

Are the Economic Partnership Agreements a First-best Optimum for the African Caribbean Pacific Countries?

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The 77 countries of the African, Caribbean and Pacific (ACP) group² have been negotiating free-trade agreements with the European Union (EU) since 2002. The Economic Partnership Agreements (EPAs) will replace the non-reciprocal preferences the EU currently grants to the ACP group with a reciprocal preferential scheme that conforms to World Trade Organization (WTO) rules. This article estimates the effects of the EPAs on the ACP economies, and compares them with the potential impact induced by the alternatives to the EPAs. Based on an original methodology, mixing general equilibrium analysis and disaggregated tariff calculations, the article highlights the significant costs induced by the EPAs, even under the hypothesis of a high asymmetry between the commitments of the ACP and European countries. It shows that switching from the Cotonou preferences to the Generalized System of Preferences (GSP) and the “Everything But Arms” initiative would be less costly for most ACP countries than adopting the EPAs. Furthermore, it investigates the “GSP+” option, whereby the current GSP is extended to better cover sensitive products for ACP economies. It demonstrates that a marginally extended GSP would indeed be the optimum choice for ACP countries.

I. INTRODUCTION

The preferential tariffs applied by the European Union (EU) on the African, Caribbean and Pacific (ACP) exports do not conform to WTO regulations, as they are granted on a unilateral and discriminatory basis. With the creation of the World Trade Organization on 1 January 1995, this legal issue has become unavoidable.³ In order to perpetuate the Cotonou scheme, the EU and ACP countries are transforming this

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² The ACP group is comprised of all Sub-Saharan African countries, most Caribbean States and small islands of the Pacific. The list is available on the ACP Secretariat website, at <www.acpsec.org>. Of note, South Africa, which belongs to the ACP group, does not negotiate EPAs because it signed a free-trade agreement with the EU in 1999.

³ Contrary to the GATT time, when no punishment could actually be applied against international trade law infringement, the creation of Dispute Settlement Body in the framework of the WTO has permitted a sanction of the Lomé scheme illegality. Hence, the European Union requested two waivers to temporarily maintain its scheme in 1994 and 2000, and committed to conforming it to the WTO rules by the end of 2007.

scheme into free-trade areas (FTA). The Economic Partnership Agreements (EPAs) between the EU and Regional Economic Communities of ACP countries will replace the existing preferences on 1 January 2008. Associated with an improvement in aid mechanisms, the EPAs will slightly improve the access of the ACP exporters to the European markets, and could also foster the liberalization process in the ACP sub-regions, boosting economic reforms and reinforcing the credibility of the ACP governments.

Yet, this option is likely to be costly for ACP countries. These countries will have to eliminate tariff barriers on nearly all of their European imports. As a result, domestic prices should drop, boosting the consumer welfare, but decreasing the market shares of local producers and non-European exporters. This could in turn harm not only the ACP industries, but also the regional integration process, by substituting European imports to regional exchanges. Furthermore, eliminating duties on European goods will lead to fiscal losses for ACP governments, as most rely heavily on customs revenues⁴ and the EU is the main exporter towards the ACP markets.⁵

Hence, the alternatives to the EPAs could be less harmful than the EPAs themselves. First, the ACP countries could renounce tariff benefits of the Cotonou partnership. For the ACP LDCs, which enjoy near duty-free access to the European markets through the Everything But Arms initiative,⁶ the tariff component of the EPAs seems to be more restrictive than helpful. For non-LDC ACP countries, abandoning the Cotonou preferences involves facing the protection applied by the EU on all developing countries through the GSP. Given the level of openness of the European markets, this increase in tariffs may not be as costly as would be adopting the EPAs. Additionally, the EU has committed itself to a future situation whereby the situation of ACP countries will not deteriorate regardless of the option that is used to reshape the Lomé scheme. Therefore, an extension of the GSP is to be considered, so that ACP countries that do not sign the EPAs face unchanged access to the European markets.

This study aims to compare the effects of the different existing options to reshape the Lomé preferences. Its objective is to figure out whether a marginal GSP extension ("GSP+ option") could significantly offset the loss of preferences that abandoning the Lomé scheme would induce.

After reviewing the existing literature on the estimation of the EPAs and its alternatives, section III focuses on the description and discussion of the methodology used in our simulations. In section IV, the results of the EPAs simulations are presented, and compared in section V with the results obtained with the alternatives to the EPAs. The last part concludes the study.

⁴ The custom revenues stood for 27 percent of the public revenues in Sub-Saharan Africa in 1995, according to the World Development Indicators of the World Bank (2005).

⁵ In 2001, the imports from the EU accounted for 42 percent of the total ACP African imports (source: GTAP 6.0).

⁶ Since 2001, the Everything But Arms scheme gives a duty-free access to the European markets for all exports from the LDCs, except arms, and temporarily sugar, beef and rice.

II. REVIEW OF LITERATURE

The EPAs have been assessed since the European Commission officially recognized the need to revise the Lomé preferential scheme in its 1996 green book. The empirical studies converge on the potentially harmful effects of the EPAs, but generally offer a partial perspective on these effects due to methodological limitations. Thus, they do not provide information regarding the impact of the EPAs on world trade, terms of exchanges or industrial specialization. Furthermore, they rarely estimate the effects of the alternatives to the EPAs.

Most of the literature has been written from the perspective of partial equilibrium modelling. They tend to show that European exporters are the main beneficiaries of the EPAs, as their sales to the ACP markets soar after the implementation of these agreements. This pushes the prices of European imports down,⁷ thus reducing the number of non-European imports to the ACP, and boosting the welfare of ACP consumers. In some cases, this type of import substitution is associated with a relative loss of economic efficiency, as less efficient producers replace more efficient non-European producers.⁸ This situation tends to reduce the welfare of ACP countries. Additionally, these studies emphasize the potential negative impact of the EPAs on the public revenues of ACP countries.

The United Nations Economic Commission for Africa (UNECA) has provided an exhaustive assessment of the effect of EPAs on African economies, based on the partial equilibrium model SMART.⁹ This study shows that European firms could increase their exports to African markets by more than 20 percent,¹⁰ while imports from third markets drop.¹¹ In the meantime, consumer welfare would rise by US\$ 509 million, with fiscal losses amounting to US\$ 1,972 million. Busse *et al.* (2004) have focused on the ECOWAS regional economic community (REC), using Viner's type modelling.¹² They evaluate trade creation in ECOWAS to US\$ 844 million,¹³ and trade diversion to US\$ 563 million, while they estimate that public revenues decrease by US\$ 943 million. These results, which are very similar to the results obtained by UNECA (2005) on the ECOWAS REC, also concur with the conclusions reached by the COMESA secretariat in the COMESA sub-region, Milner *et al.* (2005) in the East African Community, Tekere and Ndela (2003) in SADC and Robert Scollay in the Pacific ACP states.

⁷ Under the reserve of perfect imports substitutability, hypothesis largely questioned by Hinkle and Schiff (2004) in the case of the ACP countries.

⁸ This kind of imports substitution is often called trade diversion in the Viner's terminology, as opposed to trade creation whereby imports substitution leads to a gain of economic efficiency.

⁹ The SMART model is described in Laird and Yeats (1986).

¹⁰ Except for Madagascar, Erithrea and Angola. In the case of Zimbabwe, Seychelles, Mauritius, Djibouti, Kenya and Ghana the increase is even superior to 35 percent.

¹¹ This drop stands from 14 percent to 29 percent of the trade creation in the respective cases of CEMAC and SADC.

¹² Busse *et al.* (2004) use the Verdoorn model, which was originally developed to analyse the effects of a trade union between Belgium, Luxembourg and the Netherlands in the late 1930s.

¹³ In the case of an ambitious liberalization scenario.

These results are based on limited methodologies, which do not permit us to analyse the impact of the EPAs on international trade, the terms of exchange, or the level of structural changes in the output of ACP countries. They also do not indicate the “second-round” effects, such as trade shifts on third markets or endowment reallocation. General equilibrium modelling, however, gives complementary information regarding these issues. Hence, Keck and Piermartini (2005), who have used the GTAP model and database,¹⁴ have estimated the impact of the EPAs on the SADC sub-region in a very comprehensive manner. After implementation of the EPAs, the welfare of the SADC sub-region would grow by US\$ 1.5 billion, due in part to an improvement in the terms of exchange. These gains could be reduced by other liberalization processes, such as multilateral liberalization. Furthermore, the authors reveal that the EPAs are likely to hamper industrialization of these countries, contrary to multilateral liberalization, which tends to foster their industries.

Even though they offer comprehensive results, general equilibrium analyses have rarely been used to estimate EPAs.¹⁵ Furthermore, most studies have focused on the assessment of EPAs, rather than investigating their alternatives. Kennan and Stevens (1997) have quantified the cost of losing Lomé preferences and returning to the GSP scheme. Using static methodology, whereby the level of ACP exports to European markets is not affected by the loss in preferences, the authors assume that the loss in the ACP supply chain equals the gains made by the European treasury, thus resulting in the end of Cotonou/Lomé preferences. They further estimate the ACP loss to Ecu 767,¹⁶ two-thirds of which occur in the sugar trade. However, the static framework of this pioneering work gives little indication on the real trade effects of the EPAs, nor on its output implications. Besides, the baseline of these estimations is 1995, before the Everything But Arms initiative that grants near duty-free access to the exports from the least-developed countries to European markets.

III. METHODOLOGY

A. DESCRIPTION

The Global Trade Analysis Project (GTAP) is a widely used general equilibrium model. The ORANI model, a regional single country CGE model developed by the Australian Industry Commission, provided the inspiration for the GTAP project in 1990–1991. Since then, a consortium of institutions¹⁷ has contributed to the development of the project. The model is well described by Hertel (1997), while a simplified graphical exposition of the model is presented by Brockmeier (2001). The

¹⁴ The version 6.0 was utilized for these simulations.

¹⁵ See the discussion on the methodologies in the fourth part of this study.

¹⁶ The authors refer to the Ecu currency in their publication, which is the ancestor of the Euro.

¹⁷ Hertel (1997) emphasizes the importance of the USDA's economic research service and World Bank in the development of the GTAP in its early stages.

GTAP model is based on two kinds of equations: behavioural equations and accounting relationships. The former corresponds to microeconomic optimization programmes of economic agents, while the latter ensures that expenditures and revenues of all these agents are balanced. The standard closure of the model is a classical representation of the global economy, with constant returns to scale, perfect competition, and a systematic adjustment between supply and demand through prices.

The model is powered by various databases that combine to constitute the GTAP database. In version 6.0 of the database, which is utilized in these simulations, trade flow data are mainly provided by United Nations COMTRADE, while protection figures were obtained thanks to the MACMAPS database developed by the Centre d'Etudes Prospectives et d'Informations Internationales (CEPII).¹⁸ Additionally, the GTAP database is comprised of input-output tables for each country and group of countries. Version 6.0 of this database recognizes 87 countries or group of countries, as well as 57 sectors and five endowments.

The GTAP database has been aggregated to 10 regions and 12 sectors,¹⁹ to focus the simulations on the issue of EPAs. As the baseline includes 2001 data, tariffs have been updated to take into account the European enlargement to 27 members,²⁰ as well as the phasing-out of the Multi-Fibre Agreement. The database has also been modified to better reflect the prevailing trade environment at the end of the implementation of the EPAs, which should occur around 2018.²¹ The multilateral liberalization has been taken into account, with tariff cuts by developed and developing countries of 36 percent and 24 percent respectively, the elimination of agricultural export subsidies and cuts to domestic support for agriculture of 20 percent. The regional integration of trade in the ACP countries was also assumed to be achieved, as regional tariffs have been completely eliminated in these countries.

The bilateral ACP–EU tariff agreements have been updated with the latest figures available in the TRAINS database. Extracted at the HS-6 level, they have been aggregated according to the GTAP classification, thanks to the conversion table provided by Mark Horridge in October 2002.²² In all simulations, tariff changes induced by the EPAs have been calculated at the HS-6 level and aggregated according to this conversion table. For instance, in the first scenario, which depicts asymmetrical EPAs where the ACP countries reciprocate tariff elimination on only 80 percent of their imports, HS-6 tariffs have been sorted in descending order, with the lowest tariffs corresponding to 80 percent of the import volume being reduced to zero, while the others being left unchanged.

¹⁸ The MacMaps database significantly improved the protection data of the GTAP database, by including preferential tariffs, as well as tariff equivalents to non-*ad valorem* tariffs. Bouet *et al.* (2004) present the MacMaps database in detail.

¹⁹ The geographical and sectoral aggregations are presented in the first and second annexes.

²⁰ It is assumed that Croatia and Romania will have joined the EU by the end of the EPA implementation.

²¹ The implementation of the EPAs will begin on 1 January 2008. A transition period of more or less 10 years should be granted to the ACP countries.

²² The file of the table is available in the GTAP folders.

B. IS GENERAL EQUILIBRIUM MODELLING A RELEVANT TOOL TO ESTIMATE THE EFFECTS OF THE EPAS AND ITS ALTERNATIVES?

The GTAP model is rarely used to assess EPAs. This is partly due to the fact that the protection data did not include preferential tariffs until the latest version of the GTAP database, which has only been available since 2005. In addition, the statistical weakness of the GTAP database on ACP economies is a serious limitation. Only a very small proportion of ACP countries are individually disaggregated in this database. Thirty-five African ACP countries are included in the “Other SSA” group, while Pacific and Caribbean ACP countries are aggregated into only two regions. Furthermore, some non-ACP countries are also included in these Pacific and Caribbean regions. Since they do not represent a significant portion of the output and trade in their respective regions,²³ the results of the EPAs for the Pacific and Caribbean ACP groups are slightly biased.

This high level of aggregation limits the usefulness of the GTAP database in estimating EPAs. The database can be restrictive, as it does not deliver detailed results for the ACP economies. Still, the high level of aggregation is one of the main features of the general equilibrium analysis. In this perspective, the GTAP tool can still be used to give a broad picture of the EPAs and its alternatives. Contrary to other tools, such as partial equilibrium analysis, GTAP is able to capture the interactions between world and national markets. It can estimate the price effects induced by trade shocks, and measure the impact of changes in trade on the structure and level of output and the reallocation of endowments. Hence, GTAP can greatly enrich the analysis of welfare changes brought about by EPAs.

Simulations

Simulation 1 (reference scenario): ACP countries eliminate their tariffs on 80 percent of their imports from the EU, while the EU grants duty-free access to all ACP products to its markets.

The SADC countries apply the same tariff cuts, even though Botswana, Lesotho, Namibia and Swaziland are linked to commitments made by South Africa in the Trade, Development and Cooperation agreement (TDCA) through the Southern African Customs Union. We assume that the EPAs will prevail over the TDCA, implying that the latter is aligned to the commitments of the former²⁴ at some point. Yet, we have not modified the tariff structures of South Africa in order not to dull the analysis of the figures.

²³ The non-ACP countries stand for respectively 37 percent and 41 percent of the GDP of the Pacific and Caribbean ACP regions in the GTAP classification (source: CIA, *The World Factbook 2005*).

²⁴ The other option could have been that Botswana, Namibia, Lesotho and Swaziland align their tariffs on the European imports according to the TDCA commitments.

Simulation 2 (increased asymmetry scenario): This is similar to scenario 1, except that ACP countries now reciprocate tariff elimination on only 50 percent of their imports from the EU.

Simulation 3 (genuine free trade agreements): All tariffs on the EU–ACP trade are eliminated.

Simulation 4 (regional integration): Using the same baseline and closure as in the previous scenarios, we isolate the elimination of ACP regional tariffs in order to assess the effects of full liberalization of ACP regional trade.

Simulation 5 (GSP option): The ACP countries leave their tariffs unchanged, while the EU increases its tariffs on imports from the ACP non-LDC countries to the level of the GSP. This tariff increase is calculated at the HS-6 level by applying the same tariffs the EU is currently applying on the imports from emerging markets to the imports from the ACP non-LDC countries. The tariffs on the imports from the ACP LDCs remain unchanged, assuming that all products originating from these countries enter the European market under the “Everything But Arms” scheme.

The non-tariff benefits associated with the Cotonou agreement are assumed to be maintained, based on the hypothesis that there are no legal issues with the non-tariff aspects of the Cotonou agreement. The GTAP model does not take into account the rules of origin, which limits the accuracy of the fifth and sixth simulations, as switching from Lomé to the GSP implies facing more restrictive rules of origin. However, the rules of origin of the GSP may be softened in the coming years as they are a core issue of the Doha Development agenda.

Simulation 6 (GSP+ option): This is similar to scenario 5, above, except that the GSP is now enlarged, with 250 tariff lines reduced to zero for each ACP group. These extra tariffs are the lines where the weighted difference between the Cotonou and GSP tariffs are the largest for the non-LDCs ACP exporters.

IV. ANALYSIS OF THE RESULTS

A. MEASURING THE POTENTIAL EFFECTS OF THE ASYMMETRICAL EPA PROPOSALS

Asymmetrical EPAs are tested in the first and second scenarios, whereby the EU eliminates tariffs on 100 percent of its imports from ACP countries, while these countries apply duty-free access on only 80 percent (s1) and 50 percent (s2) of their imports from the EU. The first scenario is referred to as the “standard” EPA proposal, as it realistically fits the WTO requirements as interpreted by the EU.²⁵ Hence, it should give clear insight into the trade and welfare implications of the EPAs for the

²⁵ In the Trade, Development and Cooperation Agreement (TDCA) signed with South Africa, the EU retains that “substantially” all trade was covered by the agreement since it was covering 90 percent of the trade flows, 86 percent of the European exports and 94 percent of the South African imports. It seems that this figure constitutes the norm for the EU in its interpretation of the Article 24 of the GATT, as noted by Huber (2000).

ACP countries and the rest of the world. The second scenario highlights the effects of extra flexibilities on the ACP economies.

Regarding trade effects, the EPAs formulas could bring uneven gains among countries. Despite the asymmetrical levels of commitment, sales from ACP exporters will increase at a slower rate on the European market than the growth in the rate of exports from the EU on ACP markets. This result was largely predictable given the asymmetry between current protection rates of ACP countries and the EU, and the discrepancies in terms of economic performance between these two groups of countries. The effect of the size of each market is not significant enough to offset the protection and competitiveness imbalances: the efficient and diversified exporters of the EU have more to gain from quasi-duty free access to the protected ACP markets than ACP exporters have to gain from a genuine duty-free access to the already open European markets.

At the global level, these imbalances are partly offset by trade shifts on the other markets. European firms export more towards the ACP countries, but shift their sales from the other markets, including their own markets. Thus, exporters from the rest of the world increase their sales on all markets except those of the ACP. A paradoxical implication of these trade shifts is that ACP countries, as well as those of the EU, suffer from a deterioration of their trade balance as a result. On the contrary, the rest of the world benefits from an improvement of its trade balance, despite the shrinkage of its exports and imports.

TABLE 1: BILATERAL TRADE CHANGES (SCENARIO 1)

From/to	SADC	SSA	Pacifique	CARICOM	EU27	RoW	Total
SADC	-18	-27	0	0	118	5	77
SSA	4	-342	-1	2	954	727	1,343
Pacifique	0	0	-6	0	136	104	233
CARICOM	0	-18	-1	-41	162	281	382
EU27	677	6,417	1,254	2,238	-2,840	-6,043	1,704
RoW	-465	-4,210	-946	-1,635	4,688	2,217	-351
Total	197	1,819	300	564	3,218	-2,711	3,387

Source: Author's simulations with GTAP 6.0.

In return, this trade imbalance leads to shrinkage of output in the ACP countries. Largely due to the drop in light and heavy industrial production, this effect is worsened by the price implications of the EPAs. Boosting industrial exchanges, the EPA leads to a relative decline in agricultural prices and to a significant deterioration of the terms of trade of the ACP countries. The drop in GDP could thus reach 1.9 percent in the case of Pacific countries, while the cumulated welfare loss could amount to US\$ 0.9 billion for ACP countries in the case of the "standard" EPA proposal. Meanwhile, the EU would benefit from the appreciation of industrial prices, with a rise in its welfare of US\$ 1.7 billion.

TABLE 2: MACRO-ECONOMIC IMPLICATIONS OF THE FIRST SCENARIO

	Terms of trade %	Balance of trade	GDP (volume)	GDP (value)	Welfare changes
SSA	-0.52	-753	-0.08	-1.41	-612
Rest of SADC	-0.01	-130	-0.07	-0.39	-24
South Africa	-0.31	97	-0.02	-0.44	-126
North Africa	-0.06	39	0	-0.03	-27
ACPPacific	-0.65	-97	-0.17	-1.87	-134
ACPCARICOM	-0.22	-249	0	-0.34	-81
EU 27	0.06	-230	0	0.1	1,638
Oth. developed	-0.02	1,034	0	-0.03	-441
Oth. developing	-0.02	290	0	-0.04	-455

Source: Author's simulations with GTAP 6.0.

If the ACP countries were allowed to reciprocate on a smaller proportion of their European imports, the impact of the EPAs would be more balanced. In the case of the second scenario, European exports to ACP markets grew by “only” US\$ 5.5 billion, versus US\$ 10.6 billion in the preceding scenario. ACP exports to the European markets are also smaller in this scenario, reaching US\$ 0.6 billion, versus US\$ 1.4 billion in the preceding scenario. Still, the bilateral trade imbalance is reduced in this scenario, leading to a drop in the global ACP trade imbalance from US\$ 1.1 billion in the first scenario to US\$ 0.6 billion in the second. As the terms of trade are also more favourable in the second scenario, the welfare loss in ACP countries is reduced from US\$ 0.9 billion to US\$ 0.3 billion. Non-SADC Sub-Saharan African countries are the most affected countries by the level of asymmetry of the EPAs. Their welfare losses are cut by 73 percent, and trade imbalances by 42 percent, if the level of reciprocation of the ACP countries is reduced from 80 percent to 50 percent. However, the losses felt by the ACP countries remain significant for every ACP sub-group, even at this low level of reciprocation.

TABLE 3: MACRO-ECONOMIC IMPLICATIONS OF THE 50 PERCENT RECIPROCATION EPA PROPOSAL (SCENARIO 2)

	Terms of trade %	Balance of trade	GDP (volume)	GDP (value)	Welfare changes
SSA	-0.13	-437	-0.01	-0.4	-167
Rest of SADC	0.02	-55	-0.02	-0.11	-2
South Africa	-0.13	40	-0.01	-0.18	-54
North Africa	-0.02	18	0	-0.01	-11
ACPPacific	-0.27	-93	-0.11	-1.32	-98
ACPCARICOM	-0.15	-96	0.01	-0.2	-42
EU 27	0.03	-79	0	0.05	765
Oth. developed	-0.01	539	0	-0.02	-245
Oth. developing	-0.01	164	0	-0.02	-222

Source: Author's simulations with GTAP 6.0.

As it is the case in most studies on EPAs, the results of the first and second scenario put into perspective the potential fiscal losses of ACP countries. Added to the elimination of tariffs on the main source of custom revenues, the drop in GDP leads to fiscal losses ranging from 0.2 percent of Caribbean GDP, to 1.6 percent of Asian GDP in the case of the “standard” proposal. Higher asymmetry significantly limits the fiscal losses induced by the EPAs, but, again, this is not enough to solve the issue completely.

TABLE 4: FISCAL LOSSES INDUCED BY THE EPAS IN THE ACP ECONOMIES (OUT OF THE INITIAL GDP)

Level of reciprocity	SSA	SADC	Pacific	CARICOM
50%	0.4%	0.1%	1.2%	0.1%
80%	1.0%	0.4%	1.6%	0.2%
100%	1.7%	1.4%	2.1%	0.5%

Source: Author's simulations with GTAP 6.0.

B. THE INDUSTRIAL AFTERMATH OF THE EPAS

The EPAs should boost the industrial exports²⁶ of the ACP countries to the EU and the rest of the world by US\$ 0.9 billion and US\$ 0.2 billion respectively. Industrial imports from these countries are also stimulated by the EPAs, with global growth of US\$ 3.3 billion, and US\$ 1.7 billion in the case of heavy equipment goods. As a result, the EPAs could lead to a sharp deterioration of the industrial trade balance of the ACP countries, associated with a slight improvement of the agricultural, services and natural resources trade balances.

TABLE 5: SECTORAL TRADE BALANCES CHANGES INDUCED BY THE EPAS IN THE ACP ECONOMIES (SCENARIO 1)

	Exports to the EU	Exports to the RoW	Trade balance
Cereals, wheat, rice	1	-2	-51
Vegetable, oilseeds	48	4	44
Sugar	0	0	0
Cotton	8	22	22
Other crops	195	46	200
Livestock	10	2	8
Natural resources	76	193	226
Agro processed	242	-40	-195
Textile clothing	18	61	100
Light-med industries	294	13	-913
Heavy industries	361	208	-1,088
Services	116	158	419

Source: Author's simulations with GTAP 6.0.

²⁶ Including agro-processed goods.

The structure of the output changes according to the observed trade imbalances, with a decrease in industrial production and a slight improvement in agricultural output. The de-industrialization effect is contrasted among the different ACP sub-groups. In the “standard” EPA proposal, for instance, Caribbean countries are not greatly affected, with a slight drop in industrial output of 0.3 percent, while non-SADC Sub-Saharan and Asian ACP countries suffer from a decrease of their industrial output of 1.8 percent. Again, this effect is softened by higher levels of asymmetry. All ACP countries, except those in Asia, minimize their industrial losses at the minimum level of reciprocity of 50 percent.

TABLE 6: IMPACT OF THE EPAS ON DE-INDUSTRIALIZATION DEPENDING ON THE RECIPROCITY LEVELS

	Level of reciprocity	100%	80%	50%
SSA	Agriculture	0.5	0.3	0.1
	Agro-process	-2.7	-1.0	-0.1
	Industries	-1.9	-1.8	-1.0
SADC	Agriculture	-0.1	0.0	0.0
	Agro-process	-1.9	0.1	0.2
	Industries	0.4	-0.7	-0.4
PACIFIC	Agriculture	1.2	0.8	0.6
	Agro-process	3.3	2.2	1.4
	Industries	-1.3	-1.8	-1.8
CARICOM	Agriculture	-0.1	0.0	0.0
	Agro-process	-0.6	-0.1	-0.1
	Industries	-0.2	-0.3	-0.1

Source: Author's simulations with GTAP 6.0.

C. THE EPAS AND REGIONAL INTEGRATION

The third scenario, which simulates complete tariff elimination inside each ACP group,²⁷ tends to confirm the existence of the “virtuous circle” of regional integration. As a result of regional liberalization, regional trade is boosted by US\$ 1.9 billion, and the welfare of the ACP countries increased by US\$ 0.2 billion.

²⁷ In this scenario, the gains induced by investment liberalization, economic coordination as well as trade facilitation, are not taken into consideration, giving a partial view of the potential gains induced by regional integration in the ACP countries.

TABLE 7: THE BENEFITS OF THE REGIONAL INTEGRATION FOR THE ACP COUNTRIES (SCENARIO 4)

	Balance of trade (volume)	Terms of trade %	GDP (volume)	GDP (value)	Welfare changes
SADC	24	-0.07	0	-0.08	-26
SSA	-56	0.24	0.07	0.33	71
Pacific	-295	0.25	0	0.34	157
CARICOM	3	0	0	0	3
North Africa	-1	0.01	0	0.01	1
South Africa	-12	0.03	0	0.03	8
EU27	107	0	0	-0.01	-126
Oth. develpd	153	0	0	0	-63
Oth. develpg	76	0	0	0	-25

Source: Author's simulations with GTAP 6.0.

However, the benefits of regional integration in this scenario seem to have little to do with the EPAs themselves. Regional tariff liberalization has been ongoing in many ACP countries for the last several decades, and should be achieved in the coming years.²⁸ Hence, the EPAs may be helpful in promoting trade facilitation or regional investment liberalization, but is not responsible for the results of elimination of tariffs in the ACP sub-regions.

Furthermore, the elimination of tariffs between the EU and the ACP countries will have a negative effect on the integration of trade in these countries. As European exporters become more competitive on the ACP markets, their products tend to replace local and regional products, leading to shrinkage in regional exchanges. This trade displacement could amount to 40 percent of regional trade growth induced by regional integration itself in the case of a 100 percent reciprocity EPA, and 22 percent of trade creation if the "standard" EPA proposal is applied. In terms of welfare, the situation is even more alarming, as the welfare losses induced by the EPAs far exceed the welfare benefits of the regional integration process.

TABLE 8: REGIONAL INTEGRATION VERSUS EURO-ACP INTEGRATION

	Regional trade	Welfare
Regional Integration	1,874	205
EPA—100% reciprocity	-734	-1,892
EPA—80% reciprocity	-407	-851
EPA—50% reciprocity	-179	-309

Source: Author's simulations with GTAP 6.0.

²⁸ For instance, SADC plans to achieve its customs union by 2010, while ECOWAS and CEMAC have already completed their customs unions.

V. ESTIMATING THE ALTERNATIVES TO THE EPAS

To preserve the Lomé/Cotonou preferences, EU and ACP countries have to change the organization of their trade relationship. Either they transform the current non-reciprocal discriminatory system into a reciprocal preferential trade arrangement²⁹—an option that was chosen in the EPA negotiations, or they enlarge these preferences to all developing countries, making them non-discriminatory.³⁰ Hence, two alternatives to the EPA formula can be considered. The ACP countries could give up the Cotonou preferences, LDCs relying only on the EBA arrangement while non-LDC ACP countries rely on the Generalized System of Preferences. The second option would see an enlargement of the current GSP system to include some of the Cotonou preferences on the most sensitive products for ACP countries, with LDCs still relying on the EBA initiative.

These alternatives are likely to be less attractive than the EPAs for the EU. The EU does not get better access to the ACP markets, and has to enlarge its own market access to non-ACP developing countries in the case of the second alternative. In return, ACP countries would keep their tariffs on European imports, but lose part of their preferential access to European markets. We have simulated these alternatives to figure out whether they could be preferable to the EPA formulas for the ACP countries *ceteris paribus*,³¹ and assess their potential implication for the EU.

A. THE GSP ALTERNATIVE, THE RISKY BET

To assess the GSP alternative, we have applied GSP tariffs on European imports from the non-LDCs ACP countries, combined them with current tariffs put in place by the EU on LDC ACP imports, and aggregated them from the HS-6 level to the GTAP format. This new aggregation shows that the discrepancies among the GSP and the Cotonou tariffs are rather limited on industrial imports from the ACP, and significant on agricultural imports.

As a result of the implementation of the GSP alternative, exports from the ACP countries towards the EU should drop by US\$ 0.9 billion. Most tariff discrepancies concern agricultural goods, and these countries export less of these goods, especially oilseeds and agro-processed goods. However, they also switch US\$ 0.8 billion of their sales from European markets to the other markets. In the meantime, they also reduce their imports, particularly industrial goods from developed countries, which leads to an improvement of their current accounts.

²⁹ In conformity with the GATT Article 24, which allows reciprocal preferences. See note 4 above, for the detail of this article.

³⁰ In conformity with the enabling clause of 1979.

³¹ In particular, we have assumed that non-tariffs benefits associated with the Cotonou scheme are maintained (see the fourth part on that issue).

TABLE 9: CURRENT TARIFFS, GSP AND GSP+ TARIFFS ON THE ACP EXPORTS TO THE EU

From:	Sector	Initial	GSP option	GSP+ option
SSA	Agriculture	0.04%	1.29%	0.15%
	Industries	0.04%	0.19%	0.06%
SADC	Agriculture	0.42%	4.12%	0.98%
	Industries	0.00%	0.01%	0.01%
PACIFIC	Agriculture	0.20%	1.60%	0.09%
	Industries	0.02%	0.02%	0.02%
CARICOM	Agriculture	0.04%	2.86%	0.29%
	Industries	0.05%	0.72%	0.17%

Source: Author's calculations with TRAINS database.

This paradoxical result—the loss of preferences inducing a trade balance improvement—is partly mitigated by the price effect associated with the GSP alternative. As the EU increases its tariffs mostly on agricultural imports, which are sensitive products for ACP countries, the terms of trade of these countries tend to deteriorate. Hence, the effective improvement of their current account amounts to only US\$ 0.2 billion, while their welfare decreases by US\$ 0.5 billion. In terms of the value of GDP, the losses would be particularly significant in the SADC and Pacific ACP countries, with GDP value decreases reaching 1.3 percent and 0.8 percent in these two groups of countries.

TABLE 10: IMPLICATIONS OF THE GSP ALTERNATIVE (SCENARIO 5)

	Balance of trade (volume)	Terms of trade %	GDP (volume)	GDP (value)	Welfare changes
SADC	97	-0.8	-0.07	-1.27	-176
SSA	88	-0.21	-0.01	-0.38	-149
Pacific	41	-0.55	-0.09	-0.83	-56
CARICOM	8	-0.2	-0.01	-0.26	-78
North Africa	-1	-0.01	0	0	-4
South Africa	5	0	0	-0.04	-5
EU27	-107	0.01	0	0.02	376
Oth. develpd	-98	0	0	0	52
Oth. develpg	-34	0	0	0	7

Source: Author's simulations with GTAP 6.0.

Contrary to the EPA proposals, this option should lead to a growth in industrial output. Indeed, the ACP economies adjust to the increase in EU tariffs on their agricultural exports by switching their resources from the agro-processing industries to the other industries. The global industrial output grows by 1 percent on average in the ACP countries, and the price of land, which is the main factor used in agriculture, decreases significantly.

More protective for ACP-based industries, the GSP option is also more favourable in terms of regional integration and fiscal resource preservation. Regional trade slightly increases under this option, while it undergoes a severe shrinkage under the EPA proposals.³² In the meantime, ACP governments still record the customs revenues on European imports, and do not suffer from external imbalances. Even in terms of welfare and GDP changes, the GSP option seems preferable at least for non-SADC Sub-Saharan and Pacific ACP countries. For the world as a whole, this option is also better, as global welfare decreases by only US\$ 31 million, versus US\$ 263 million in the first simulation.³³

Still, this option remains a risky bet for ACP countries. First, the SADC and Caribbean countries may obtain better results in terms of welfare and GDP with the EPAs formula. Welfare and GDP results associated with the GSP alternative are worse for SADC countries than all results observed under different EPAs options, while for the Caribbean countries, they roughly equal the losses observed in the “standard” EPAs proposal. Besides, the GSP option predictably leads to a drop in the global ACP exports by US\$ 0.1 billion, as well as international trade shrinkage by US\$ 0.8 billion, while the different EPAs proposals boost both ACP exports and international trade. Even though this growth in exports is associated with fiscal and external imbalances, as well as welfare losses in ACP countries, one may argue that the EPAs option is more favourable to trade integration among these countries, reaching one of the objectives of the EPA negotiations.

B. IS THE GSP+ A SECOND-BEST OPTIMUM?

In the last scenario, we tested an improved version of the existing GSP by extending duty-free privileges to the 250 lines on the most sensitive exports of the ACP countries to European markets.³⁴ In this scenario, the marginal extension of the GSP benefits only ACP countries, assuming that graduation mechanisms could be used by the EU to avoid granting new tariffs to the most competitive exporters for the concerned products, and that the impact of the enlargement of the GSP on producers from other developing countries is negligible for the ACP producers.

Abandoning the Cotonou preferences to the GSP+250 would leave the effective protection that ACP exporters enjoy on the European markets roughly unchanged.³⁵ On some tariff lines, this protection would be even lower than under the Cotonou protection. As a result, the trade impact of this proposal is rather limited. The sales of the ACP exporters to European markets would drop by US\$ 0.1 billion, largely offset by an increase in their sales to other markets including ACP regional markets. As imports diminish by US\$ 0.1 billion, external accounts record a slight improvement. The total loss of welfare for ACP countries would reach its minimum level observed in

³² On that issue, refer to IV.C. above.

³³ For the sole developing world, the welfare losses reach US\$ 1.5 billion under the EPA standard proposal, versus US\$ 0.5 billion under the GSP alternative.

³⁴ Please refer to the fourth part for the explanation of the utilized method, and to the third annex for the detail of the products concerned by this GSP enlargement.

³⁵ The figures are available in Table 9.

TABLE 11: IMPLICATIONS OF THE GSP+ ALTERNATIVE (SCENARIO 6)

	Balance of trade (volume)	Terms of trade %	GDP (volume)	GDP (value)	Welfare changes
SADC	15	-0.13	-0.01	-0.21	-29
SSA	10	-0.02	0	-0.04	-14
Pacific	-4	0.06	0.01	0.09	6
CARICOM	5	-0.03	0	-0.04	-14
North Africa	0	0	0	0	0
South Africa	1	0	0	-0.01	-1
EU27	-14	0	0	0	49
Oth. develpd	-10	0	0	0	5
Oth. develpg	-4	0	0	0	-1

Source: Author's simulations with GTAP 6.0.

all simulations, equalling US\$ 50 million. On the global stage, the results are also optimal, with an imperceptible welfare increase.

Hence, this scenario gives the most satisfactory results for all ACP sub-groups³⁶ in terms of welfare, GDP value, fiscal and external balances as well as regional trade. Still, reservations must be expressed concerning the changes in international trade flows, as they are reduced by US\$ 0.1 billion under this scenario, while they are boosted by the EPA option. However, the global welfare impact under this option is more favourable than under the EPAs option, especially for developing countries, which suffer from an unnoticeable loss of US\$ 53 million.

TABLE 12: THE "STANDARD" EPA PROPOSAL VERSUS GSP AND GSP+ ALTERNATIVES

		"Standard" EPA proposal	GSP option	GSP+ option
ACP	Welfare	-851	-459	-51
	Real GDP	-183	-79	-9
	Trade balance	-1,223	234	26
	Fiscal imbalance (%GDP)	0.7%	0%	0%
	Regional trade	-407	60	7
EU27	Welfare	1,638	376	49
	Real GDP	71	33	9
RoW	Welfare	-1,050	50	3
	Real GDP	-147	15	1
Total world	Welfare	-263	-31	1

Source: Author's simulations with GTAP 6.0.

³⁶ Except for the welfare and GDP value of the SADC countries, which could be marginally improved by a high asymmetrical EPAs formula.

VI. CONCLUSION

The estimations of the Economic Partnership Agreements under the general equilibrium analysis highlight the asymmetries between the gains made by the ACP and European countries. Despite the lower levels of commitment of the ACP countries, ACP exporters, which already benefit from near duty-free access to the European markets and suffer from supply sides rigidities, will not significantly increase their sales on the European markets, while European exporters largely increase their shares on the ACP markets. As a result, ACP countries will undergo major trade imbalances, while the intra-ACP regional trade will shrink to the benefit of ACP–European trade. Additionally, these countries will face a major drop in their industrial output, associated with a large reallocation of their workers, which could create social difficulties. Added to a deterioration of their terms of trade, this drop in output will lead to welfare losses in every group of ACP countries, especially in the non-SADC countries in Sub-Saharan Africa and Asia.

Increasing the level of asymmetry between the commitments of the EU and the ACP countries would clearly soften the effects of the EPAs. For the SADC and Caribbean countries, the effects of a 50 percent reciprocation EPA is almost neutral in terms of output and welfare. Yet, for other ACP countries the losses would still be significant. Globally, even this very asymmetrical EPAs proposal is harmful, with global welfare losses reaching US\$ 0.3 billion.

Indeed, the alternatives to the EPAs seem much more attractive for the ACP countries, as well as the world as a whole. If ACP countries had to use the GSP and the EBA initiative, their welfare and output losses would be less important than the losses induced by the “standard” EPAs proposal. Their trade balance would improve, while public revenues would be fully preserved. This would also be more favourable for their industrialization efforts, as well as for the integration of their regional trade. Besides, welfare losses, especially in the developing world, are much less large.

Extending the European GSP to 250 extra tariff lines is even more positive for the ACP countries and the global economy. After this marginal improvement, non-LDC ACP exporters would face a protection roughly equivalent to the protection they face under the current Cotonou scheme. Hence, this GSP+ option leads to a quasi-*status quo* in the trade relationship between the EU and ACP countries, and is less costly than the EPAs options.

However, these alternatives have been estimated under the hypothesis that the EU is ready to consider alternatives to the EPAs. Indeed, if the EU were to retaliate against those ACP countries that do not sign the EPAs, for example by withdrawing the non-tariff Cotonou benefits, the cost of the non-EPA for the ACP countries would then be much higher. At this point, the willingness of the European Commission to consider these alternatives is thus crucial to the strategy of the ACP countries.

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ANNEX 1: GEOGRAPHICAL AGGREGATION

No.	New code	Comprising old regions
1	South Africa	South Africa.
2	RestofSADC	Botswana; Rest of South African CU; Mozambique; Rest of SADC.
3	SSA	Malawi; Tanzania; Zambia; Zimbabwe; Madagascar; Uganda; Rest of Sub-Saharan Africa.
4	NorthAfrica	Morocco; Tunisia; Rest of North Africa.
5	ACPPacific	Rest of Oceania.
6	ACPCARICOM	Rest of FTAA.
7	EU15	Austria; Belgium; Denmark; Finland; France; Germany; United Kingdom; Greece; Ireland; Italy; Luxembourg; Netherlands; Portugal; Spain; Sweden.
8	EU12	Croatia; Cyprus; Czech Republic; Hungary; Malta; Poland; Romania; Slovakia; Slovenia; Estonia; Latvia; Lithuania.
9	Othdeveloped	Australia; New Zealand; Japan; Singapore; Canada; United States; Switzerland; Rest of EFTA; Rest of Europe; Russian Federation.
10	Othdeveloping	China; Hong Kong; Korea; Taiwan; Rest of East Asia; Indonesia; Malaysia; Philippines; Thailand; Vietnam; Rest of Southeast Asia; Bangladesh; India; Sri Lanka; Rest of South Asia; Mexico; Rest of North America; Colombia; Peru; Venezuela; Rest of Andean Pact; Argentina; Brazil; Chile; Uruguay; Rest of South America; Central America; Rest of the Caribbean; Albania; Bulgaria; Rest of Former Soviet Union; Turkey; Rest of Middle East.

ANNEX 2: SECTORAL AGGREGATION

No.	New code	Comprising old sectors
1	CerWheatRi	Paddy rice; wheat; cereal grains nec.
2	VegetOilsee	Vegetables, fruit, nuts; oil seeds.
3	Sugar	Sugar cane, sugar beet.
4	Cotton	Plant-based fibres.
5	oCrops	Crops nec.
6	Livestock	Cattle, sheep, goats, horses; animal products nec; raw milk; meat: cattle, sheep, goats, horses.
7	Natresources	Forestry; coal; oil; gas; minerals nec.
8	Agroproc	Wool, silk-worm cocoons; fishing; meat products nec; vegetable oils and fats; dairy products; processed rice; sugar; food products nec; beverages and tobacco products.
9	TextileCloth	Textiles; wearing apparel.
10	Lgtmedindu	Leather products; wood products; paper products, publishing; petroleum, coal products; chemical, rubber, plastic prods; mineral products nec; ferrous metals; metals nec; metal products.
11	HeavIndustry	Motor vehicles and parts; Transport equipment nec; Electronic equipment; Machinery and equipment nec; Manufactures nec.
12	Svces	Electricity; gas manufacture, distribution; water; construction; trade; transport nec; aea transport; air transport; communication; financial services nec; insurance; business services nec; recreation and other services; PubAdmin/Defence/Health/Educat; dwellings.

ANNEX 3: THE 250 TARIFF LINES WHERE THE ACP COUNTRIES WOULD FACE THE HIGHEST WEIGHTED TARIFF INCREASE BY SWITCHING FROM LOMÉ TO THE GSP (BASE FOR THE CALCULATION OF THE GSP+ OPTION)

a. Pacific ACP exports

HS-6 class	Products	Cotonou tariff	GSP tariff	Volume of ACP exports	Number of tariff lines
160414	Tunas, skipjack and bonito (sarda spp.)	0	24.05	26,978	19
151311	Crude oil	0.63	2.28	32,053	8
090500	Vanilla.	0	2.1	17,286	1
151321	Crude oil	0.8	2.45	15,693	4
200899	Other	0	12.18	1,570	50
030379	Other	0.79	7.5	765	38
080300	Bananas, including plantains, fresh or dried	0.49	12.5	363	6
030410	Fresh or chilled	0	12.36	265	52
160420	Other prepared or preserved fish	0.2	14.57	195	27
200980	Juice of any other single fruit or vegetable	0	11.4	197	52

b. SSA exports

HS-6 class	Products	Cotonou	GSP	Volume of ACP exports	Number of tariff lines
160414	Tunas, skipjack and bonito (sarda spp.)	0	24.05	266,849	57
610910	Of cotton	0	9.6	234,181	4
060310	Fresh	0	6.01	303,332	81
070820	Beans (vigna spp., phaseolus spp.)	0	7.97	76,188	18
611020	Of cotton	0	9.6	60,712	12
611011	(2002-) Of wool	0	9.2	61,609	9
200820	Pineapples	0	11.1	45,544	18
070990	Other	0.97	9	62,892	210

c. SADC exports

HS-6 class	Products	Cotonou	GSP	Volume of ACP exports	Number of tariff lines
030420	Frozen fillets	0	9.35	163,883	118
030379	Other	0.79	7.5	34,835	38
030269	Other	1.25	10.44	23,218	72
030490	Other	0	7.02	23,887	49

d. Caribbean exports

HS-6 class	Products	Cotonou	GSP	Volume of ACP exports	Number of tariff lines
080300	Bananas, including plantains, fresh or dried	0	12.5	139,446	21
281820	Aluminium oxide, other than artificial corundum	0	4	233,564	1
611020	Of cotton	0	9.6	36,756	12
240210	Cigars, cheroots and cigarillos, contain. tobacco	0	9.1	27,656	5

HS-6 class	Products	Cotonou	GSP	Volume of ACP exports	Number of tariff lines
611011	(2002-) Of wool	0	9.2	21,631	3
290511	Methanol (methyl alcohol)	0	2	94,967	1
030611	Rock lobster and other sea crawfish	0	4.3	34,923	8
611030	Of man-made fibres	0	9.6	13,582	6
080719	(1996-) Other	0	23.4	2,617	16
070990	Other	0.97	9	6,335	490

Source: Author's calculation with TRAINS database.