weighting), including through

Figure 7: Côte d'Ivoire: Trade Liberalization Scheme and common external tariff scenario – changes in corporate profitability



Source: ECA calculations based on micro-simulator as described in annex 3.

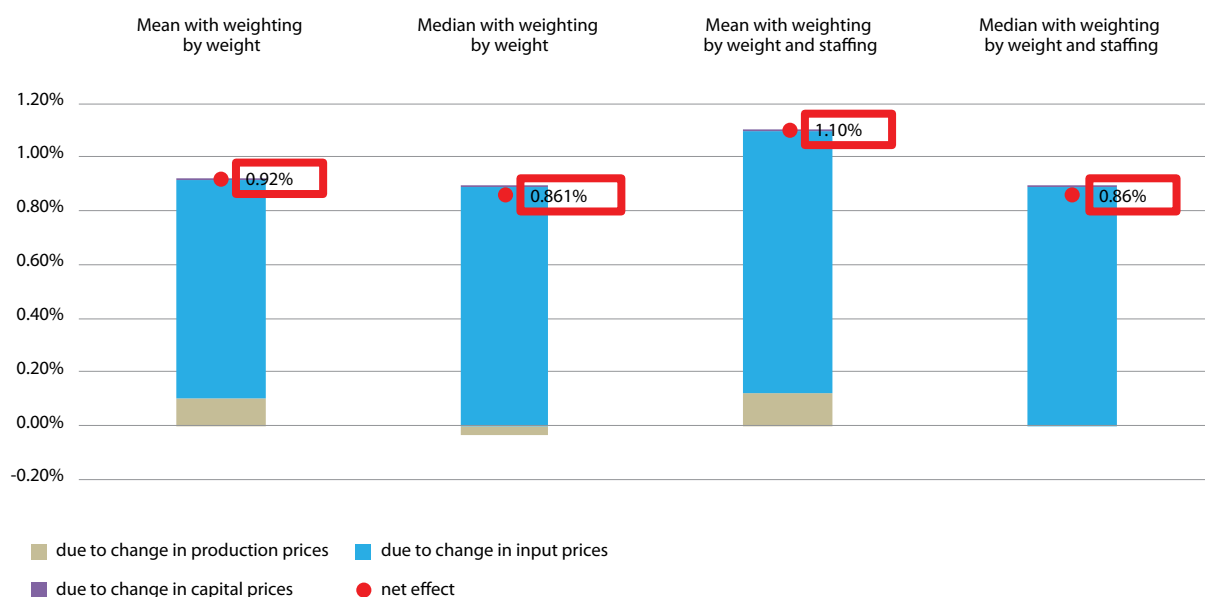
the decline in the price of inputs. Increasing profitability through a drop in the price of inputs is a pathway more conducive to structural transformation than that of increasing profitability through the increase in the cost of production. The short-term increase of profitability through an increase in the production cost disadvantages consumers and undermines price competition, and can have a negative impact on productivity,

innovation and, ultimately, on long-term growth and structural transformation.

Economic partnership agreements

81. Figures 10–13 present the same indicators for the net effect of the economic partnership agreement 2035 scenario for figures 5, 7 and 8.

Figure 8: Niger: Trade Liberalization Scheme and common external tariff scenario – changes in corporate profitability



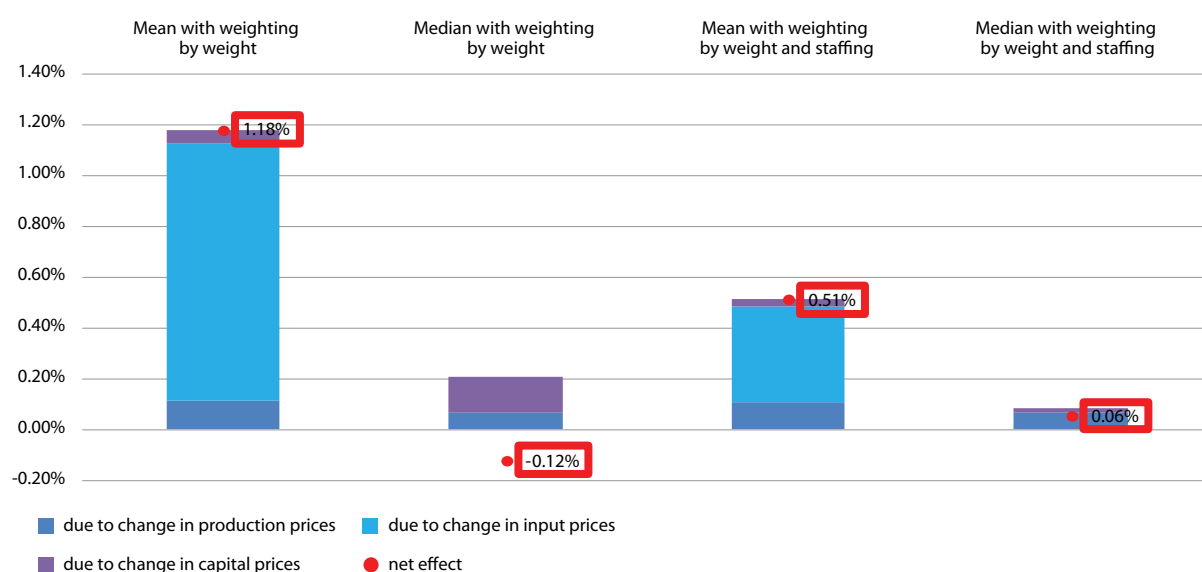
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 9: Togo: Trade Liberalization Scheme and common external tariff scenario – changes in corporate profitability



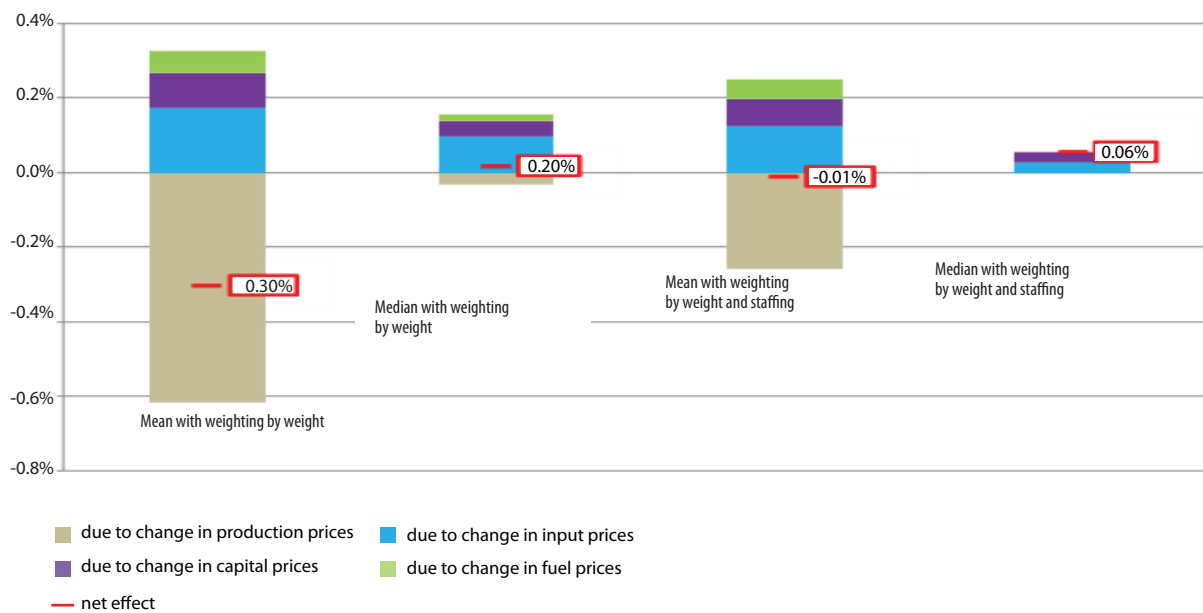
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 10: Benin: economic partnership agreement scenario – changes in corporate profitability



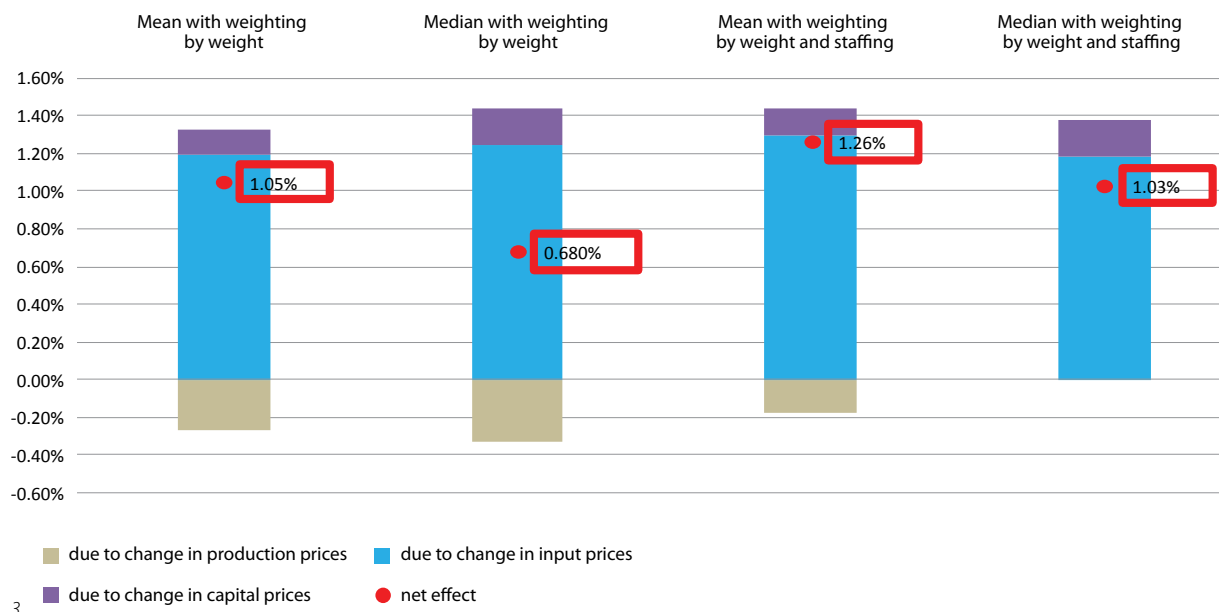
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 11: Côte d'Ivoire: economic partnership agreement scenario – changes in corporate profitability



Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 12: Niger: economic partnership agreement scenario – changes in corporate profitability



Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 13: Togo: economic partnership agreement scenario – changes in corporate profitability



Source: ECA calculations based on micro-simulator as described in annex 3.

82. The economic partnership agreements had a positive short-term marginal impact on the profitability of enterprises through lower prices of inputs (blue bars, figures 10–13) and, to a lesser extent, the drop in the prices of capital goods (purple bars, figures 10–13). Beyond their short-term marginal impact on the profitability of enterprises, it is uncertain whether long-term gains can be expected through these two channels in terms of growth and competitiveness.

5.4.2 Price change impacts on business and jobs

83. Figures 14–21 present global figures on the entire range of enterprises, in order to assess the number or percentage of winners and losers from the Trade Liberalization Scheme and common external tariff reforms and those of the 2035 economic partnership agreement. It is therefore important to understand the channels and the probable direction followed in the reallocation of resources (profits, jobs) between firms and between sectors. This direction may depend on profitability changes caused by the reform, and also on the level of profitability prior to the reform.

84. In these figures, all enterprises in the sample are classified according to the impact of the reform on their profitability:

- Companies whose profitability decreases by more than 3 per cent. This category refers to enterprises whose level of profitability was high before the reform;
- Companies whose profitability decreases by less than 3 per cent;
- Companies whose profitability remains the same;
- Companies whose profitability increases by less than 3 per cent. This situation could arise from a moderate decline in the prices of inputs and capital goods or in slightly inflated production prices;
- Companies whose profitability increases by more than 3 per cent. This situation could arise from a sharp drop in the prices of inputs and capital goods or in inflated production prices.

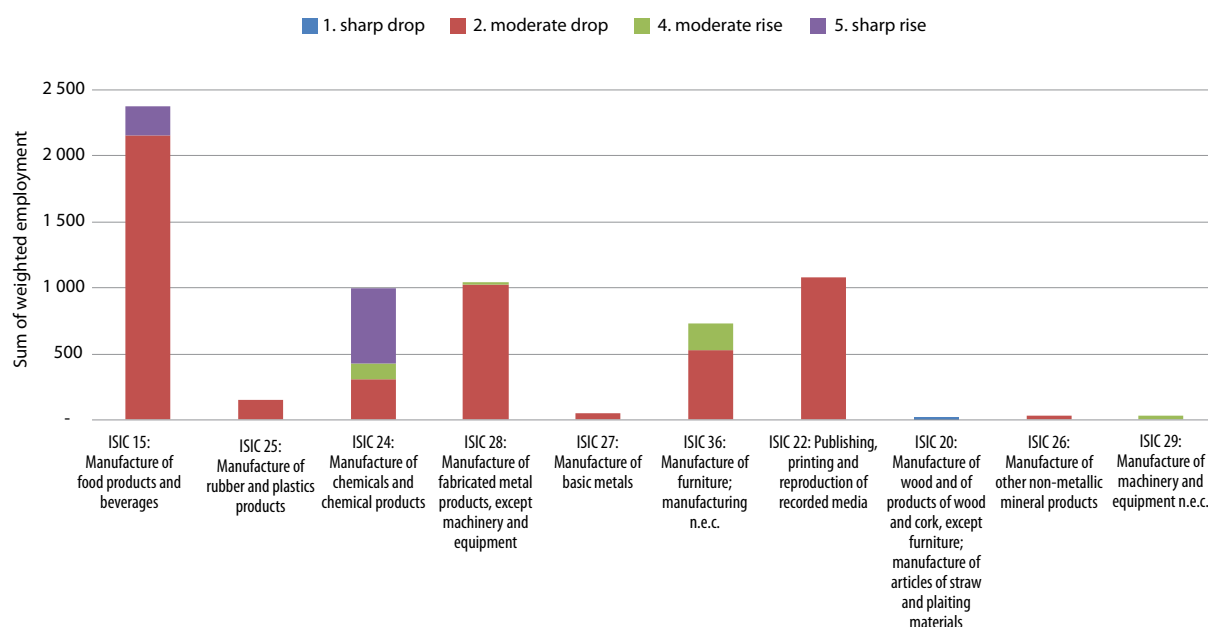
85. The results suggest the following conclusions:

- In Benin, the companies that will see a drop of less than 3 per cent in profitability, following the implementation of the Trade Liberalization Scheme and the

common external tariff, are those which are creating large number of jobs at the current time. They are also active in the areas of food and beverages, publishing and printing and metalwork. Implementation of the economic partnership agreement will bring these companies an increase of less than 3 per cent in their profitability. The key feature of these companies is that they mostly use imported inputs (imported from outside ECOWAS) and distribute imported products.

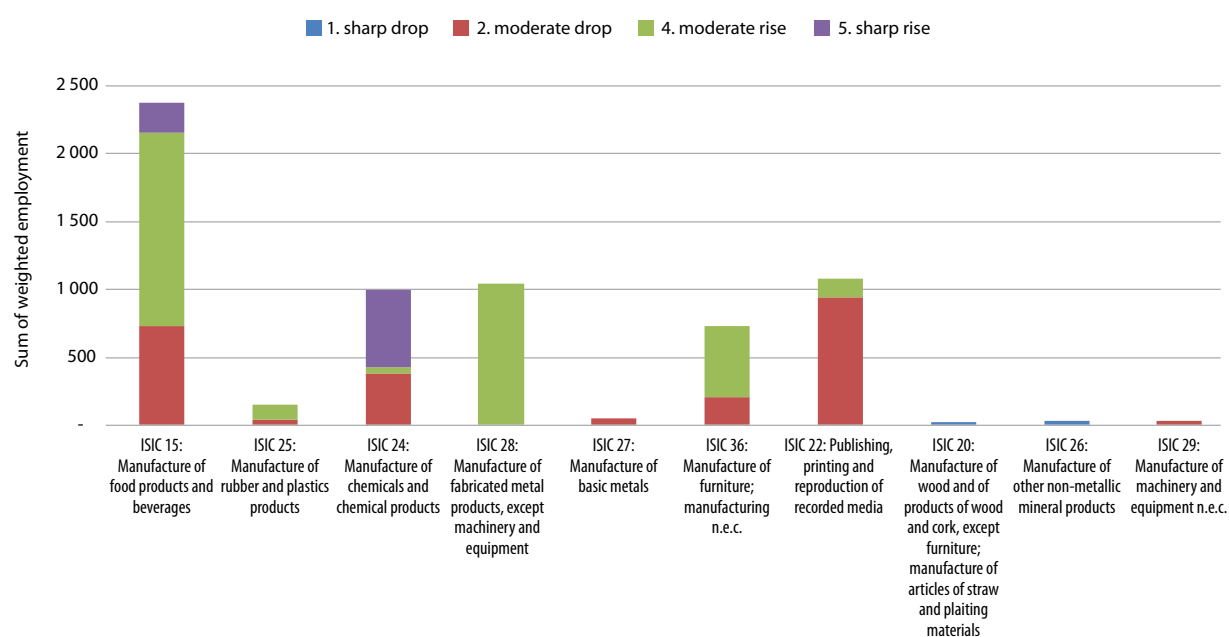
- In the Niger, companies in those same sectors have the highest job quotas and, with the implementation of the reform of the common external tariff, some will experience an increase of over 3 per cent in profitability and some less than 3 per cent. The same effects may be seen with the reforms of the economic partnership agreements.
- In Côte d'Ivoire, companies with large staff numbers will experience a drop in productivity as a result of the implementation of the Trade Liberalization Scheme and the common external tariff. The companies concerned are those manufacturing apparel, food and beverages, and other products. Companies in the rubber and plastics sector which are sources of employment will experience a moderate increase in profitability. The same effects may be seen with the reforms of the economic partnership agreements.
- Companies with high job numbers in Togo, such as those manufacturing rubber items and engaged in metalwork, will register profitability gains with the envisaged reforms.

Figure 14: Benin – common external tariff scenario: jobs classified by type of impact



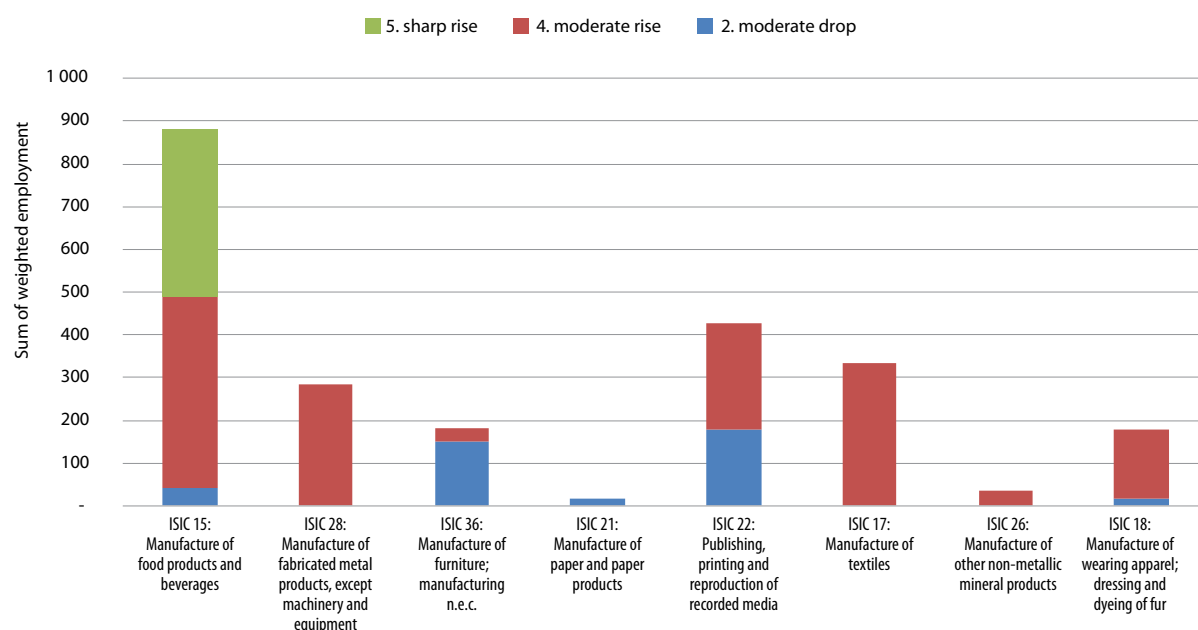
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 15: Benin – economic partnership agreement scenario: jobs classified by type of impact



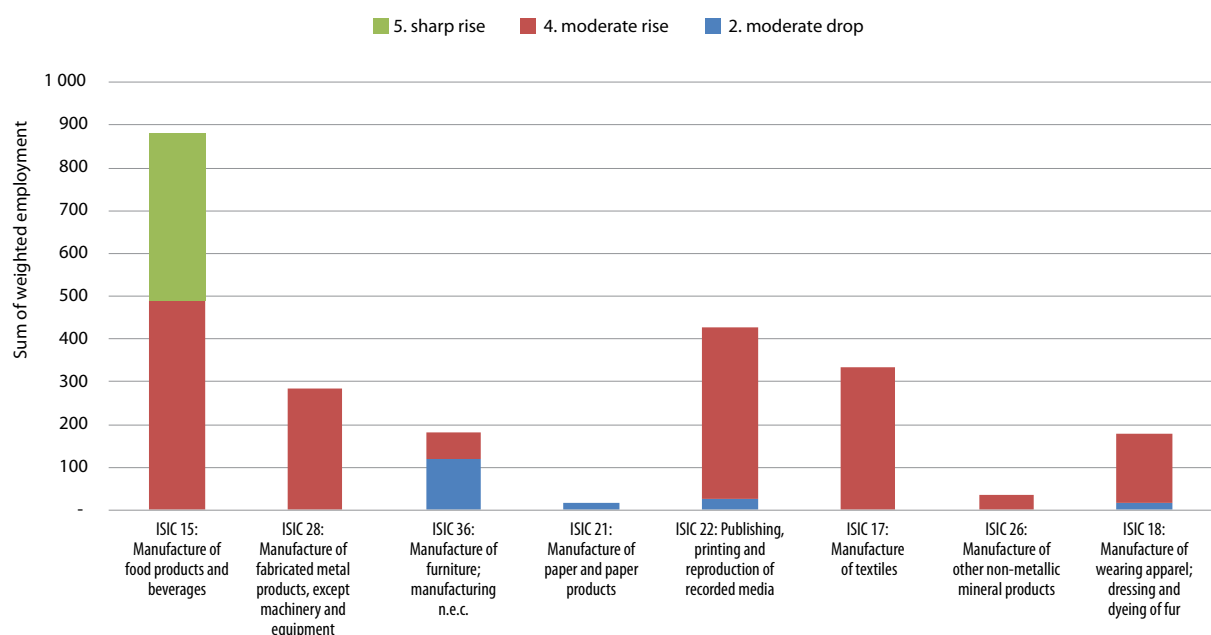
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 16: Niger – common external tariff scenario: jobs classified by type of impact



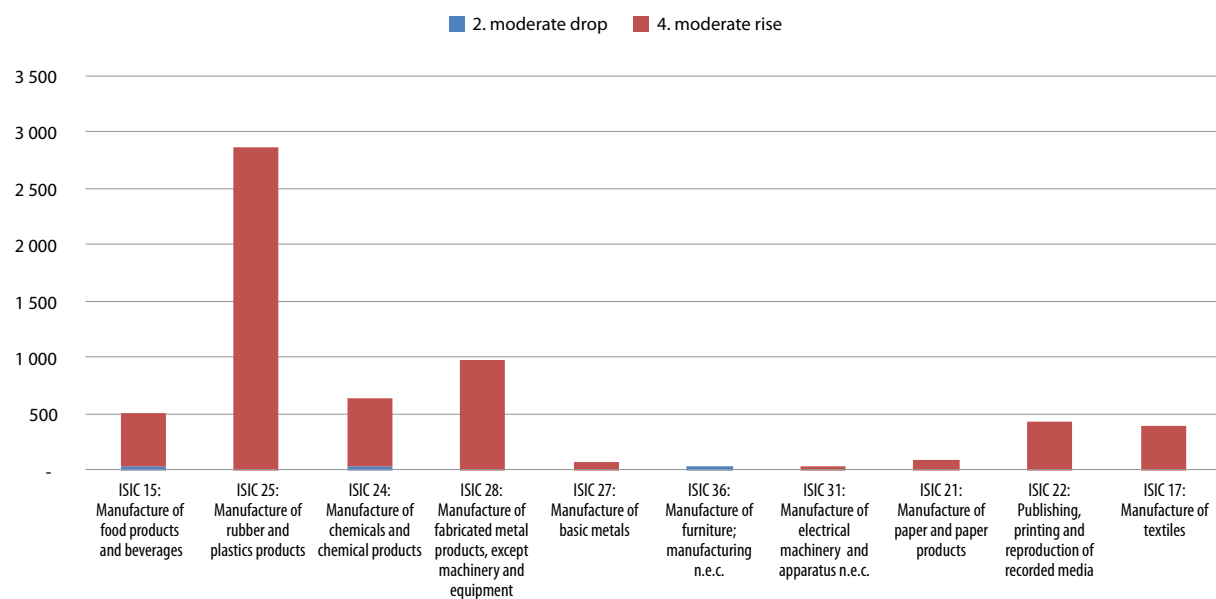
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 17: Niger – economic partnership agreement scenario: jobs classified by type of impact



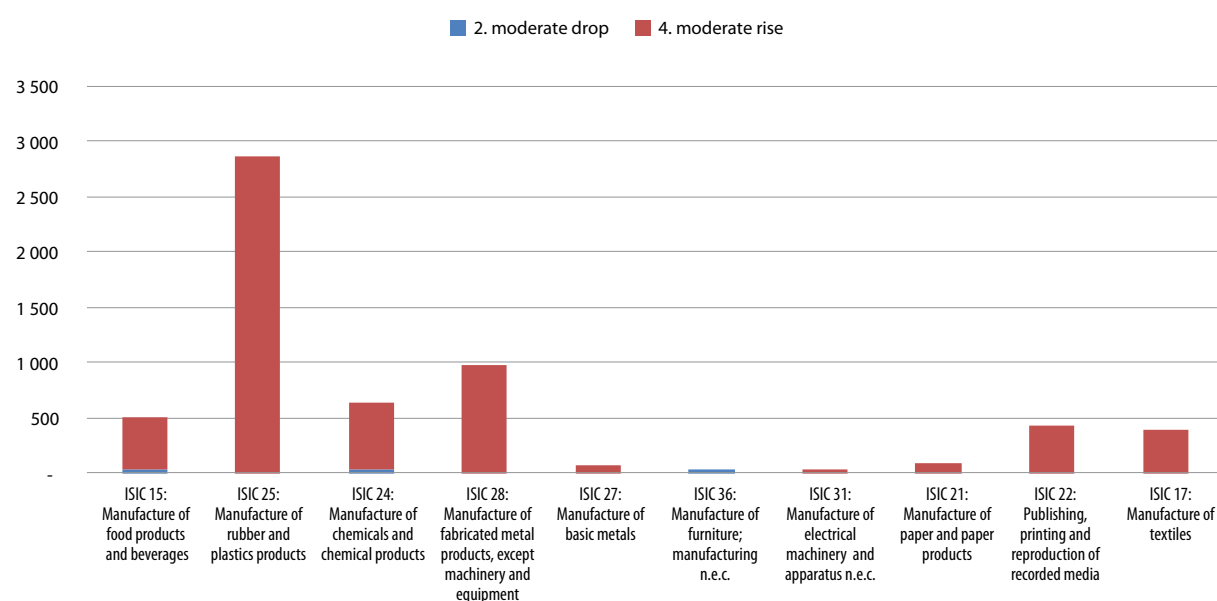
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 18: Togo – common external tariff scenario: jobs classified by type of impact



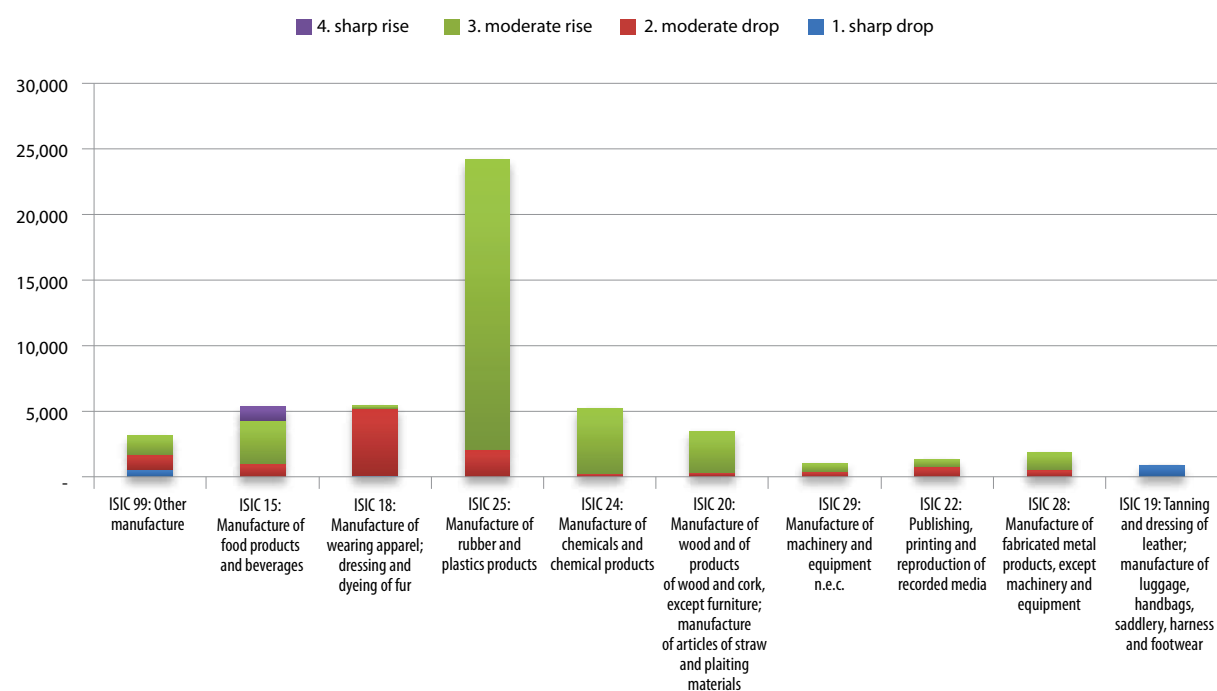
Source: ECA calculations based on micro-simulator as described in annex 3.

**Figure 19: Togo – economic partnership agreement scenario:
jobs classified by type of impact**



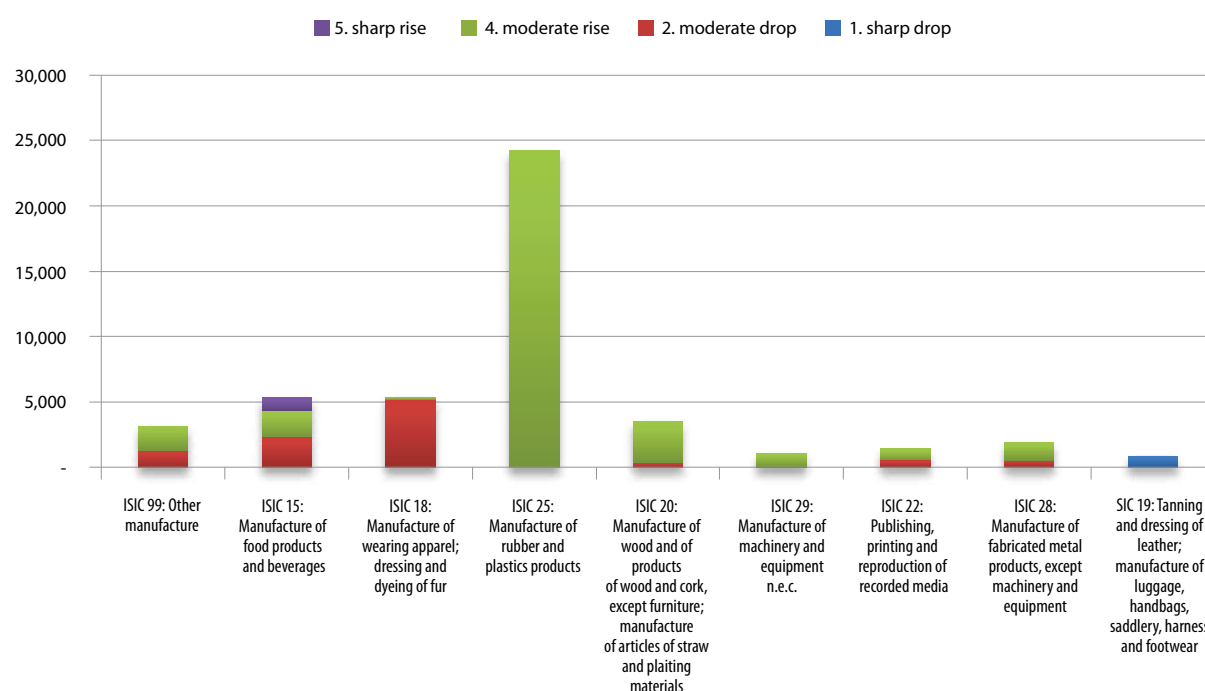
Source: ECA calculations based on micro-simulator as described in annex 3.

**Figure 20: Côte d'Ivoire – common external tariff scenario:
jobs classified by type of impact**



Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 21: Côte d'Ivoire – economic partnership agreement scenario: jobs classified by type of impact



Source: ECA calculations based on micro-simulator as described in annex 3.

5.4.3 Effects of alternative measures of support

86. Previous findings of these three case studies, confirmed by other studies pertaining to the subregion, show that ECOWAS member States will face declines in customs revenues that will affect the ability of Governments to finance sustainable and inclusive development. The positive marginal short-term effects on the profitability of some manufacturing firms will support the economic partnership agreements, but these profitability gains will be limited in extent and are unlikely to promote the structural transformation of the subregion. McMillan and Rodrik (2011) have noted that, in Africa, the structural transformation process in which the workers are leaving their farms and rural areas to move to other economic sectors in urban centres has not been accompanied by the sort of changes observed in East Asia and, more generally, in the member countries of the Organization for Economic Cooperation and Development (OECD) over the course of their economic history. This process is characterized by the transition from low-productivity to high-productivity activities, with a manufacturing sector that consumes a large proportion of workers from the agricultural sector and an overall increase in

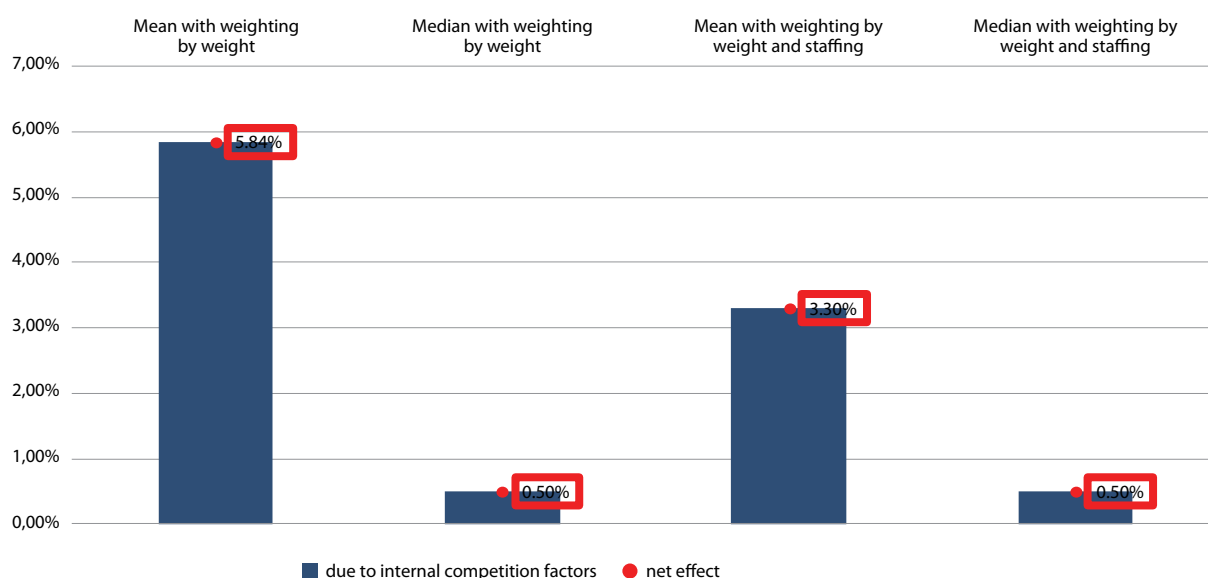
the productivity of the economy. The model seen in many African countries is the displacement of populations from rural areas to the urban informal sector or from low-productivity service activities (retail trade, personal services, and others), with little expansion of the manufacturing sector.

87. Hoekman (2017) points out that what is important in terms of structural transformation is not so much the transfer of the resources of rural agriculture to urban assembly plants as the shift of resources towards activities that generate high value addition and increase overall productivity. Activities of this kind often involve or are classified as services, in that they are administered within the industry or as autonomous services. It is therefore important for policymakers in the subregion to integrate services reform into the programme of alternative measures or support for the tariff reform. This would improve the efficiency of the Trade Liberalization Scheme, the common external tariff and, potentially, the economic partnership agreements in terms of their contribution to structural transformation. By way of illustration, figures 20–27 show a simulation of the effect of a 50 per cent reduction in power outages on profitability of manufacturing companies of the coun-

tries under review. The results are much greater than the profitability gains generated by the tariff reforms already launched. A reform programme of the Trade Liberalization Scheme type for services at the subregional level and the initiation of negotiations in the context of the economic partner-

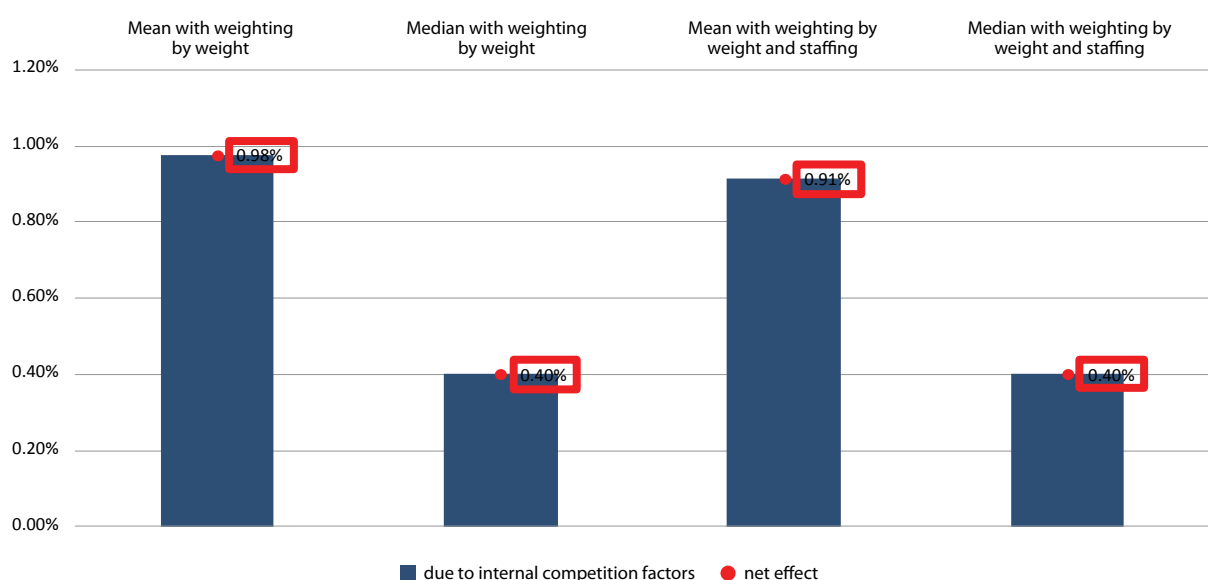
ship agreements, together with the development and implementation of an economic partnership agreement programme for services, are options that could be contemplated to ensure an effective contribution by subregional liberalization and

Figure 22: Benin: change in profitability with a 50 per cent reduction in electricity outages



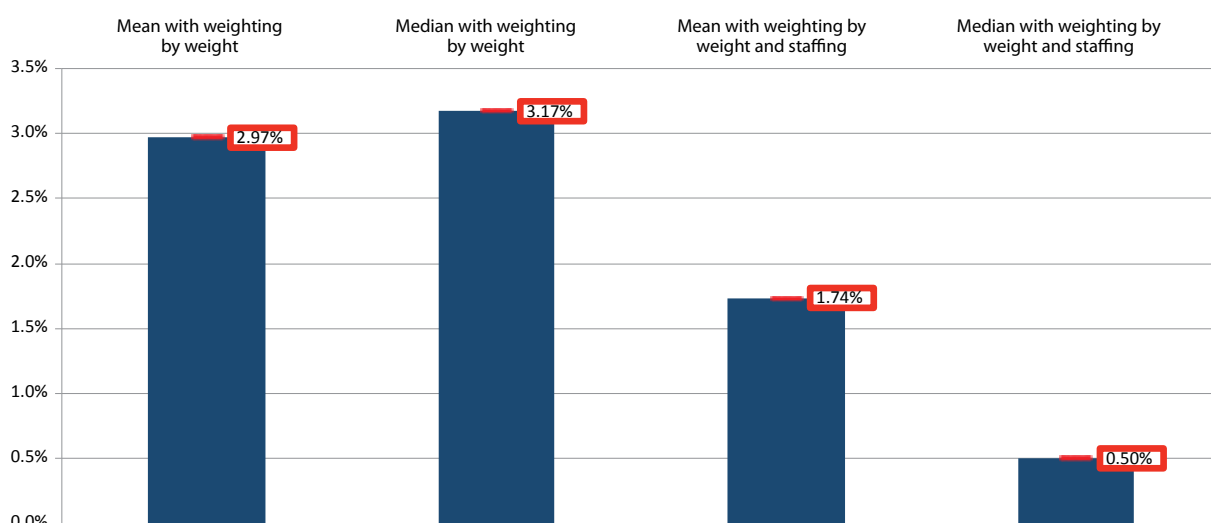
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 23: Benin: change in profitability with a 20 per cent reduction in electricity costs



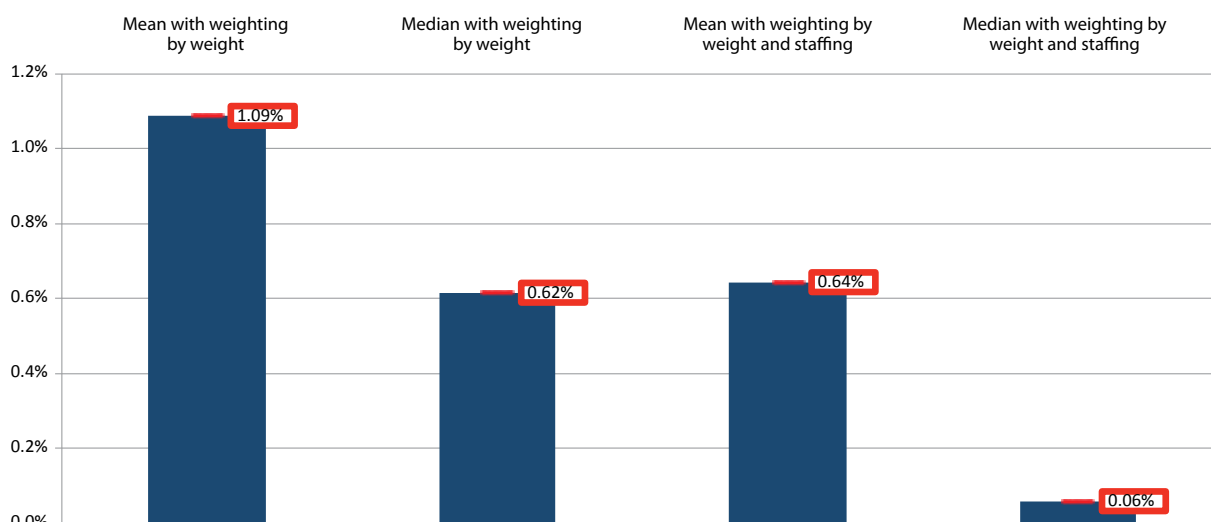
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 24: Côte d'Ivoire: change in profitability with a 50 per cent reduction in electricity Outages



Source: ECA calculations based on micro-simulator as described in annex 3.

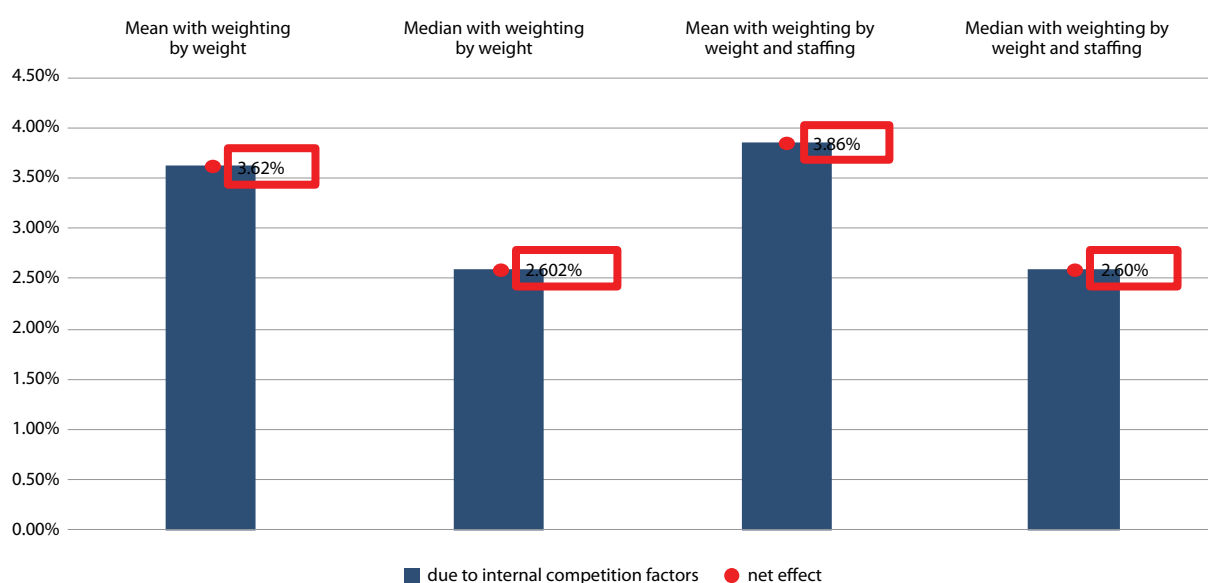
Figure 25: Côte d'Ivoire: change in profitability with a 20 per cent reduction in electricity costs



Source: ECA calculations based on micro-simulator as described in annex 3.

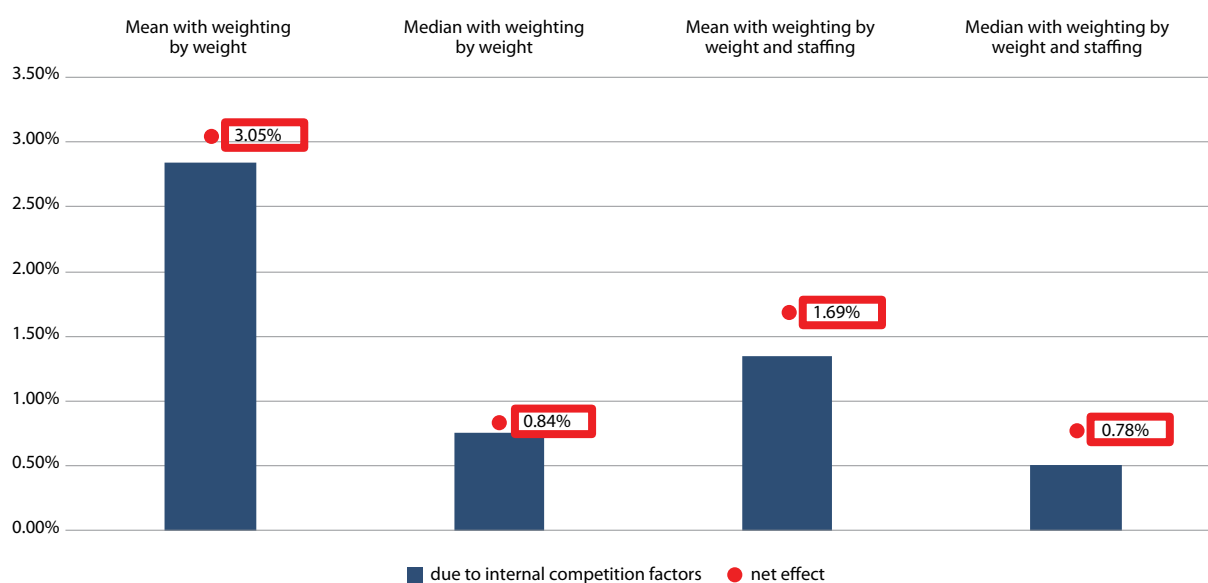
by the economic partnership agreements to the structural transformation of the subregion.

Figure 26: Niger: change in profitability with a 50 per cent reduction in electricity outages



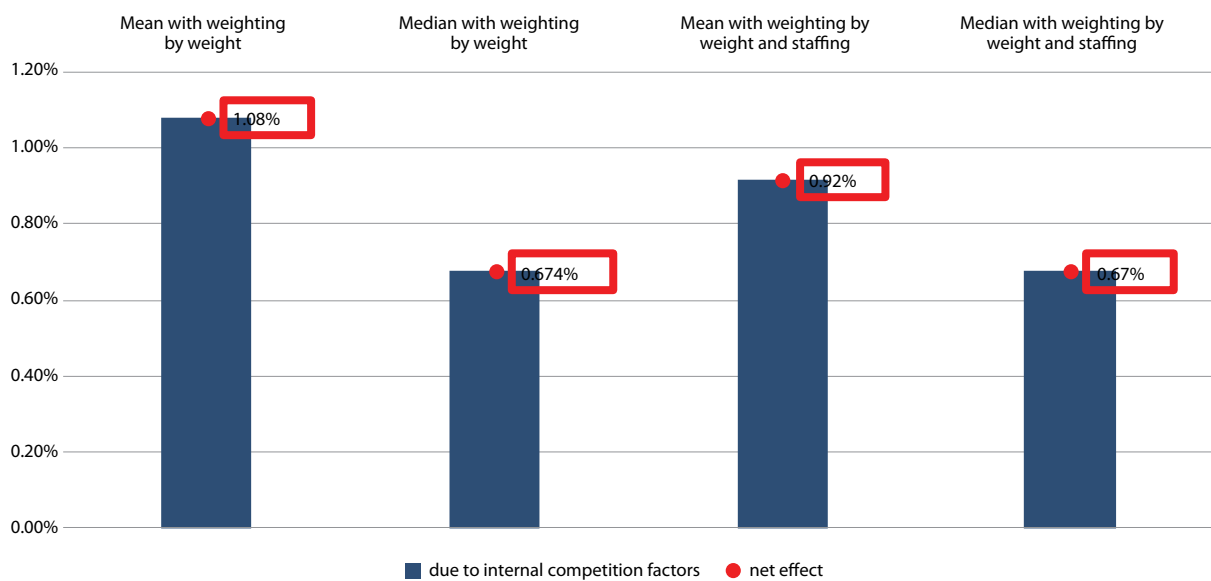
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 27: Togo: change in profitability with a 50 per cent reduction in electricity outages



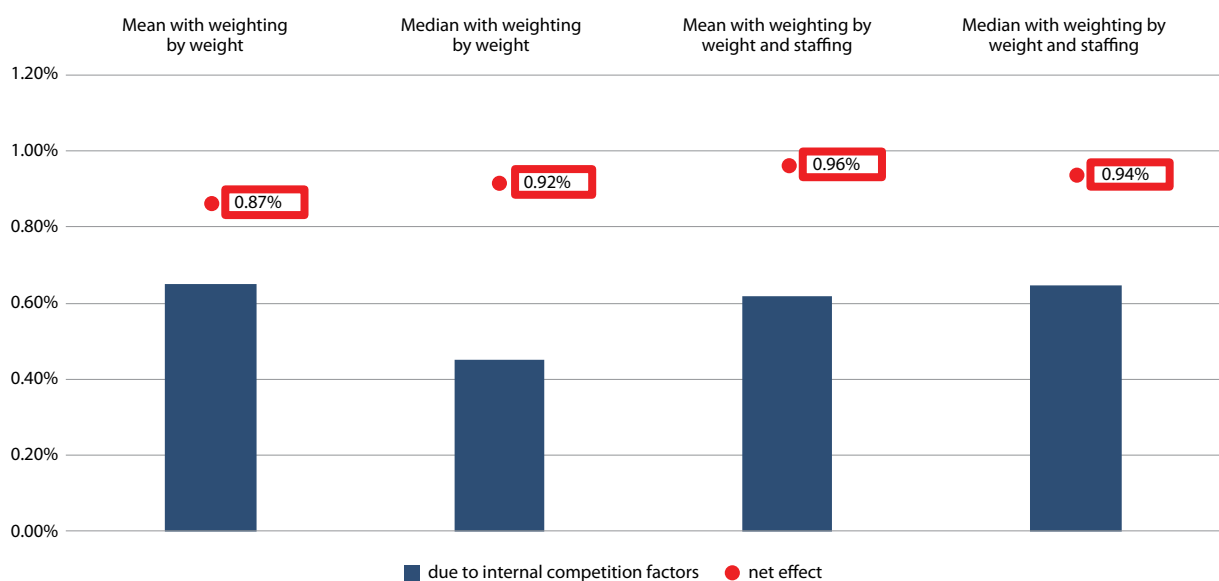
Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 28: Niger: change in profitability with a 20 per cent reduction in electricity costs



Source: ECA calculations based on micro-simulator as described in annex 3.

Figure 29: Togo: change in profitability with a 20 per cent reduction in electricity Costs



Source: ECA calculations based on micro-simulator as described in annex 3.

6. Conclusions and policy recommendations

88. As with most major trade policy decisions, the common external tariff and the economic partnership agreements will have an impact on regional integration and the structural transformation of the economies of West Africa. Producers can gain or lose, depending on how these tariff reforms affect the prices of their inputs, their investment goods and their production. The fiscal balance of Governments will also be affected by changes in their income from imports. The present study contributes to the review of the relevant literature and analysis of tariff reform in West Africa by providing an intuitive and technical viewpoint on its effects and one based on data at the national level. It is underpinned by the results of previous studies, and it quantifies and provides case studies of three countries with a view to understanding the extent of tariff revenue gains and losses, assessing the impact on price changes, and analysing the repercussions on the profitability of manufacturing companies and on jobs. The study also includes the tariff reforms under the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements in a very specific context, so that those reforms can be seen in their proper perspective.

89. The general situation prior to the reform demonstrates that significant tariffs are still being applied in the ECOWAS countries on imports from within ECOWAS: 3.5 per cent in Benin, 2.2 per cent in the Niger and 7.6 per cent in Togo. This probably reflects delays in implementation of the Trade Liberalization Scheme or failure by the exports of ECOWAS members to comply with the rules of origin of that system. Accordingly, those exports do not fully benefit from the subregion's duty-free import regime.

90. Among the countries of the subregion the tariff collection rates differ, ranging, for example, from 46 per cent in the Niger to 93 per cent in

Benin. This variation is partially attributable to differences in national policies on tax exemptions. It poses an obstacle to attainment of the customs union.

91. The simultaneous implementation of a zero tariff on imports from within the subregion and of the common external tariff on imports from outside the subregion will have an impact on trade and budget revenues. The extent of this impact will depend on the status of the countries' national exemption policies. Maintaining the trends prior to the reform of tax exemption policies, the tariffs will rise for Benin (by 1.8 per cent) and drop for the Niger (by -0.4 per cent), Togo (by -0.6 per cent) and only slightly for Côte d'Ivoire (by -0.1 per cent). This is due in part to the fact that, on the one hand, Benin imports less from within ECOWAS than the Niger and Togo and, on the other hand, its overall tariff collection rates are higher. Accordingly, the application of a duty-free regime for imports from within ECOWAS would have less impact on the revenue of Benin and the raising of the WAEMU common external tariff by the ECOWAS common external tariff would boost its revenue thanks to the high collection rate. For the Niger, Togo and Côte d'Ivoire, to a lesser extent, the downward effect of the trade liberalization system would prevail over the upward effect of the ECOWAS common external tariff. All in all, there will be a drop in imports in Benin (from -0.9 to -2.5 per cent) and a rise in imports in the Niger (from +0.2 to +0.4 per cent) and in Togo (from +0.2 to +0.5 per cent). There will be zero effect on total imports in Côte d'Ivoire. Imports from ECOWAS partners will increase sharply (by 6 to 24.6 per cent in Benin, 2 to 6.2 per cent in the Niger, 7 to 22.8 per cent in Togo and 4.2 to 15.8 per cent in Côte d'Ivoire) at the expense of trade with the European Union, the rest of Africa and the rest of the world. Hence the need for a careful look at the promotion of infant industries in the subregion, given the strong competition generated

by imported goods vis-à-vis locally manufactured products.

92. In addition, the Government's tariff revenues will grow marginally in Benin and decline in the Niger and Togo. Analysis shows that these results can be attributed to the concatenation of arrangements for the replacement of exports originating from non-ECOWAS countries by ECOWAS exports in domestic markets (substitution arrangements) and to the effect of demand following domestic price fluctuations resulting from full implementation of the Trade Liberalization Scheme and the common external tariff.

93. The various stages in implementing the economic partnership agreements with the European Union will slow the rate of change in tariff protections resulting from the Trade Liberalization Scheme and the common external tariff and scale back both the pace of trade change, and the change in income tariff and the total income of the Government. This slowdown will steadily increase as countries move towards the final stages of implementing the economic partnership agreements. In 2035, at the end of the implementation period of the reform of the economic partnership agreement tariffs, tariff-based income will drop (by some 7.9–8.4 per cent in Benin, 19.9–21.3 per cent in Côte d'Ivoire, 8.8–9.5 per cent in the Niger, and 22.1–24.1 per cent in Togo) by comparison to simulated tariff income under the Trade Liberalization Scheme and common external tariff alone (economic partnership agreement net).

94. With the implementation of the Trade Liberalization Scheme and common external tariff, the average enterprise in Benin will see its profitability boosted, by an equivalent of 1.20 per cent of sales. This is explained by the fact that the significant increase in output prices due to higher levels of protection (low rates of tax exemption) will more than offset the much weaker negative influence of the rise in prices of inputs and capital goods. Where Côte d'Ivoire is concerned, there will be a mixed impact on the profitability of the average (mean) enterprise (between -0.28 and zero per cent for the average enterprise, according to weighting) and an almost zero effect on the prof-

itability of the median enterprise (between -0.06 and 0.01 per cent, according to weighting). In the other countries, where the Trade Liberalization Scheme and common external tariff will lead to a drop in protection levels (as in the Niger and Togo), there will be a slight increase in average enterprise profitability (of between 0.92 and 1.10 per cent of turnover in the Niger; and 0.21 per cent and 0.34 per cent in Togo, according to weighting) and median enterprise profitability (0.86 per cent of turnover in the Niger and between 0.24 and 0.33 per cent of turnover in Togo, according to weighting), thanks, among other factors, to the channelled effects of the drop in price of inputs. Increasing profitability through a drop in the price of inputs is a pathway more conducive to structural transformation than that of increasing profitability through the increase in the cost of production. The short-term increase of profitability through an increase in the production cost disadvantages consumers and undermines price competition, and can have a negative impact on productivity, innovation and, ultimately, on long-term growth and structural transformation.

95. Economic partnership agreements have a mixed impact on the profitability of enterprises, including by bringing down the prices of inputs and those of capital goods. Beyond their short-term marginal impact on the profitability of enterprises, it is uncertain whether long-term gains can be expected through these two channels in such areas as sustainability and inclusiveness of growth, and also in improving the competitiveness of locally manufactured products, because of competition from imports (from outside the sub-region and outside the Africa region in general).

96. In terms of the challenges of maintaining employment, the enterprises in Benin which will experience a moderate decline in profitability, following the implementation of the Trade Liberalization Scheme and common external tariff, are those which currently have large workforces and which are active in such areas as food and beverages, publishing and printing and metalwork. Implementation of the economic partnership agreements will bring these companies a marginal increase in profitability. In the Niger, companies in

those same sectors have the largest workforces and will experience a moderate increase in their profitability with the common external tariff and a marginal increase with the economic partnership agreements. In Côte d'Ivoire, enterprises which are large-scale employers and which are going to suffer a drop in profitability following the implementation of the Trade Liberalization Scheme and common external tariff are those which manufacture apparel, food and beverages and other products. Companies manufacturing rubber and plastics products, which are the biggest employers of all, will experience a moderate increase in profitability. The same effects may be seen with the reforms of the economic partnership agreements. Enterprises that have large employment numbers in Togo, such as those in the rubber sector and in other industries, will also display the same trends in terms of gains in profitability with the envisaged reforms (Trade Liberalization Scheme, common external tariff and economic partnership agreements).

97. For the economies in the subregion which, however, benefit from some of the positive effects of the Trade Liberalization Scheme, the common external tariff and the economic partnership agreements in terms of regional integration and structural transformation, additional strategic measures are needed in a number of key areas of trade and investment policy, as outlined below.

98. *Rule of origin of the Trade Liberalization Scheme:* Subregional imports are a source of competition for national economies of the subregion, but they support tariffs which they should not be supporting, either because of ignorance or because of costs related to compliance with the rules of origin of the Trade Liberalization Scheme. The development of a road map on the rules of origin of the Trade Liberalization Scheme, aligned with activities at the national level, could be considered. The ECOWAS Commission could also consider adapting the rules of origin of the Trade Liberalization Scheme to best practices in the area of preferential rules of origin. The ministerial decision by the World Trade Organization in Nairobi in December 2015 on preferential rules of origin for

least developed countries can be seen as a window of opportunity for such reforms.

99. *Tariff and tax incentives:* Tariff and tax incentives (exemptions) on imports may cancel out or strengthen the effects of tariff reforms. ECOWAS member States currently do not follow the same approaches in the area of tariff and tax incentives. In order to ensure a free flow of goods within ECOWAS and to avoid trade diversion effects, a rigorous approach should be taken to tariff incentives at the subregional level. This would facilitate progress by ECOWAS towards a customs union.

100. *Competition policy:* It is expected that regional imports will become a source of competition at the national level and help to mitigate the impact on prices caused by the increase in common external tariff rates. The potential of this source of competition cannot, however, be fully harnessed without the implementation of the Trade Liberalization Scheme and in the absence of a competition policy. It is the implementation of a competition policy which would make it possible for a duty-free arrangement (under the Trade Liberalization Scheme) or drop in tariff rates (under the common external tariff or certain categories of economic partnership agreements) to have repercussions on the prices paid by indirect importers or by consumers. To ensure that ECOWAS economies will benefit from the expected results of these tariff reforms, there is need to strengthen competition policy.

101. *Fostering integration with global value chains:* In addition to tariffs, which directly expand input costs and the costs of imported capital goods, barriers to trade such as high transaction costs may also limit the ability of companies to benefit from imported inputs or capital goods. The reliability of supply for imported inputs is a key factor, which will enable businesses to anticipate and operate with optimal capacity. Possible delays along the supply chain for inputs may discourage businesses from using imported inputs; and this could inhibit their productivity. The authorities should consider the value chains as an opportunity for deeper integration in global trade.

102. *Improvement of infrastructure services:* The scenario of a reduction in the cost of services, such as those related to power outages, promises positive results that far exceed profitability gains arising from the tariff reforms under way as part of the common external tariff and the economic partnership agreements. Policymakers in the subregion must include reforms of services in their repositories of alternative measures or support measures for tariff reform, to ensure that the reform of the common external tariff and the economic partnership agreements has a positive influence on structural transformation, including through industrialization. A reform programme of the Trade Liberalization Scheme type for services at the subregional level and the initiation of negotiations in the context of the economic partnership agreements, together, where appropriate,

with the development and implementation of an economic partnership agreement programme for services, are options that could be contemplated to ensure an effective contribution to the structural transformation of the subregion.

103. *Optimization of the reform deployment schedule:* If ECOWAS countries are actively involved in the establishment of the continental free trade area prior to the implementation of the economic partnership agreements, this would not only preserve the theoretical gains expected from the implementation of such agreements, but also would reverse its adverse effects. Intra-African trade will be given a powerful impetus, in particular in the area of industrial products, opening up positive prospects for the structural transformation of the economies of the subregion.

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Annex 1: Strengths and weaknesses of general and partial equilibrium models

Strengths		Weaknesses	
Partial balance	Overall balance	Partial balance	Overall balance
Relatively simple assumptions	Is able to analyse not only the immediate impact of the reform of tariff policy higher in terms of increased imports, reduction in customs revenues, etc., but also long-term adjustment of the economy in terms of growth, investment and, on occasion, employment	Silent on the overall balance effects of tariff policy reform. The reaction of businesses to change in relative prices is not modelled: the variation in price is fully linked to prices and not to quantities	Difficult to use in an environment of missing data and non-availability of key information on the structure of domestic production
Relatively transparent modelling frameworks	Results are most relevant from the standpoint of decision makers		It is more difficult in terms of technical understanding and calculation capacity to construct a picture of the various economic sectors and their interlinkages with a set of assumptions and elasticity measures (limited transparency, method often called "black box")
Enables analysis at very disaggregated level, by industry		Results of the change in trade flows depend on the elasticity quotients of trade flows that are often based on assumptions	Results are likely to be very sensitive to assumptions underlying the model and could thus be more controversial in a policy debate
Capable of providing sufficiently precise results on changes in protection measures, VAT, excise taxes, domestic prices and tariff income			Less accurate in assessing the direct effect of the initial trade policy reform

Annex 2: Review of the results and methodologies used in the ex ante impact studies of the common external tariff and economic partnership agreements in West Africa

Author	Busse and Grossmann (2004)	Karingi and others (2005)	Nielsen and Zouhoun-Bi (2007)	CRES (2011)	Mevel and others (2015)	European Union Commission (2016)	Von Uexkull and others (2014, 2015, 2016)	Our study
Country/ECOWAS								
Benin	Yes	Yes		Yes		Yes		Yes
Burkina Faso	Yes	Yes		Yes		Yes		
Cabo Verde	Yes		Yes	Yes				
Côte d'Ivoire	Yes	Yes		Yes		Yes		
Gambia	Yes							
Ghana	Yes	Yes	Yes	Yes		Yes	Yes	
Guinea	Yes			Yes				
Guinea-Bissau	Yes	Yes		Yes				
Liberia								
Mali	Yes			Yes				
Niger	Yes	Yes		Yes				Yes
Nigeria	Yes	Yes	Yes	Yes		Yes	Yes	
Senegal	Yes	Yes	Yes	Yes		Yes	Yes	
Sierra Leone								
Togo	Yes	Yes		Yes		Yes		Yes
Rest of ECOWAS (entity)	No	No	No			Yes		
ECOWAS (entity)	No	No	No		Yes			

Author	Busse and Grossmann (2004)	Karingi and others (2005)	Nielsen and Zouhoun-Bi (2007)	CRES (2011)	Mevel and others (2015)	European Union Commission (2016)	Von Uexkull and others (2014, 2015, 2016)	Our study
Methodology								
ECOWAS common external tariff scenario	No	No	No	No (rather enlargement of ECOWAS common external tariff)	Yes	Yes	Yes	Yes
Multi-stage EPA tariff scenario	Zero tariff on products imported from EU (step 1)	Zero tariff on products imported from EU (step 1)	Zero tariff on products imported from EU (step 1)	New tariffs (3 stages: 5 year, 15 year and 25 year)			New tariffs (4 stages: 5 year, 10 year, 15 year and 20 year)	New rates (4 stages: 5 year, 10 year, 15 year and 20 year)
Source of data on tariff protection	COMTRADE, TRAINS, IDB	COMTRADE, TRAINS, IDB (via WITS)	World Bank/IMF	National sources	MACMap		National sources	National sources
Year for tariff data	2001 or latest available	2001-2003	2004	2000-2004			2014	2014
VAT on imports	No	No	No	No	No		Yes	Yes
Excise on imports	No	No	No	No	No		Yes	Yes
Other taxes on imports	No	No	No	No			Yes	Yes
Diversion of trade	Yes	No	Yes				Yes	Yes
Tax exemptions	Calculated indirectly aggregated exemption rate	No	No	Calculated indirectly with a per product exemption rate aggregated by the social accounting matrix (SAM)	No	Calculated indirectly with an aggregated rate for collection efficiency	Yes (per product line)	Yes (per product line)
Baseline model	Verdoorn	WITS/SMART	Verdoorn	Own model developed	MIRAGE	MIRAGRODEP	TRIST	TRIST
Model type	Partial balance	Partial balance	Partial balance	Overall balance	Overall balance	Overall balance	Partial balance	Partial balance
Aggregated tariff data	HS4	HS6	?	SAM products	HS6		HS 8 or 10	HS 10
Domestic production	No	No	No	SAM products	SAM products	SAM products	No	No

Author	Busse and Grossmann (2004)	Karingi and others (2005)	Nielsen and Zouhon-Bi (2007)	CRES (2011)	Mevel and others (2015)	European Union Commission (2016)	Von Uexkull and others (2014, 2015, 2016)	Our study
Variability among businesses	No	No	No	No	No		Yes	Yes
Variability among households	No	No	No	No	No		Yes	Yes
Taking account of the impact of support policies	No	No	No	No			Yes	Yes
Net impact at the macro and sectoral level								
GDP growth	n.a.	n.a.	n.a.			0.0% to 3.5%	n.a.	n.a.
Poverty						-0.01% (Ghana and Nigeria)		
Statutory tariff protection	Yes	Yes	Yes				Yes	
Actual tariff protection	n.a.	n.a.	n.a.					
Import growth						0.6% to 3.3%	Yes	
Export growth						1.3% to 3%	n.a.	n.a.
Change in customs revenue collected by the State						-6.1% to -25.5%		
Change in total revenue collected by the State								
Change in relative prices of goods								
Labour market								
Change (%) in relative remuneration of production factors	n.a.	n.a.	n.a.			Labour: 0.0–0.3 Capital: -0.3–1.3 Land: -0.1 –1.1 Natural resources: -0.9 –1.3		
Change in household consumption profile								

[illegible]

Annex 3: Methodology of microeconomic breakdown of profitability per transmission channel*

The expected change in profitability for each firm i in the sample is calculated as follows:

Equation 1

$$\Delta\pi_i = \pi_i^{EPA} - \pi_i^0$$

with

$$\pi_i^0 = \frac{Y_i * p(Y)^0 - (I_i * p(I)^0 + L_i * \bar{p}(L) + C_i * p(C)^0 + T_i * \bar{p}(T) + O_i * \bar{p}(0))}{(I_i * p(I)^0 + L_i * \bar{p}(L) + C_i * p(C)^0 + T_i * \bar{p}(T) + O_i * \bar{p}(0))}$$

and

$$\pi_i^{EPA} = \frac{Y_i * p(Y)^{EPA} - (I_i * p(I)^{EPA} + L_i * \bar{p}(L) + C_i * p(C)^{EPA} + T_i * \bar{p}(T) + O_i * \bar{p}(0))}{(I_i * p(I)^{EPA} + L_i * \bar{p}(L) + C_i * p(C)^{EPA} + T_i * \bar{p}(T) + O_i * \bar{p}(0))}$$

where:

Y is the firm's output

I are the inputs used by the firm

L is labour used by the firm

C is the depreciation of capital used by the firm

T are transport services used by the firm

O are all other cost items (rent, water, electricity, and telecommunications)

$p(X)$ is the price of item X

Subscript i refers to firm-specific variables

Superscripts 0 and EPA refer to the baseline and post-EPA scenario, respectively; this also applies, however, to the CET

\bar{p} refers to prices that do not change as a result of the trade shock.

For the employment-weighted graphs, each firm is weighed by its survey weight, which corrects for regional, size, and industry sampling bias in the Enterprise Survey, as well as its number of full-time employees before the results are aggregated.

For the policy scenario with 0.1 percent exogenous productivity growth, Y_i is multiplied under the reform scenario with $1.03^{(t-2014)}$ where t is the end year of the respective EPA scenario (2024, 2029, 2034, 2035).

For the policy scenario with a 50 per cent reduction in losses due to electricity outages, Y_i is divided in the reform scenario by $(1-EL*0.5)$, where EL refers to a variable in the Enterprise Survey that asks firms to report the loss in total output due to electricity outages.

For the policy scenario with a 50 per cent reduction in transport cost, $p(T)$ is divided by 2 in the reform scenario.

Prices $p(Y)$ and $p(C)$ are production prices and capital goods prices. The price $p(I)$ is the price of raw materials. As the business survey does not provide any information on the composition of the raw materials (it only provides information on the total value), a price index of the raw materials used for each activity (Y) will be constructed from the social accounting matrix (SAM).

* This annex is reproduced from MacLeod and others, 2015.