

The **African** Growth and Opportunity Act

JULY 2013

An Empirical Analysis of the Possibilities Post-2015



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Executive Summary

The African Growth and Opportunity Act (AGOA), one of the defining characteristics of the trade and commercial relationship between the United States and Africa, will expire on September 30, 2015. So far, there have been heightened discussions both by African and U.S. policymakers on the post-2015 commercial relationship between the United States and African countries, excluding North Africa. These discussions have largely focused on whether to extend the current legislation, and, if so, for how long, and what elements of the current legislation should be changed. Although there have been propositions as to what may happen under different scenarios, these are not supported by hard empirical evidence and thus are not very useful in informing the design of the post-2015 relationship. As AGOA's extension is debated, it is important to have empirically based analyses of how changes to the legislation could affect trade patterns as well as how changes in the global trading environment could affect U.S.-Africa trade volumes and African economies more broadly.

This report provides an analysis of outcomes of U.S.-Africa trade under five categories of post-2015 scenarios. These scenarios look at the trade and income implications of i) not extending AGOA beyond 2015; ii) expanded product eligibility for AGOA; iii) revisions to the currently eligible countries; iv) a restructuring of AGOA to resemble the economic partnership agreements (EPAs) of the European Union; and v) the effects that a possible EU-U.S. free trade agreement (FTA) could have on AGOA or an EPA-like situation, with an additional scenario examining how a continental free trade area

(CFTA) would play into such an integrated trade environment.

The results indicate, first of all, that should AGOA not be extended and current AGOA-eligible countries revert back to the U.S. Generalized System of Preferences (GSP), then trade losses would be distributed in a very unequal fashion across the continent due to the variation in AGOA-eligible products that are exported by different countries. The results also show that expanding product eligibility for AGOA would only have small effects on the exports coming from AGOA-eligible countries—unless complete duty-free and quota-free (DFQF) market access was granted because the most import-sensitive sectors for the U.S. (e.g., sugar, cotton and clothing) are still where Africa would gain the most. The results of the analysis also show that U.S. producers and exporters would not be affected by providing these additional benefits. In addition, the analysis shows that excluding middle-income countries that are currently eligible for AGOA or adding other non-African least-developed countries (LDCs) that are currently not AGOA-eligible would result in considerable trade losses and increased competition for Africa. Last, the results show that EPA-like agreements could result in large losses in tariff revenue for African countries, but also demonstrate the importance of regional integration because there is a higher increase in intra-African trade when EPAs are in place with a CFTA instead of the currently proposed regional FTAs.

These findings suggest certain recommendations for policymakers, including extending AGOA beyond

2015: Without an extension, there will be declines in African exports, economic diversification and employment for many AGOA-eligible countries. Thus, there remains a strong case for continuing or expanding the current preferences. The results also show the importance for regional integration of allowing African exporters to remain competitive, and making efforts toward offsetting the potential tariff revenue losses that could be experienced with EPAs (or agreements like them) or external FTAs that would compete with African exports. Increased trade assistance and investment will likely be

necessary for countries to ensure sufficient progress in this area. There is also an obvious need for policymakers to examine the idea of granting complete DFQF access to the U.S. market for Africa because of the large benefits it would provide for AGOA-eligible countries and the low cost to the U.S. They should also be careful in considering an extension of AGOA benefits to LDCs outside Africa due to the negative effects it could have for African economies. Last, there is an obvious need for AGOA-eligible countries to further exploit the benefits of the trade preferences available under the legislation.

Introduction

The African Growth and Opportunity Act (AGOA) was signed into law in 2000, marking the beginning of a new trade-focused relationship between the United States and Africa.¹ AGOA provides trade preferences for the continent that, combined with the U.S. Generalized System of Preferences (GSP),² allow for duty-free export access to the U.S. market for up to 6,400 product lines³ coming from 39 countries in Africa.⁴

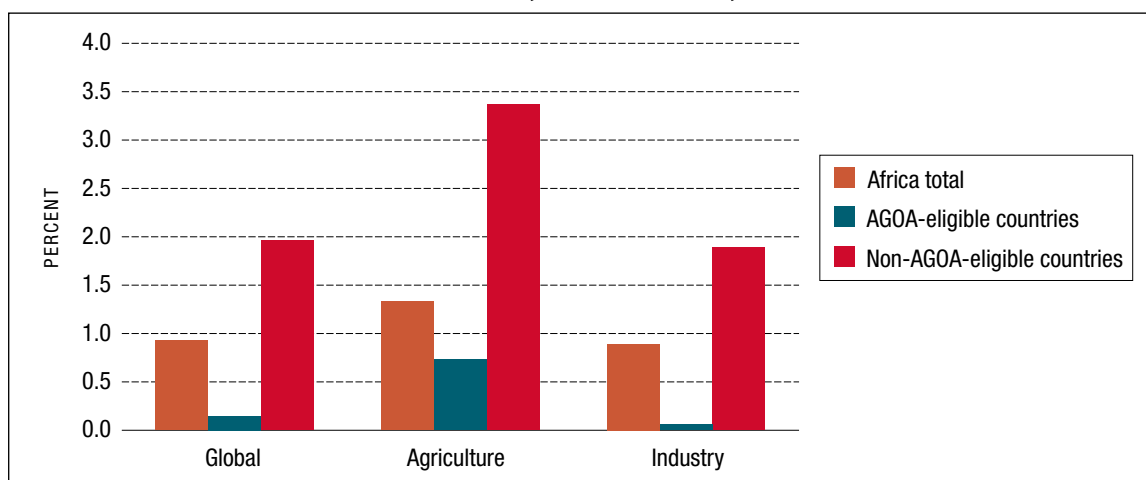
Snapshot of U.S. Market Access under AGOA

As a consequence, Africa currently enjoys excellent access when exporting to the U.S. market,

facing an average protection of less than 1 percent.⁵ While African countries that are not eligible for AGOA face nearly 2 percent protection on their exports to the U.S., AGOA-eligible countries have much better access to the U.S. market, with tariff barriers averaging only 0.15 percent (see figure 1).

However, this average global protection masks strong disparities across sectors and countries. Indeed, the U.S. remains more protectionist on its agricultural imports (especially sugar, cotton and milk) than on its industrial imports from Africa. Nevertheless, even in industry, some key sectors for Africa are still significantly protected, such as textiles and wearing

FIGURE 1. AVERAGE AD VALOREM PROTECTION FACED BY AFRICA ON ITS EXPORTS TO THE UNITED STATES, BY MAIN SECTOR, 2013



Source: Authors' calculations based on MAcMapHS6v2 database.

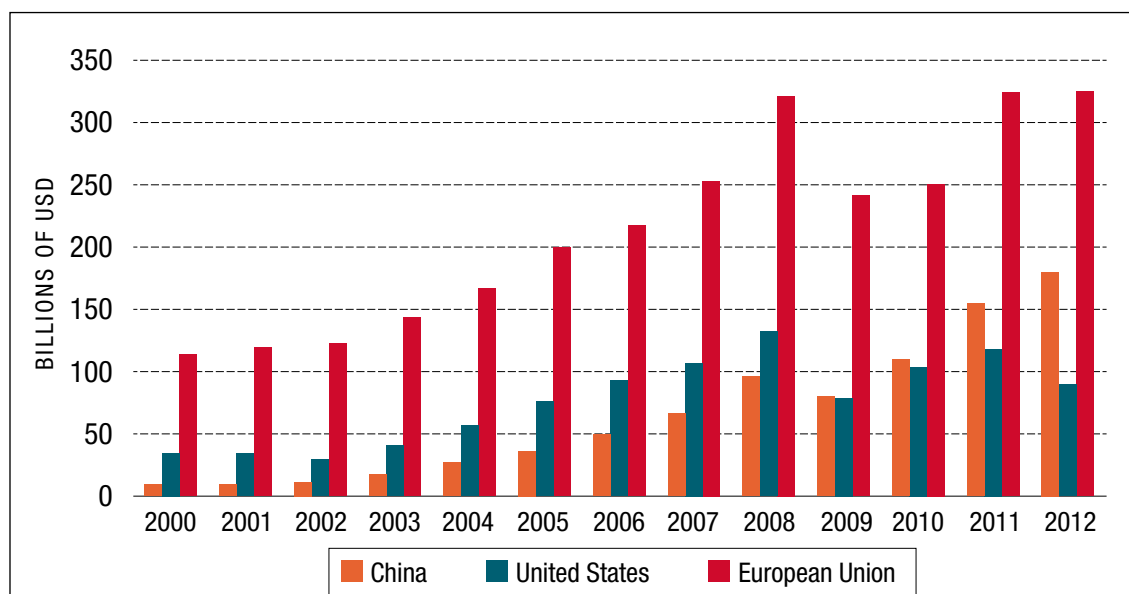
apparel, especially those that are not eligible for the textile and apparel clause under AGOA. As a consequence, a few countries, such as Burkina Faso (a large cotton producer and an AGOA-eligible country) and Madagascar (a large textile and apparel producer and currently not AGOA-eligible), face significant average tariff barriers when exporting to the U.S. (see annex A).

Beyond the better market access obtained by African countries when exporting to the U.S., the first priority for AGOA, as written in the legislation, is to “promote stable and sustainable economic growth and development in Sub-Saharan Africa.”

In fact, since 2000 Africa has seen previously unprecedented levels of economic growth. Many anticipate that the decade ahead will continue with these positive trends because the region is forecasted to remain one of the fastest growing on the planet. Along with its increasing growth rates, Africa has also quickly become a much more desirable region in which to invest and with which to do business.

Trade is expected to play a key role in catalyzing growth and development. Africa’s total trade with its traditional partners, like the European Union, has remained high, and at the same time China, Turkey, India and many other countries have seized the opportunities for mutually beneficial growth and commerce by engaging the continent. China’s trade with Africa was about \$10 billion in 2000, jumped to \$155 billion in 2011, and reached \$180 billion in 2012.⁶ Therefore, and despite AGOA being in place since 2000, China has surpassed the U.S. to become Africa’s second-largest trade partner after the EU (as shown in figure 2). U.S. imports from AGOA-eligible countries have also increased over the last decade, though they declined with the onset of the global financial and economic crisis in 2008 and again in 2012. Total trade between the U.S. and Africa decreased by almost \$30 billion from 2011 to 2012;⁷ mineral oil and fuel exports from Africa constituted a large portion of this decrease—making up about \$22 billion of the total trade decline.⁸ Under these conditions, although AGOA certainly played a key role in reinforcing U.S.-Africa trade relationships, trade preferences

FIGURE 2. TOTAL TRADE VOLUMES FOR CHINA, THE EU AND THE U.S. WITH AFRICA



Source: IMF, Direction of Trade Statistics.

granted by the U.S. have certainly not been fully exploited by Africa.

Looking Beyond 2015

As the U.S. considers its strategy for trade and investment with Africa and the possible extension of the AGOA legislation, understanding the ways in which different forms of engagement could affect trade with the region is crucial. AGOA expires in 2015, and when this time comes there are two obvious options: AGOA could be extended, or it could simply be allowed to expire. If AGOA expires, it would mean the end of extended trade preferences for Africa and a return to earlier trade arrangements under the GSP,⁹ conditional upon the extension of the GSP, which otherwise expires at the end of July 2013. Under the possibility of extension, there are several different scenarios, some in which AGOA's trade benefits could be restructured, others in which it could be continued within the context of a very different external trading environment. AGOA could be restructured in a number of ways: It could include or exclude certain countries; provide different or extended benefits; or provide reciprocal benefits. In addition, such scenarios could also occur within a different global trading environment.

This Report's Structure and Baseline

The following sections of this report present additional descriptions and results for the different possible scenarios that could unfold at the end of 2015. A baseline scenario is used to compare the effects of each of the scenarios described in the report. The baseline scenario proposes an extension of AGOA to 2025, under the same preferential arrangement whereby 26 of the 39 countries under AGOA qualify for the textile and apparel clause. A 10-year timeframe was selected for the extension period in part because it seems the most likely period of time based on recent discussion. It is perceived to be a period that will allow enough time for continued investment in AGOA-eligible countries and sectors that benefit from AGOA-eligibility while also keeping in mind that the rapidly changing global trade environment may prompt the U.S. to enter into different types of preferential trade agreements for Africa in the near future, such as reciprocal negotiated agreements in lieu of unilaterally granted trade preferences. Though shorter or longer periods are possible, the 10-year period will allow for sufficient analysis of trends. Below, five categories of scenarios are compared to the baseline to gauge the effects of changing the AGOA legislation from the status quo.

Category I Scenario: AGOA Expires in 2015

Description of the Scenario

OVERVIEW

AGOA expires at the end of 2015, and the U.S. reverts back to the GSP for Africa, excluding North Africa.

If the AGOA legislation is not reauthorized in 2015, the U.S. would revert to the GSP granted to LDCs. As mentioned above, returning to the GSP would mean that the extra 1,800 product lines for which AGOA provides preferential access would no longer be duty free. The GSP would be the only preferential scheme offered by the U.S. to Africa, which is also granted to 127 other developing countries in the world.¹⁰ The following scenario examines how a return to the GSP would differ from the baseline scenario of a 10-year extension of AGOA to 2025.

Results for the Category I Scenario

The first scenario envisaged in revising the structure of AGOA is a return to the U.S. GSP for all AGOA-eligible countries. Compared to the baseline scenario, which assumes extension of the current AGOA situation until 2025, a return to the GSP provides a better understanding and quantitative evidence regarding how much Africa would lose if a phase out of AGOA were to happen.

It should also be noted that the results for this scenario look not only at the effects upon trade and real income for AGOA-eligible countries individually and as a whole, but also at the effects of AGOA on economic diversification and employment, since comparing an extension of AGOA through 2025 (the baseline) to its expiration in 2015 provides the most obvious evidence of its broader effects.

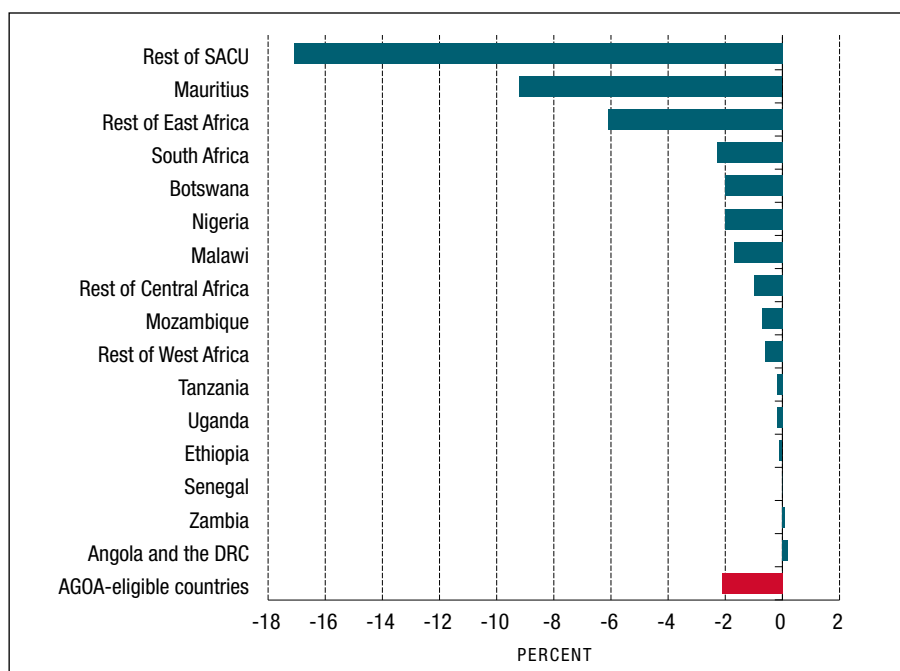
From a protection perspective, annex A shows that the removal of AGOA preferences would not have a large effect upon the access of AGOA-eligible countries to the U.S. market, with average global protection increasing from 0.15 percent under AGOA to 0.76 percent after a return to the U.S. GSP, which continues to be low overall. Therefore, it is evident that the rather good access enjoyed by African countries when exporting to the U.S. is essentially the result of the GSP scheme, thanks to about 4,600 product lines already eligible for DFQF market access under the GSP. This result suggests that the additional 1,800 lines subject to DFQF eligibility under AGOA do not considerably improve the access of African countries to the U.S. market on average. Having said that, some African countries and products would actually see their protection levels soar if AGOA preferences were to be discontinued. For example, the average protection

faced by Botswana and Namibia when exporting agricultural products to the U.S. would pass from fully free access for both countries under AGOA to an average 17.3 percent and 13.0 percent under only the U.S. GSP, respectively. As far as industrial products are concerned, Lesotho, Malawi, Mauritius, Swaziland, Cape Verde and Kenya would also face considerably higher average protection levels on their exports to the U.S. strictly under the U.S. GSP compared to AGOA.

Those higher levels of average protection following a return to the GSP for currently AGOA-eligible countries when exporting to the U.S. translate into export losses for African countries to the U.S. market. A return to the GSP would be detrimental for currently AGOA-eligible countries as a whole because their exports to the U.S. would be reduced by 2.1 percent (or \$1.3 billion) when compared to the baseline in 2025 (see figure 3 and annex G).

Not surprisingly, the countries/regions exporting products to the U.S. that would face the highest tariff increases due to the discontinuity of AGOA preferences would be the ones experiencing the largest export losses. See the methodology section for the countries/region classifications used in this report. For example, as the U.S. average protection imposed on Namibia's exports of agricultural products would increase from 0.0 to 13.0 percent, and the ones imposed on Lesotho's and Swaziland's exports of industrial products would change from 0.0 and 0.4 percent to 11.4 and 6.9 percent, respectively, following a return to the U.S. GSP. The rest of the Southern African Customs Union's (SACU's) total exports to the U.S. would drop by 17.1 percent (see figure 3), with exports of specifically milk and dairy products and textiles and wearing apparel products dropping by 76.2 and 56.2 percent, respectively, as compared to the baseline in 2025 (see annex H). In fact, a phase-out of AGOA preferences would have the largest effect upon several specific categories of products exported from current AGOA-eligible countries to

FIGURE 3. CHANGES IN EXPORTS FROM INITIALLY AGOA-ELIGIBLE COUNTRIES TO THE U.S., FOLLOWING SCENARIOS ASSUMING A RETURN TO THE GSP COMPARED TO THE BASELINE SCENARIO, 2025

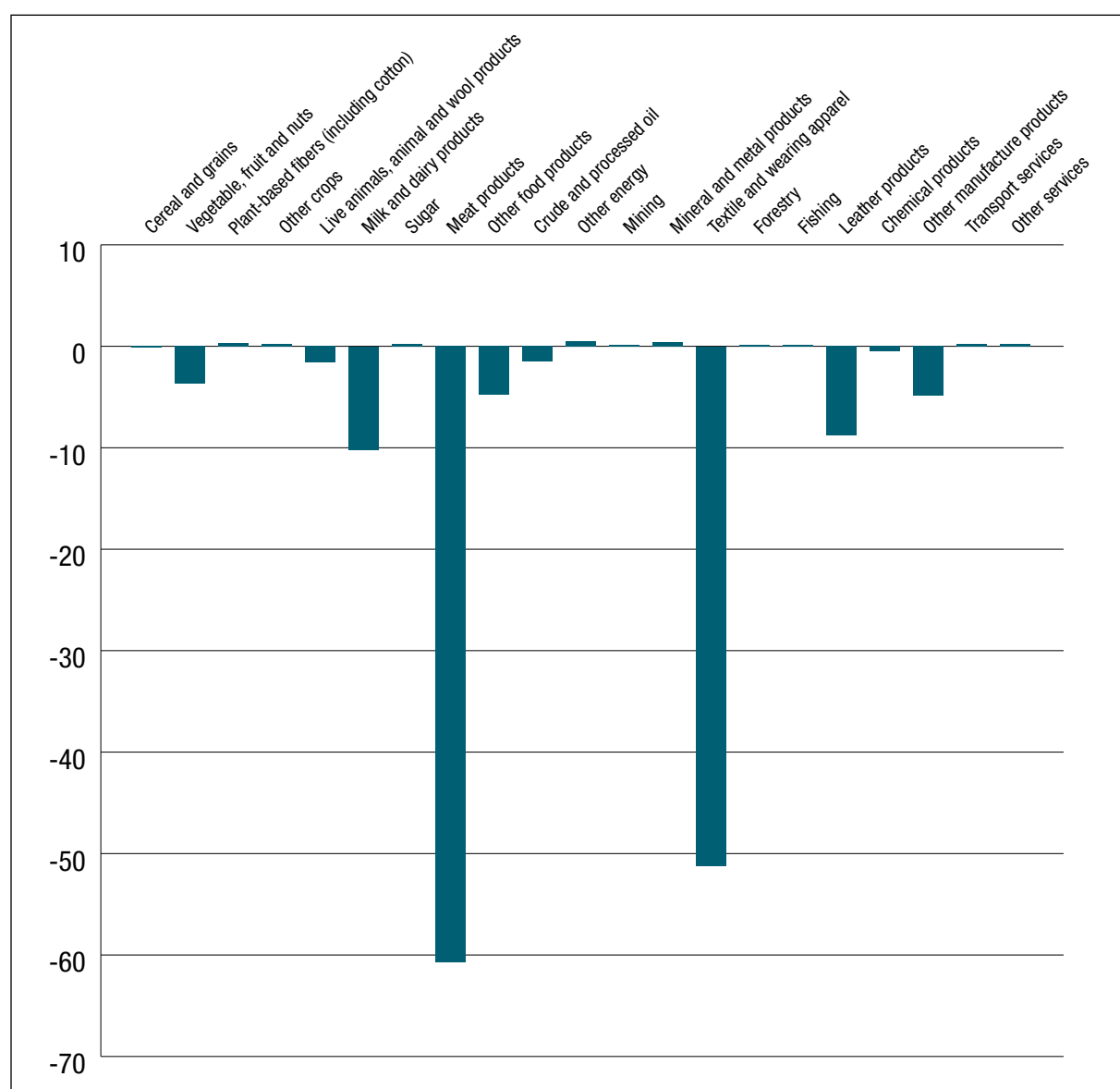


Source: Authors' calculations based on the MIRAGE model.

the U.S. The most affected would be milk and dairy products (-10.2 percent), meat products (-60.7 percent), textiles and apparel products (-51.2 percent) and leather products (-8.8 percent) (see figure 4). Apart from textiles, apparel and leather products—for which the exports reductions from currently AGOA-eligible countries to the U.S. are to be found in nearly all countries and are often large—decreases in exports in other products are generally

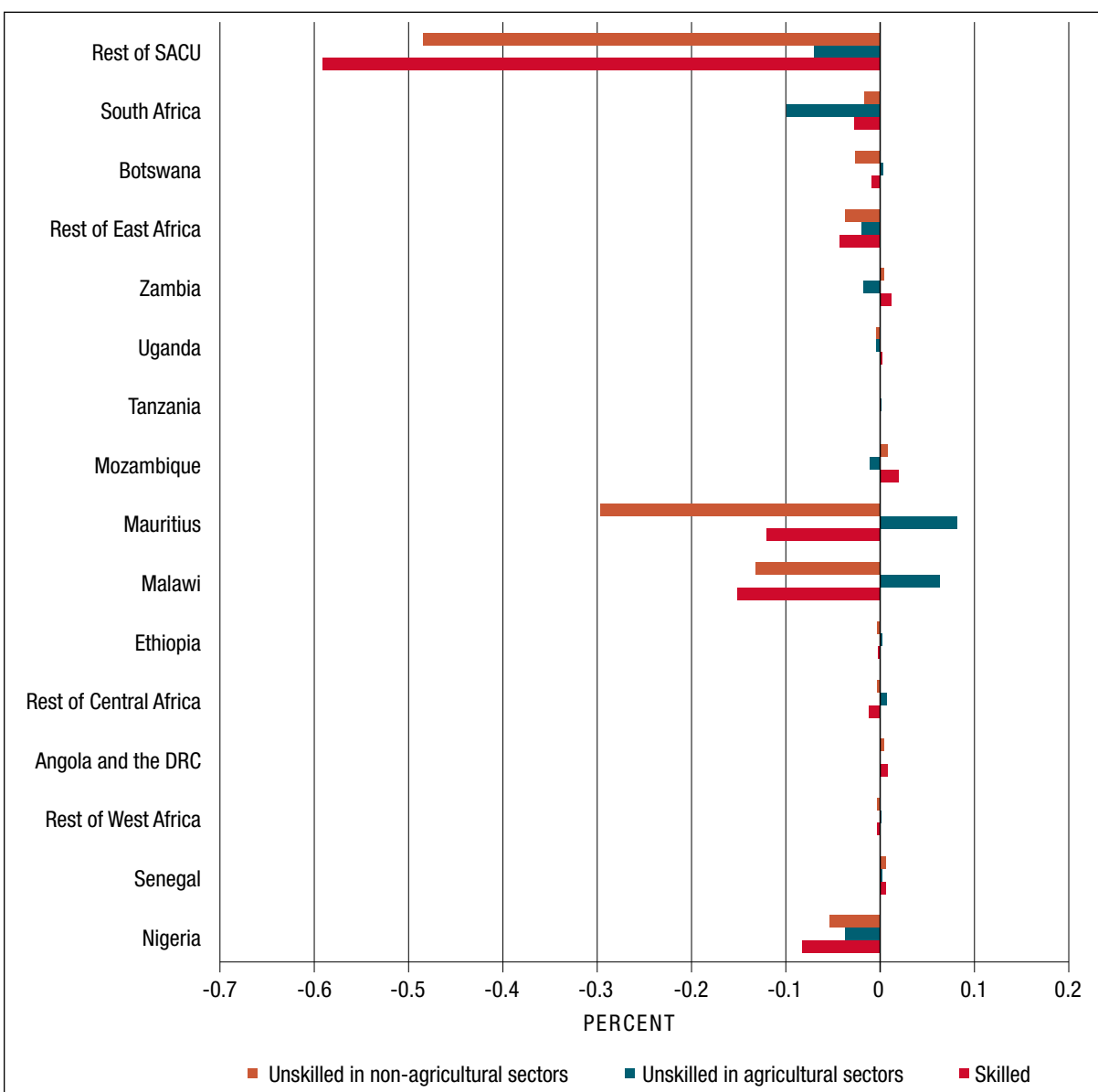
concentrated in a few countries: High export reductions can be observed in milk and dairy products for Nigeria, South Africa and regional groupings,¹¹ such as the rest of SACU, rest of West Africa, rest of Central Africa and rest of East Africa and in meat products for Botswana, Nigeria and South Africa. Lower but still meaningful export losses are registered for South Africa in other food products and other manufactured products, as well as for

FIGURE 4. CHANGES IN EXPORT PRODUCTS FROM AGOA-ELIGIBLE COUNTRIES TO THE U.S., FOLLOWING A SCENARIO ASSUMING A RETURN TO THE GSP COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

FIGURE 5. CHANGES IN PERCENTAGE COMPARED TO THE BASELINE SCENARIO IN 2025 IN REAL WAGES FOR SKILLED WORKERS AND UNSKILLED WORKERS ENGAGED IN THE AGRICULTURAL SECTOR AND UNSKILLED WORKERS ENGAGED IN THE NONAGRICULTURAL SECTOR



Source: Authors' calculations based on the MIRAGE model.

Mozambique, the rest of East Africa, South Africa again and the rest of SACU in vegetables, fruit and nuts, and also for Nigeria in oil (see annex H). The fact that AGOA is having considerably larger trade effects upon certain countries and regions is also indicative of the limited role it has played in diversifying African economies (see figure 4). This

trend tends to highlight the necessity for AGOA to become more inclusive.

Employment

In addition, evaluating the effects upon wages in this scenario demonstrates the effects that a return

to the GSP would have on employment. Generally, a return to the GSP would cause losses—although quite marginal ones—in real wages, but the effects on different regions and sectors vary significantly. Wages for unskilled nonagricultural employment would see very large declines for specific regions, concentrated especially in those with a larger textile and apparel sector, such as the rest of SACU (which includes Lesotho), Mauritius and, surprisingly, Malawi, which does not have a very large textile and apparel sector but which significantly benefits from AGOA and would therefore be very negatively affected should there be a return to the GSP. Wages for unskilled labor in the agricultural sector would not only be negatively affected

for the rest of SACU, but also for South Africa, Nigeria and the rest of East Africa. Wages for skilled labor would be negatively affected in the rest of SACU, Mauritius and Malawi—likely due to the more skilled jobs within some of the industry-related sectors (e.g., textiles and apparel) that would be negatively affected. Many of the other regions not mentioned above would see little or virtually no effects upon wages in these sectors. The countries/regions that would see declines in wages are also the countries that would experience the largest declines in exports should AGOA expire in 2015.¹² Overall, however, it is clear that a return to the GSP would cause large declines in wages for some countries and regions.

These findings indicate that AGOA is clearly supporting African countries' exports to the U.S., higher wages and, implicitly, employment. These gains do, however, seem to be large for only a few countries and products and, as a consequence, a return to the U.S. GSP would affect African economies and sectors quite unequally. Some export sectors, like milk and dairy products, leather, meat products, textiles and apparel, and other manufactured goods would see less exports as a result of the slower growth that these export sectors would experience. Whereas some countries (in particular, Mauritius, Nigeria, Malawi, Botswana, South Africa, and a few countries from the rest of SACU and the rest of East Africa) would be strongly hurt as far as trade and wages are concerned by a return to the GSP. Others would not see their access to the U.S. market worsen or their wages decline considerably after losing AGOA preferences.

Category II Scenarios: Expanding AGOA Product Eligibility

Descriptions of Scenarios

OVERVIEW

- (A) The textile and apparel export provision is granted to all currently AGOA-eligible countries.
- (B) DFQF access is given to 97 percent of all exports from AGOA-eligible countries.
- (C) DFQF access is given to 99 percent of all exports from AGOA-eligible countries.
- (D) DFQF access is given to 100 percent of all exports from AGOA-eligible countries.

The following four scenarios are built on the premise of extending AGOA product eligibility by including more items on the list of eligible commodities available for countries to export to the U.S. under AGOA. The first scenario focuses on textile and apparel products only, while the second, third and fourth scenarios examine what would happen if AGOA is extended to other product lines.

Currently, AGOA provides duty-free export eligibility for textiles and apparel to 26 of the 39 AGOA-eligible countries under the special textile and apparel provision. In order to qualify for the special textile and apparel provision of AGOA, countries must establish a visa system that signifies that they are able to prevent trans-shipment of textile goods as well as effectively monitor and track the sourcing and sale of textiles. In addition to the textile and apparel clause, there is also the third-country fabric rules of origin provision that allows “lesser developed,”¹³ AGOA-eligible, textile-producing countries to source fabric for the production of textiles from other countries regardless of the source.¹⁴ Not all the AGOA eligible countries fall into the category of “lesser developed,” and thus all are not eligible for the third-country fabric rules of origin eligibility.

Whether countries lack the visa for exporting apparel due to low production capacity of textiles and apparel, are not eligible for the third-country fabric provision, or have difficulty regarding the capacity to set up the needed visa system, it would be interesting to understand the ways in which having the textile and apparel provision extended to all currently AGOA-eligible countries would affect exports in this sector. The first scenario (II.A) thus explores this possibility.

For the next three scenarios, extended product eligibility is considered more broadly, but keeping in place the same textile and apparel clauses that existed as of April 2013. AGOA (including the GSP) provides duty-free access to thousands of product lines, but there are still categories of products being exported from AGOA-eligible countries to the U.S. that are not eligible for duty-free status, among them many food and agricultural goods. Agricultural products account for a small percentage of all AGOA-eligible exports to the U.S. Further, certain quotas are imposed on imports of agriculture commodities—such as sugar, tobacco and peanuts—which are important exports for Africa.

Expanding AGOA eligibility to additional product lines could be beneficial for African countries. In the following two scenarios in this category, we assume that DFQF access is extended partially or fully to all exports from AGOA-eligible countries. An index was computed to establish the products that are considered most sensitive to the U.S. market. Import-sensitive products would be those that the U.S. produces that are considered particularly susceptible to competition from foreign imports. The second scenario (II.B) extends DFQF access to 97 percent of AGOA-eligible countries' exports to the U.S., with the remaining 3 percent of the most sensitive sectors for the U.S. market being excluded. The third scenario (II.C) extends DFQF access to 99 percent of AGOA-eligible countries' exports to the U.S., with only 1 percent of sensitive product lines being excluded (e.g., sugar and cotton). And the fourth scenario (II.D) extends DFQF access to 100 percent of AGOA-eligible countries' exports to the U.S.

Results for the Category II Scenarios

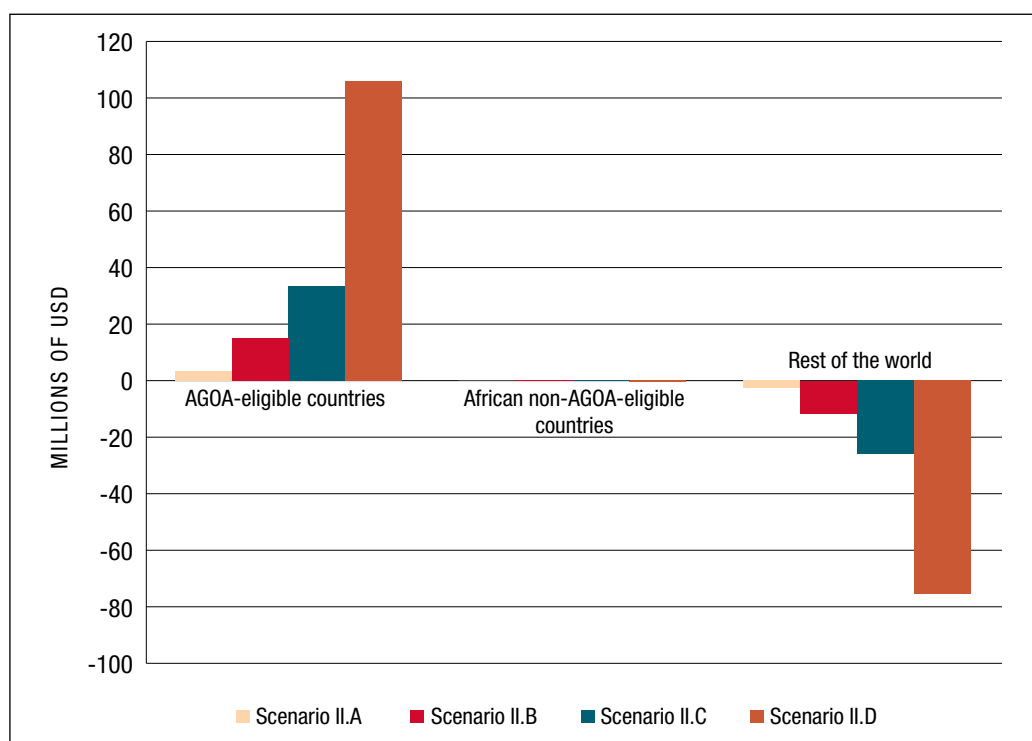
Considering African economies' already good access to the U.S. market, it would be expected that scenarios looking at the extension of AGOA eligibility by product would not translate into a surge of African exports to the U.S. when compared to the product eligibility currently existing under AGOA.

The results of the analysis confirm this assumption. Indeed, current AGOA-eligible countries would only increase their exports to the U.S. by \$3.2 million following an extension of the textile and apparel clause to all AGOA-eligible countries as compared to an extension of the current AGOA situation in 2025 (scenario II.A). In the case of DFQF being extended to 97 percent (scenario II.B) and 99 percent (scenario II.C) of AGOA-eligible countries' exports, then the increase of AGOA countries' exports to the U.S. would also be relatively limited, with an additional \$15.0 million and \$33.3 million, respectively, compared to the reference case in 2025 (see figure 6). Other regions would therefore lose a

slight amount of market access to the U.S., facing higher competition from African countries. However, overall, the changes in legislation would be net trade creating. It is, however, important to note that some African countries/regions would be able to grab more trade opportunities than others—in particular, the rest of West Africa, Ethiopia, Mauritius, Tanzania, the rest of East Africa, South Africa and the rest of SACU would gain some additional export markets to the U.S. (see annex B).

Potential gains can become quite significant at the country/region and sector levels. Table 1, which depicts the highest export increases depending on scenarios exploring AGOA eligibility expansion by product, indicates that when the textile and apparel clause is extended to all 39 AGOA-eligible countries, exports of textiles and wearing apparel products to the U.S. from the rest of Central Africa¹⁵ and the rest of West Africa would increase by 14.8 percent and 9.1 percent, respectively, compared to the baseline scenario in 2025. Not surprisingly, extension of DFQF to up to 97 percent or 99

FIGURE 6. CHANGES IN EXPORTS FROM MAIN REGIONS TO THE UNITED STATES, FOLLOWING SCENARIOS ASSUMING AN EXTENSION OF AGOA ELIGIBILITY BY PRODUCT COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

percent of product lines would provide larger market opportunities to AGOA-eligible countries, thanks essentially to the inclusion of textiles and wearing apparel products not initially part of the textile and apparel clause. For example, Zambia and Nigeria would increase their exports of textiles and apparel to the U.S. by more than 50 percent in 2025 following an extension of DFQF to 99 percent of their exports to the U.S. when compared with current AGOA product eligibility.

Nevertheless, if the remaining 1 percent of protection imposed by the U.S. on its sensitive imports (e.g. sugar, cotton, diamonds, fish and some cereals, as well as textiles and apparel and a few other industrial products) from African countries were to become eligible for DFQF access, then much larger export gains could be registered by African countries. Indeed, while—as already observed—an extension of AGOA-eligible products to 99 percent DFQF would bring an additional \$33.3 million in

2025 compared to an extension of current AGOA, simply adding the residual 1 percent to the DFQF list would increase African exports by another \$72.5 million. Specifically, if African exports were to be granted 100 percent DFQF to the U.S., then African exports of sugar would be considerably boosted, increasing by 121.5 percent, 95.3 percent and 94.9 percent for South Africa, Nigeria and Malawi, respectively, in comparison to an extension of current AGOA product eligibility. Sugar exports to the U.S. would also be enhanced in the rest of SACU and Mauritius; plant-based fiber (essentially cotton) exports from the rest of West Africa (inclusive of Burkina Faso) would also be augmented quite significantly, increasing by 21.7 percent. Africa's exports of textiles and wearing apparel to the U.S. would also rise considerably—increasing by more than 30 percent in Zambia, Nigeria, the rest of West Africa, Tanzania, the rest of Central Africa and Ethiopia, as well as in most other African countries/regions, but in more moderate proportions. Exports of fish from

TABLE 1. HIGHEST CHANGES IN EXPORTS IN THE TEXTILE & APPAREL SECTOR FROM AFRICAN COUNTRIES/REGIONS BY SECTORS TO THE U.S., FOLLOWING SCENARIOS ASSUMING AN EXTENSION OF AGOA ELIGIBILITY BY PRODUCT COMPARED TO THE BASELINE SCENARIO, 2025
(PERCENT CHANGE)

Scenario II.A	
Country/Region	%
Rest of Central Africa	14.8
Rest of West Africa	9.1
Angola and the DRC	2.1
Rest of East Africa	0.7
Scenario II.B	
Country/Region	%
Zambia	47.0
Nigeria	37.4
Rest of Central Africa	15.6
Rest of West Africa	12.8
Angola and the DRC	10.5
Scenario II.C	
Country/Region	%
Zambia	64.2
Nigeria	50.8
Rest of West Africa	32.4
Rest of Central Africa	23.3
Tanzania	22.3

Source: Authors' calculations based on the MIRAGE model.

Senegal, Uganda, the rest of West Africa, South Africa, Mauritius and the rest of Central Africa would increase. Mineral and metal products from the rest of SACU and Malawi, and leather products from South Africa and Mauritius would also significantly increase, although to a lesser extent. Moreover, it is important to note that if the U.S. is to grant 100 percent DFQF to AGOA-eligible countries, then U.S. producers would only see their production diminishing by \$9.6 million, compared to an AGOA extension until 2025 under current conditions.

Thus, expanding AGOA benefits by increasing product eligibility would only deliver significant and better distributed export benefits across African countries if full DFQF access was to be granted by the U.S. to African economies. Moreover, it is important to note that U.S. producers and exporters would not be affected by having such concessions given to African countries.

Category III Scenarios: Revising the List of AGOA-Eligible Countries and Extending AGOA-Like Benefits to Non-African Countries

Description of Scenarios

OVERVIEW

- (A) Middle-income countries are excluded from AGOA.
- (B) Middle-income countries are excluded from AGOA, but all LDCs (African and non-African) are included.
- (C) Middle-income countries are excluded from AGOA, but all LDCs are included, and the textile and apparel provision is extended to all.
- (D) Both middle-income and non-African LDCs are included (but the textile and apparel provision is unchanged from 2013).

We build four scenarios that revise the list of AGOA-eligible countries, including removing some currently eligible countries and extending AGOA-like benefits to some countries outside Africa. Recently, there have been commentary and media reports on the possibility of South Africa being excluded from AGOA. Ideas of whether middle-income countries (MICs) should be excluded or graduated from the benefits of AGOA remain a topic of consideration in policy circles. The first scenario in this section (III.A) revises the list of AGOA-eligible countries to exclude all MICs that are currently benefiting from the legislation.

For the following two scenarios in this category, additional countries receive AGOA benefits but the MICs remain excluded. Congress has introduced bills in the past¹⁶ suggesting the extension of AGOA-like benefits to other developing economies—including countries like Bangladesh, Cambodia and Laos,¹⁷ which are low-income countries but whose production levels in many sectors, like textiles and apparel are very large, in some cases much more than what the whole of Africa produces (e.g., Bangladesh).¹⁸ In that sense, the second scenario (III.B) examines the effects of extending AGOA-like benefits to other LDCs, while still excluding MICs (with no access to the textile and apparel provision). The third scenario (III.C) is the same but also extends the textile and apparel provision eligibility to all LDCs. These scenarios are also aligned with possible DFQF extension to all LDCs under the World Trade Organization (WTO) in the near future, which would imply an erosion of preferences for African countries when exporting to the U.S. market.

In the last scenario in the category (III.D), MICs remain eligible along with non-African LDCs, and the textile and apparel provision is kept as it is today and not extended to additional countries.

Results for the Category III Scenarios

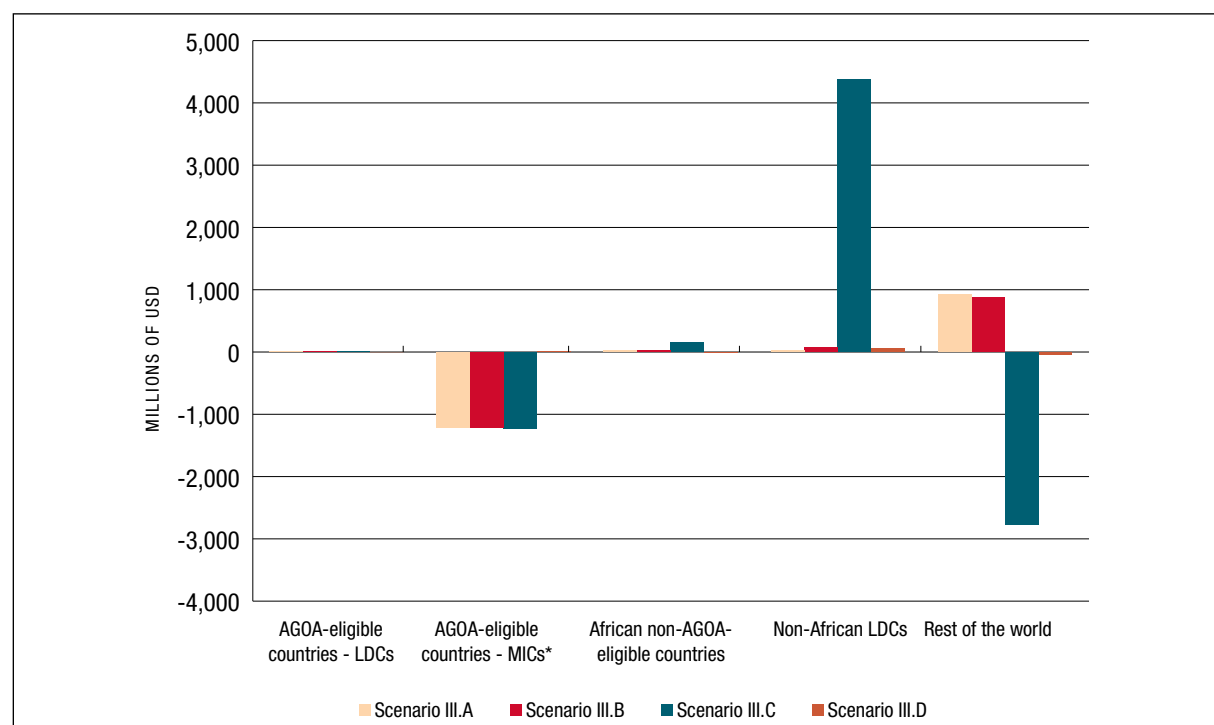
Of the 39 AGOA-eligible countries, 14 are MICs.¹⁹ Losing AGOA preferences (i.e., returning to the U.S. GSP) would imply important trade losses for all African MICs to the U.S. market, thereby offering additional opportunities to export to the U.S. for other countries, especially for those outside the African continent (scenarios III.A, III.B and III.C; see figure 7).

Proportionately, Mauritius would be the most affected if it were to be removed from AGOA, with a decrease of its exports to the U.S. above 9 percent compared to the baseline in 2025, regardless of the scenario envisaged (see annex C). African MICs from the rest of SACU and the rest of East Africa would also register large drops in their exports to the U.S. In absolute terms, Nigeria would be the country losing the most, with a reduction of its exports to the U.S.

being more than \$500 million. This dramatic drop shows how much this oil exporter is currently benefiting from AGOA. Annex 7, which indicates export changes by countries/regions and main sectors, shows that all MICs except Nigeria would mainly see their market access to the U.S. reduced in the textile and apparel markets. Exports from Nigeria to the U.S. would, not surprisingly, decrease in mining and energy, as well as in agriculture and food. Exports to the U.S. in agriculture and food would also be considerably reduced for Botswana and South Africa, essentially due to the loss of preferences for key products such as meat and milk.

LDCs that are currently AGOA eligible would not draw much benefit from the exclusion of initially eligible MICs from the agreement, as LDCs would only marginally increase their market access to the U.S. (scenario III.A). Angola and the Democratic Republic of the Congo (DRC) would register the highest

FIGURE 7. CHANGES IN EXPORTS FROM MAIN REGIONS TO THE U.S., FOLLOWING SCENARIOS ASSUMING REVISIONS OF AGOA ELIGIBILITY BY COUNTRIES COMPARED TO THE BASELINE SCENARIO, 2025



Note: * indicates that some LDCs are also included in the regional groupings defined in the GTAP database (e.g., the rest of West Africa) and cannot be broken down, and therefore LDCs and MICs cannot be separated.

Source: Authors' calculations based on the MIRAGE model.

gains, which would still only be a 0.2 percent (or \$13 million) increase in terms of their exports to the U.S. If the eight African LDCs that are not currently AGOA eligible²⁰ as well as the 15 non-African LDCs²¹ were to also receive the benefits of AGOA (scenarios III.B, III.C and III.D), the main beneficiaries would be non-African LDCs, even though their exports to the U.S. would still remain rather moderate, with up to an increase of 0.2 percent (or \$71.4 million), unless the textile and apparel clause were also granted to them.

The limited gains when the textile and apparel clause is not granted to all LDCs (scenarios III.B and III.D) are consistent with the fact that the protection faced when exporting to the U.S. market for non-African LDCs is essentially concentrated in textile and apparel products. Indeed, non-African LDCs currently face an average global protection rate of 9.2 percent when exporting to the U.S. (see annex D). If these LDCs are to be granted AGOA preferences not including the textile and apparel clause by the U.S., then the level of protection imposed by the American economy on non-African LDCs would still be quite high, standing at 8.9 percent. Nevertheless, assuming that the textile and apparel clause is extended to non-African LDCs, it would make the average global protection level faced by these countries when exporting to the U.S. drop to as little as 0.3 percent—reflecting the fact that protection faced by non-African LDCs when exporting to the U.S. is mainly concentrated in textile and apparel products. As a consequence, unless preferential access is given by the U.S. to non-African LDCs for textile and apparel products, then trade changes cannot be expected to be large. In that sense, assuming that the textile and apparel clause would also be granted to non-African LDCs would hugely enhance trade gains for these countries on the U.S. market. Indeed, if the clause offering DFQF to a number of textile and apparel products

is extended to all LDCs, then non-African LDCs as well as Madagascar would get a boost in their textile and apparel exports to the U.S. While Madagascar's exports of textiles and apparel to the U.S. would increase by 99.9 percent (or \$158.6 million), non-African LDCs' exports to the U.S. of similar products would be augmented by 63.8 percent (representing as much as an additional \$4.5 billion), compared to the baseline in 2025 (see annex C). This considerable trade expansion for the East Asian economies would be essentially and relatively equally divided between Bangladesh and Cambodia, with \$2.2 billion and \$1.9 billion, respectively.

As a result, African countries would face higher competition with East Asian economies when exporting textile and apparel products to the U.S. market and see significantly decreased exports to the U.S. Annex C clearly indicates that all African countries—with the exceptions of Madagascar, Angola and the DRC²²—would see their exports of textile and apparel to the U.S. diminishing if all LDCs were to be granted the textile and apparel clause. As a whole, exports of textile and apparel from AGOA-eligible countries to the U.S. would decrease by 37.5 percent (see annex E) if the textile and apparel clause were to be granted to all LDCs, as compared to the current AGOA situation in 2025.

The results from scenario III.D—which reflect a situation where current AGOA eligibility is preserved, AGOA-eligible MICs are included, and all LDCs are also included (without the textile and apparel clause granted to all)—confirm that textiles and apparel is the category where competition from non-African LDCs would have the largest negative effect on African exports. Thus, unless the textile and apparel clause is granted to all countries, the competition with non-African LDCs should not strongly limit African exports to the U.S.

In brief, African MICs currently eligible for AGOA would suffer considerable trade losses if they were to become ineligible for AGOA. Extending AGOA to all LDCs would only be a concern for African countries if the textile and apparel clause were to be granted to all, in which case the added competition would severely limit African exports to the U.S.

Category IV Scenarios: Restructuring AGOA Based on EPAs

Description of Scenarios

OVERVIEW

- (A) The U.S. has an agreement modeled after the European Union's EPAs.
- (B) The U.S. has an agreement modeled after the European Union's EPAs, while a continental FTA is in place for Africa (unlike the regional FTAs of the normal EPAs).

Category IV consists of scenarios related to changes to the current AGOA legislation. One such possible scenario is for AGOA to be restructured into a form similar to the trade preference agreements being negotiated elsewhere with the countries of Africa. The preferential trade agreements that have been getting the most attention lately are the ones that the European Union is in the process of negotiating with the countries in the African, Caribbean and Pacific (ACP) regions, called economic partnership agreements (EPAs). The EU has had preferential trade agreements with the ACP countries for about 30 years. These agreements have provided preferential market access to the EU in an effort to foster growth and development. The EPAs would be different from these historical agreements in that they would provide partially, though largely, reciprocal trade preferences that would involve the ACP countries opening their markets and in turn providing preferential access to the EU.

These agreements would gather the ACP countries into specific regional groupings. The five African EPA-specified regions are labeled West Africa, Central Africa, and East and Southern Africa, the Southern African Development Community (SADC) and the East African Community (EAC). Only the EAC corresponds completely with an existing African regional economic community (REC), while only SADC corresponds in name with an existing REC (the methodology section contains a complete list of the countries in each regional group and additional information on regional economic groups).²³

The EPAs plan to provide full market access for ACP countries when exporting to the EU, and then reciprocal access for the EU's exports to the markets of the ACP regional groups within an agreed-upon time frame while still providing certain protections for African markets. It is anticipated that 80 percent of EU exports will have DFQF access to these regional markets and, therefore, the 20 percent most sensitive products for African countries will still be excluded. For the scenarios in this report, complete DFQF

access to the EU market will begin immediately (in 2016), and the delayed reciprocity portion will be effective seven years later to allow some demonstration of the effects of these changes.²⁴

Thus, there are two scenarios modeled on the EU's EPAs whereby the U.S. restructures its current trade preference program to be exactly like the EU's EPAs but only for African countries. The first of the two EPA-like scenarios uses the exact same model of the EU, with the African countries of each regional group also establishing an FTA (scenario IV.A); the second scenario has a CFTA in place beginning in 2017 (scenario IV.B), which is the year that the Heads of State and Government of the African Union have decided upon²⁵ for implementing a CFTA.²⁶

Results for the Category IV Scenarios

There has been a fair amount of discussion as to whether a reciprocal agreement between the U.S. and Africa—designed based on the EPAs currently being negotiated by the European Union with the ACP countries—could offer brighter perspectives than a phase-out of AGOA or if it could represent an agreement that is more likely than an extended AGOA, since the EU is currently negotiating these types of agreements.

Before discussing the results of the EPA-like scenarios, it should be noted that one of the disadvantages posed by the EPA design is that the EPAs impose certain structures of regional integration upon the countries with which they propose to cooperate and disincentivize forms of intra-African trade outside those structures. By creating FTAs with specific regions, certain countries are simultaneously being excluded from other relevant EPA-established regional FTAs. For example, the EPA group called SADC includes only some of the countries that are actually part of that regional economic community, namely, Angola, Botswana, Lesotho, Mozambique, Namibia, Swaziland and South Africa. The other members of SADC are the DRC, Malawi, Mauritius, Zambia and Zimbabwe, which have been placed into different EPA regional groups. This means that countries that border one another, like Malawi and Mozambique, will not share a common regional FTA and will not be incentivized to trade with one another to the same degree that those within the EPA-established FTA will.

Therefore, while the following results show indications of increases in trade flows, they do not totally capture the way in which the EPAs are also working against efforts toward increased intra-African trade. The following results also indicate the importance of establishing a CFTA in order to counteract these effects. While a CFTA would help offset the possible declines in intra-African trade that would result from EPAs, it will be costly to finance necessary complementary measures to tariff reductions, such as improved trade facilitation.

Having said that, when one looks at total export variations from countries and regions following implementation of scenarios assuming revisions of the structure of AGOA, it appears that agreements that envisage (asymmetric) reciprocity in terms of tariff barrier reductions between the U.S. and Africa would deliver higher gains than any of the cases analyzed looking at an expansion of AGOA eligibility by products or countries. Indeed, whereas Africa's exports would decrease by \$400 million after a return to the U.S. GSP, the continent would see its exports increasing by \$6.9 billion and \$21.7 billion if EPA-like scenarios were to be concluded between the U.S. and Africa along with establishment of five African regional FTAs or a single African CFTA, respectively, compared to the baseline scenario in 2025 (see annex I for details by country/region).

However, decomposing export variations by destinations of exports show that the trade benefits that Africa would get from such EPA-like scenarios are due to the trade creation within African FTAs

rather than increases in trade between Africa and the U.S.

Indeed, it turns out that none of the African countries would see their exports to the U.S. considerably increase as a result of being granted 100 percent free access to the U.S. market following an EPA-like scenario, as compared to the baseline, assuming extension of current AGOA preferences (see figure 9). There are at least two reasons for this.

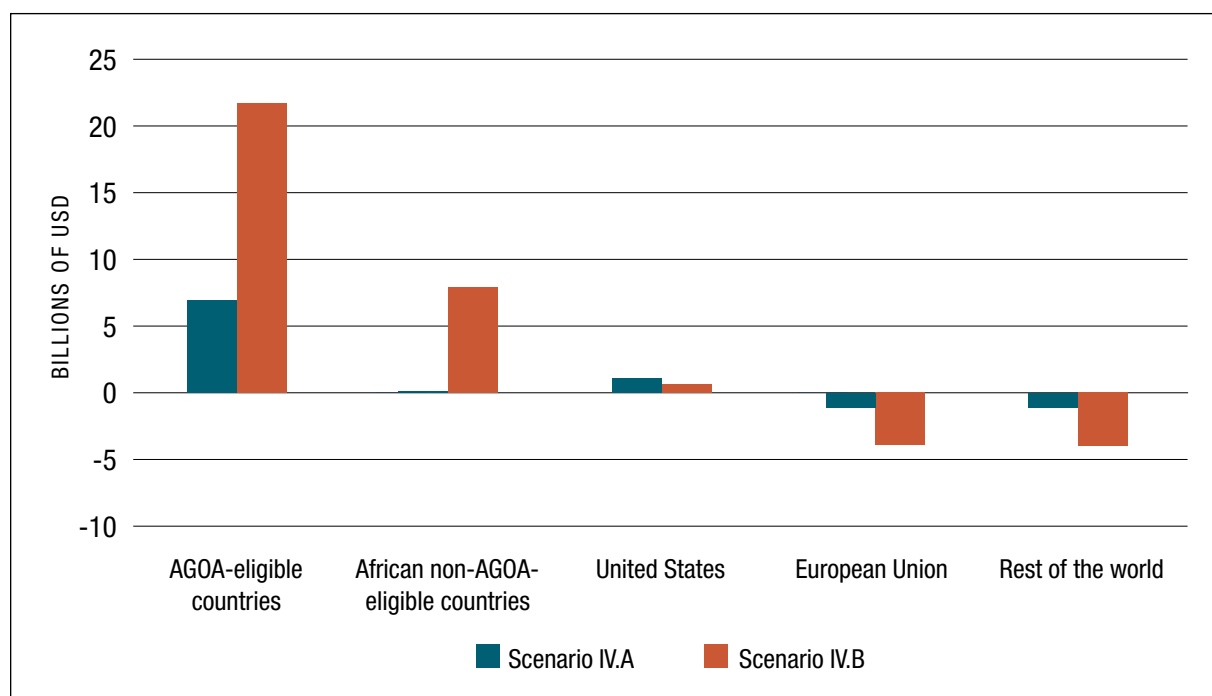
First, since African countries already enjoy relatively good access to the U.S. market, and as observed in the analysis of scenarios looking at extension of AGOA eligibility by products, a surge of exports cannot be expected from fully free access to the U.S. However, some countries, especially those facing initially higher tariff barriers when exporting to the U.S., would get non-negligible export—for example, textile and apparel exporters (e.g., Madagascar, which is non-AGOA eligible, and Mauritius) and exporters of sugar (e.g., Malawi), as well as

those exporting products in high demand outside the African continent (e.g., oil from Nigeria).

Second, African exports to the U.S. are being substituted or replaced (limiting their magnitude or even implying a reduction) by African exports to African partners, thanks to the reduction of often high tariff barriers that would be removed for countries trading with others within their respective regional FTAs. Therefore, EPA-like scenarios between Africa and the U.S. would be trade creating for Africa, thanks mainly to the deepened regional integration in Africa envisaged by the agreement. Figure 10 confirms that Africa's exports directed toward Africa (i.e., intra-African trade) would increase significantly following the establishment of FTAs.

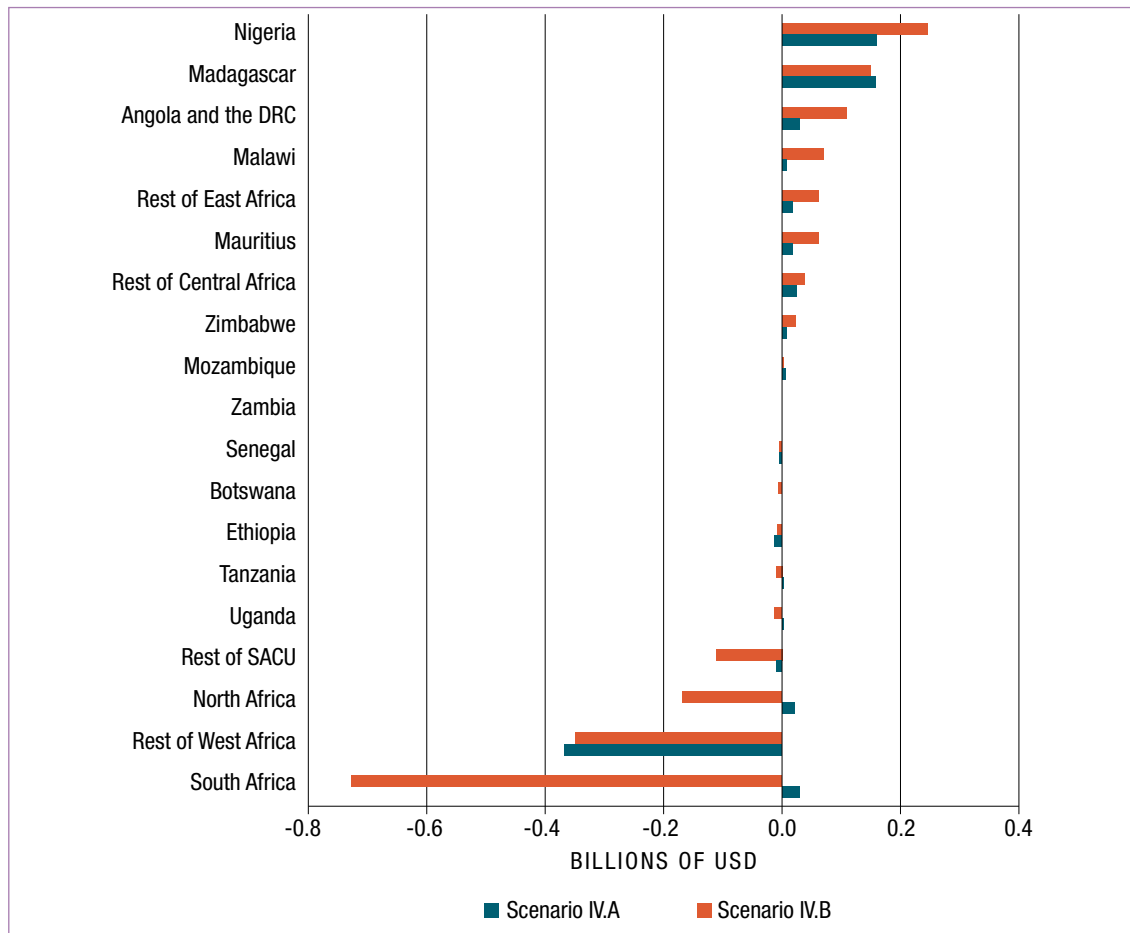
In the context of U.S.-Africa EPAs, the formation of five regional FTAs would contribute to increasing intra-African trade by \$8 billion, while a CFTA would help create as much as \$37.5 billion in intra-African trade, as compared to the baseline of simply

FIGURE 8. CHANGES IN TOTAL EXPORTS FROM MAIN REGIONS, FOLLOWING SCENARIOS ASSUMING REVISIONS OF THE STRUCTURE OF AGOA COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

FIGURE 9. CHANGES IN EXPORTS FROM AFRICAN COUNTRIES/REGIONS TO THE U.S., FOLLOWING SCENARIOS ASSUMING REVISIONS OF THE STRUCTURE OF AGOA COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

extending the status quo AGOA in 2025. As previously alluded to, the large difference in intra-African trade gains between the scenario considering regional FTAs and the one assuming CFTA attests to the still high tariff barriers remaining between regional groupings in addition to those within regional groups (which are already being reduced) and provides a strong argument in favor of an African continent free of tariff barriers to help African countries take advantages of economies of scale and trade opportunities. Furthermore, the above-mentioned intra-African trade gains would only be the results of a reduction or elimination of tariff barriers to trade. Policymakers should consider complementary reforms, such as the adoption of trade facilitation measures on top of FTA re-

forms, which are expected to considerably enhance intra-African trade.²⁷

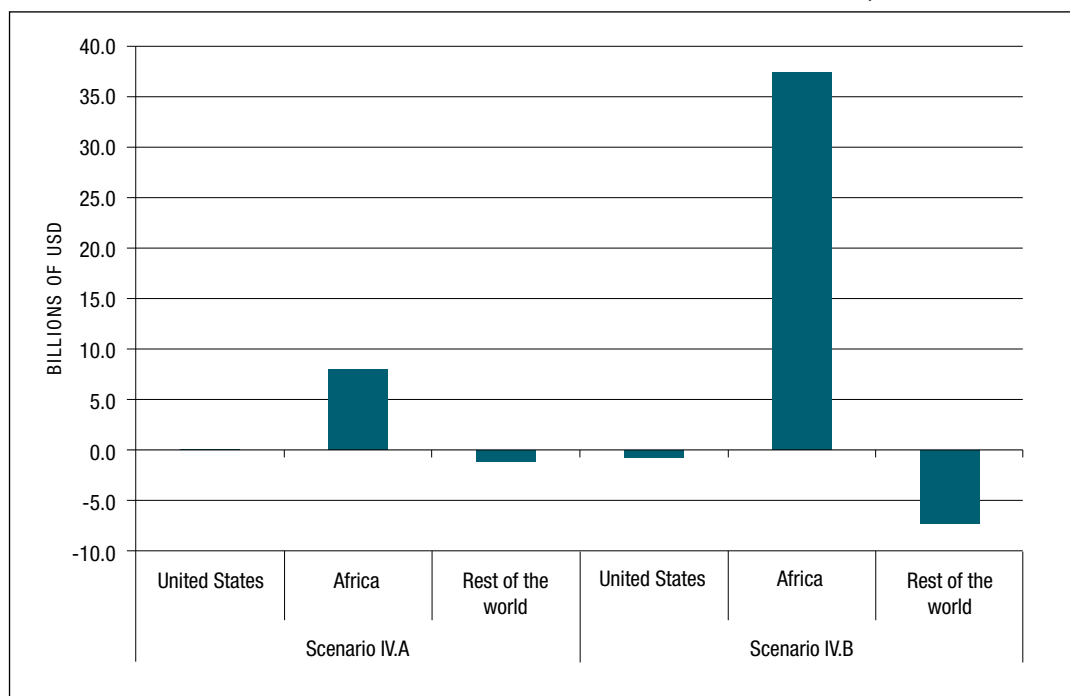
Additionally, a decomposition of these intra-African trade gains from FTA reforms shows that the deeper regional integration in Africa, the stronger the potential to increase the industrialization of intra-African trade. Indeed, gains in textiles and apparel and other industries account for about 55 percent and 62 percent of the total intra-African trade gains, considering FTAs and CFTA, respectively.

As far as the U.S.-Africa trade relationship is concerned, U.S. exports to Africa would increase more

than Africa's exports to the U.S. after the implementation of an EPA-like arrangement between the U.S. and Africa. Indeed, a scenario assuming regional FTAs (scenario IV.A) in Africa would result in an increase of Africa's exports to the U.S. of \$100 million when U.S. exports to Africa would be augmented by \$2.4 billion, compared to the baseline in 2025. In the case of a CFTA within Africa (scenario IV.B), Africa's exports to the U.S. would decline by \$600 million, whereas U.S. exports to Africa would still increase, but by \$1.8 billion (see figure 12). While the reasons for a relatively low increase or even decrease (i.e., scenario considering a CFTA) in Africa's exports to the U.S. have already been given, the increase in U.S. exports to Africa is strictly due to the improved market access for the U.S. when exporting to Africa as implied under the EPA-like scenario. Under a CFTA, however, the U.S. exports less to Africa than when regional African FTAs are established because African countries are offering more competition to the U.S. in the African market, thanks to the lower tariff barriers that would be in place on the African continent.

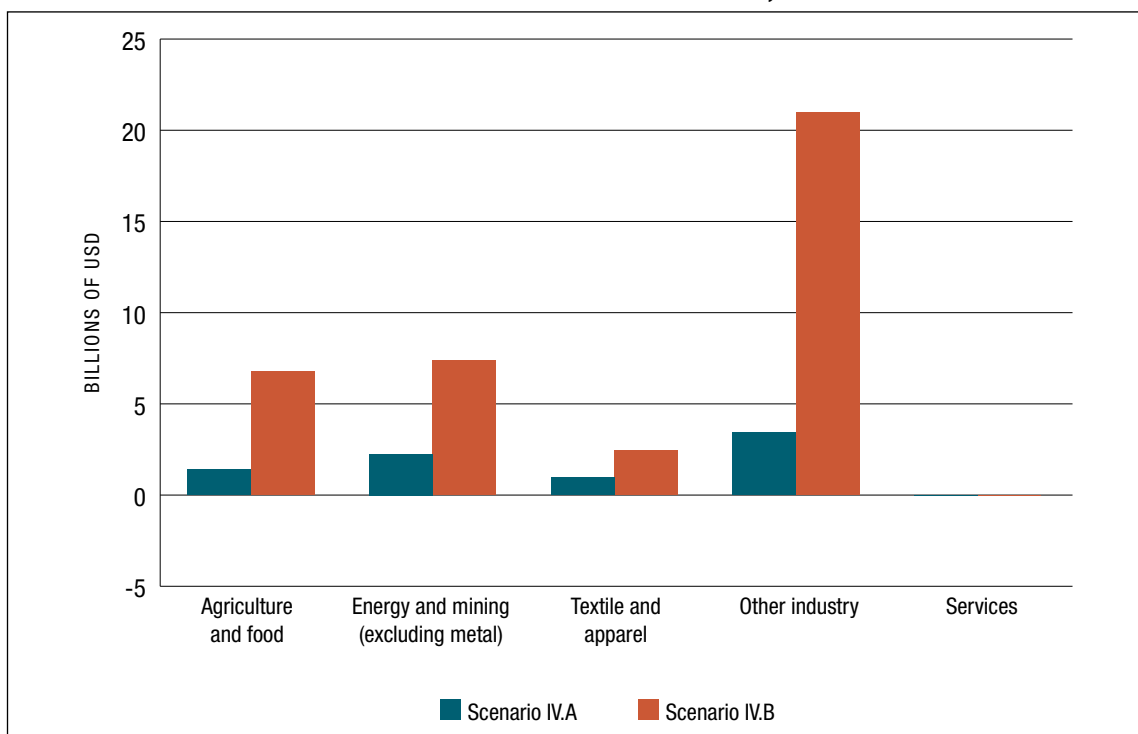
In other words, the U.S.-Africa two-way trade variations under the EPA-like scenarios reveal that although such a trade agreement would be asymmetrical, with Africa apparently required to grant fewer concessions than the U.S.—which would immediately grant 100 percent DFQF on its market to African exports while Africa would progressively open its market to provide 80 percent DFQF to U.S. exports—such an agreement would favor the U.S. in terms of the magnitude of market access gained when exporting and therefore create potential trade benefits. Indeed, average protection faced by Africa, excluding North Africa (as these countries are not part of the EPA-like scenario), when exporting to the U.S. would be lowered to 0.0 percent from an average tariff of about only 1 percent today, thanks to the U.S. GSP and AGOA. At the same time, average protection faced by the U.S. when exporting to Africa would decrease from 11.3 to 9.9 percent.²⁸ Although 9.9 percent remains very high, thanks to 20 percent of Africa's imports from the U.S. being classified as sensitive from an African perspective, it still provides an average 1.4 percentage point

FIGURE 10. CHANGES IN EXPORTS FROM AFRICA BY MAIN DESTINATION, FOLLOWING EPA-LIKE SCENARIOS COMPARED TO THE BASELINE SCENARIO, 2025



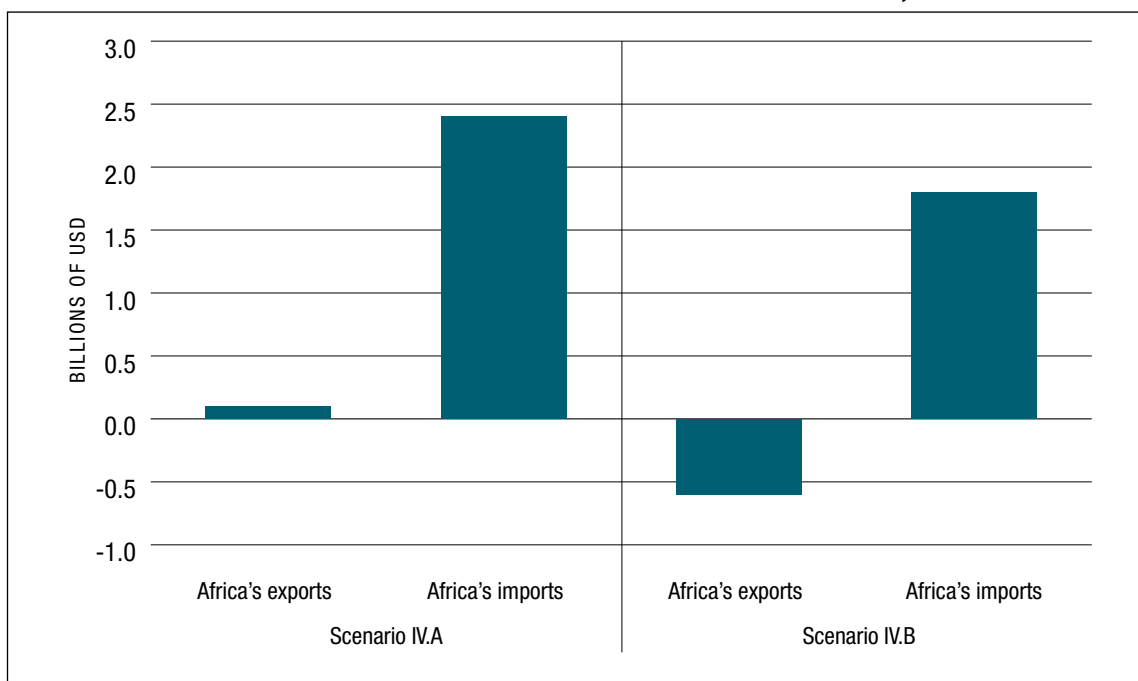
Source: Authors' calculations based on the MIRAGE model.

FIGURE 11. CHANGES IN EXPORTS FROM AFRICA BY SECTOR, FOLLOWING EPA-LIKE SCENARIOS COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

FIGURE 12. CHANGES IN AFRICA'S EXPORTS/IMPORTS FROM/TO THE U.S., FOLLOWING EPA-LIKE SCENARIOS COMPARED TO THE BASELINE SCENARIO, 2025



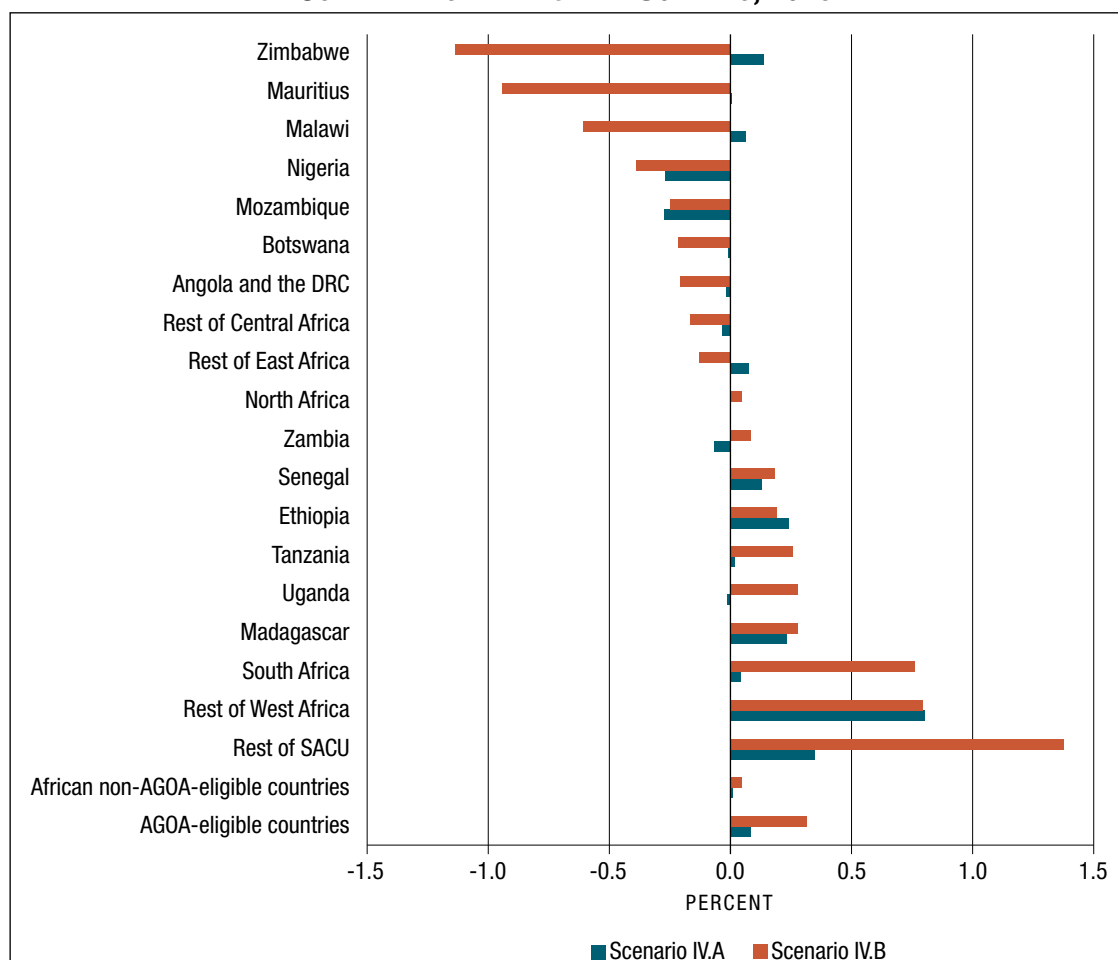
Source: Authors' calculations based on the MIRAGE model.

improvement for a wide range of products in terms of market access.

It is also important to note that despite trade gains for Africa—essentially coming from the regional integration dimension of the EPA-like scenarios—the effects of such scenarios on real income are quite ambiguous. Indeed, although as a whole Africa would increase its real income with the ensuing regional integration, figure 13 and annex J indicate that some countries might be hurt while others might get benefits. Such variable outcomes for African countries could be explained by a number of reasons.

First, some countries initially face higher tariff barriers, not only when exporting to the U.S. but also when exporting to African partners, and thus register significant gains from the liberalization reforms (e.g., the rest of SACU). When these economies are exporting more than importing, this leads to real exchange rate appreciation, improving their real incomes. This is often observed when countries are more diversified in terms of their exports (e.g., South Africa). Second, other countries already enjoy good market access on their exports, which does not improve much following the reforms (e.g., Nigeria, Angola and the DRC). As a result, these countries' imports tend to increase more than

FIGURE 13. CHANGES IN AFRICAN COUNTRIES' REAL INCOME, FOLLOWING EPA-LIKE SCENARIOS COMPARED TO THE BASELINE SCENARIO, 2025

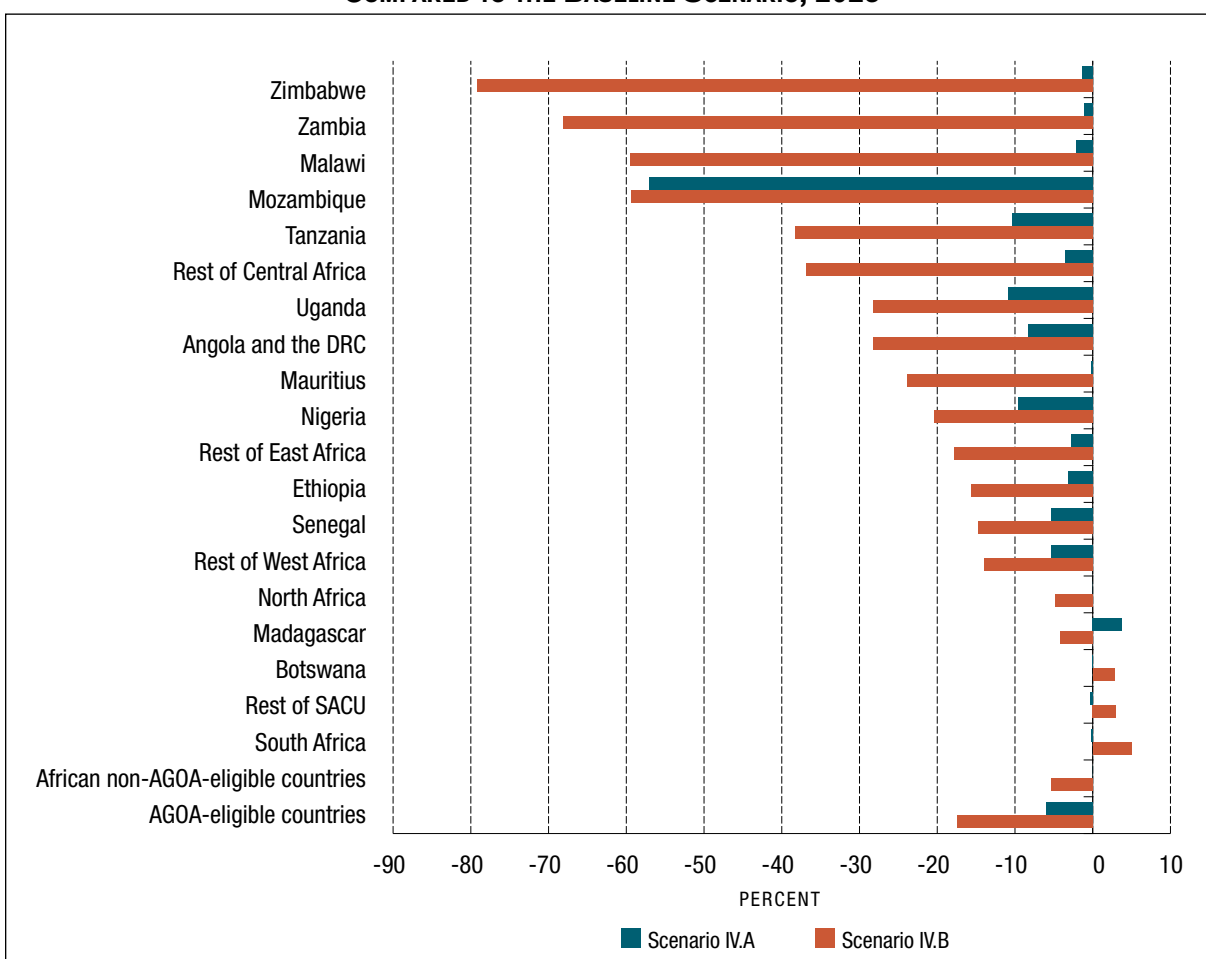


Source: Authors' calculations based on the MIRAGE model.

their exports. It follows that a depreciation of their real exchange rates leads to a decrease in their real income. This especially occurs when a country is strongly dependent upon a few partners and products for its imports (e.g., Botswana depends heavily on South Africa for its imports). Third, and perhaps most important, liberalization implies governments renouncing tariff revenues, which often represent a significant share of their incomes. Therefore,

whenever the trade reforms result in important tariff revenue losses, real income can be negatively affected. Countries such as Zimbabwe, Malawi and Mozambique see their tariff revenues reduced by more than 50 percent after implementation of an EPA-like scenario, assuming a CFTA reform; these countries are among the most hurt in terms of real income following the reform.

FIGURE 14. CHANGES IN TARIFF REVENUES BY AFRICAN COUNTRIES, FOLLOWING EPA-LIKE SCENARIOS COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

The EPA-like scenarios present varying advantages and disadvantages for the U.S. and African countries. The U.S. would see significantly increased exports because its market access on the African continent would greatly improve, but it would actually see less of an increase were a CFTA to be in place because the increases in intra-African trade that would follow such an agreement would compete with U.S. exports.

African countries would experience some trade gains, which would mostly be thanks to deepened regional integration—especially if a CFTA was in place—but these trade gains would be accompanied by varying effects upon real income, with some countries seeing large declines likely due to reductions in tariff revenues. It should be noted, however, that increased trade and transportation facilitation aimed at improving cross-border trade could work to offset some of the potential real income losses.²⁹ However, such measures in and of themselves could be very costly for African countries; therefore, these countries should focus on seeking additional trade assistance.

Category V Scenarios: AGOA within a Different Global Trading Environment

Description of Scenarios

OVERVIEW

- (A) There is an EU-U.S. FTA, and the EU implements its EPAs while the U.S. maintains AGOA.
- (B) There is an EU-U.S. FTA, but both the U.S. and the EU have EPAs with Africa, and there is a CFTA in place in Africa.

Category V scenarios examine the ways that Africa would be affected by the implementation of an FTA between the U.S. and the EU. The possibility of such an agreement has been growing since the U.S.-EU Summit in November 2011, when an exploratory process on the issue began. The idea was publicly announced by President Obama during his State of the Union Address in February 2013, and in March 2013 he officially stated his intent to negotiate such an agreement to Congress. As of May 2013, comments on the topic were being publicly accepted by the Office of the United States Trade Representative.³⁰

While it is too early to know the complete details that may be part of such an agreement, the scenarios for this category are designed using information from the WTO negotiations in the most recent Doha Development Round. In the first scenario (V.A), in addition to the U.S. and the EU having an FTA, the U.S. continues to use AGOA as it is (as of April 2013), and the EU implements EPAs with the five different regional groups. The five regional FTAs take effect in 2017, to provide the most realistic timeframe possible. In the second model of this scenario (V.B), both the U.S. and the EU implement EPAs with Africa, but there is also a CFTA in place within Africa beginning in 2017 (as mentioned above, the year that the African Union has tentatively decided upon for implementing the CFTA).³¹ In both scenarios, the EU-U.S. FTA takes effect in 2017 as well in order to provide a more realistic timeframe for its implementation—it is assumed, for the sake of this scenario, that such an agreement, if signed, would take effect before the end of President Obama's current term.

Results for the Category V Scenarios

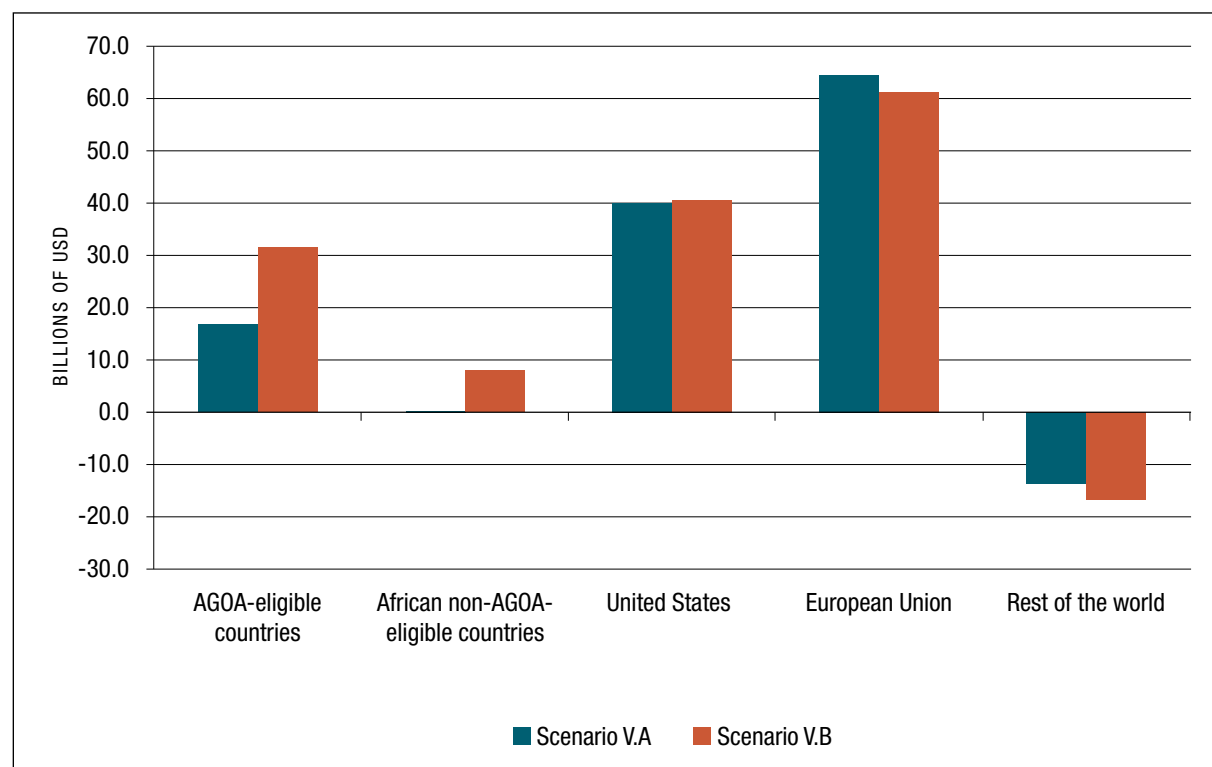
If an FTA is to be established between the EU and the U.S., either in the context of an extension of AGOA in the U.S. and negotiated EPAs between the EU and Africa, or with the U.S. also taking on an EPA-like reform, this could result in the expansion of exports worldwide ranging between \$107 billion and \$124.2 billion (see figure 15 and annex L).

Half the gain would be captured by the EU alone, with the U.S. capturing the next largest piece. Africa, especially the countries that are currently AGOA eligible, would also benefit; the rest of the world not part of any of the above-described agreements would see its exports reduced facing higher competition on EU, U.S. and African markets.

Whereas the large trade benefits for the EU and the U.S. may not appear to be a surprise, the magnitude of the gains for Africa is interesting and deserves scrutiny. In that sense, breaking down the expected export benefits by destination may help one to better understand the outcomes of the assumed reforms.

To begin, the EU-U.S. trading relationship would be strongly reinforced, thanks essentially to the establishment of an FTA between the two giant economies. Indeed, both U.S. exports to the EU and EU exports to the U.S. would increase by more than \$50 billion (i.e., about an 11 percent increase in U.S. exports to the EU and a 10 percent increase in EU exports to the U.S.) resulting in an augmentation of two-way trade between the EU and the U.S. by over \$100 billion, compared to the baseline scenario in 2025 (see annexes M and N).

**FIGURE 15. CHANGES IN TOTAL EXPORTS FROM MAIN REGIONS, FOLLOWING SCENARIOS
LOOKING AT A DIFFERENT GLOBAL ENVIRONMENT COMPARED TO THE BASELINE SCENARIO, 2025**



Source: Authors' calculations based on the MIRAGE model.

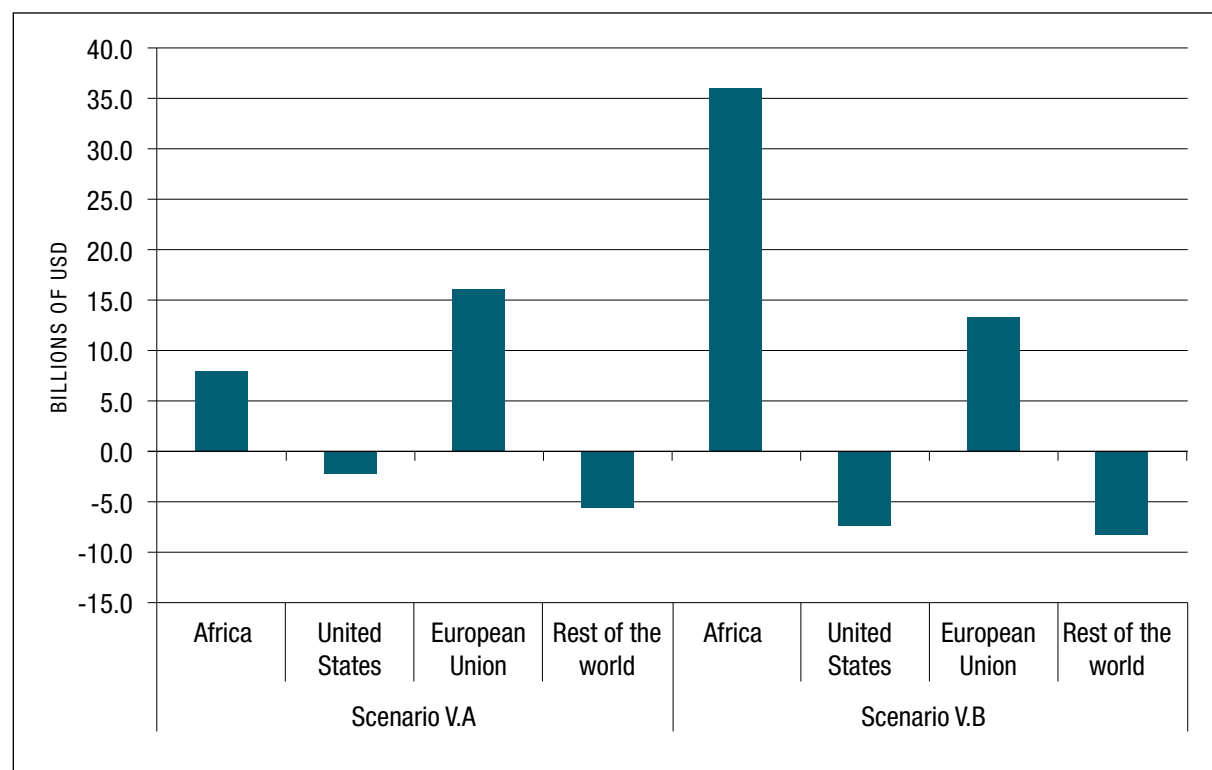
While the two nations would register relatively similar export gains when trading with each other, the EU would benefit more than the U.S. from its respective agreements with Africa.

Whereas under scenario V.A, the U.S. would not gain any additional market access to African countries, which is consistent with the fact that AGOA is maintained as also assumed in the baseline. The EU would increase its exports to Africa by about \$12 billion (i.e., a growth of 9.7 percent), thanks to the EPAs in comparison to the reference case in 2025.

When the EU and the U.S. would—in addition to their FTA—both also conclude agreements designed after the EPAs but assuming a CFTA within Africa (scenario V.B), both the EU and the U.S. would see their exports to Africa increasing, but in different proportions: The EU would again gain

more access to the African market than the U.S., and the EU would increase its exports to Africa by \$8.4 billion, while the U.S. would register a more modest gain of \$1.9 billion. At least two justifications can be advanced for such an outcome: First, the EU initially faces slightly higher tariff barriers on average when exporting to Africa than the U.S. does, with average protection rates of 13.0 and 11.3 percent, respectively, and EPAs therefore imply slightly better improvements in market access to Africa for the EU than for the U.S. Indeed, EPAs scenarios imply that 80 percent of EU exports as well as 80 percent of U.S. exports to Africa become DFQF. As a consequence, the final average protection faced by the EU and the U.S. when exporting to Africa after implementation of the EPA-like scenarios are 11.3 percent and 9.9 percent, giving the EU a 0.3 percent larger decrease in protection faced than the U.S. when exporting to Africa after EPAs.

FIGURE 16. CHANGES IN AFRICA'S EXPORTS BY MAIN DESTINATIONS, FOLLOWING SCENARIOS LOOKING AT A DIFFERENT GLOBAL ENVIRONMENT COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

Second, and probably more important, the EU is by far the main source of imports for Africa, with nearly 40 percent of Africa's total imports coming from the EU, whereas the share of Africa's imports from the U.S. accounts for less than 10 percent.³² Under this condition and the geographic proximity dimension, when both the EU and the U.S. are getting relatively equivalent market access improvements when exporting to Africa, then the EU's exports to Africa tend to expand more than U.S. exports to Africa.

In addition, Africa's export variations by main destinations would increase toward Africa itself and the EU, but would decrease toward other destinations (see figure 16). Africa's exports' decrease toward the rest of the world is evident as none of the agreements designed in this fifth category of scenarios envisage market access improvements for Africa when exporting to those countries.

The reduction by \$2.1 billion of Africa's exports toward the U.S., at least under the scenario assuming extension of AGOA (also assumed in the baseline scenario), is straightforward, considering the market shares lost because of the EU-U.S. FTA as Africa faces more competition from the EU when exporting to the U.S. However, a similar reduction of Africa's exports to the U.S. is observed when an EPA-like scenario between the U.S. and Africa is assumed along with EPAs between the EU and Africa in the context of an African CFTA. Such an outcome is not really surprising since—as already indicated in the scenario for the fourth categories, assuming an EPA-like scenario with the U.S. only—deepened regional integration in Africa would strongly stimulate intra-African trade, with some of African exports toward the U.S. being replaced by African exports toward African partners.

Moreover, a few African exports toward the U.S. may also be replaced by new African products to the EU. Indeed, and despite the establishment of an EU-U.S. FTA, an EPA between the EU and Africa would actually enhance Africa's exports by \$15.8 billion and \$13.8 billion to the EU after scenario V.A (five regional FTAs within Africa as part

of the EPAs) and scenario V.B (when an African CFTA is considered), respectively, compared to the baseline in 2025 (see figure 16 and annex P).

While the lower magnitude of African exports' gain to the EU, following the scenario inclusive of a CFTA reform compared to FTAs within Africa, is logical considering the strong boost in intra-African trade, resulting in the substitution of some of Africa's exports to the EU by Africa's exports to Africa itself, the high volume observed in the case of "regular" EPAs is quite interesting and requires some attention. In fact, most of the increase in Africa's exports to the EU is highly concentrated in a handful of countries, essentially the rest of SACU and to a lesser extent Botswana, Mauritius, the rest of Central Africa and the rest of West Africa (see figure 17 and annex P). Interestingly, these countries/regions are those initially facing the higher tariff barriers on their exports to the EU. While the average protection faced by Africa today when exporting to the EU is 1.2 percent—which is comparable to the average protection faced by African countries when exporting to the U.S.—there are very strong disparities across countries and sectors. Indeed, the 33 African LDCs eligible for the Everything But Arms initiative enjoy nearly free access to the EU market, but African MICs can sometimes face high tariffs, largely in agriculture.³³

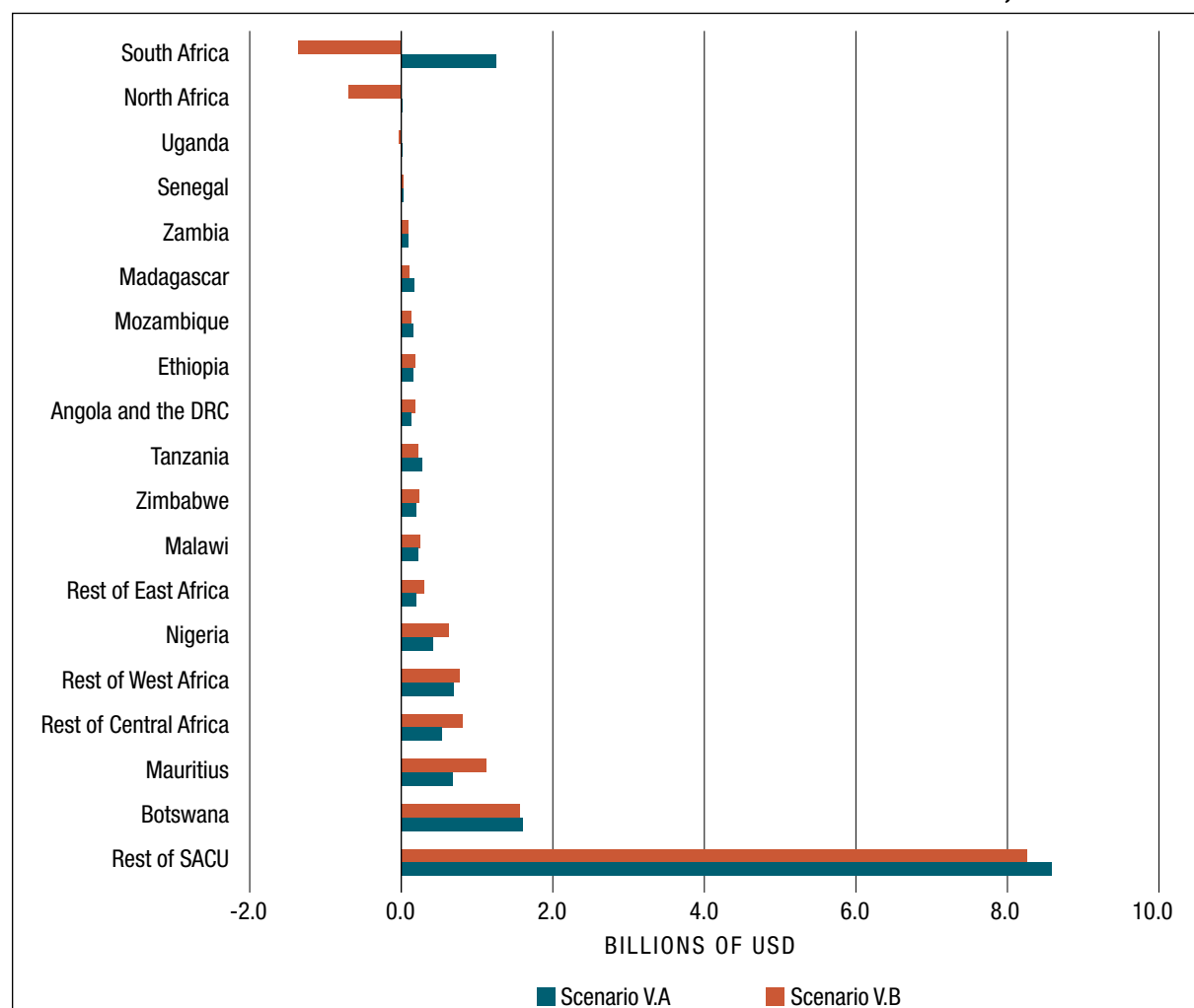
Therefore, countries with initially easy access when exporting to the EU could not expect strong export increases when granted 100 percent DFQF thanks to EPAs, whereas countries facing initially high tariff barriers on their exports to the EU would see them increasing, and sometimes to a large degree. For example, Swaziland and Namibia, two MICs which belong to the rest of SACU, along with LDCs—namely, Lesotho—face average protection rates in agriculture of 100.3 and 70.9 percent when exporting to the EU, respectively (see annex O) because tariffs are particularly high in meat products and sugar for these countries. The same can be observed for countries such as Botswana, Mauritius, the Republic of the Congo, Malawi or Zambia. As a result, EPAs concluded with the EU generate great export gains for these countries. In particular, just the rest of SACU would see its exports to the EU

increasing by over \$8 billion (or 300 percent), representing more than half of Africa's exports increase to the EU, following an EPA with the EU compared to the baseline scenario in 2025 (see figure 17 and annex P). This would come from relatively comparable increases in just meat products and sugar exports to the EU.

As already mentioned in scenarios defined under category IV, African countries' exports to African partners would increase greatly if a CFTA is to be established, and it would also favor intra-African trade of industrial products (see figure 18).

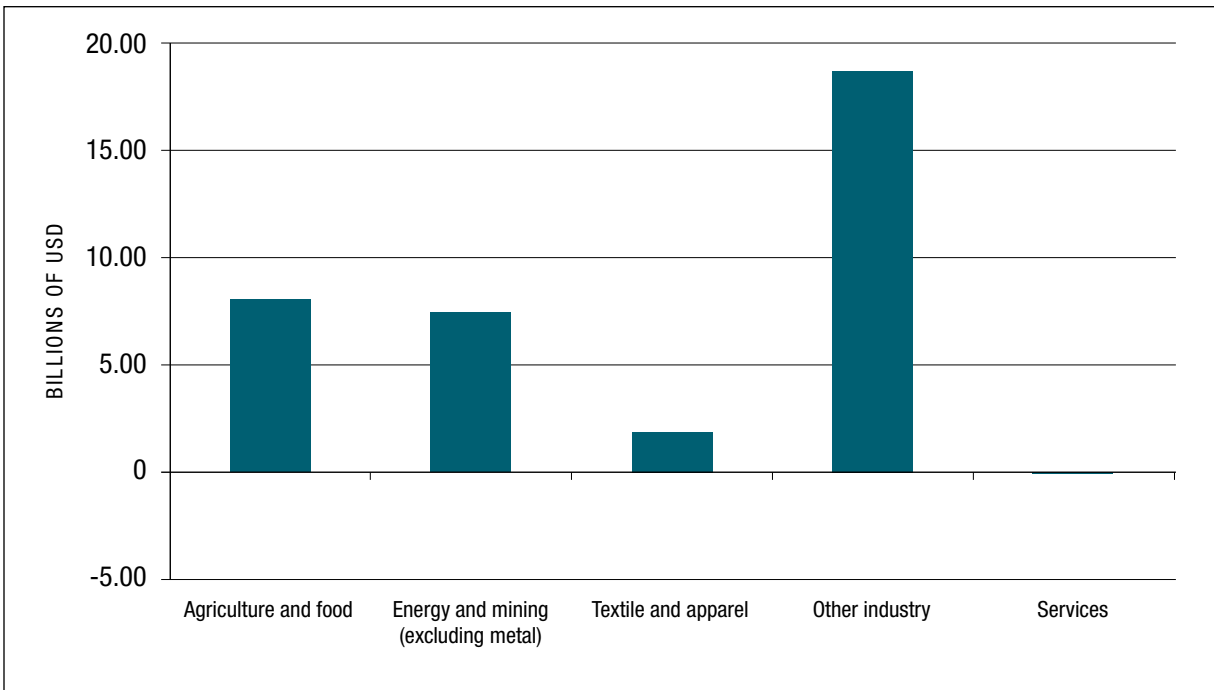
However, real income effects would still be marginal for African nations under a CFTA. Indeed, Africa as a whole would improve its real income by \$686.2 and \$912.8 million following scenarios V.A and V.B, respectively, compared to the baseline in 2025. Nevertheless, many countries (e.g., Nigeria, Angola and the DRC, Mozambique, Uganda, Zambia and the rest of East Africa) would still see their real income decrease, depending on the trade reform implemented (see annex Q). Significant tariff revenues losses implied by trade liberalizations would greatly explain such outcomes.

FIGURE 17. CHANGES IN AFRICAN COUNTRIES' EXPORTS TO THE EU, FOLLOWING SCENARIOS LOOKING AT A DIFFERENT GLOBAL ENVIRONMENT COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

FIGURE 18. CHANGES IN INTRA-AFRICAN TRADE BY MAIN SECTORS FOLLOWING SCENARIO IV.B COMPARED TO THE BASELINE SCENARIO, 2025



Source: Authors' calculations based on the MIRAGE model.

An African continent that is highly integrated with potentially reciprocal agreements between the U.S. and Africa as well as between the EU and Africa would limit some of the potential trade diversion for Africa if an EU-U.S. FTA is to be implemented. An increase in intra-African trade following FTA reforms would produce enough export gains for Africa to compensate any export losses that could occur due to the formation of an EU-U.S. FTA and EPA-like scenarios. Moreover, EPAs could actually benefit a handful of African countries, especially those that still face significant protection today, when exporting to the EU. Nevertheless, for most African countries, export gains would not be sufficient to ensure real income benefits due partly to tariff revenues losses implied by the trade reforms. As a consequence, tariff reduction alone does not appear to be sufficient for producing positive trade and real income benefits to all, thereby justifying the need for complementary measures.

Conclusions and Policy Recommendations

Overview of the Scenario Results

The scenarios modeled in this report show a variety of possible outcomes for U.S.-Africa trade through 2025 and also demonstrate important trends regarding the current direction for African trade should AGOA benefits continue or be modified. It is important to note that discontinuing AGOA would be detrimental for African economies. There would be declines in exports, decreases in the possible progress of economic diversification, and a decline in wages for unskilled nonagricultural wages and skilled wages. The effects would vary based on country/region and sector, with some being more negatively affected than others, but keeping AGOA in place would definitely provide much better results than a return to the GSP. If AGOA is to be extended, it should be noted that expanding product eligibility is not anticipated to make a significant difference in export benefits for Africa unless AGOA-eligible countries are given 100 percent DFQF access. Even with 99 percent DFQF access to all products, it is still the 1 percent most sensitive import products for the U.S. that would provide the most benefits. Such access could be provided at a minimal cost for the U.S. (data indicate that it would only cost about \$9.6 million to U.S. producers while Africa's exporters would gain over \$105 million).

Scenarios that consider removing MICs from AGOA eligibility indicate that they would suffer export losses in their exports to the U.S. On the other hand, granting AGOA eligibility to other

non-African LDCs would not actually have much effect on the exports of African LDCs to the U.S., unless the textile and apparel clause were also to be granted to them, which would be expected to have severe effects on Africa's textile and apparel industry.

Scenarios that assume some degree of reciprocity between the U.S. and Africa in terms of preferences granted would be beneficial for African exports if they were also accompanied by deeper regional integration within the continent, specifically if the anticipated CFTA were to be in place. Without considerably more regional integration on the continent, there would not be such significant export gains. It should also be noted that reciprocity would result in large tariff revenue losses that could have a negative impact on real income levels. Some of the losses of tariff revenue could be offset by enhancements to intraregional trade and transportation facilitation; however, it should be stressed that the level of regional integration required to counteract these losses would be very costly to finance and difficult to achieve without additional financial support (e.g., additional aid directed at trade facilitation).

Similarly, should the EU and the U.S. agree upon and implement an FTA, deepened regional integration in Africa could help offset export losses that would follow as EU-U.S. trade would increase and take some of the market share of African countries—specifically, if a CFTA were to be put in place, intra-African trade would increase. Increases in

intra-African trade in this case would be accompanied by some increases in EU-Africa trade (thanks to only a handful of African countries, mostly from SADC, following a rise of meat and milk exports to the EU), but decreases in U.S.-Africa trade. While the increases in trade would be beneficial, there would still be a significant loss in tariff revenue that could have negative real income effects for many countries.

Thus, all the scenarios designed and analyzed provide useful indications for post-2015 options, but none of them actually allow for a clear win-win scenario between the U.S. and Africa. In fact, it appears from the findings that scenarios considering only tariff barrier removal would not be sufficient, and complementary measures would be required to ensure that countries are better off following the trade reforms.

Policy Recommendations

The results from these scenarios demonstrate a number of lessons and options for increasing trade and further developing the commercial relationship between AGOA-eligible countries and the U.S. There are also many implications regarding the necessary strategies to pursue while promoting development in Africa through real income growth, economic diversification, and an increase in wages and employment. This section provides policy recommendations for how both the U.S. and AGOA-eligible countries can use the scenario results to promote growth and better engagement.

Renewing AGOA beyond 2015

By far the most obvious result from these scenarios is that AGOA provides, though with varying strength, a great deal of benefits to the countries of Africa and discontinuing AGOA or allowing it to expire would create losses in exports and harm employment. Should Congress decide to extend AGOA benefits to additional countries outside the African continent, African economies would suffer export losses and lose market share when exporting to the U.S. if complete DFQF benefits were given to other LDCs.

Reconsidering AGOA Product Eligibility

The report identifies that products that are within the most sensitive import sectors for the U.S. are also the sectors where Africa stands to gain the most by having DFQF access. It also shows that having 100 percent DFQF would not harm U.S. producers and exporters. The U.S. could therefore consider granting complete DFQF access to AGOA-eligible countries because of the benefits it could provide in terms of diversification and market access.

Better Exploitation of AGOA Preferences

Africa must look at taking better advantage of the preferences it is being granted by the U.S. and other partners, in particular identifying sectors with supply chain potential. Additionally, lowering the often relatively high tariffs imposed by African countries on their imports of intermediate goods (as it could be expected from an African common external tariff set under a Continental Customs Union) may allow them to use cheaper inputs into their production process and add value to the goods that can then be exported.

Prioritizing Regional Integration

A recurring theme throughout the report is the importance of pursuing deeper regional integration within the African continent (preferably a CFTA). This move would strongly stimulate intra-African trade and help in the movement toward more industrialized economies. It would also help African countries be more competitive in the face of external trade agreements that will increase competition for African export destinations both on and away from the continent. Achieving a CFTA would likely call for an increase in aid for trade directed toward trade facilitation measures. African governments should prioritize a CFTA and encourage their development partners to assist with this as well. The U.S. should consider scaling efforts aimed at trade facilitation and officially integrating a comprehensive trade assistance strategy as part of AGOA. This is particularly important as AGOA has two components: trade and investment. While both components are distinct, they also go hand in hand, because strengthening one can help strengthen the other.

Methodology

Data and Modeling

The scenarios in this report were modeled using a computable general equilibrium (CGE) model. Although they have significant constraints/limitations, CGE models are the sole tools available today capable of capturing multiple interactions taking place within the different agents of the world economy, thanks to many interconnected equations representing behaviors of economic agents and various economic linkages. A CGE model uses economic data to predict how economies react to changes in policy, in this case, how U.S.-Africa trade patterns react to changes in trade policy. In other words, it compares the changes between any scenario (after implementation of specific policy reforms) and the reference case (or baseline), which usually correspond to a prolongation of the current situation.

The CGE model used for this report is the MIRAGE model, which stands for Modeling International Relationships in Applied General Equilibrium. The model is described as a multicountry, multisector, recursive dynamic model.³⁴ It was first developed to analyze and study trade policy scenarios like bilateral and multilateral agreements, which is why it is especially useful for modeling the scenarios in this report. The CGE model generates indicators for regions that allow it to measure the effects of changes related to trade policy, including changes in exports, imports, terms of trade, real GDP, real income and production factor uses, among many other indicators.

The data used for the model comes from the Global Trade Analysis Project (GTAP) 7 database, and the Market Access Map version 2 database, which uses the six-digit Harmonized System (MACMap-HS6v2). The GTAP database contains complete bilateral trade information as well as transportation and protection linkages between 113 regions for 57 sectors. These data were paired with the MACMap tariff data because MACMap gives more exhaustive information on tariff lines than the GTAP data, including ad valorem tariffs, specific tariffs and preferences.³⁵ MACMap has data for 169 countries, 220 trading partners and 5,113 HS6 products. MACMap also provides a group of reference weights, which allows for more accurate demonstration and weighting of tariff and protection data when aggregating tariff information across countries and sectors.

The data depict the global economy in 2004, but they have been updated to reflect protection information as of April 2013, since a number of significant events and policy changes have taken place since that time. Relevant protection information regarding the most recent AGOA-eligible tariff lines inclusive of textile and apparel clauses, the GSP tariff lines and eligible countries, the Everything But Arms trade preference of the European Union and the expiration of the Multi-Fibre Arrangement have all been taken into account.

Country/Region Classifications

For this report, unless otherwise indicated, the focus of the modeling results was on the countries of Africa, specifically the AGOA-eligible countries, and the United States. In scenarios where the EU was involved the effects of trade, involving the EU was also examined. There are multiple scenarios that involve other LDCs, and the results of the trade policies involving them are relevant in those scenarios.

It should be noted that AGOA-eligible countries included in the study lists Sudan, although Sudan is not eligible for AGOA. South Sudan does not have sufficient data available, thus Sudan as one country serves as a proxy.

The annexes include a list of the categorizations of the countries (see annex T). Due to existing groupings in the data, certain countries did not have individual data available and thus were analyzed as a regional group with other nearby countries. In some cases, countries in one group crossed income levels, and they were then classified as “rest of least-developed countries,” which includes some non-LDCs (because it is impossible to isolate only LDCs). The one exception is Yemen, which is actually in a group with many middle-income developing countries of the Middle East and is included in the group “rest of developing countries.”

Throughout the paper, different regional labels apply. The “rest of West Africa” includes Benin, Burkina Faso, Cape Verde, Côte d’Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Sierra Leone and Togo. The “rest of Central Africa” includes Cameroon, Central African Republic, Chad, Congo, Equatorial Guinea, Gabon, and São Tomé and Príncipe. The “rest of Eastern Africa” includes Burundi, Comoros, Djibouti, Eritrea, Kenya, Rwanda, Seychelles, Somalia and Sudan (South Sudan is part of Sudan in the GTAP database). The “rest of the Southern African Customs Union (SACU)” includes Lesotho, Namibia and Swaziland.

Sectoral Classifications

Commodities were placed into one of five broad categories for analysis: agriculture and food; mining and energy; textiles and apparel; other industry; and services. The data breakdown used for the modeling has information for 21 commodity sectors in total, and the broader commodity categories were constructed from these to provide broader overviews of the trends. A complete list of the sectors and categories can be found in annex S.

Import-Sensitive Products and Index

For scenarios B and C in category II as well as scenarios A and B in category V, an index was used to identify the commodities that are thought to be import sensitive for the country receiving the goods.³⁶ This index stipulates that commodities or sectors that are usually import sensitive are those which have high initial tariffs, which are highly traded, and would have a high tariff reduction if the tariffs were to be cut. Therefore, higher values of computed index correspond to highly sensitive products.

Economic Partnership Agreements: Country Groupings

The EPAs in the West Africa region include Benin, Burkina Faso, Cape Verde, Côte d’Ivoire, the Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo and Mauritania—almost the exact same countries as the Economic Community of West African States (ECOWAS) except for the inclusion of Mauritania. The EPAs in the Central Africa region include Cameroon, Central African Republic, Chad, the Republic of the Congo, the DRC, Equatorial Guinea, Gabon, and São Tomé and Príncipe—six of these eight countries (Cameroon, the Central African Republic, Chad, the Republic of the Congo, Equatorial Guinea and Gabon) are part of the regional economic group called *la Communauté Économique et Monétaire de l’Afrique Centrale* (in English, the Economic and Monetary Community of Central Africa) and use the same currency.

The East and Southern Africa region includes a variety of countries that are not in a closely established regional group and are not located in especially close proximity to one another. They include the Indian Ocean islands (Comoros, Madagascar, Mauritius and Seychelles) and the countries on the Horn of Africa (Djibouti, Ethiopia, Eritrea and Sudan), as well as Malawi, Zambia and Zimbabwe. Interestingly, the group labeled SADC includes only some of the countries that are actually part of that regional economic community, namely, Angola, Botswana, Lesotho, Mozambique, Namibia, Swaziland and South Africa. The other members of SADC are the DRC, Madagascar, Malawi, Mauritius, Zambia and Zimbabwe, which have been placed into different EPA regional groups. The only group that involves all the members of an already-established and well-integrated regional economic community is the EAC, which contains Kenya, Uganda, Tanzania, Burundi and Rwanda.

The EU-U.S. Free Trade Agreement

For the situation involving the possible EU-U.S. FTA, the most recent round of WTO negotiations

was used in the assumptions of the FTA's design. The EU-U.S. FTA model assumes that there would be no tariffs on 100 percent of industry related commodities. Of the 677 agricultural commodities (at the HS-6 level), it is anticipated that certain levels of protection would remain in place for the 4 percent most sensitive import items.

For those 4 percent sensitive products, proposed negotiated tariff rate cuts were used in the model. For tariffs that were between 0 and greater than or equal to 20 percent, then the 50 percent cut that one would expect for a WTO-negotiated tariff would be cut by two-thirds. For those between 20 and less than 50 percent, then it would be two-thirds of the 57 percent cut; for those between 50 and less than 75 percent, then it would be two-thirds of the 64 percent cut; and for those greater than 75 percent, it would be two-thirds of the 70 percent cut. In instances where the most-favored-nation (MFN) tariff rate would be lower than the sensitive tariff cuts, then the MFN tariff rate would remain in place.

Endnotes

1. Henceforth, “Africa” refers to Africa, excluding North Africa.
2. GSP offers preferential duty-free treatment for up to 5,000 products—using the Harmonized Tariff Schedule (HTS) 8-digit codes—from 127 developing countries in the world, as indicated by the Office of the United States Trade Representative in its December 2012 GSP Guidebook; see http://www.ustr.gov/sites/default/files/GSP%20Guidebook%20Dec%202012%20%20%20final%20version_0.pdf. AGOA adds an additional 1,800 HTS-8 product lines. In this report, “AGOA” refers to both AGOA and the GSP benefits as one.
3. This is using the 8-digit-level HTS.
4. The AGOA-eligible countries include Angola, Benin, Botswana, Burkina Faso, Burundi, Cameroon, Cape Verde, Chad, Comoros, the Republic of the Congo, Côte d’Ivoire, Djibouti, Ethiopia, Gabon, the Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Malawi, Mali, Mauritania, Mauritius, Mozambique, Namibia, Niger, Nigeria, Rwanda, São Tomé and Príncipe, Senegal, Seychelles, Sierra Leone, South Africa, Swaziland, Tanzania, Togo, Uganda and Zambia.
5. Further explanatory information on average protection levels are provided in the methodology section and annex T.
6. The source for these data is the International Monetary Fund, Direction of Trade Statistics.
7. The source for these data is the International Monetary Fund, Direction of Trade Statistics.
8. The source for these data is the U.S. International Trade Commission, Interactive Trade and Tariff Dataweb.
9. This arrangement offers preferential duty-free treatment for up to 5,000 products from 127 developing countries in the world.
10. It should also be noted that the U.S. GSP is set to expire in July 2013, but this report is written with the expectation that it will be renewed.
11. While we cannot distinguish effects by countries within the regional groups, it is likely that those results are driven by just few countries, based on observations from protection level in annex A. For example, it is expected that Namibia is responsible for the outcome observed in the rest of the SACU, Burkina Faso for the rest of West Africa, Gabon for the rest of Central Africa, and Tanzania for the rest of East Africa, Africa. See the methodology section and annex T for details on country classifications.
12. The model closure assumes full employment due to the lack of data reliability and availability. Therefore, workers are only reallocated from the least-efficient sectors to the most-efficient ones following policy reforms. As the aggregated employment is fixed in all regions, wages are assumed to be flexible. As a consequence, it is not surprising that in a selected country, some workers (those who are the most negatively affected by trade reforms) see their wages decreasing, while other categories of workers (those that are the least affected by the reform) see their wages increasing.
13. See H.R. 434 (106th), the Trade and Development Act of 2000, which states: “LESSER DEVELOPED BENEFICIARY SUB-SAHARAN AFRICAN COUNTRY - For purposes of this subparagraph the term ‘lesser developed beneficiary sub-Saharan African country’ means a beneficiary sub-Saharan African country that had a per capita gross national product of less than \$1,500 a year in 1998, as measured by the World Bank.” (Text linked here: <http://www.govtrack.us/congress/bills/106/hr434/text>). This Act was amended in 2002 to include Botswana and Namibia (in H.R. 3009 (107th): Trade Act of 2002). It should be noted, however, that for the purposes of this report, the “LDC” category actually consists of least-developed countries as categorized by the United Nations.
14. See H.R. 434 (106th): Trade and Development Act of 2000 available online here: www.govtrack.us/congress/bills/106/hr434/text.
15. Likely driven by São Tomé and Príncipe, as the country registers the highest drop from the rest of Central Africa in protection faced when exporting to the U.S. following the implementation of scenario I.A. As far as the rest of West Africa is concerned, Mauritania is gaining market access to the U.S. thanks to the extension of textile and apparel clause to the country.
16. Tariff Relief Assistance for Developing Economies Act of 2009, <http://www.govtrack.us/congress/bills/111/s1141/text>.
17. Other countries include Afghanistan, Bhutan, the Solomon Islands, Myanmar, Kiribati, Haiti, Laos, Nepal, Vanuatu, East Timor, Samoa and Yemen.
18. See <http://thewhitakergroup.us/wordpress/2010/05/05/collier-warns-against-expanding-agoa-to-non->

- african-least-developed-countries.
19. Namely, Botswana, Cameroon, Cape Verde, Congo, Gabon, Ghana, Côte d'Ivoire, Kenya, Mauritius, Namibia, Nigeria, Seychelles, South Africa and Swaziland (country income classifications are categorized according to the United Nations classifications).
 20. These countries include the Central African Republic, the Democratic Republic of the Congo, Equatorial Guinea, Eritrea, Guinea-Bissau, Madagascar, Mali and Somalia. Note that Sudan is not included in AGOA, whereas South Sudan is included. However, considering the data limitations for South Sudan, Sudan is considered as part of the currently AGOA-eligible countries for the simulation exercise.
 21. Namely, Afghanistan, Bangladesh, Bhutan, Cambodia, Kiribati, Laos, Myanmar, Nepal, Samoa, the Solomon Islands, Timor-Leste, Tuvalu, Vanuatu, Yemen and Haiti.
 22. Note that Madagascar and the DRC are African LDCs not currently AGOA-eligible, which is the reason why they would benefit from being granted AGOA preferences. Angola (currently AGOA-eligible) cannot be differentiated from the DRC in the GTAP database; therefore the results in this report are given for Angola and the DRC as a whole.
 23. The EU's EPAs, as mentioned above, will also be extended to other regions outside Africa, but demonstrating this model is outside of the scope of this report.
 24. The EU Web site says opened up EU markets fully and immediately (unilaterally by the EU since January 1, 2008), but allowed ACP countries 15 (and up to 25) years to open up to EU imports while providing protection for the sensitive 20 percent of imports.
 25. As noted in the Decisions, Declarations and Resolutions decided upon during the Eighteenth Ordinary Session of the African Union in January 2012.
 26. It appears that there may not be sufficient progress toward the CFTA for it to actually be implemented in 2017, but for the sake of scenarios and the intended deadlines this date is used for the modeling.
 27. Simon Mevel and Stephen Karingi, "Deepening Regional Integration in Africa: A Computable General Equilibrium Assessment of the Establishment of a Continental Free Trade Area Followed by a Continental Customs Union," paper presented at 7th African Economic Conference, Kigali, Rwanda, 2012.
 28. These average protection levels were computed by the authors using the MAcMap-HS6v2 database.
 29. See Simon Mevel and Stephen Karingi, "Deepening Regional Integration in Africa: A Computable General Equilibrium Assessment of the Establishment of a Continental Free Trade Area Followed by a Continental Customs Union," paper presented at 7th African Economic Conference, Kigali, Rwanda, 2012).
 30. See <https://www.federalregister.gov/articles/2013/04/01/2013-07430/request-for-comments-concerning-proposed-transatlantic-trade-and-investment-agreement>.
 31. The year 2017 was agreed as an indicative date by African Heads of State and Government at the 18th AU Summit.
 32. Authors' calculation based on MIRAGE model, 2013 data.
 33. This is except for LDCs exporting important volumes of sugar, rice or bananas, which are not fully exempted of tariff duties under Everything But Arms, e.g., Malawi.
 34. A recursive dynamic model is a model that solves each year before solving for the following year.
 35. The source for these data is H. Boumellassa, D. Laborde and C. Mitaritonna, *A Picture of Tariff Protection Across the World in 2004: MAcMap-HS6, Version 2*, IFPRI Discussion Paper 00903 (Washington: International Food Policy Research Institute, 2009).
 36. The index used is based on S. Jean, D. Laborde and W. Martin, *Choosing Sensitive Agricultural Products in Trade Negotiations*, IFPRI Discussion Paper 00788 (Washington: International Food Policy Research Institute, 2008).

Annexes

ANNEX A. AVERAGE AD VALOREM PROTECTION FACED BY AFRICAN COUNTRIES ON THEIR EXPORTS TO THE U.S. BY MAIN SECTOR 2013 VS. RETURN TO THE U.S. GSP BY 2016 (PERCENT)

	2013			After return to U.S. GSP		
	Global	Agriculture	Industry	Global	Agriculture	Industry
Africa total	0.9	1.3	0.9	1.3	1.9	1.2
AGOA-eligible countries	0.1	0.7	0.1	0.8	1.5	0.6
Angola	0.0	0.0	0.0	0.0	0.0	0.0
Benin	0.1	0.0	0.2	0.1	0.0	0.3
Botswana	0.0	0.0	0.0	0.5	17.3	0.2
Burkina Faso	5.3	8.0	1.0	5.3	8.0	1.1
Burundi	0.2	0.0	0.3	0.2	0.0	0.3
Cameroon	0.4	1.6	0.0	0.6	1.6	0.3
Cape Verde	0.1	0.2	0.1	5.8	0.5	6.2
Chad	0.0	0.0	0.0	0.0	0.0	0.0
Comoros	0.2	0.1	0.2	0.2	0.1	0.2
Republic of the Congo	0.0	0.0	0.0	0.3	0.6	0.3
Côte d'Ivoire	0.4	0.6	0.1	0.6	0.7	0.5
Djibouti	0.4	0.1	0.4	0.4	0.1	0.5
Ethiopia	0.3	0.0	0.9	0.5	0.0	1.5
Gabon	0.0	1.5	0.0	0.3	2.5	0.3
Gambia	0.1	0.0	0.1	0.2	0.0	0.5
Ghana	0.2	0.4	0.1	0.4	0.5	0.4
Guinea	0.0	0.0	0.0	0.0	0.0	0.0
Kenya	0.1	0.0	0.2	1.9	0.4	4.4
Lesotho	0.0	0.0	0.0	11.3	1.4	11.4
Liberia	0.0	0.0	0.0	0.0	0.1	0.0
Malawi	1.6	1.7	0.1	2.6	1.7	9.0
Mauritania	0.3	0.4	0.3	0.3	0.5	0.3
Mauritius	0.2	0.6	0.1	7.1	0.7	8.6
Mozambique	0.0	0.0	0.0	0.0	0.0	0.0
Namibia	0.1	0.0	0.1	1.6	13.0	0.7
Niger	0.0	0.3	0.0	0.0	0.3	0.0
Nigeria	0.0	0.2	0.0	0.3	0.2	0.3
Rwanda	0.0	0.0	0.0	0.1	0.0	0.1
São Tomé and Príncipe	0.5	0.0	0.9	0.5	0.0	0.9
Senegal	0.2	0.0	0.2	0.2	0.0	0.3
Seychelles	0.0	0.0	0.0	0.1	0.4	0.1
Sierra Leone	0.1	0.0	0.1	0.6	0.0	0.6
South Africa	0.2	0.9	0.1	0.7	3.2	0.5
Sudan	0.0	0.0	0.0	0.0	0.0	0.0
Swaziland	0.5	0.7	0.4	4.7	1.4	6.9
Tanzania	1.1	4.0	0.2	1.2	4.0	0.3
Togo	0.2	0.5	0.1	0.2	0.5	0.1
Uganda	0.0	0.0	0.1	0.2	0.0	0.4
Zambia	0.3	0.3	0.3	0.3	0.3	0.3
Non-AGOA eligible countries	2.0	3.4	1.9	2.0	3.4	1.9
Algeria	0.2	1.7	0.2	0.2	1.7	0.2
Central African Republic	0.1	0.1	0.1	0.1	0.1	0.1
Democratic Republic of the Congo	0.0	0.0	0.0	0.0	0.0	0.0
Egypt	2.8	5.5	2.5	2.8	5.5	2.5
Equatorial Guinea	0.0	0.6	0.0	0.0	0.6	0.0
Eritrea	1.7	4.6	0.8	1.7	4.6	0.8
Guinea-Bissau	0.0	0.0	0.0	0.0	0.0	0.0
Libya	0.6	3.2	0.6	0.6	3.2	0.6
Madagascar	4.4	1.3	6.0	4.4	1.3	6.0
Mali	0.0	0.1	0.0	0.0	0.1	0.0
Morocco	5.0	3.6	5.2	5.0	3.6	5.2
Somalia	0.1	0.0	0.2	0.1	0.0	0.2
Tunisia	5.5	0.7	5.7	5.5	0.7	5.7
Zimbabwe	2.5	5.2	0.5	2.5	5.2	0.5

Source: Authors' calculations based on MAcMapHS6v2 database.

THE AFRICAN GROWTH AND OPPORTUNITY ACT: AN EMPIRICAL ANALYSIS OF THE POSSIBILITIES POST-2015

ANNEX B. CHANGES IN EXPORTS FROM AFRICAN COUNTRIES/REGIONS AND OTHER MAIN REGIONS TO THE U.S., FOLLOWING SCENARIOS ASSUMING AN EXTENSION OF AGOA ELIGIBILITY BY PRODUCT COMPARED TO THE BASELINE SCENARIO, 2025

	Scenario II.A		Scenario II.B		Scenario II.C		Scenario II.D	
	%	Billions of USD	%	Billions of USD	%	Billions of USD	%	Billions of USD
AGOA-eligible countries	0.0	3.2	0.0	15.0	0.1	33.3	0.2	105.8
Nigeria*	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
Senegal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of West Africa*	0.0	1.2	0.1	1.8	0.1	4.4	0.2	5.9
Angola and the DRC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2
Rest of Central Africa*	0.0	0.2	0.0	0.2	0.0	0.3	0.0	0.4
Ethiopia	0.0	0.0	0.0	0.3	0.1	1.7	0.3	2.9
Malawi	0.0	0.0	0.1	0.0	0.1	0.1	0.4	2.4
Mauritius*	0.0	0.0	0.1	0.8	0.2	2.2	0.5	5.6
Mozambique	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Tanzania	0.0	0.0	0.1	0.4	0.3	1.6	0.4	2.5
Uganda	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.3
Zambia	0.0	0.0	0.1	0.1	0.1	0.1	0.5	0.6
Rest of East Africa*	0.1	1.9	0.2	4.0	0.4	9.0	0.4	10.6
Botswana*	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
South Africa*	0.0	0.0	0.1	5.9	0.1	11.7	0.6	62.0
Rest of SACU*	0.0	0.0	0.1	1.2	0.1	1.7	1.0	12.7
African non-AGOA-eligible countries	0.0	0.0	0.0	-0.1	0.0	-0.1	0.0	-0.5
Madagascar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Zimbabwe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North Africa	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.4
Non-African LDCs	0.0	-0.1	0.0	-0.3	0.0	-0.7	0.0	-2.0
Bangladesh	0.0	0.0	0.0	-0.1	0.0	-0.2	0.0	-0.4
Cambodia	0.0	0.0	0.0	-0.1	0.0	-0.2	0.0	-0.4
Rest of non-African LDCs	0.0	0.0	0.0	-0.1	0.0	-0.3	0.0	-1.3
European Union	0.0	-0.2	0.0	-1.1	0.0	-2.2	0.0	-10.4
Rest of the world	0.0	-2.3	0.0	-10.3	0.0	-23.0	0.0	-63.1
Rest of developed countries	0.0	-0.1	0.0	-0.7	0.0	-1.5	0.0	-8.2
BRIC countries	0.0	-1.8	0.0	-7.5	0.0	-17.0	0.0	-38.0
Other developing countries	0.0	-0.4	0.0	-2.1	0.0	-4.5	0.0	-16.9

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs. BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model.

**ANNEX C. CHANGES IN EXPORTS FROM AFRICAN COUNTRIES/REGIONS AND OTHER MAIN REGIONS
TO THE U.S., FOLLOWING SCENARIOS ASSUMING REVISIONS OF AGOA ELIGIBILITY BY COUNTRIES
COMPARED TO THE BASELINE SCENARIO, 2025**

	Scenario III.A		Scenario III.B		Scenario III.C		Scenario III.D	
	%	Millions of USD	%	Millions of USD	%	Millions of USD	%	Millions of USD
AGOA-eligible countries	-1.9	-1,200.7	-1.9	-1,200.3	-1.9	-1,216.1	0.0	0.7
Nigeria*	-2.0	-534.8	-2.0	-534.8	-2.0	-534.7	0.0	0.0
Senegal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of West Africa*	-0.5	-18.8	-0.5	-18.8	-0.6	-19.5	0.0	0.0
Angola and the DRC	0.2	13.0	0.2	13.0	0.2	13.1	0.0	0.0
Rest of Central Africa*	-1.0	-64.9	-1.0	-64.9	-1.0	-65.5	0.0	0.0
Ethiopia	0.1	0.7	0.1	0.7	0.0	0.3	0.0	0.0
Malawi	0.1	0.5	0.1	0.5	0.0	0.0	0.0	0.0
Mauritius*	-9.2	-95.5	-9.3	-95.5	-9.4	-97.4	0.0	0.0
Mozambique	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
Tanzania	0.0	0.2	0.0	0.2	0.0	-0.1	0.0	0.0
Uganda	0.1	0.8	0.1	0.8	0.1	0.5	0.0	0.0
Zambia	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Rest of East Africa*	-6.1	-130.8	-6.0	-130.2	-6.1	-132.2	0.0	0.8
Botswana*	-2.1	-8.6	-2.1	-8.6	-2.1	-8.7	0.0	0.0
South Africa*	-2.4	-259.5	-2.4	-259.6	-2.4	-263.2	0.0	-0.1
Rest of SACU*	-7.7	-103.4	-7.7	-103.4	-8.1	-108.8	0.0	0.0
African non-AGOA-eligible countries	0.1	27.5	0.1	27.5	0.5	158.8	0.0	-0.1
Madagascar	0.1	0.8	0.1	0.8	0.8	149.2	0.0	0.0
Zimbabwe	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0
North Africa	0.1	26.6	0.1	26.6	0.0	9.4	0.0	-0.1
Non-African LDCs	0.1	18.3	0.2	71.4	12.1	4,380.3	0.1	53.0
Bangladesh	0.1	2.8	0.9	33.3	55.9	2,155.9	0.8	30.5
Cambodia	0.1	2.9	0.2	5.0	64.5	1,867.9	0.1	2.2
Rest of non-African LDCs	0.0	12.6	0.1	33.0	1.1	331.8	0.1	20.4
European Union	0.0	117.5	0.0	112.2	0.0	-107.1	0.0	-5.3
Rest of the world	0.0	801.8	0.0	761.6	-0.1	-2,665.2	0.0	-40.3
Rest of developed countries	0.0	114.0	0.0	112.2	0.0	-27.6	0.0	-1.9
BRIC countries	0.0	330.9	0.0	299.7	-0.3	-2,329.2	0.0	-31.2
Other developing countries	0.0	356.9	0.0	349.7	0.0	-308.6	0.0	-7.3

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs. BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model.

ANNEX D. AVERAGE GLOBAL AD VALOREM PROTECTION FACED BY NON-AFRICAN LDCs ON THEIR EXPORTS TO THE U.S., CURRENT VS. AFTER SCENARIOS, ASSUMING REVISIONS OF AGOA-ELIGIBILITY BY COUNTRIES (WHERE CHANGES ARE IMPLIED FOR NON-AFRICAN LDCs) (PERCENT)

	2013	After Scenario III.B	After Scenario III.C	After Scenario III.D
Non-African LDCs	9.2	8.9	0.3	8.9
Afghanistan	0.2	0.2	0.1	0.2
Bangladesh	10.8	10.6	0.4	10.6
Bhutan	1.2	0.8	0.5	0.8
Cambodia	9.0	8.3	0.1	8.3
Kiribati	0.2	0.2	0.0	0.2
Laos	11.1	10.3	0.3	10.3
Myanmar	9.9	9.4	0.5	9.4
Nepal	6.2	6.0	0.4	6.0
Samoa	0.8	0.8	0.1	0.8
Solomon Islands	0.1	0.1	0.0	0.1
Timor-Leste	0.1	0.1	0.0	0.1
Tuvalu	n/a	n/a	n/a	n/a
Vanuatu	0.2	0.2	0.0	0.2
Yemen	0.0	0.0	0.0	0.0
Haiti	11.0	11.0	0.1	11.0

Source: Authors' calculations based on MAcMapHS6v2 database.

ANNEX E. CHANGES IN EXPORTS FROM AFRICAN COUNTRIES/REGIONS AND OTHER MAIN REGIONS TO THE U.S., FOLLOWING SCENARIOS ASSUMING REVISIONS OF AGOA ELIGIBILITY BY COUNTRIES COMPARED TO THE BASELINE SCENARIO, 2025 (PERCENT)

	Scenario III.A					Scenario III.B					Scenario III.C					Scenario III.D				
	Agriculture and food	Mining and energy	Textile and wearing apparel	Other industry	Services	Agriculture and food	Mining and energy	Textile and wearing apparel	Other industry	Services	Agriculture and food	Mining and energy	Textile and wearing apparel	Other industry	Services	Agriculture and food	Mining and energy	Textile and wearing apparel	Other industry	Services
AGOA-eligible countries	-2.2	-1.3	-36.6	-3.9	0.2	-2.1	-1.3	-36.6	-3.9	0.2	-2.2	-1.3	-37.5	-3.9	0.1	0.0	0.0	0.0	0.0	0.0
Nigeria*	-2.2	-2.1	0.4	-0.1	0.3	-2.2	-2.1	-0.4	-0.1	0.3	-2.2	-2.1	-2.2	-0.1	0.3	0.0	0.0	0.0	0.0	0.0
Senegal	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.1	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of West Africa*	-0.4	-0.9	-11.4	-1.0	0.0	-0.4	-0.9	-7.2	1.0	0.0	-0.4	-0.9	-7.2	-1.0	0.0	0.0	0.0	0.0	0.0	0.0
Angola and the DRC	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.2	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of Central Africa*	-0.2	-1.3	-17.9	0.0	0.1	-0.2	-1.3	-17.8	0.0	0.1	-0.2	-1.3	-14.5	-0.1	0.1	0.0	0.0	0.0	0.0	0.0
Ethiopia	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.2	0.0	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malawi	0.1	0.2	0.2	0.1	0.0	0.1	0.2	0.2	0.1	0.0	0.0	0.2	-1.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Mauritius*	0.0	0.5	-58.2	-1.0	0.7	0.0	0.5	-58.2	-1.0	0.7	-0.1	0.5	-59.0	-1.2	0.6	0.0	0.0	0.0	0.0	0.0
Mozambique	0.0	0.1	0.2	0.0	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tanzania	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Uganda	0.1	0.2	0.2	0.1	0.0	0.1	0.2	0.2	0.1	0.0	0.1	0.2	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Zambia	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of East Africa*	-1.1	0.4	-49.7	-0.7	0.3	-0.5	0.4	-49.7	-0.6	0.3	-0.6	0.4	-50.3	-0.7	0.2	0.8	0.0	0.0	0.0	0.0
Botswana*	-14.2	0.0	-62.2	0.2	0.1	-14.2	0.0	-62.2	0.2	0.1	-14.2	0.0	-62.9	0.2	0.1	0.0	0.0	0.0	0.0	0.0
South Africa*	-14.2	0.2	-33.5	-5.0	0.1	-14.2	0.2	-33.5	-5.0	0.1	-14.2	0.2	-34.7	-5.1	0.1	0.0	0.0	0.0	0.0	0.0
Rest of SACU*	-0.9	0.7	-25.5	0.5	0.7	-0.9	0.7	-25.5	0.5	0.7	-0.9	0.7	-26.8	0.5	0.7	0.0	0.0	0.0	0.0	0.0
African non-AGOA-eligible countries	0.0	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.0	0.0	-0.5	0.1	19.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Madagascar	0.0	0.2	0.2	0.0	0.0	0.0	0.2	0.2	0.2	0.0	-1.3	-0.9	99.9	-2.5	-1.7	0.0	0.0	0.0	0.1	0.0
Zimbabwe	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.0	0.0	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
North Africa	0.0	0.2	0.1	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.2	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Non-African LDCs	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.6	0.0	-1.2	-0.1	63.8	0.2	-1.1	0.0	0.0	0.0	0.5	0.0
Bangladesh	0.0	0.0	0.1	0.0	0.0	-0.1	0.1	0.1	17.4	-0.1	-3.7	-5.9	112.8	10.5	-4.4	-0.1	0.1	-0.1	17.4	-0.1
Cambodia	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.1	4.9	0.0	-10.4	-13.6	82.5	-7.9	-10.5	0.0	0.0	0.0	4.9	0.0
Rest of non-African LDCs	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.0	-0.1	12.5	0.0	-0.1	0.1	0.0	0.0	0.2	0.0
European Union	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	-1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of the world	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of developed countries	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
BRIC countries	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other developing countries	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.1	-1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs. BRIC = Brazil, Russia, India and China.
Source: Authors' calculations based on the MIRAGE model.

ANNEX F. DETAILED LIST OF THE 1 PERCENT MOST SENSITIVE U.S. IMPORTS (AT HS-6 LEVEL) FROM AGOA-ELIGIBLE COUNTRIES

hs6 code	hs6 label	hs6 code	hs6 label
30350	Frozen herrings (excl. livers and roes)	721420	Bars & rods,i/nas,hr,hd or he,cntg indent,ribs,et
30374	Frozen herrings (excl. livers and roes)	721590	Bars & rods, i/nas, not elsewhere specified
100510	Maize seed	730410	Pipes, line, iron or steel, smls, of a kind use
110290	Other cereal flour, not elsewhere specified	730421	Drill pipe, of a kind used in drilling for oil or gas, seamless, of iron (other than cast iron) or steel.
151329	Palm kernel or babassu oil (excl. crude)	730429	Casing and tubing, of a kind used in drilling for oil or gas, seamless, of iron (other than cast iron) or steel.
151590	Other fixed vegetable fats and fractions, not elsewhere specified	730520	Casings,i/s,int/ext circ c sect,wld ext dia >40
170199	Cane or beet sugar, in solid form, not elsewhere specified	730531	Tubes & pipe, i or s, longitudinally welded
210111	Extracts, essences and concentrates of coffee	730610	Pipe,line,i or s,welded,riveted or sim closed
220830	Whiskeys	730620	Casing/tubing,i or s,welded,riveted or sim clsd
230910	Dog or cat food, put up for retail sale	730820	Towers and lattice masts, iron or steel
252329	Portland cement (excl. white)	730890	Structures and parts of structures
271312	Calcined petroleum coke	842139	Filtering or purifying machinery and apparatus
300420	Medicaments of other antibiotics, for retail	843049	Boring or sinking machinery nes, not self-prope
330300	Perfumes and toilet waters	843139	Parts of lifting, handling, loading or unloadin
330410	Lip make-up preparations	843143	Parts of boring or sinking machinery
330499	Beauty, make-up, skin-care (incl. suntan), not elsewhere specified	843149	Parts of cranes, work-trucks, shovels
330520	Preparations for permanent waving or straighten	870410	Dump trucks designed for off-highway use
330590	Preparations for use on the hair, not elsewhere specified	880212	Helicopters of an unladen weight exceeding 2,000 kg
520942	Denim, with >=85% cotton, >200g/m2	880230	Aircraft not elsewhere specified of an unladen weight > 2,000 kg
600199	Pile fabrics of textile materials, not elsewhere specified, knitted	880240	Aircraft not elsewhere specified of an unladen
630900	Worn clothing and other worn articles	880330	Aircraft parts not elsewhere specified
631010	Used or new rags, worn out scrap twine, cordage	940330	Office furniture, wooden, not elsewhere specified
681599	Articles of stone or of other mineral substance	940360	Furniture, wooden, not elsewhere specified
710231	Diamonds non-industrial unworked or simply sawn	940380	Furniture of oth materials,including cane,osier
710239	Diamonds non-industrial not elsewhere specified	970110	Paintings,drawings and pastels executed by hand
721391	Bars and rods of iron/non-alloy steel, hot-rolled, in irregular wound coils, of circular cross-section <14 mm in diameter		

Source: Authors' calculations based on MAcMapHS6v2 database.

ANNEX G. CHANGES IN EXPORTS FROM AFRICAN COUNTRIES/REGIONS AND OTHER MAIN REGIONS TO THE U.S., FOLLOWING SCENARIOS ASSUMING REVISIONS OF THE STRUCTURE OF AGOA COMPARED TO THE BASELINE SCENARIO, 2025

	Scenario I		Scenario IV.A		Scenario IV.B	
	%	Millions of USD	%	Millions of USD	%	Millions of USD
AGOA-eligible countries	-2.1	-1,340.6	-0.2	-99.0	-1.0	-645.6
Nigeria*	-2.0	-534.8	0.6	161.2	0.9	244.9
Senegal	0.0	0.0	-1.3	-3.2	-1.5	-3.7
Rest of West Africa*	-0.6	-19.8	-10.5	-365.4	-10.0	-348.1
Angola and the DRC	0.2	13.2	0.4	30.5	1.5	109.0
Rest of Central Africa*	-1.0	-64.9	0.4	25.0	0.6	39.6
Ethiopia	-0.1	-0.7	-1.1	-12.1	-0.6	-7.1
Malawi	-1.7	-11.4	1.2	7.8	10.6	70.9
Mauritius*	-9.2	-95.4	0.6	6.3	5.4	55.3
Mozambique	-0.7	-1.1	4.3	6.6	1.7	2.6
Tanzania	-0.2	-1.3	0.8	4.6	-1.6	-9.8
Uganda	-0.2	-1.1	0.4	2.4	-2.3	-12.2
Zambia	0.1	0.1	1.2	1.3	1.6	1.8
Rest of East Africa*	-6.1	-130.8	0.8	18.1	2.9	62.7
Botswana*	-2.0	-8.5	0.0	0.0	-1.3	-5.5
South Africa*	-2.3	-256.3	0.3	29.4	-6.7	-726.0
Rest of SACU*	-17.1	-228.1	-0.6	-8.1	-8.3	-110.9
African non-AGOA-eligible countries	0.1	28.1	0.6	187.6	0.0	6.7
Madagascar	0.1	0.9	18.7	157.8	17.7	149.5
Zimbabwe	0.1	0.1	4.8	8.0	14.0	23.4
North Africa	0.1	27.1	0.1	21.5	-0.5	-166.2
Non-African LDCs	0.1	22.0	0.0	9.2	0.0	5.6
Bangladesh	0.1	3.9	0.0	0.4	0.0	1.5
Cambodia	0.1	4.0	0.0	-0.6	0.0	-1.0
Rest of non-African LDCs	0.0	14.1	0.0	9.4	0.0	5.1
European Union	0.0	124.6	0.0	260.8	0.1	327.9
Rest of the world	0.0	904.3	0.0	975.6	0.1	1,251.6
Rest of developed countries	0.0	118.0	0.0	221.4	0.0	132.6
BRIC countries	0.0	412.3	0.0	355.0	0.1	626.9
Other developing countries	0.0	374.0	0.0	399.3	0.1	492.1

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs.

BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model.

ANNEX H. CHANGES IN EXPORTS FROM INITIALLY AGOA-ELIGIBLE COUNTRIES/REGIONS TO THE U.S., FOLLOWING SCENARIOS ASSUMING A RETURN TO THE U.S. GSP, BY SECTOR, 2025 (PERCENT)

	Agriculture and food	Cereal and grains	Vegetable fruit and nuts	Plant based fibers (including cotton)	Other crops	Live animals, animal and wool products	Milk and dairy products	Sugar	Meat products	Other food products	Mining and energy	Crude and processed oil	Other energy
AGOA-eligible countries	-2.0	-0.1	-3.7	0.3	0.2	-1.6	-10.2	0.2	-60.7	-4.8	-1.3	-1.5	0.5
Nigeria*	-2.2	0.3	0.2	0.0	0.3	-0.2	95.9	0.3	-63.7	0.1	-2.1	-2.1	0.5
Senegal	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1	0.5	1.1
Rest of West Africa*	-0.4	-1.7	-1.1	0.1	0.0	-0.5	-64.6	0.0	0.0	-0.6	-0.9	-1.0	0.3
Angola and the DRC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.1
Rest of Central Africa*	-0.2	-0.2	0.1	0.0	-0.3	-1.5	-80.6	0.0	0.0	0.0	-1.3	-1.3	0.9
Ethiopia	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	-0.2	-0.2	0.0	0.0
Malawi	0.5	0.0	0.4	0.8	0.5	0.0	0.0	0.6	0.0	0.5	0.5	0.5	0.0
Mauritius*	0.0	0.3	-0.8	0.0	-0.6	-3.3	0.0	0.4	0.0	0.4	0.5	0.5	0.7
Mozambique	0.0	0.0	-2.7	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.2	0.0	0.2
Tanzania	0.1	0.1	0.1	0.1	0.1	0.0	0.4	0.0	0.1	0.1	0.0	0.0	0.0
Uganda	0.2	0.0	0.0	0.2	0.1	0.1	0.4	0.0	0.0	0.1	0.2	0.2	0.3
Zambia	0.1	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.3
Rest of East Africa*	-1.1	0.3	-3.0	0.0	-0.1	0.2	-29.9	0.0	0.0	-0.3	0.4	0.4	0.7
Botswana*	-14.2	0.0	0.1	0.0	0.2	-0.7	0.0	0.0	-74.0	0.0	0.0	0.0	0.7
South Africa*	-14.2	0.0	-4.8	0.0	-1.8	-0.1	-48.2	0.2	-46.1	-11.2	0.2	0.2	0.4
Rest of SACU*	-0.4	0.0	-6.4	0.0	1.0	0.4	-76.2	1.2	0.0	0.7	1.4	0.8	4.7

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs.

The red cells indicate significant changes in exports by sector for AGOA-eligible countries as a whole.

Source: Authors' calculations based on the MIRAGE model.

ANNEX H (CONTINUED). CHANGES IN EXPORTS FROM INITIALLY AGOA-ELIGIBLE COUNTRIES/REGIONS TO THE U.S., FOLLOWING SCENARIOS ASSUMING A RETURN TO THE U.S. GSP, BY SECTOR, 2025 (PERCENT)

	Mining	Mineral and metal products	Textile and wearing apparel	Other industry	Forestry	Fishing	Leather products	Chemical products	Other manufacture products	Services	Transport services	Other Services
AGOA-eligible countries	0.1	0.4	-51.2	-3.9	0.1	0.1	-8.8	-0.5	-4.9	0.2	0.2	0.2
Nigeria*	0.0	0.1	-0.4	0.0	0.3	0.1	-6.2	0.0	0.4	0.3	0.2	0.3
Senegal	0.0	0.0	-5.3	-0.1	0.0	0.0	-12.1	0.0	0.0	0.0	0.1	0.0
Rest of West Africa*	0.0	0.0	-18.7	-1.0	0.0	0.0	-17.9	0.0	-1.8	0.0	0.1	0.0
Angola and the DRC	0.0	0.0	0.2	0.0	0.0	0.0	-44.5	0.0	0.0	0.0	0.0	0.0
Rest of Central Africa*	0.0	0.1	-20.2	0.0	0.1	0.1	-48.1	0.2	0.1	0.1	0.1	0.1
Ethiopia	0.0	-0.5	-15.5	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	0.0
Malawi	0.0	0.9	-55.2	1.0	0.0	0.4	-32.9	0.9	1.0	0.6	0.5	0.7
Mauritius*	0.3	-2.3	-58.2	-1.0	0.0	0.2	-21.8	0.1	-1.0	0.7	0.6	0.8
Mozambique	0.0	0.0	-25.7	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Tanzania	0.0	0.1	-21.6	0.0	0.1	0.0	-7.4	0.1	0.1	0.0	0.1	0.0
Uganda	0.0	0.1	-19.1	0.1	0.0	0.0	-1.2	0.1	0.1	0.1	0.1	0.1
Zambia	0.0	0.1	-0.6	0.1	0.0	0.0	-0.3	0.1	0.1	0.0	0.0	0.0
Rest of East Africa*	0.1	0.2	-49.7	-0.7	0.4	0.1	-4.9	0.3	-0.5	0.3	0.3	0.3
Botswana*	0.0	0.0	-62.2	0.2	0.0	0.0	-2.1	-0.1	0.3	0.1	0.1	0.1
South Africa*	0.1	0.2	-33.5	-5.0	0.2	0.1	-10.1	-1.0	-6.0	0.2	0.1	0.2
Rest of SACU*	0.4	1.7	-56.2	1.4	0.0	0.0	-4.8	1.3	1.7	1.4	1.1	1.4

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs.

The red cells indicate significant changes in exports by sector for AGOA-eligible countries as a whole.

Source: Authors' calculations based on the MIRAGE model.

ANNEX I. CHANGES IN TOTAL EXPORTS BY COUNTRY/REGION, FOLLOWING SCENARIOS ASSUMING REVISIONS TO THE STRUCTURE OF AGOA COMPARED TO THE BASELINE SCENARIO, 2025

	Scenario I		Scenario IV.A		Scenario IV.B	
	%	Millions of USD	%	Millions of USD	%	Millions of USD
AGOA-eligible countries	-0.1	-0.4	1.6	6.9	5.1	21.7
Nigeria*	0.1	-0.1	1.8	1.7	3.6	3.5
Senegal	0.0	0.0	3.2	0.1	5.8	0.2
Rest of West Africa*	0.0	0.0	6.3	2.8	8.2	3.6
Angola and the DRC	0.0	0.0	0.7	0.2	2.6	0.8
Rest of Central Africa*	0.0	0.0	0.6	0.2	6.0	1.7
Ethiopia	0.0	0.0	1.5	0.1	4.5	0.3
Malawi	-0.4	0.0	0.4	0.0	14.1	0.3
Mauritius*	-0.5	0.0	0.1	0.0	6.4	0.5
Mozambique	0.0	0.0	6.1	0.4	6.7	0.4
Tanzania	0.0	0.0	3.7	0.3	15.7	1.1
Uganda	0.0	0.0	1.0	0.0	5.3	0.2
Zambia	0.0	0.0	-0.1	0.0	12.9	0.7
Rest of East Africa*	-0.3	-0.1	2.3	0.6	8.3	2.2
Botswana*	-0.1	0.0	0.0	0.0	0.0	0.0
South Africa*	-0.1	-0.1	0.3	0.4	4.4	5.8
Rest of SACU*	-0.7	-0.1	0.6	0.1	2.4	0.3
African non-AGOA-eligible countries	0.0	0.0	0.0	0.1	3.0	7.9
Madagascar	0.0	0.0	1.8	0.1	2.4	0.1
Zimbabwe	0.0	0.0	0.5	0.0	11.7	0.3
North Africa	0.0	0.0	0.0	0.0	2.9	7.5
Non-African LDCs	0.0	0.0	0.0	0.0	0.0	0.0
Bangladesh	0.0	0.0	0.0	0.0	0.0	0.0
Cambodia	0.0	0.0	0.0	0.0	0.0	0.0
Rest of non-African LDCs	0.0	0.0	0.0	0.0	0.0	0.0
United States	0.0	-0.3	0.1	1.1	0.0	0.6
European Union	0.0	0.0	0.0	-1.1	-0.1	-3.9
Rest of the world	0.0	0.3	0.0	-101	0.0	-4.0
Rest of developed countries	0.0	0.0	0.0	-0.2	0.0	-0.6
BRIC countries	0.0	0.2	0.0	-0.4	0.0	-1.5
Other developing countries	0.0	0.1	0.0	-0.5	0.0	-1.9

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs.

BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model.

ANNEX J. CHANGES IN REAL INCOME BY COUNTRY/REGION, FOLLOWING SCENARIOS ASSUMING REVISIONS TO THE STRUCTURE OF AGOA COMPARED TO THE BASELINE SCENARIO, 2025

	Scenario I		Scenario IV.A		Scenario IV.B	
	%	Millions of USD	%	Millions of USD	%	Millions of USD
AGOA-eligible countries	0.0	-33.4	0.1	81.8	0.3	316.6
Nigeria*	-0.1	-15.3	-0.3	-35.7	-0.4	-50.9
Senegal	0.0	0.1	0.1	2.2	0.2	3.1
Rest of West Africa*	0.0	-0.6	0.8	89.0	0.8	88.3
Angola and the DRC	0.0	0.3	0.0	-1.2	-0.2	-10.3
Rest of Central Africa*	0.0	-1.5	0.0	-2.2	-0.2	-10.0
Ethiopia	0.0	0.0	0.2	5.5	0.2	4.4
Malawi	-0.1	-0.3	0.1	0.3	-0.6	-2.7
Mauritius*	-0.2	-2.5	0.0	0.0	-0.9	-9.8
Mozambique	0.0	0.1	-0.3	-3.9	-0.3	-3.6
Tanzania	0.0	0.0	0.0	0.5	0.3	7.7
Uganda	0.0	0.0	0.0	-0.3	0.3	4.1
Zambia	0.0	0.1	-0.1	-0.9	0.1	1.0
Rest of East Africa*	0.0	-3.0	0.1	8.4	-0.1	-15.6
Botswana*	0.0	0.0	0.0	-0.2	-0.2	-2.9
South Africa*	0.0	-6.3	0.0	16.3	0.8	298.1
Rest of SACU*	-0.4	-4.6	0.3	4.0	1.4	15.9
African non-AGOA-eligible countries	0.0	0.2	0.0	0.87	0.0	26.6
Madagascar	0.0	0.0	0.2	2.2	0.3	2.7
Zimbabwe	0.0	0.0	0.1	0.4	-1.1	-3.1
North Africa	0.0	0.2	0.0	-1.9	0.0	27.0
Non-African LDCs	0.0	0.2	0.0	-0.5	0.0	-0.1
Bangladesh	0.0	0.0	0.0	-0.6	0.0	-0.8
Cambodia	0.0	0.1	0.0	-0.1	0.0	-0.1
Rest of non-African LDCs	0.0	0.1	0.0	0.2	0.0	0.9
United States	0.0	7.5	0.0	24.5	0.0	29.5
European Union	0.0	2.1	0.0	-26.4	0.0	-75.8
Rest of the world	0.0	14.1	0.0	-45.7	0.0	-146.5
Rest of developed countries	0.0	0.6	0.0	-4.6	0.0	-10.4
BRIC countries	0.0	9.8	0.0	-20.3	0.0	-63.3
Other developing countries	0.0	3.8	0.0	-20.9	0.0	-72.8

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs.

BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model.

ANNEX K. CHANGES IN TARIFF REVENUES BY COUNTRY/REGION, FOLLOWING SCENARIOS ASSUMING REVISIONS OF THE STRUCTURE OF AGOA COMPARED TO THE BASELINE SCENARIO, 2025 (PERCENT)

	Scenario I	Scenario IV.A	Scenario IV.B
AGOA-eligible countries	-0.3	-6.0	-17.4
Nigeria*	-0.3	-9.6	-20.4
Senegal	0.0	-5.4	-14.7
Rest of West Africa*	-0.1	-5.4	-13.9
Angola and the DRC	0.0	-8.3	-28.2
Rest of Central Africa*	-0.1	-3.5	-36.9
Ethiopia	0.0	-3.2	-15.6
Malawi	-0.5	-2.1	-59.5
Mauritius*	-1.3	-0.2	-23.8
Mozambique	0.0	-57.1	-59.4
Tanzania	0.0	-10.3	-38.3
Uganda	-0.1	-10.9	-28.3
Zambia	0.0	-1.1	-68.1
Rest of East Africa*	-0.3	-2.8	-17.8
Botswana*	-0.8	-0.1	2.8
South Africa*	-0.3	-0.2	5.0
Rest of SACU*	-4.3	-0.3	3.0
African non-AGOA-eligible countries	0.0	0.0	-5.4
Madagascar	0.0	3.8	-4.2
Zimbabwe	0.0	-1.3	-79.2
North Africa	0.0	0.0	-4.8
Non-African LDCs	0.0	0.0	0.0
Bangladesh	0.0	0.0	-0.1
Cambodia	0.0	0.0	0.0
Rest of non-African LDCs	0.0	0.0	0.0
United States	0.5	-0.1	-0.1
European Union	0.0	0.0	0.0
Rest of the world	0.0	0.0	-0.1
Rest of developed countries	0.0	0.0	0.0
BRIC countries	0.0	0.0	-0.1
Other developing countries	0.0	0.0	-0.1

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs.

BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model.

ANNEX L. CHANGES IN TOTAL EXPORTS BY COUNTRY/REGION, FOLLOWING SCENARIOS ASSUMING A DIFFERENT TRADING ENVIRONMENT COMPARED TO THE BASELINE SCENARIO, 2025

	Scenario V.A		Scenario V.B	
	%	Millions of USD	%	Millions of USD
AGOA-eligible countries	3.9	16.7	7.4	31.5
Nigeria*	2.3	2.2	4.1	3.9
Senegal	4.7	0.2	7.3	0.3
Rest of West Africa*	8.6	3.8	10.6	4.7
Angola and the DRC	1.1	0.3	3.1	1.0
Rest of Central Africa*	2.6	0.7	8.0	2.3
Ethiopia	2.4	0.2	6.1	0.4
Malawi	5.9	0.1	19.4	0.4
Mauritius*	3.8	0.3	11.6	1.0
Mozambique	7.4	0.4	8.2	0.5
Tanzania	6.4	0.4	18.1	1.3
Uganda	0.8	0.0	5.1	0.2
Zambia	0.0	0.0	12.7	0.7
Rest of East Africa*	3.6	1.0	9.7	2.6
Botswana*	6.9	0.6	6.8	0.6
South Africa*	1.7	2.2	5.7	7.5
Rest of SACU*	30.6	3.8	30.9	3.9
African non-AGOA-eligible countries	0.0	0.0	3.0	7.8
Madagascar	1.2	0.1	3.5	0.2
Zimbabwe	3.5	0.1	14.6	0.3
North Africa	0.0	-0.1	2.9	7.3
Non-African LDCs	-0.2	-0.4	-0.2	-0.4
Bangladesh	-0.2	0.0	-0.2	-0.1
Cambodia	-0.1	0.0	-0.1	0.0
Rest of non-African LDCs	-0.2	-0.3	-0.2	-0.3
United States	2.0	39.8	2.1	40.5
European Union	2.3	64.4	2.2	61.1
Rest of the world	-0.1	-13.5	-0.1	-16.4
Rest of developed countries	-0.1	-2.7	-0.1	-3.1
BRIC countries	-0.1	-5.4	-0.2	-6.5
Other developing countries	-0.1	-5.4	-0.1	-6.8

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs. BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model.

ANNEX M. CHANGES IN EXPORTS BY ORIGIN AND DESTINATION FOLLOWING SCENARIO IV.A COMPARED TO THE BASELINE SCENARIO, 2025
(BILLIONS OF DOLLARS)

	AGOA-eligible countries	Nigeria	Senegal	Rest of West Africa	Angola and the DRC	Rest of Central Africa	Ethiopia	Malawi	Mauritius	Mozambique	Tanzania	Uganda	Zambia	Rest of East Africa	Botswana	South Africa	Rest of SACU	African non AGOA-eligible countries	Madagascar	Zimbabwe	North Africa	United States	European Union	Rest of the world
	8.2	3.3	0.1	2.0	-0.1	-0.2	0.0	0.0	0.0	0.5	0.3	0.0	-0.1	0.2	1.0	-2.6	3.9	-0.1	0.0	0.1	-0.1	-2.0	15.8	-5.3
Nigeria*	1.1			1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.5
Senegal	0.2	0.0		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of West Africa*	4.5	3.4	0.1	10.	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	0.7	-0.3
Angola and the DRC	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Rest of Central Africa*	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1
Ethiopia	0.2	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	-0.1
Malawi	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.2	0.0
Mauritius*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.7	-0.2
Mozambique	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.2	0.0
Tanzania	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Uganda	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Zambia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	-0.1
Rest of East Africa*	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
Botswana*	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		-0.4	0.0	0.0	0.0	0.0	0.0	-0.1	1.6	-0.4
South Africa*	4.8	-0.2	0.0	-0.1	0.2	-0.1	0.0	0.0	0.0	0.6	-0.1	0.0	-0.1	-0.1	1.0		3.7	0.0	0.0	0.0	0.0	-0.7	1.3	-3.1
Rest of SACU*	-3.0	0.0	0.0	0.0	-0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-2.4	0.0	0.0	0.0	0.0	0.0	-0.7	8.6	-1.1
African non-AGOA eligible countries	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	-0.1	0.4	-0.2
Madagascar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.2	-0.1
Zimbabwe	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.2	-0.1
North Africa	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
United States	0.2	-0.4	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.4	0.4	-0.2	0.0	0.0	-0.2		50.9	-11.1
European Union	12.0	1.0	0.3	2.5	0.7	1.2	0.3	0.1	0.4	0.2	0.2	0.1	0.1	0.0	0.9	0.4	4.3	1.1	-0.1	0.0	-0.9	52.7		0.0
Rest of the world	-0.2	-2.1	-0.1	-0.5	-0.3	-0.2	0.0	0.0	0.1	-0.3	-0.1	0.0	0.0	-0.6	0.3	2.7	0.9	0.1	0.0	0.0	0.0	-8.4	-6.8	1.4

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs. BRIC = Brazil, Russia, India and China.
Source: Authors' calculations based on the MIRAGE model.

ANNEX N. CHANGES IN EXPORTS BY ORIGIN AND DESTINATION FOLLOWING SCENARIO IV.B COMPARED TO THE BASELINE SCENARIO, 2025
(BILLIONS OF DOLLARS)

	AGOA-eligible countries	Nigeria	Senegal	Rest of West Africa	Angola and the DRC	Rest of Central Africa	Ethiopia	Malawi	Mauritius	Mozambique	Tanzania	Uganda	Zambia	Rest of East Africa	Botswana	South Africa	Rest of SACU	African non AGOA-eligible countries	Madagascar	Zimbabwe	North Africa	United States	European Union	Rest of the world
	23.4	6.5	0.1	3.0	1.2	2.3	0.4	0.4	1.1	0.5	1.4	0.2	0.9	2.9	0.9	-1.7	3.7	3.8	0.0	0.5	3.3	-2.2	13.8	-7.6
Nigeria*	2.1		0.0	0.9	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.3	0.0	0.0	0.3	0.3	0.6	0.7
Senegal	0.2	0.0		0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rest of West Africa*	4.9	3.2	0.0	0.9	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.3	0.0	0.0	0.3	-0.4	0.8	-0.8
Angola and the DRC	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1	0.1	0.2	0.4
Rest of Central Africa*	0.9	0.2	0.0	0.1	0.5	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.1	0.8	0.2
Ethiopia	0.3	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-0.1
Malawi	0.1	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Mauritius*	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	1.1	-0.2
Mozambique	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0		0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Tanzania	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0		0.0	0.1	0.6	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Uganda	0.3	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Zambia	0.5	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.3	0.0		0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.0	0.1	0.0
Rest of East Africa*	1.3	0.2	0.0	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.2	0.0	0.5	0.0	0.0	0.5	0.1	0.3	0.4
Botswana*	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		-0.4	0.0	0.0	0.0	0.0	0.0	-0.1	1.6	-0.4
South Africa*	14.6	2.9	0.0	0.9	0.7	0.6	0.2	0.3	1.0	0.5	0.4	0.1	0.8	1.8	0.8		3.5	1.9	0.0	0.5	1.4	-1.3	-1.4	-6.4
Rest of SACU*	-2.6	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	-2.4	-2.4	0.0	0.1	0.0	0.0	0.1	-0.7	8.3	-1.2
African non-AGOA eligible countries	3.0	0.7	0.1	0.9	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.4	0.1	5.9	0.0	0.0	5.9	-0.1	-0.4	-0.6
Madagascar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.1	0.1	-0.1
Zimbabwe	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0		0.0	0.2	0.0	0.0
North Africa	2.8	0.7	0.1	0.9	0.1	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.4	0.0	5.9	0.0	0.0	5.9	-0.2	-0.7	-0.5
United States	2.2	-0.2	0.0	0.4	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	1.0	0.4	-0.4	0.0	0.0	-0.4		50.6	-12.0
European Union	9.2	-0.3	0.2	1.9	0.2	0.1	0.2	0.0	0.2	0.2	0.1	0.2	0.0	0.9	0.4	4.3	1.1	-0.8	0.1	0.0	0.2	52.4		0.4
Rest of the world	-3.4	-3.5	-0.2	-1.4	-0.9	-0.7	-0.4	-0.1	-0.3	-0.3	-0.3	-0.1	-0.3	-2.0	0.3	5.5	1.0	-1.3	0.1	-0.1	-1.2	-7.4	-6.6	1.9

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs. BRIC = Brazil, Russia, India and China.
Source: Authors' calculations based on the MIRAGE model.

**ANNEX O. AVERAGE AD VALOREM PROTECTION FACED BY AFRICAN COUNTRIES ON
THEIR EXPORTS TO THE EU, BY MAIN SECTOR, 2013 (PERCENT)**

	Global	Agriculture	Industry
Africa total	1.2	10.6	0.3
Angola	0.0	0.5	0.0
Benin	0.0	0.0	0.0
Botswana	1.7	81.9	0.0
Burkina Faso	9.3	14.8	0.0
Burundi	0.0	0.0	0.0
Cameroon	2.2	9.5	0.0
Cape Verde	0.2	0.5	0.2
Chad	0.0	0.0	0.0
Comoros	0.0	0.1	0.0
Rep. of the Congo	0.9	45.2	0.1
Côte d'Ivoire	2.1	3.6	0.1
Djibouti	0.0	0.0	0.0
Ethiopia	2.3	3.3	0.0
Gabon	0.0	13.3	0.0
Gambia	0.0	0.0	0.0
Ghana	0.3	0.5	0.0
Guinea	0.0	0.0	0.0
Kenya	1.3	2.0	0.1
Lesotho	0.0	0.0	0.0
Liberia	0.0	0.9	0.0
Malawi	10.4	11.8	0.0
Mauritania	0.1	13.0	0.0
Mozambique	1.1	22.7	0.0
Namibia	5.6	70.9	0.2
Niger	0.0	0.4	0.0
Nigeria	0.0	1.0	0.0

	Global	Agriculture	Industry
Rwanda	0.0	0.1	0.0
São Tomé and Príncipe	0.2	0.5	0.0
Senegal	0.0	0.0	0.0
Seychelles	0.2	4.8	0.1
Sierra Leone	0.0	0.1	0.0
South Africa	1.7	9.8	0.9
Sudan	1.0	8.3	0.0
Swaziland	39.2	100.3	0.1
Tanzania	2.4	9.8	0.0
Togo	0.3	1.0	0.0
Uganda	0.0	0.0	0.0
Zambia	2.0	13.0	0.0
Algeria	0.1	7.2	0.1
Central African Republic	0.0	0.0	0.0
DRC	0.1	9.6	0.2
Equatorial Guinea	00.0	0.1	0.0
Eritrea	0.2	0.7	0.0
Guinea-Bissau	0.0	0.0	0.0
Libya	0.4	4.9	0.4
Madagascar	1.3	3.8	0.0
Mali	0.0	0.0	0.0
Morocco	0.8	6.4	0.1
Somalia	0.0	0.0	0.0
Tunisia	2.1	38.3	0.1
Zimbabwe	4.8	11.1	0.0

Source: Authors' calculations based on the MIRAGE model.

**ANNEX P. CHANGES IN EXPORTS FROM ALL COUNTRIES/REGIONS TO THE EU,
FOLLOWING SCENARIOS ASSUMING A DIFFERENT TRADING ENVIRONMENT COMPARED TO THE
BASELINE SCENARIO, 2025**

Countries	Scenario V.A		Scenario V.B	
	%	Billions of USD	%	Billions of USD
AGOA-eligible countries	13.8	15.8	12.1	13.8
Nigeria*	2.7	0.4	4.0	0.6
Senegal	0.1	0.0	0.2	0.0
Rest of West Africa*	3.9	0.7	4.4	0.8
Angola and the DRC	5.6	0.1	7.7	0.2
Rest of Central Africa*	6.1	0.5	9.3	0.8
Ethiopia	6.4	0.1	7.5	0.2
Malawi	57.7	0.2	67.1	0.3
Mauritius*	16.7	0.7	27.6	1.1
Mozambique	4.0	0.2	3.3	0.1
Tanzania	15.4	0.3	12.5	0.2
Uganda	0.1	0.0	-3.0	0.0
Zambia	19.7	0.1	20.0	0.1
Rest of East Africa*	3.2	0.2	4.9	0.3
Botswana*	24.9	1.6	24.3	1.6
South Africa*	3.2	1.3	-3.5	-1.4
Rest of SACU*	307.4	8.6	295.5	8.3
African non-AGOA-eligible countries	0.3	0.4	-0.3	-0.4
Madagascar	6.8	0.2	4.4	0.1
Zimbabwe	42.4	0.2	48.6	0.2
North Africa	0.0	0.0	-0.5	-0.7
Non-African LDCs	-0.7	-0.4	-0.7	-0.4
Bangladesh	-0.3	0.0	-0.2	0.0
Cambodia	0.0	0.0	0.0	0.0
Rest of non-African LDCs	-0.9	-0.4	-0.9	-0.4
United States	11.3	50.9	11.2	50.6
Rest of the world	-0.3	-6.4	-0.3	-6.2
Rest of developed countries	-0.3	-1.6	-0.3	-1.7
BRIC countries	-0.2	-2.0	-0.2	-1.7
Other developing countries	-0.3	-2.8	-0.3	-2.8

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs.

BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model.

ANNEX Q. CHANGES IN REAL INCOME BY COUNTRY/REGION, FOLLOWING SCENARIOS ASSUMING A DIFFERENT TRADING ENVIRONMENT COMPARED TO THE BASELINE SCENARIO, 2025

Countries	Scenario V.A		Scenario V.B	
	%	Millions of USD	%	Millions of USD
AGOA-eligible countries	0.7	686.2	0.9	912.8
Nigeria*	-0.3	-35.6	-0.4	-47.0
Senegal	0.1	1.4	0.2	2.6
Rest of West Africa*	1.2	136.3	1.2	136.5
Angola and the DRC	-0.2	-9.8	-0.4	-16.9
Rest of Central Africa*	0.0	2.5	0.0	-1.1
Ethiopia	0.5	12.3	0.5	11.1
Malawi	1.0	4.5	0.3	1.6
Mauritius*	4.4	45.2	3.5	36.7
Mozambique	-0.5	-6.9	-0.4	-6.3
Tanzania	0.2	6.1	0.5	13.7
Uganda	-0.1	-1.2	0.2	3.3
Zambia	0.0	-0.4	0.1	1.5
Rest of East Africa*	0.0	5.9	-0.1	-12.5
Botswana*	9.0	118.0	8.7	114.0
South Africa*	0.4	153.5	1.1	423.5
Rest of SACU*	21.9	254.5	21.8	252.5
African non-AGOA-eligible countries	0.0	14.9	0.1	43.9
Madagascar	0.6	5.4	0.8	7.9
Zimbabwe	4.7	12.7	3.8	10.3
North Africa	0.0	-3.2	0.0	25.8
Non-African LDCs	0.0	-13.5	0.0	-13.0
Bangladesh	0.0	-1.2	0.0	-1.4
Cambodia	-0.1	-0.6	-0.1	-0.6
Rest of non-African LDCs	0.0	-11.7	0.0	-10.9
United States	0.0	399.5	0.0	428.6
European Union	0.0	484.2	0.0	428.7
Rest of the world	0.0	-509.1	0.0	-610.5
Rest of developed countries	0.0	-83.7	0.0	-89.9
BRIC countries	0.0	-201.9	0.0	-244.7
Other developing countries	0.0	-223.6	0.0	-275.9

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs.

BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model

**ANNEX R. CHANGES IN TARIFF REVENUES BY COUNTRY/REGION, FOLLOWING
SCENARIOS V.A AND V.B COMPARED TO THE BASELINE SCENARIO, 2025 (PERCENT)**

	Scenario V.A	Scenario V.B
AGOA-eligible countries	-6.7	-18.5
Nigeria*	-12.3	-22.9
Senegal	-17.9	-27.4
Rest of West Africa*	-10.1	-19.2
Angola and the DRC	-14.0	-33.8
Rest of Central Africa*	-12.5	-43.8
Ethiopia	-2.0	-17.5
Malawi	4.3	-57.0
Mauritius*	7.2	-18.7
Mozambique	-58.8	-61.9
Tanzania	-10.8	-38.1
Uganda	-14.1	-32.8
Zambia	-1.6	-67.5
Rest of East Africa*	-6.2	-20.5
Botswana*	36.5	39.9
South Africa*	6.4	10.7
Rest of SACU*	82.5	73.5
African non-AGOA-eligible countries	-0.1	-5.5
Madagascar	-5.2	-9.1
Zimbabwe	9.1	-76.5
North Africa	-0.2	-4.9
Non-African LDCs	-0.3	-0.3
Bangladesh	-0.3	-0.3
Cambodia	-0.3	-0.3
Rest of non-African LDCs	-0.3	-0.4
United States	-14.9	-15.0
European Union	-16.3	-16.3
Rest of the world	-0.3	-0.3
Rest of developed countries	-0.2	-0.2
BRIC countries	-0.4	-0.4
Other developing countries	-0.2	-0.3

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs. BRIC = Brazil, Russia, India and China.

Source: Authors' calculations based on the MIRAGE model

ANNEX S. SECTOR CATEGORIZATIONS

#	Sectors	Categories
1	Cereal and grains	Agriculture and food
2	Vegetable, fruit and nuts	Agriculture and food
3	Plant based fibers (including cotton)	Agriculture and food
4	Other crops	Agriculture and food
5	Live animals, animal and wool products	Agriculture and food
6	Milk and dairy products	Agriculture and food
7	Sugar	Agriculture and food
8	Meat products	Agriculture and food
9	Other food products	Agriculture and food
10	Crude and processed oil	Mining and energy
11	Other energy	Mining and energy
12	Mining	Mining and energy
13	Mineral and metal products	Mining and energy
14	Textile and wearing apparel products	Textile and apparel
15	Forestry	Other industry
16	Fishing	Other industry
17	Leather products	Other industry
18	Chemical products	Other industry
19	Other manufactured products	Other industry
20	Transport services	Services
21	Other services	Services

ANNEX T. COUNTRY CLASSIFICATIONS

#	Country/Region	Africa vs. Non-Africa	Broad category
1	Nigeria	Africa	AGOA-eligible countries
2	Senegal	Africa	AGOA-eligible countries
3	Rest of West Africa	Africa	AGOA-eligible countries*
4	Angola and the DRC	Africa	AGOA-eligible countries
5	Rest of Central Africa	Africa	AGOA-eligible countries*
6	Ethiopia	Africa	AGOA-eligible countries
7	Malawi	Africa	AGOA-eligible countries
8	Mauritius	Africa	AGOA-eligible countries
9	Mozambique	Africa	AGOA-eligible countries
10	Tanzania	Africa	AGOA-eligible countries
11	Uganda	Africa	AGOA-eligible countries
12	Zambia	Africa	AGOA-eligible countries
13	Rest of Eastern Africa	Africa	AGOA-eligible countries*
14	Botswana	Africa	AGOA-eligible countries
15	South Africa	Africa	AGOA-eligible countries
16	Rest of SACU	Africa	AGOA-eligible countries*
17	Madagascar	Africa	Non-AGOA-eligible countries
18	Zimbabwe	Africa	Non-AGOA-eligible countries
19	North Africa	Africa	Non-AGOA-eligible countries
20	Bangladesh	Non-Africa	Non-African LDCs
21	Cambodia	Non-Africa	Non-African LDCs
22	Rest of least-developed countries	Non-Africa	Non-African LDCs
23	United States	Non-Africa	United States
24	European Union	Non-Africa	European Union
25	Rest of developed countries	Non-Africa	Rest of the World
26	BRIC countries	Non-Africa	Rest of the World
27	Rest of developing countries	Non-Africa	Rest of the World

Note: * indicates initially AGOA-eligible middle-income countries or regions inclusive of initially AGOA-eligible MICs. BRIC = Brazil, Russia, India and China.

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