

# **Differentiated Impact of AGOA and EBA on West African Countries**

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## **Abstract**

The “African Growth Opportunity Act” (AGOA) and “Everything But Arms” (EBA), two preferential agreements extended by the US (AGOA) and the EU (EBA) to some developing countries seem to have contributed somewhat to boost Sub-Saharan Africa’s exports since 2001. However, not all African countries have benefited from them, among which West African countries. Paradoxically, these latter countries host two of the most advanced regional economic communities in Sub-Saharan Africa: The West African Economic and Monetary Union (WAEMU) sharing a common monetary policy that has consistently maintained inflation low and forming a Customs Union with a compensation mechanism to uphold the Common External Tariff; and the Economic Community of West African States (ECOWAS) maintaining a regional military force (ECOMOG) and peer pressure that have rooted out military coups in its member countries. Simulations derived from a Pseudo Poisson Maximum Likelihood gravity model estimation show that West Africa could be exporting 2.5 to 4 times more to the EU and the US if AGOA and EBA were not implemented in a differentiated manner, in terms of country eligibility, product coverage and rules of origins. Given such trade creation potential for a group of countries committed to deep regional integration, a revision of AGOA and EBA, or a special ECOWAS/WAEMU provision would make these preferential trade agreements a driving force behind the success of regional integration in Sub-Saharan Africa.

**J.E.L. classification :** F15, F17, O55

**Keywords:** AGOA, EBA, ECOWAS, WAEMU, preferential trade agreement, export diversification

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\*\* The findings, interpretations, and conclusions expressed in this paper are entirely those of the author. They do not necessarily represent the view of the World Bank, its Executive Directors, or the countries they represent.

## 1) Introduction

The current pace of globalization gives no choice to small developing countries: they must integrate into world markets if they wish to succeed. Africa has more than its fair share of small poor economies because of fragmentation that it inherited from European colonizers, making Africa the continent most prone to ethnic-based conflicts (Potts et al., 2016). Yet, African countries impose the heaviest artificial barriers around their borders on top of this. Except for the two dominant economies—South Africa and Nigeria—the continent is made up with countries that have small domestic markets, limited economic diversification, and generally poor connectivity with neighboring countries, reducing proximity between economic agents within Africa, and between Africa and the rest of the world.

Yet, the approach of the international community (read: developed countries and international financial institutions) to help Africa has so far been essentially country-specific, and putting out regional fires that threaten to become global: genocides, pandemics, religious conflicts... This approach has merits, but a continent suffering on a permanent basis from the triple disadvantages of low economic density, long distance to markets, and deep divisions needs a different strategy. My research indicates that it would benefit enormously from a regional approach, as argued by the World Development Report 2009 (World Bank, 2008).

One way to do this is by granting preferential access to leading world markets to the region, as intended by the “African Growth Opportunity Act” (AGOA) and “Everything But Arms” (EBA), two preferential agreements extended by the U.S. (AGOA) and the EU (EBA) since 2001. But not all African countries have benefited from this access, among which are West African countries. Paradoxically, West Africa hosts two of the most advanced regional economic communities. The West African Economic and Monetary Union (WAEMU) shares a common monetary policy that has held inflation down and constitutes a Customs Union with a compensation mechanism to uphold the Common External Tariff. The Economic Community of West African States (ECOWAS) maintains a regional military force (ECOMOG) and exerts peer pressure that has rooted out military coups in its member countries. Obviously, something more is needed.

Trust is an important ingredient for regional integration to work, especially when some partners expect to lose in the short run. Trust can be built on traditional ties, often based on a shared language or culture. West African countries share the Dioula, Peuhl, and Haoussa cultures that, nurtured by Islam, developed an impressive regional trade network over centuries.<sup>1</sup> Beyond these traditional ties, the West African Economic and Monetary Union (WAEMU) and the Economic Community of West African States (ECOWAS) are two complementary regional economic communities that managed to build some regional institutions that are working quite well: the monetary union that is consistently delivering on a low inflation environment in all WAEMU countries, and the regional military force (ECOMOG) and peer pressures that have rooted out military coups in ECOWAS countries. The WAEMU comprises 7 Francophone countries (Benin, Burkina Faso, Cote d’Ivoire, Mali, Niger, Senegal, and Togo) and a Lusophone one (Guinea-Bissau) sharing the same currency, the same central bank, the same regional stock market, forming a Customs Union with a compensation mechanism to uphold the Common External Tariff and having a Commission overseeing macro-economic policies and sector-specific strategies. The ECOWAS adds to these 8 countries West Africa English-speaking countries (Gambia, Ghana, Liberia, Nigeria and Sierra Leone) as well as Cabo

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<sup>1</sup> Gregoire, Emmanuel, and Pascal Labazee (1993) : Grands commerçants d'Afrique de l'Ouest. Paris, France: Karthala-Orstom.

Verde (Lusophone) and Guinea (Francophone), with a competent Commission and the Heads of the States and key ministers meeting regularly to take strategic decisions and harmonize policies.

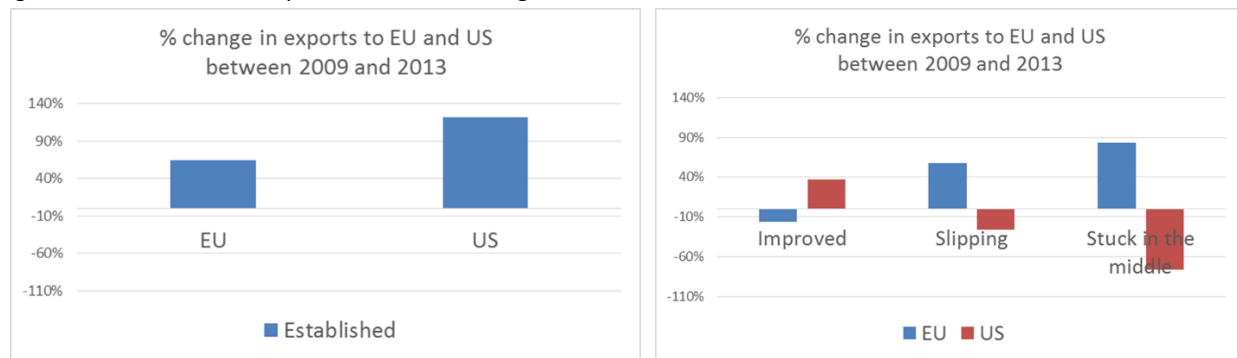
WAEMU and ECOWAS commitment to deepen regional integration is lacking in many other African regional economic communities. Therefore, by helping West Africa succeed in its regional integration endeavors, the international community could unleash positive spillover effects over Central Africa (starting from Cameroon that is sharing a border with Nigeria) and beyond. One way to help is by scaling up Aid for Trade initiatives, such as preferential access to large markets. Preferential trade agreements are policies enacted by developed countries offering lower trade barriers to developing countries in order to facilitate increased export earnings through larger volume of exports and more diversified exports (Persson, 2013). Two preeminent examples are the US “African Growth and Opportunity Act” (AGOA) extended to some Sub-Saharan African countries in 2000, followed in 2001 by the EU “Everything But Arms” (EBA) initiative targeting all least developed countries across the world. Both AGOA and EBA are non-reciprocal trade preference systems that have been implemented as extensions of the US and EU Generalized System of Preferences (GSP). GSP has its roots in the second United Nations Conference of Trade and Development (UNCTAD) in 1968, Resolution 21 (II) that called for the establishment of “generalized, nonreciprocal, non-discriminatory system of preferences in favor of developing countries, including special measures in favor of the least advanced among the developing countries” (UNCTAD, 2013).

Preferential trade with the US and EU seems to have contributed to boost Sub-Saharan Africa’s exports, but not all countries have benefited equally. By looking at growth performance of Sub-Saharan African countries over 1995-2008 vs 2014-2016, World Bank (2016) classified them in 5 groups.<sup>2</sup> By focusing on 4 of these groups, figure 1 indicates a positive export response of “established” growth performers to trading with both the EU and the US, with their export to the EU increasing by 65% over 2009-2013 and their export to the US increasing by 122% (left panel). On the other hand, “slipping” and “stuck in the middle” performers experienced a decrease in their exports to the US and an increase of their export to the EU, while “improved” performers experienced a decrease of their export to the EU and an increase of their export to the US (figure 1, right panel).

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<sup>2</sup> Africa’s Pulse, October 2016, volume 14, defined 5 groups of growth performers: “established” performers (countries registering an annual average growth rate that exceeds the top tercile in both periods), “improved” performers (countries with a growth rate below the top tercile of the Sub-Saharan Africa distribution in 1995–2008, but with a rate of GDP growth in 2014–16 greater than the top tercile), “slipping” performers (countries with their average annual growth rate in 1995–2008 exceeding the bottom tercile of the Sub-Saharan Africa growth distribution, but the GDP growth rate in 2014–16 falling below the bottom tercile) and “stuck in the middle” performers (countries with growth rate in 2014–16 exceeding the bottom tercile but was lower than the top tercile), and “falling behind” performers (countries with GDP growth failing to surpass the bottom tercile in both periods).

Figure 1: Possible Trade impact of Preferential Agreements on African Countries



Sources: WDI, COMTRADE and author's calculations.

Notes: "Established", "Improved", "Slipping" and "Stuck in the middle" are 3 groups of the Sub-Saharan African based on their growth performances over 1995-2008 vs 2014-2016. See World Bank (2016) for more details.

This paper reviews the latest developments on the estimation of the trade impact of these two preferential trade agreements, proposes an econometric strategy to rigorously re-estimate these impacts over the period 2001-2015, covering a horizon beyond when the policy went into effect. The study zooms in on West African countries to estimate their export potential in the absence of AGOA and EBA, with respect to country eligibility, products coverage and rules of origin. The last section explores some policy implications for an effective regional integration process in Africa.

## 2) Literature Review

Some research works have looked at the ex-post trade creation impact of AGOA and EBA. Mattoo, Roy and Subramanian (2003) used a partial equilibrium model to estimate the potential impact of AGOA on trade. They found that AGOA would raise the level of non-oil exports by between 8 and 11 percent, depending on the restrictiveness of rules of origin in the non-apparel sector. Most of this increase was accounted for by the apparel sector, which was expected to see an increase in exports of about 8.3 percent.

Collier and Venables (2007) use a model expressing EU and US imports from AGOA and EBA beneficiary countries, as a function of supplier countries' characteristics, importers characteristics, some bilateral characteristics and then focus on countries' export to the US relative to their export to the EU to assess the relative trade impact of AGOA and EBA. With a triple-difference estimation approach, they show that the AGOA apparel provision had a significant and large impact on apparel exports, whereas EBA had a significant and positive impact only when it was treated as an innovation with respect to the Cotonou Agreement signed between the EU and all African, Caribbean and Pacific countries for the period 2000-2020. Frazer and van Biesebroeck (2010) also use a triple-difference approach on US disaggregated imports from Sub-Saharan African countries to estimate the impact of AGOA on beneficiary countries' trade. Their results show that the apparel provision in AGOA is associated with a 42% increase in imports into the United States over the period 2001-2006.

De Melo and Portugal-Perez (2013) delve into the specificity of the rules of origins of both AGOA and EBA to assess their impact on African apparel trade. To benefit from these preferences, proof of sufficient

transformation must be provided to customs in importing countries by meeting the rules of origin requirements. These rules of origin are complicated and burdensome to exporters in least developed countries. Since 2001, under the U.S. AGOA initiative, 22 African countries that export apparel to the United States have been able to use fabric of any origin (single transformation) and still meet the criterion for preferential access (the so-called Special Rule). In contrast, the EU has continued to require yarn to be woven into fabric and then made into apparel in the same country (double transformation). The authors exploit this quasi-experimental change in the design of preferences to estimate the trade impact of AGOA and EBA over 1996–2004. Their estimates show that the AGOA simplification contributed to an increase in export volume of approximately 168 percent for the top seven beneficiaries, or approximately four times as much as the 44 percent growth effect from the initial preferential access under AGOA without single transformation. This change in design was also important for diversity in apparel exports because the number of export varieties grew more rapidly under the AGOA special regime.

AGOA and EBA have been in effect for more than 15 years. They are expected to boost the exports of eligible products from eligible countries. However, the bulk of the empirical assessment of their impact on trade have so far narrowly focused on apparels, and no counterfactual assessment of what could have been expected in terms of a boost to exports from developing countries if product and country eligibility were broadened to encourage economic communities committed to regional and global integration. Indeed, given the existence of many overlapping regional integration initiatives in Africa, the EU has established groupings of countries on the continent to streamline the Economic Partnership Agreement (EPA) negotiations while at the same time fostering a more effective regional integration process: ECOWAS/WAEMU in West Africa, CEMAC in Central Africa, EAC in East Africa and SADC in Southern Africa.<sup>3</sup> One way of expanding the literature on the trade impact of AGOA and EBA is to carefully assess for these groupings what would have been the trade creation impact if all members were eligible and all the products for which they have a comparative advantage were covered by these two preferential agreements. Such counterfactual analysis would highlight the potential development impact of these trade policies, particularly for regional economic communities demonstrating a strong commitment to deepen regional integration in order to scale up their supply capacity while pursuing global integration to scale up the demand they face. The paper focuses on Western African countries as an initial step.

### **3) ECOWAS Exports to the EU and the USA Since 2000**

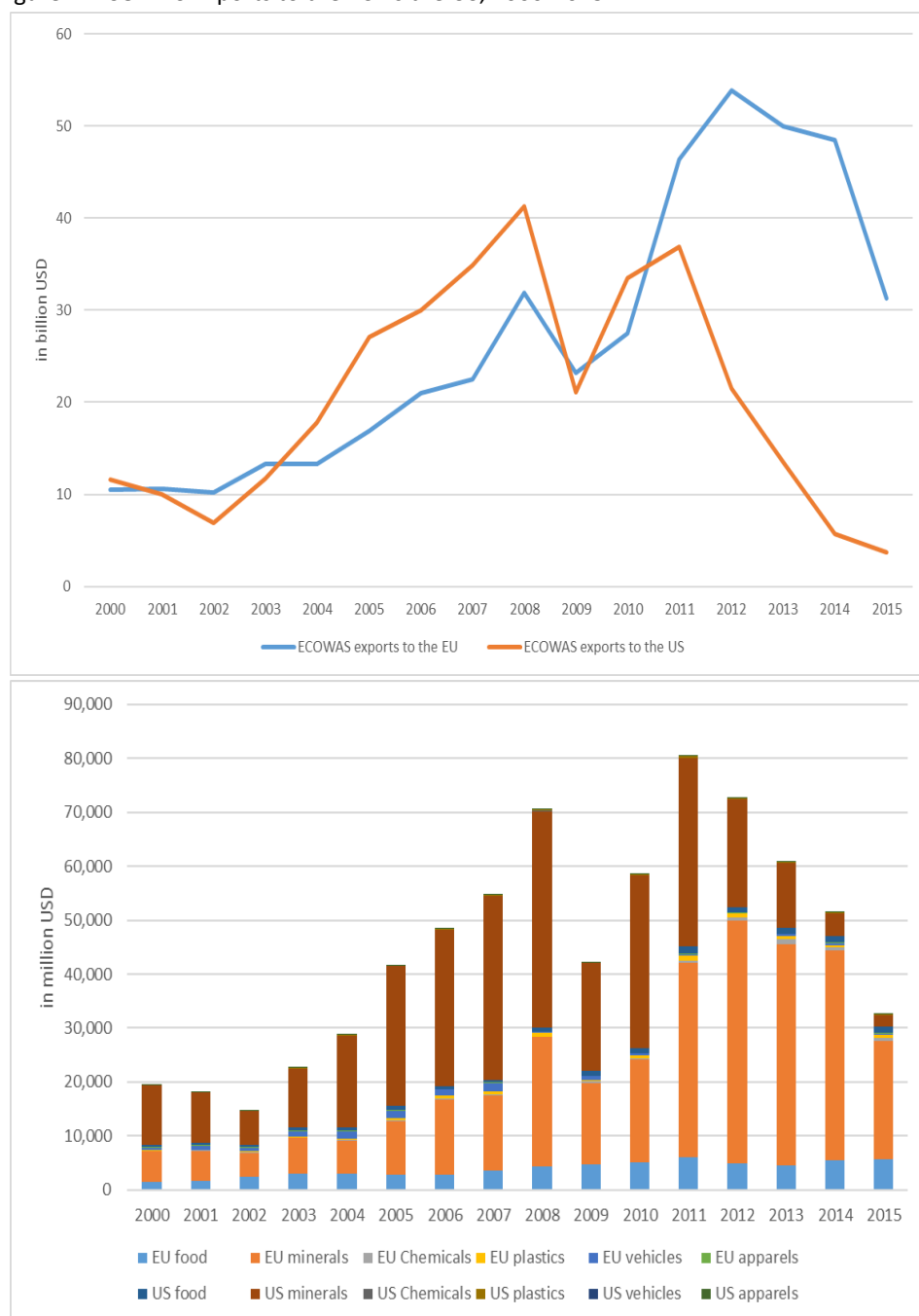
ECOWAS total exports to the EU and the US increased many-fold between 2000 to 2008, from \$11 billion to \$40 billion with regards to the US and from \$10 billion to \$30 billion with regards to the EU, before collapsing in both cases to around \$20 billion in 2009 (figure 2, left panel). After 2009, ECOWAS exports to the EU surged to exceed \$50 billion by 2013 while exports to the US plunged after reaching \$37 billion in 2011. The widening gap between ECOWAS exports to EU vs the US appears to be a systematic trend

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<sup>3</sup> CEMAC stands for “Communauté Economique et Monétaire de l'Afrique Centrale” [Economic and Monetary Community of Central Africa]; EAC stands for Easter Africa Community ; SADC stands for “ Southern Africa Development Community”.

since 2010. The gap sharply increased from \$6 billion in favor of the US in 2010 to \$40 billion in favor of the EU by 2014 (figure 2, top panel).

Figure 2: ECOWAS Exports to the EU vs the US, 2000-2015



Source: COMTRADE.

A closer look at the composition of ECOWAS exports to the EU and the US indicates that the shift in favor of EU was due to the sharp decline of ECOWAS minerals exports to the US starting 2011 (figure 2, right panel). This reflects the impact of the negative shock to oil production and price on Nigeria, the main US

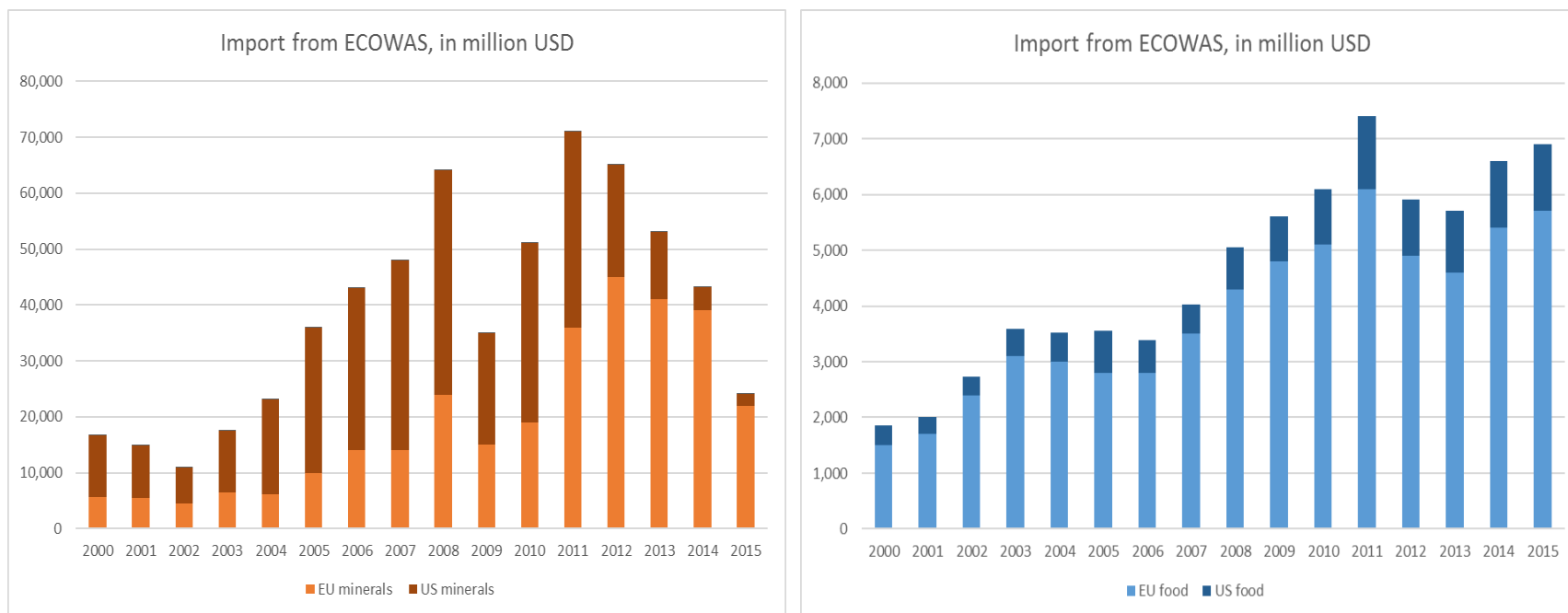
trading partner in ECOWAS. By contrast, ECOWAS countries' minerals exports to the EU quickly rebounded after the 2008-2009 crisis and remained high (figure 2, right panel). ECOWAS exports to the EU and the US appear to be dominated by minerals, with only exports of food products to the EU reaching appreciable levels (figure 2, bottom panel).

In relative terms, we further find that except for minerals, ECOWAS exports to the EU dominate their US equivalent (figure 3). ECOWAS food exports to the EU increased from \$1.5 billion in 2000 to \$5.7 billion in 2015, an average annual growth rate of 9%. ECOWAS food exports to the US increased at the same pace, but from a much lower base (\$350 million in 2000, less than a quarter of exports to the EU). Similarly, ECOWAS exports of chemicals to the EU increased from \$100 million in 2000 to \$810 million in 2013, and its exports of plastics to the EU increased from \$110 million in 2000 to \$910 million in 2011, posting average annual growth rates of 17% and 22% respectively. ECOWAS exports of automobile parts to the EU increased from \$350 million in 2000 to \$1.5 billion in 2007 before plunging to below \$150 million by 2012, and ECOWAS exports of apparels to the EU consistently decreased from \$210 million in 2000 to \$67 million by 2015 (an average annual negative growth rate of 6%).

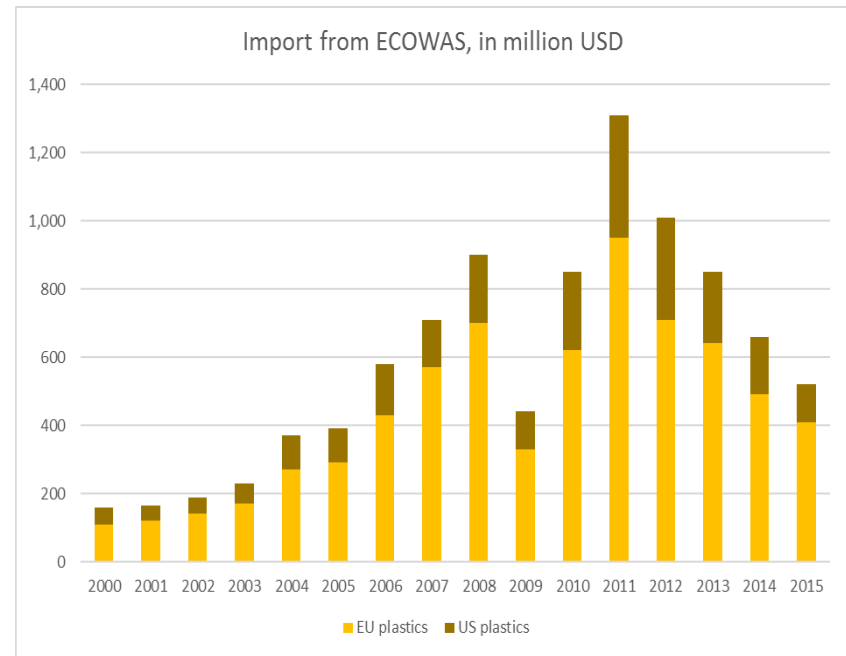
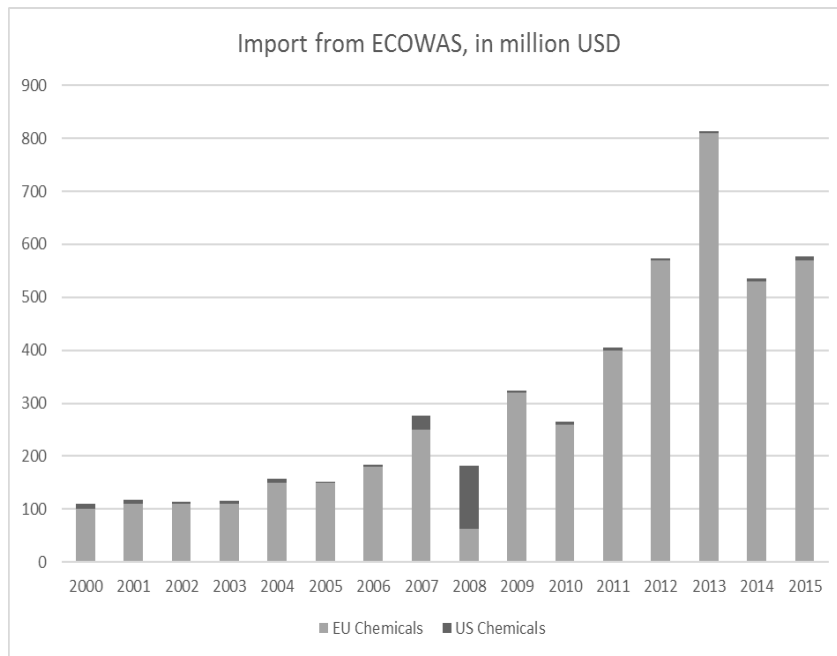
By contrast, ECOWAS exports of these categories of goods to the US have been very low, with less marked trends except for food and plastics products (figure 3). ECOWAS exports of food to the US increased from \$350 million in 2000 (less than a quarter of exports to the EU) to \$1.2 billion in 2015 (one-fifth of exports to the EU), posting an average annual growth rate of 9%. ECOWAS exports of plastics to the US increased from \$50 million in 2000 to a maximum of \$360 million in 2011 before declining and stabilizing around \$100 in 2015.

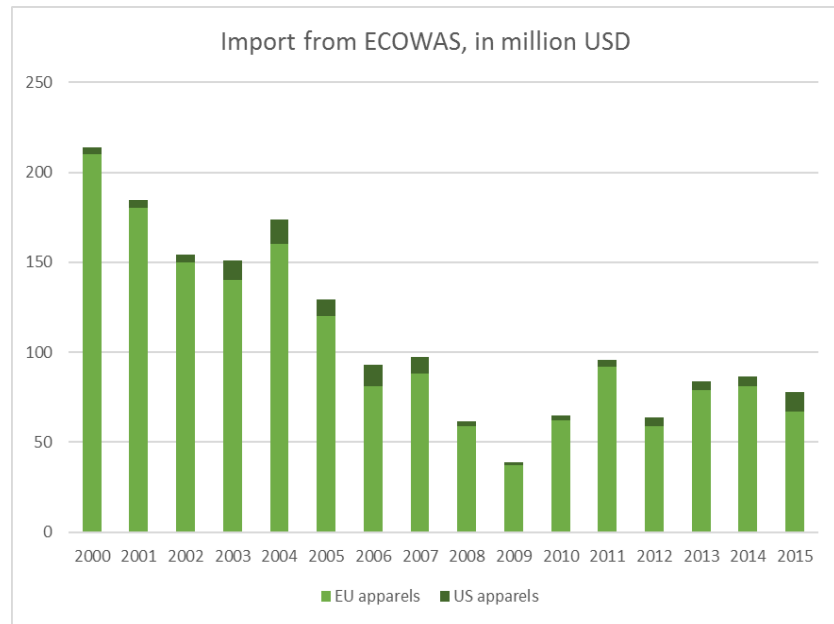
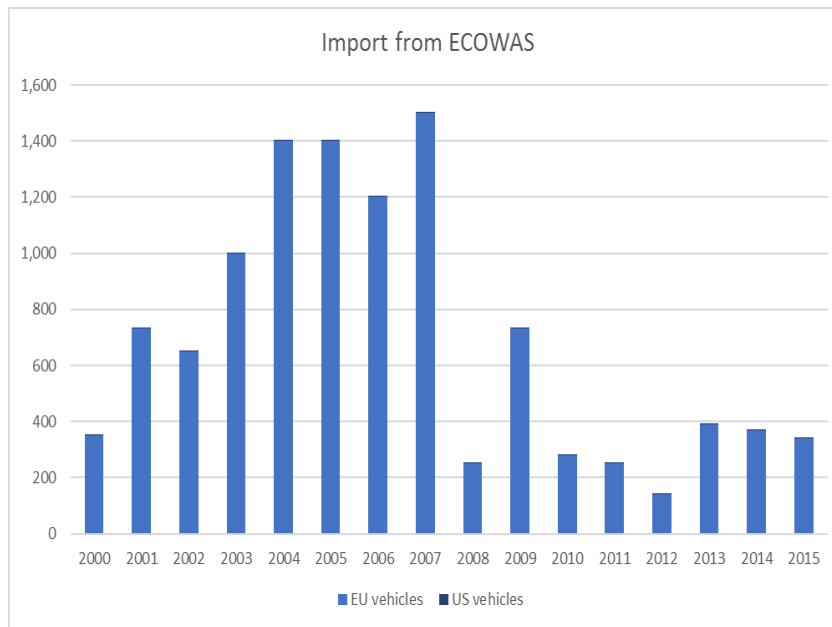
The rest of this paper aims to assess whether these differences (in volume and composition) of ECOWAS exports to the EU and the US are due to the differences in design and implementation of AGOA and EBA, and to make inferences about the potential impact of redesigning these two preferential trade agreements on ECOWAS countries.

Figure 3: Diversity of ECOWAS exports to the EU and the US, 2000-2015









Source: COMTRADE.

#### 4) Empirical Specification and Data

Following Santos Silva and Tenreyro (2006), we use the Pseudo-Poisson Maximum Likelihood (PPML) estimation approach to properly account for the heteroscedasticity of bilateral trade flows as well zero trade flows. The basic equation to be estimated for each year  $t$  is:

$$Export_{ijpt} = \alpha_{ijt} \ln(X_{ijpt}) + \sum_{k \in \{nT, T\}} \beta_{k,t} AGOA_{k,ijpt} + \gamma_t EBA_{ijpt} + FE_i + FE_j + \varepsilon_{ijpt} \quad (1)$$

where  $X_{ijt}$  is a vector of gravity variables,  $nT/T$  are non-textile/textile products,  $AGOA_{nT,ijpt}$  taking the value 1 only for year  $t$  when AGOA is in effect in country  $i$  and covers non-textile product  $p$  exported to the US,  $AGOA_{T,ijpt}$  taking the value 1 only for year  $t$  when AGOA is in effect in country  $i$  and covers textile product  $p$  exported to the US,  $EBA_{ijpt}$  taking the value 1 only for year  $t$  when EBA is in country  $i$  and covers product  $p$  exported to any of the 28 EU member countries,  $FE_i$  is the full set of reporters fixed effects and  $FE_j$  is the full set of partners fixed effects. In the empirical assessment, we also interact the AGOA and EBA variables with a dummy variable specifying West African countries to single out the impact of the two preferential agreements on this sub-region.

Given the difference in country eligibility between AGOA and EBA, with EBA only covering least developed countries while AGOA covers any country that is approved by the US President, it is important to be able to assess any differential treatment of countries by both preferential agreements. We focus on West African countries in this paper, and compare the trade impact estimated for all the AGOA and EBA beneficiaries to that estimated only for West African countries. The final equation used for empirical assessment of the trade impact of AGOA and EBA is the following:

$$Export_{ijpt} = \alpha_{ijt} \ln(X_{ijpt}) + \sum_{k \in \{nT, T\}} \beta_{k,t} \times West\_Africa \times AGOA_{k,ijpt} + \gamma_t \times West\_Africa \times EBA_{ijpt} + FE_i + FE_j + \varepsilon_{ijpt} \quad (2)$$

where *West-Africa* is a dummy variable taking the value 1 only if country  $i$  is a West African country. This formulation allows us to focus on ECOWAS countries and assess the differentiated trade impact of AGOA and EBA on them.

To adequately account for multilateral resistance (Anderson and van Wincoop, 2003), we use a “square” trade matrix, with country  $i$  being either a Sub-Saharan African country (focus of AGOA), or a Least Developed Country (LDC, focus of EBA), or a EU member or the US. We therefore have 91 partner countries for each of the 92 reporter countries. Since AGOA product eligibility is granted at a fairly disaggregated level (6-digit), we use disaggregated export flows to assess the trade impact of both AGOA and EBA. To reduce the size of the dataset, we use the 4-digit (1,241 products) instead of the 6-digit (more than 5,000 products) disaggregation level. To ensure the “square-ness” of the dataset with regards to product coverage, we complete it as needed with zero trade flows for any 4-digit product exported at least once by any of the reporter countries to any of the partner countries during 2001-2015.

Finally, to properly deal with missing trade flows, we use the unique dataset BACI of harmonized trade flows initially constructed by Gaulier and Zignago (2010) using COMTRADE data, and regularly updated by CEPII.<sup>4</sup> CEPII also provides a full set of traditional gravity variables (such as bilateral distance, contiguity, common language, and common colonizer), first used in Head, Mayer and Ries (2010).

## **5) Estimation of the Trade Impact of AGOA and EBA**

Table 1 presents the estimation of equation (1) for each year, while tables 2 and 3 present the estimation of equation (1) and (2) using panel data, while table A1 presents the year-by-year estimation of equation (2).<sup>5</sup> When using the panel Poisson maximum likelihood estimation, we interpret the estimated coefficient as elasticities in the spirit of Silva Santos and Tenreyro (2006). Table 4 presents the marginal effects of AGOA and EBA eligibility. For the panel specifications, we estimate equations (1) and (2) on the entire period of 2001-2015, and on 3-year intervals. The gravity variables are dropped from the panel specifications because of constant values in the clusters. For the year-by-year specifications, they are generally statistically significant, with the expected sign except for the GDP of the reporter country that has a negative coefficient in few instances. The panel estimations appear to be statistically more robust than the year-by-year estimations. We therefore focus the focus the following discussions on the panel specifications, while the next section uses year-by-year estimated coefficients for simulation.

Over the period 2001-2015, the estimated coefficient for AGOA<sup>6</sup> non-textile is -0.069, compared to 0.135 for AGOA textile (cf. column 1, table 2), which confirms previous results that the textile provision of AGOA has had a stronger positive impact on Sub-Saharan Africa exports to the US than the general AGOA provision. When looking at shorter time spans, the estimated effect of the textile provision of AGOA is even stronger: 75% more export over 2001-2003, 51% over 2004-2006, and 88% more export over 2012-2015, compared to 14% more export over 2001-2015 (table 4). On the other hand, the general AGOA provision appears to have induced export diversion away from the US.

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<sup>4</sup> Center of Prospective Studies and International Information, based in Paris.

<sup>5</sup> A critical issue is endogeneity – the coverage of AGOA and EBA (in terms of both product and country eligibility) is somehow endogenous given reliance on economic or governance performances that can be impacted by trade. However, we tried to instrument them with the UNDP Human Development Indicator and the World Bank Core Governance Indicators on corruption, but could not conclude because of the multicollinearity of these instruments with many independent variables.

<sup>6</sup> Note that we are not able to estimate the EBA impact in the panel specification of equation (1) because of multicollinearity between the EBA variable and the fixed effects included in the panel estimation.

Table 1: Pseudo-Poisson Maximum Likelihood Estimations, Sub-Saharan-wide Trade Impact of AGOA and EBA

Dependent variable: Xijpt	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2001	2002	2003 <sup>a</sup>	2004	2005	2007 <sup>a,b</sup>	2008
lnGdpi	-0.024 (0.02)	-0.363 (0.29)	0.422	-0.538 (0.90)	-0.406 (0.48)	1.178	1.803 (1.15)
lnGdpj	0.471 (1.76)	0.794 (2.42)*	0.119	1.024 (3.55)**	0.662 (2.32)*	0.893	0.704 (1.76)
lnGdppci	0.099 (0.12)	0.395 (0.42)	-0.144	0.628 (1.44)	0.194 (0.33)	-0.714	-0.951 (0.91)
lnGdppcj	0.091 (0.46)	-0.191 (0.74)	0.293	-0.369 (1.71)	-0.056 (0.30)	-0.240	-0.074 (0.35)
lnDistij	-0.799 (14.68)**	-0.818 (13.90)**	-0.849	-0.875 (18.14)**	-0.895 (17.89)**	-0.922	-0.927 (20.65)**
1=Contiguity	0.126 (1.96)	0.138 (2.14)*	0.119	0.113 (1.87)	0.129 (2.15)*	0.117	0.150 (2.77)**
1=Common official or primary language	0.573 (5.55)**	0.593 (5.73)**	0.606	0.595 (6.03)**	0.556 (5.51)**	0.582	0.539 (5.49)**
1=Common colonizer post 1945	1.183 (6.91)**	1.151 (6.77)**	0.983	0.984 (7.89)**	0.962 (6.86)**	0.821	0.870 (5.75)**
AGOA non-Textile impact	0.613 (1.36)	0.403 (0.94)	0.114	0.286 (0.60)	0.410 (0.80)	0.461	0.504 (0.94)
AGOA Textile impact	0.593 (1.44)	-0.293 (0.91)	-0.043	-0.481 (1.55)	-0.842 (2.61)**	-1.523	-1.823 (3.84)**
EBA impact	0.351 (1.45)	0.365 (1.58)	0.079	0.222 (0.77)	-0.067 (0.25)	-0.123	-0.150 (0.43)
Constant	-5.235 (1.94)	-5.186 (1.79)	-5.222	-4.971 (3.06)**	-3.880 (1.75)	-8.503	-10.000 (2.30)*
Reporter fixed effects	YES	YES	YES	YES	YES	YES	YES
Partner fixed effects	YES	YES	YES	YES	YES	YES	YES
R <sup>2</sup>	0.02	0.02	0.02	0.02	0.02	0.02	0.02
N	1,361,247	1,361,247	1,361,247	1,361,247	1,361,247	1,361,247	1,361,247

\* p&lt;0.05; \*\* p&lt;0.01; t-statistics in brackets

Dependent variable: Xijpt	(8)	(9)	(10)	(11)	(12)	(13)
	2009	2010	2011	2012 <sup>b</sup>	2014	2015
lnGdpi	0.647 (0.67)	0.749 (0.94)	0.466 (0.40)	-2.521	-2.867 (5.18)**	-3.645 (5.78)**
lnGdpj	0.952 (2.55)*	0.388 (0.71)	-0.148 (0.19)	-0.802	-0.628 (1.12)	-1.445 (2.84)**
lnGdppci	-0.161 (0.25)	-0.111 (0.25)	-0.128 (0.22)	1.487	1.597 (7.04)**	2.159 (7.30)**
lnGdppcj	-0.350 (1.60)	-0.040 (0.17)	0.286 (0.77)	0.515	0.301 (1.63)	0.821 (3.54)**
lnDistij	-0.912 (18.69)**	-0.918 (19.66)**	-0.875 (18.79)**	-0.877	-0.898 (20.60)**	-0.887 (20.60)**
1=Contiguity	0.148 (2.64)**	0.169 (3.01)**	0.219 (3.84)**	0.226	0.220 (4.06)**	0.173 (3.13)**
1=Common official or primary language	0.575 (5.46)**	0.549 (5.47)**	0.517 (4.95)**	0.455	0.376 (4.17)**	0.477 (4.86)**
1=Common colonizer post 1945	0.712 (4.96)**	0.631 (4.94)**	0.704 (4.74)**	0.757	0.813 (7.26)**	0.947 (8.19)**
AGOA non-Textile impact	0.257 (0.50)	0.372 (0.67)	0.606 (1.09)	-0.008	-0.665 (2.31)*	-0.836 (3.75)**
AGOA Textile impact	-1.724 (4.27)**	-1.641 (5.89)**	-1.835 (4.78)**	-1.988	-1.566 (5.80)**	-1.453 (5.47)**
EBA impact	-0.228 (0.80)	-0.171 (0.65)	-0.045 (0.16)	0.029	0.123 (0.59)	0.187 (1.07)
Constant	-7.672 (2.73)**	-6.292 (2.19)*	-3.396 (0.78)	7.439	8.586 (3.16)**	12.394 (4.89)**
<i>Reporter fixed effects</i>	YES	YES	YES	YES	YES	YES
<i>Partner fixed effects</i>	YES	YES	YES	YES	YES	YES
<i>R</i> <sup>2</sup>	0.02	0.02	0.02	0.02	0.02	0.02
<i>N</i>	1,361,247	1,361,247	1,361,247	1,353,749	1,351,927	1,339,153

\* p<0.05; \*\* p<0.01; t-statistics in brackets

Notes: <sup>a</sup> t-statistics not estimated because the variance matrix is highly singular. <sup>b</sup> Estimations for 2006 and 2013 are not reported because the computation couldn't complete due to name conflict (STATA error code 507).

Table 2: Pseudo Poisson Panel Estimations of AGOA Trade Impact on Sub-Saharan Countries

Dependent variable: Xijpt	(1)	(2)	(3)	(4)	(5)	(6)
	2001-2015	2001-2003	2004-2006	2007-2009	2010-2012	2013-2015
lnGdpi	-1.089 (182.74)**	-1.558 (17.84)**	-1.240 (19.72)**	1.161 (18.74)**	-0.394 (8.14)**	-3.460 (75.17)**
lnGdpj	-0.534 (87.68)**	0.283 (3.34)**	-1.188 (18.12)**	-0.092 (1.43)	-0.860 (16.65)**	-0.839 (24.08)**
lnGdppci	1.691 (267.33)**	2.149 (24.60)**	1.981 (30.18)**	-0.781 (12.79)**	0.847 (16.17)**	3.957 (84.50)**
lnGdppcj	1.260 (200.84)**	0.186 (2.23)*	1.751 (26.24)**	0.522 (8.22)**	1.644 (29.93)**	1.484 (41.77)**
AGOA non-Textile impact	-0.069 (7.93)**	0.010 (0.37)	-0.417 (5.92)**	-1.134 (7.60)**	-0.035 (2.01)*	-0.065 (3.52)**
AGOA Textile impact	0.135 (6.88)**	0.559 (11.03)**	0.414 (9.62)**	-0.569 (0.03)	0.079 (1.36)	0.629 (2.70)**
N	20,526,037	2,311,185	2,463,144	2,591,877	2,639,577	2,720,351

\* p&lt;0.05; \*\* p&lt;0.01; t-statistics in brackets

Notes: Reporter-partner-product and time fixed effects panel estimations. EBA was dropped from the estimations because of multicollinearity. Bilateral traditional gravity variables such as distance, contiguity and common language were also dropped for the estimations because of constant values in groups.

Table 3: Pseudo Poisson Panel Estimations of AGOA and EBA Trade Impact on Western African Countries

Dependent variable: Xijpt	(1)	(2)	(3)	(4)	(5)	(6)
	2001-2015	2001-2003	2004-2006	2007-2009	2010-2012	2013-2015
lnGdpi	-1.088 (182.52)**	-1.525 (17.50)**	-1.248 (19.85)**	1.160 (18.73)**	-0.391 (8.10)**	-3.458 (75.14)**
lnGdpj	-0.534 (87.66)**	0.283 (3.35)**	-1.192 (18.18)**	-0.092 (1.43)	-0.859 (16.63)**	-0.839 (24.08)**
lnGdppci	1.690 (267.12)**	2.115 (24.25)**	1.990 (30.32)**	-0.781 (12.78)**	0.845 (16.13)**	3.956 (84.47)**
lnGdppcj	1.260 (200.85)**	0.182 (2.18)*	1.755 (26.30)**	0.522 (8.22)**	1.642 (29.91)**	1.483 (41.76)**
AGOA non-Textile - Western Africa	-0.307 (10.29)**	-0.000 (0.00)	-0.300 (4.25)**	-1.386 (8.14)**	-0.005 (0.09)	0.717 (0.70)
AGOA Textile - Western Africa	0.560 (1.83)	1.045 (1.54)	-1.182 (0.12)	-0.569 (0.03)	-1.533 (0.86)	
EBA - Western Africa	3.918 (0.45)	3.064 (0.16)				
N	20,526,037	2,311,185	2,463,144	2,591,877	2,639,577	2,720,351

\* p&lt;0.05; \*\* p&lt;0.01; t-statistics in brackets

Notes: Reporter-partner-product and time fixed effects panel estimations. Bilateral traditional gravity variables such as distance, contiguity and common language were also dropped for the estimations because of multicollinearity. EBA is not included in specifications (3)-(6), and AGOA Textile in (6) because of multicollinearity.

Table 4: Estimated Marginal Trade Effects of AGOA and EBA

	AGOA non-Textile Overall	AGOA Textile Overall	EBA Overall	AGOA non-Textile Western Africa	AGOA Textile Western Africa	EBA Western Africa
2001-2015	-7%	14%		-26%	75%	4,930%
2001-2003	1%	75%		0%	184%	2,041%
2004-2006	-34%	51%		-26%	-69%	
2007-2009	-68%	-43%		-75%	-43%	
2010-2012	-3%	8%		0%	-78%	
2013-2015	-6%	88%		105%		
2001	85%	81%	42%	184%	-100%	130%
2002	50%	-25%	44%	94%	-94%	137%
2003	12%	-4%	8%			
2004	33%	-38%	25%	220%	-98%	49%
2005	51%	-57%	-6%	302%	-99%	67%
2006				221%	-99%	32%
2007	59%	-78%	-12%	314%	-99%	8%
2008	66%	-84%	-14%	234%	-100%	-30%
2009	29%	-82%	-20%	127%	-100%	29%
2010	45%	-81%	-16%	164%	-99%	-35%
2011	83%	-84%	-4%			
2012	-1%	-86%	3%	-10%	-98%	-49%
2013				-36%	-100%	-49%
2014	-49%	-79%	13%	-78%	-99%	-49%
2015	-57%	-77%	21%	-83%	-99%	-38%

Note: The marginal effects are calculated as  $(e^{\text{estimated\_coefficient}} - 1)$ . Grey highlights indicate that the marginal effect is calculated with a coefficient that is not statistically significant.



When focusing on West African countries (table 3), we find that the textile provision of the AGOA didn't induce more export of apparel to the US. All the estimated coefficients are either not statistically significant (AGOA textile), or statistically significant but negative (AGOA general provision). By contrast, the estimated EBA coefficients are large and positive, although not statistically significant. This seems to corroborate the fact that ECOWAS countries trade more with the EU, and on a diversified basis (figure 3).

Despite their deeper regional integration (cf. section 1) as well as their fairly diversified trade to the EU (cf. section 3), ECOWAS countries appear to benefit less from the two major preferential trade agreements providing access to the EU and the US markets. Many reasons could explain this poor performance. With regards to EBA, which covers only least developed countries, ECOWAS most dynamic countries (Cote d'Ivoire, Ghana and Nigeria) are not beneficiaries. With regards to AGOA, the restrictiveness of the non-textile provision seems also to preclude ECOWAS AGOA beneficiaries from leveraging their diversified trade with EU. This suggests that EBA has the potential to boost export growth and diversification if the rules of origins allow countries with a more diversified export portfolio to the EU to scale up their exports in this major market. It also suggests an extension of the provisions of AGOA to cover more countries and products coupled with a better understanding of beneficiary countries in using the preferential scheme could have a major impact on ECOWAS countries.

The next section tries to quantify the potential exports to the EU and the US that ECOWAS countries could have expected were the best features of these two preferential agreements not differentiating among countries and products.

## **6) Differentiated Impact of AGOA and EBA on ECOWAS Countries**

We use the estimated coefficients on AGOA and EBA variables for each year to simulate the export potential of ECOWAS countries, assuming that AGOA and EBA are formulated to allow full benefit for all ECOWAS countries. For this, we first separate disaggregated bilateral exports between textile and non-textile so that EBA impact can be estimated for textile and non-textile products. We then assume that the full potential of AGOA is estimated by the panel specifications of the equation (1) (cf. table 4, first four rows). Since the largest positive and statistically significant marginal effect is obtained for 2013-2015, we use the estimated 88% more export as the full potential of the AGOA textile provision. Then for each year, we use the difference between this marginal effect and the estimated marginal effect on ECOWAS countries of AGOA non-textile, AGOA textile and EBA (for non-statistically significant coefficients, we just assumed the marginal effect to be zero). We finally aggregate each of these ECOWAS individual export flows, distinguishing between textile and non-textile products, for 2001-2015 (table 5). Figure 4 plots the exports values simulated.

Non-textile products seem to have a larger potential for ECOWAS countries than textile products, and the EU seems to be the market with more potential for ECOWAS countries than the US. While actual ECOWAS exports of non-textile products to the EU varied from less than \$10 billion in 2001 to about \$50 billion in 2014, it would have reached \$110 billion by 2014 if EBA had the same impact on ECOWAS as the textile provision of AGOA had on Sub-Saharan Africa as a whole over 2013-2015, and would have reached \$190 billion if in addition this potential EBA impact was extended to ECOWAS countries not currently beneficiary of EBA (table 5 and figure 4). This means that ECOWAS non-textile exports to the EU in 2014 could have been 4 times more than the level registered. Similarly, ECOWAS textile exports could have

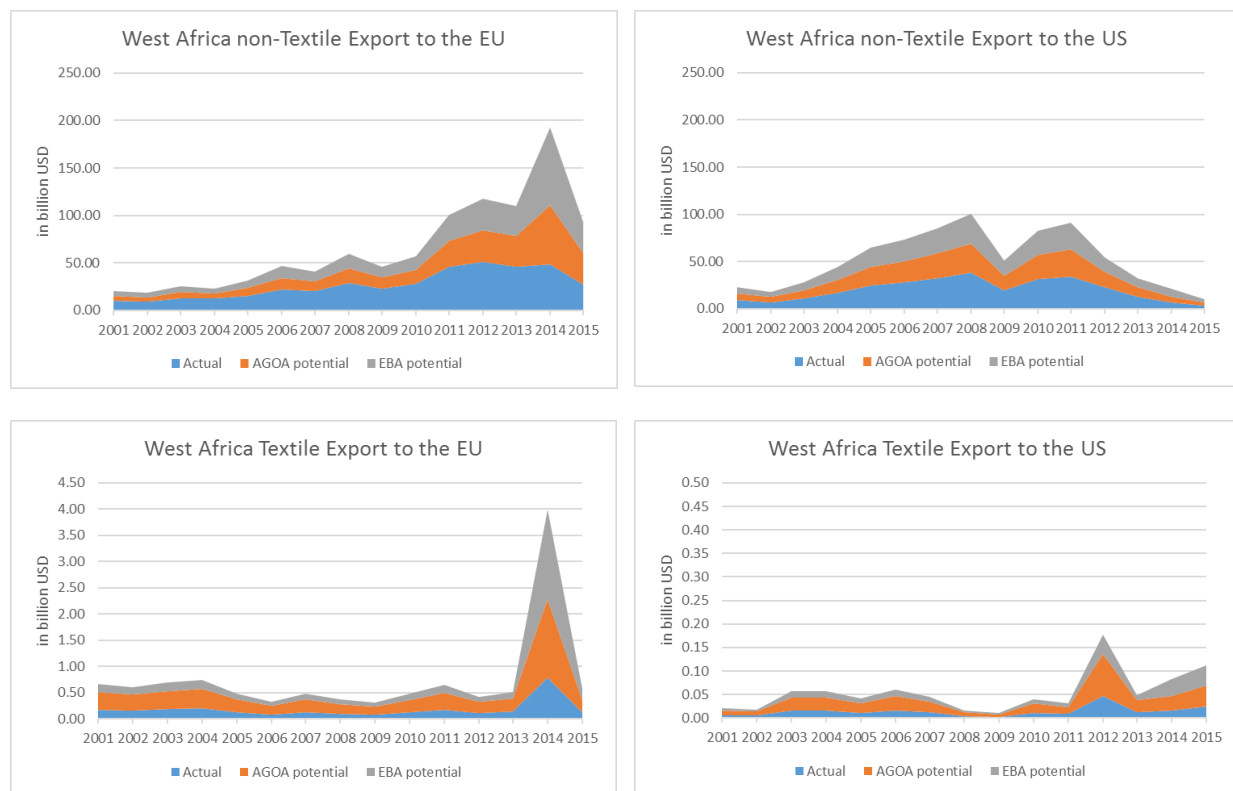
reached nearly \$4 billion by 2014, instead of the registered amount of less than \$1 billion, which means that ECOWAS textile exports to the EU in 2014 could have been 5 times more (table 5 and figure 4). With regards to exports to the US, ECOWAS exports of non-textile products to the US in 2014 could have been about \$20 billion instead of the \$6 billion registered, more than 3 times more (table 5 and figure 4). Similarly, ECOWAS exports of textile products to the US in 2014 could have been nearly \$100 million instead of the registered \$40 million, 5 times more.

Table 5: Potential Trade Impact of AGOA and EBA on ECOWAS Countries

Destination	Year	Non-textile export (in billion USD)			Textile export (in billion USD)			Non-textile	Textile
		Actual	AGOA potential	EBA potential	Actual	AGOA potential	EBA potential	Potential/ Actual	Potential/ Actual
EU	2001	9.64	5.30	5.30	0.18	0.34	0.16	2.10	3.76
EU	2002	9.19	4.63	4.63	0.16	0.30	0.14	2.01	3.70
EU	2003	12.79	6.31	6.31	0.19	0.34	0.16	1.99	3.72
EU	2004	12.19	5.47	5.47	0.20	0.37	0.17	1.90	3.74
EU	2005	15.35	7.93	7.93	0.13	0.24	0.11	2.03	3.75
EU	2006	21.90	12.37	12.37	0.09	0.16	0.08	2.13	3.75
EU	2007	20.22	10.08	10.08	0.13	0.24	0.11	2.00	3.75
EU	2008	28.83	15.51	15.51	0.10	0.19	0.09	2.08	3.76
EU	2009	22.78	11.56	11.56	0.08	0.15	0.07	2.02	3.76
EU	2010	27.59	14.75	14.75	0.13	0.24	0.11	2.07	3.75
EU	2011	45.80	27.36	27.36	0.17	0.33	0.15	2.19	3.75
EU	2012	50.66	33.28	33.28	0.11	0.21	0.10	2.31	3.74
EU	2013	45.72	32.25	32.25	0.14	0.26	0.12	2.41	3.76
EU	2014	48.10	62.89	81.46	0.80	1.49	1.71	4.00	5.02
EU	2015	26.98	32.99	32.99	0.13	0.23	0.21	3.45	4.58
US	2001	8.88	7.16	7.16	0.01	0.01	0.01	2.61	3.76
US	2002	6.87	5.57	5.57	0.00	0.01	0.00	2.62	3.70
US	2003	10.84	8.56	8.56	0.02	0.03	0.01	2.58	3.72
US	2004	16.51	13.63	13.63	0.02	0.03	0.01	2.65	3.74
US	2005	24.26	20.09	20.09	0.01	0.02	0.01	2.66	3.75
US	2006	27.67	22.70	22.70	0.02	0.03	0.01	2.64	3.75
US	2007	31.87	26.43	26.43	0.01	0.02	0.01	2.66	3.75
US	2008	37.81	31.45	31.45	0.00	0.01	0.00	2.66	3.76
US	2009	19.17	15.78	15.78	0.00	0.01	0.00	2.65	3.76
US	2010	31.29	25.67	25.67	0.01	0.02	0.01	2.64	3.75
US	2011	34.29	28.36	28.36	0.01	0.02	0.01	2.65	3.74
US	2012	22.90	15.84	15.84	0.05	0.09	0.04	2.38	3.74
US	2013	12.68	9.72	9.72	0.01	0.02	0.01	2.53	3.76
US	2014	6.15	6.50	8.42	0.02	0.03	0.04	3.43	5.02
US	2015	3.57	3.26	3.26	0.02	0.05	0.04	2.83	4.58

Sources: Author's calculations.

Figure 4: Differentiated Impact of AGOA and EBA on ECOWAS Countries



Sources: COMTRADE and author's calculations.

The full set of simulations indicate that ECOWAS exports of non-textile products to the EU or the US could have been on average 2.5 times more than the levels registered, and the exports of textile products could have been 4 times more. This potential for trade creation in a region that has demonstrated commitment to deeper regional integration calls for revisiting the AGOA and EBA provisions to incentivize positive cooperative behaviors.

## 7) Policy Implications

EBA provides the widest product coverage (everything by arms), but only for least developed countries, and with rules of origins that are restrictive relative to AGOA (cf. De Melo and Portugal-Perez, 2013). However, given the initial cost of getting familiar with the requirements to benefit from the general and textile provision of AGOA due to the language barrier (most of ECOWAS countries are former French colonies), ECOWAS has tended to trade more with the EU. This has led to a fairly diversified export basket to that destination (cf. figure 3). At the same time, the restrictiveness of EBA in terms of the beneficiary countries has precluded ECOWAS most dynamic economies (namely Ghana, Cote d'Ivoire and Nigeria) to take advantage of this diversified export base. Given the quite advanced regional integration process of ECOWAS and WAEMU, and the potential to trigger 2.5 to 4 times more export from these countries to the

EU and the US, a revision of AGOA and EBA, or a special ECOWAS/WAEMU provision intended to tap this potential should be considered. This section provides the rationale for such recommendation.

### *Unleashing the channels of regional spillovers*

In the spirit of the G20 “Africa Compact” spearheaded by Germany, an Aid-for-trade initiative focusing on ECOWAS/WAEMU countries could accelerate export from these countries. It will also certainly trigger three chain reactions that can be considered as channels of regional spillovers:

- A *Distribution* effect from countries directly benefiting from the targeted Aid-for-Trade initiative to their regional economic partners within and outside West Africa through trade in goods and services and cross-border labor and capital movement searching for better opportunities. This will boost for instance the attractiveness of Nigeria, Cote d’Ivoire and Ghana (the three leading West African economies) vis-à-vis major foreign investors looking for hub locations in Africa.
- A *Domino* effect inciting countries close to ECOWAS/WAEMU to join the integration process so as to fully take advantage of the new economic opportunities generated by the coordination of foreign aid (Morocco recent application for ECOWAS membership confirms the relevance of such domino effect). Other neighboring countries such as Cameroon and Mauritania might benefit from such move too.
- A *Demonstration* effect encouraging other subgroup of countries to deepen their regional integration processes to take advantage of the coordinated Aid-for-Trade initiative. For instance, countries like Cameroon and Gabon could be induced to overcome their longtime rivalries and take the lead in the integration effort in the Central African neighborhood including Chad, Central African Republic, the Democratic Republic of Congo, and Congo.

The World Bank could take the lead in reorienting the debate on Africa’s development challenge by moving from a “country-specific” to a “neighborhood-specific” approach to efficiently use foreign aid and by the same token reduce the risk of cross-border conflicts by increasing economic inter-dependence of the member countries.<sup>7</sup>

### *Promoting a “Contract with African Neighborhoods”*

Once these initial moves have helped to form African regional economic communities ready to deepen their economic cooperation, the international community could shift to a specific “Contract with African Neighborhoods” involving leading and lagging countries of the neighborhoods as well as the donors’ community providing the right incentives to ensure developmental regional cooperation initiatives.

For each of these neighborhoods, the contract could involve governments of leading and lagging countries and the international community. To be more specific, the governments of East, Central, Southern and West Africa could commit to:

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<sup>7</sup> Martin, Mayer and Thoenig (2008) show that countries interacting economically a lot with their neighbors are less likely to engage in an armed-conflict.

1. Establishing “African Economic Areas” that would tie the economic interests of leading and lagging countries in Africa’s regional neighborhoods tightly together.
2. Allowing and maintaining the free movements of labor, capital, goods and services within these areas.
3. Maintaining and protecting access routes between land-locked countries and outlets for trade, as well as providing the political space to support investment in regional infrastructures essential for the neighborhood.

In exchange for these cross-country actions, bilateral and multilateral development partners could commit to:

1. A large increase in international financial assistance for improved social services and other life-sustaining infrastructure aimed at raising living standards and creation of portable human capital in lagging countries such as world-class secondary and education.
2. Increased financial support for growth-sustaining infrastructure—including ports, transport links, information and communication technology—in the leading countries where economic take-off is most likely, as well as infrastructure to link the markets of leading countries with labor, capital, goods and ideas from their lagging neighbors.
3. Preferential access to the markets of high-income countries for Sub-Saharan Africa’s exports, without strict rules of origin or eligibility criteria that impede rapid growth of trade in intermediate inputs with other developing countries.

The large export potential estimated in this paper for ECOWAS if AGOA and EBA were revised to eliminate the differentiated eligibility criteria and rules of origin provides a rationale to jumpstart the implementation of such contract with the West African Neighborhood.

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Table A1: Year-by-year TOBIT Estimations, Sub-Saharan-wide Trade Impact of AGOA and EBA

Dependent variable: Xijpt	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	2001	2002 <sup>b</sup>	2004	2005	2006 <sup>a</sup>	2007	2008
lnGdpi	0.001 (0.00)	-0.222 (0.19)	-0.461 (0.82)	-0.544 (0.67)	1.610	0.384 (0.53)	1.583
lnGdpj	0.465 (1.74)	0.787 (2.40)*	1.039 (3.61)**	0.673 (2.38)*	0.856	0.917 (2.22)*	0.736
lnGdppci	-0.080 (0.11)	0.185 (0.21)	0.526 (1.33)	0.277 (0.49)	-0.862	-0.173 (0.38)	-0.823
lnGdppcj	0.104 (0.53)	-0.179 (0.70)	-0.361 (1.67)	-0.053 (0.28)	-0.051	-0.243 (0.91)	-0.082
lnDistij	-0.791 (15.24)**	-0.809 (14.17)**	-0.859 (17.91)**	-0.888 (18.24)**	-0.896	-0.917 (21.28)**	-0.925
1=Contiguity	0.137 (2.18)*	0.146 (2.30)*	0.122 (2.06)*	0.139 (2.37)*	0.145	0.125 (2.32)*	0.156
1=Common official or primary language	0.556 (5.54)**	0.584 (5.78)**	0.589 (6.15)**	0.526 (5.47)**	0.491	0.552 (6.16)**	0.514
1=Common colonizer post 1945	1.178 (6.38)**	1.161 (6.23)**	1.080 (7.01)**	1.068 (6.87)**	0.835	0.914 (6.32)**	0.933
AGOA non-Textile impact on Western Africa	1.045 (1.06)	0.665 (0.72)	1.163 (1.24)	1.391 (1.43)	1.166	1.420 (1.43)	1.207
AGOA Textile impact on Western Africa	-8.562 (8.33)**	-2.780 (3.90)**	-3.772 (6.46)**	-4.426 (6.90)**	-4.386	-4.643 (7.27)**	-6.324
EBA impact on Western Africa	0.831 (1.28)	0.861 (1.75)	0.401 (0.66)	0.513 (0.79)	0.278	0.080 (0.12)	-0.351
Constant	-5.196 (2.02)*	-5.422 (1.94)	-5.165 (3.30)**	-3.570 (1.66)	-9.862	-6.548 (2.83)**	-9.489
Reporter fixed effects	YES	YES	YES	YES	YES	YES	YES
Partner fixed effects	YES	YES	YES	YES	YES	YES	YES
R <sup>2</sup>	0.02	0.02	0.02	0.02	0.02	0.02	0.02
N	1,361,247	1,361,247	1,361,247	1,361,247	1,361,247	1,361,247	1,361,247

\* p&lt;0.05; \*\* p&lt;0.01; t-statistics are in brackets

Dependent variable: Xijpt	(8)	(9)	(10)	(11)	(12)	(13)
	2009	2010	2012	2013	2014	2015
lnGdpi	0.481 (0.51)	0.547 (0.72)	-2.474 (2.88)**	-2.665 (2.61)**	-2.650 (4.91)**	-3.387 (5.43)**
lnGdpj	0.964 (2.58)**	0.385 (0.71)	-0.811 (1.10)	-1.194 (1.54)	-0.654 (1.16)	-1.550 (3.06)**
lnGdppci	-0.033 (0.05)	0.006 (0.01)	1.463 (3.86)**	1.339 (2.88)**	1.517 (7.27)**	2.059 (7.17)**
lnGdppcj	-0.357 (1.64)	-0.036 (0.15)	0.519 (1.63)	0.497 (1.77)	0.309 (1.68)	0.849 (3.67)**
lnDistij	-0.916 (19.69)**	-0.914 (20.41)**	-0.874 (18.94)**	-0.917 (21.46)**	-0.892 (21.35)**	-0.869 (20.62)**
1=Contiguity	0.150 (2.73)**	0.175 (3.20)**	0.226 (4.01)**	0.225 (4.14)**	0.219 (4.08)**	0.181 (3.30)**
1=Common official or primary language	0.553 (5.41)**	0.522 (5.49)**	0.462 (5.05)**	0.364 (4.08)**	0.391 (4.39)**	0.470 (4.80)**
1=Common colonizer post 1945	0.775 (5.12)**	0.687 (4.88)**	0.730 (4.59)**	0.508 (3.65)**	0.769 (6.77)**	0.926 (7.80)**
AGOA non-Textile impact on Western Africa	0.818 (0.83)	0.970 (1.01)	-0.101 (0.11)	-0.449 (0.52)	-1.512 (2.14)*	-1.792 (2.49)*
AGOA Textile impact on Western Africa	-6.493 (17.44)**	-5.224 (10.27)**	-4.183 (8.07)**	-5.410 (9.24)**	-5.171 (8.12)**	-4.342 (7.52)**
EBA impact on Western Africa	0.255 (0.57)	-0.431 (0.85)	-0.664 (1.56)	-0.675 (1.52)	-0.682 (2.47)*	-0.485 (1.64)
Constant	-7.298 (2.65)**	-5.724 (2.03)*	7.325 (2.01)*	10.118 (2.43)*	7.962 (2.93)**	11.930 (4.72)**
<i>Reporter fixed effects</i>	YES	YES	YES	YES	YES	YES
<i>Partner fixed effects</i>	YES	YES	YES	YES	YES	YES
$R^2$	0.02	0.02	0.02	0.02	0.02	0.02
$N$	1,361,247	1,361,247	1,353,749	1,358,784	1,351,927	1,339,153

\* p<0.05; \*\* p<0.01; t-statistics are in brackets

Notes: <sup>a</sup> t-statistics not estimated because the variance matrix is highly singular. <sup>b</sup> Estimations for 2003 and 2011 are not reported because the computation couldn't complete due to name conflict (STATA error code 507).