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TRADE DEVELOPMENT

THE IMPACT OF TRADE PREFERENCES IN FACILITATING COMPETITIVE INDUSTRIAL DEVELOPMENT: AN AGOA CASE STUDY

Table of Contents

I. Introduction

The central question and motivation behind this paper is to determine whether trade preference agreements facilitate permanent economic development, or if they merely temporarily increase the volume of exports over the period of preferential market access. The paper will evaluate this, by using the case study of the African Growth and Opportunity Act (AGOA) enacted by the United States (US) in 2000. The literature and empirical data show that exports do increase in certain cases under trade preference agreements, however what is missing to a large extent is the impact that these increased exports have on facilitating competitive industrial development through learning-by-doing spill over effects. The objective of this paper is to identity evidence which supports the notion that trade preferences have the potential to advance competitive industrial development, by specifically looking at the impact that AGOA has had on eligible Sub-Saharan African (SSA) countries exports to third countries since its enactment in 2000 as the indicator of trade induced permanent economic development. This is one indicator of many, such as labour productivity, manufacturing output, foreign direct investment, and GDP per capita which could also be used as indicators of development.

The remainder of this paper is organised as follows. In the second section, a review of the theoretical and empirical literature with respect to trade preferences and specifically AGOA preferences is discussed. Section three presents an empirical analysis, firstly in terms of a graphical analysis which is then followed by an econometric analysis. The aim of the empirical analysis is to firstly understand the aggregate story of apparel exports under AGOA preferences, and secondly to test the relationship that trade preferences facilitate economic development through enhanced trade. The fourth section concludes the paper by emphasising the key findings, issues and policy recommendations of the paper.

II. Literature Review

The literature on trade preferences and the specific case study of AGOA is vast, both theoretically and empirically, however there is less literature examining the impact of preferences on economic development and industrial competitiveness. The structure of this review will be to briefly highlight the origins and progression of trade preferences over recent decades, as well as the mechanics of how preferences work. This will be followed by unpacking the effect that trade preferences have on the export supply response of beneficiaries and the channels through which exports facilitate associated economic development and growth. Reasons as to why trade preferences perhaps do not necessarily achieve their intended objectives will then be discussed. Finally, a review of the AGOA case study with respect to its policy, objectives, results and degree of success will be discussed.

A. Trade Preferences

Trade preferences have a long history, with one of the earliest examples occurring when the US reduced tariffs on exports from the Philippines by 25 percent in 1902 and by 100 percent in 1908 (Brown, 1986). More recently, since 1956 preferential market access granted to developing countries via tariff and quota reductions has become a significant part of the world trading system, where many of these agreements stemmed out of former colonial relationships (Brown, 1986). The Generalised System of Preferences (GSP) was a key proposal originating out of the first United Nations Conference on Trade and Development (UNCTAD) in 1964, which encouraged developed countries to extend preferential tariff preferences on imports from developing countries of most manufactured and semi-manufactured products (Baldwin and Murray, 1977). The GSP was negotiated over the period 1964-1971.

The European Economic Community (EEC) implemented the first scheme in July 1971 followed by Australia, Japan and the United States in 1976, amongst many other developed nations. However around 1977 the developed countries began new negotiations under the Generalised Agreement on Trade and Tariffs (GATT) which would see significant most-favoured-nation (MFN) tariff cuts, which at that time was a threat to the benefits developing countries were receiving from preference agreements extended under the GSP (Baldwin and Murray, 1977). However the benefits for developing countries under MFN tariff cuts was that a broader range of products became recognised than under the GSP, and these countries would have access to a broader world market accompanied by unlimited trade volumes. Baldwin and Murray (1986) remark that individual beneficiary countries had more to gain in terms of trade creation with the MFN tariff reductions than the trade diversion effects of reduced preference margins over other countries.

The Multi-Fibre Arrangement (MFA) governed textile and apparel trade under GATT over the period 1974-1994 (Rolfe and Woodward, 2005). More recently, in 1994 the Uruguay Round GATT agreement led to the Agreement on Textiles and Clothing (ATC) to govern the trade of textiles and apparel, which was to be administered by the World Trade Organisation (WTO). Finally in 2005, the WTO withdrew the ATC which effectively ended quota restrictions on textiles and apparel, resulting in significantly more competition facing African countries which had enjoyed preferential market access to the US, over the period 2000-2004 under AGOA. The former quota system after 1974 is now usually referred to as the MFA, and will be referred to as that throughout the remained of the paper.

According to Brown (1987), preferential agreements will generally improve the welfare of the beneficiary country, reduce the welfare of non-preferred countries and have an ambiguous effect on the donor or preference giving country. However trade preferences are also criticised on the grounds that they do not provide significant benefits to most sectors and products, countries might push for

specialising in sectors which they do not actually have a comparative advantage in, potentially high administrative costs of implementation and monitoring, political tension between beneficiaries and excluded countries, rules of origin restrictions and the resistance by beneficiaries for increased trade liberalisation due to the threat of their preference margins being reduced (Hoekman and Özden, 2005).

Trade preference agreements have two important elements associated to them. The first is the technical reduction of tariffs and restrictive quotas to the maximum point of duty-free and quota-free market access for the beneficiary. The second is the constraints imposed upon country participation such as rules of origin requirements, which have always been an issue and generally result in uncertainty for future investment according to Mattoo et al. (2003).

The aim of preference agreements as a whole is to provide less developed countries with the opportunity and space to improve productivity, product sophistication and ultimately diversify into other products through learning-by-doing, which is afforded by the rules enabling preferential market access (Edwards and Lawrence, 2013). More specifically, the aim of rules of origin requirements is to encourage beneficiaries to invest in additional stages of the manufacturing process and to ensure that they benefit from the preferences whilst preventing other countries from benefiting, however these rules can easily create a hindrance to trade (Stevens and Kennan, 2004).

It is these constraints that are argued reduce the effectiveness of trade preferences in facilitating economic development (Brown, 1986; Collier and Venables, 2007; Brenton and Ikezuki, 2004). They argue that these constraints are most restrictive to manufactured products, suggesting that trade preferences have to be adapted in order to further integrate developing countries into the world trading system. The reason being that least developed countries rely on preferential market access, however often have to comply with rigid and complex rules of origin requirements for which evidence of transformation has to be provided to customs of importing countries (De Melo & Portugal-Perez, 2013).

The manner in which rules are made to be less restrictive is by either requiring fewer processes to be undertaken domestically or by expanding the number of countries from which inputs can be sourced from without the product losing originating status, where the more countries from which inputs can be sourced from, the better (Stevens and Kennan, 2004). Thus the over or under specification of the rules of origin can have a significant consequence on the gains accrued to beneficiary countries, as there is a tension between industrial development and rules of origin. If these rules are too lax, then firms do not have an incentive to develop the domestic supply industry. The implication will be that if the preferences are removed, domestic industries and firms will not be able to compete. If they are too onerous, then firms are unable to export and trade will be inhibited. The challenge in implementing preference arrangements is to find the balance between these two extremes, where generally cautious liberal rules

should be preferred as this facilitates both trade and potential industrial development (Stevens and Kennan, 2004.)

B. Export Growth and the Emergence of Competitive Industry

This section discusses the channels through which trade preference arrangements enhance economic growth and the development of competitive industries. Firstly, preferences result in an export supply response, particularly of products to which preferential market access is extended. Economic growth is enhanced as a result of trade growth, through a number of channels. Firstly, preferences targeting manufactured goods help diversify the economy into manufactures, which provide a number of favourable externalities for growth. Trade preferences can attract foreign direct investment (FDI) which lead to technology transfers. Firms are exposed to greater competitive pressures when exporting, and hence may improve productivity. Trade preferences, through enhancing exports, may reduce barriers to trade and facilitate the emergence of trade institutions, which in turn improves productivity and industry competitiveness. Finally, issues mitigating the success of trade preference arrangements will be discussed.

A static result of trade preferences is the export supply response of beneficiaries. Brown (1986) suggests that empirical studies, prior to his paper, provide mixed results in terms of the impact that preferential trade agreements have on developing countries exports to donor countries, however concludes that most estimates show that preferential market access can stimulate a beneficiaries export supply response by between 10 percent to 30 percent. Further, Brown (1986) suggests that most studies find the impact on donor countries is generally small, often resulting in trade creation and a terms of trade improvement for the donor country, with small effects on other third party countries.

Collier and Venables (2007) main focus is the benefit that trade preferences have on stimulating an export supply response, which has the potential to create employment and economic growth in developing countries. The key to preferences successfully stimulating an export supply response is if they provide firms with a significant commercial advantage along the value chain such that it is beneficial to locate certain processes in a beneficiary country (Stevens and Kennan, 2004). A surprising example of this has been Lesotho where prior to AGOA, the apparel industry was relatively insignificant.

Increased trade growth is often related to improved economic growth. Hausmann et al. (2005) find that periods of economic growth accelerations require an increase in investment, exports, imports and a more competitive real exchange rate. Jones and Olken (2005) suggest that a reduction in manufacturing and investment lead to growth collapses, with growth accelerations most commonly associated with large and consistent expansions in international trade. They show that periods of accelerated growth increase the share of Gross Domestic Product (GDP) that is traded by 13 percent

over a 5-year period, with both exports and imports expanding their respective shares of GDP. Patillo et al. (2005) show the linkage between increased trade growth and associated GDP growth accelerations in Sub-Saharan Africa. Frankel and Romer (1999) show that a 25 percent increase in the ratio of trade to GDP increases per-capita income by between 50 to75 percent, pointing to the fact that increased trade is a key factor driving GDP growth and economic development. The channels through which increased trade and economic growth enhance competitiveness and economic development will now be discussed.

The literature shows that the growth in manufacturing and other modern sector exports is important for economic growth and development. Collier and Venables (2007) argue that preferences can enable the African region to tap into new markets, particularly with respect to manufactured goods as opposed to agricultural and resource based products which face diminishing returns to scale due to fixed land and resource endowments.

A large portion of the literature focuses on the idea that growth, particularly with respect to relatively poor countries, comes about as economies transition from agriculture into manufacturing. The idea is that manufacturing by its nature is more productive and has the potential for learning-by-doing spill over effects. Jones and Olken (2005) find that during periods of GDP growth, manufacturing output grows faster than total output growth and that manufacturing sector employment as a share of total employment increases. Thus the reallocation of resources towards more efficient and productive sectors is an important factor behind growth accelerations.

The second major benefit of manufacturing export led growth is the improved ability for firms to overcome scale thresholds. Firstly, producers of manufactured goods supplying only the domestic market can face diminishing returns due to the small size of the domestic market, however have a greater potential to overcome this barrier when given the opportunity to supply a broader external market (Collier & Venables, 2007). These barriers are overcome due to increasing internal economies of scale and external economies of scale, which are particularly strong for firms that form part of a cluster of similar firms. The notion is that certain export locations may be uncompetitive relative to established clusters, and hence can never form unless provided the space to do so, one method being granted a period of preferential market access. Thus Collier and Venables (2007) primary argument is that preferences will not only lead to an export supply response but can also potentially permanently alter a locations industrial composition even when the preferences are only temporary in nature. This leads to permanent industrial development and competitiveness.

Preferential market access can be a catalyst for foreign direct investment (FDI), which improves productivity and competitiveness particularly through technology transfers. Evidence of this comes from AGOA preferences, where it is found find that AGOA stimulated FDI and the entry of foreign firms into beneficiary countries (Frazer and Van Briesebroeck, 2007; Roberts and Thoburn, 2003).

Further, these firms where associated with importing better technology, organisational skills, and more sophisticated capital equipment which all contributed to improved domestic productivity and increased domestic output. Lall (2005) suggests that trade preferences played a critical role in stimulating Lesotho's rapid manufacturing sector growth, which got driven by large export-orientated foreign direct investment. This has been particularly surprising given the small size of the economy, small industrial base, and the lack of adequate infrastructure, resources and skills. However he warns that long term sustainability is dependent on the integration of these foreign firms into the domestic economy, accompanied by significant improvements in skills and productivity.

Trade preferences assist domestic firms to enter the external market, which can expose them to greater external competition, despite being extended preferential market access to certain regions. The increase in competitive pressure can force domestic firms to improve productivity, particularly through learning-by-doing as exports expand. Frankel and Romer (1999) suggest that it is improvements in efficiency or total factor productivity (TFP), rather than capital accumulation that supports improved economic growth. The principle is that as international trade increases, resources reallocate according to comparative advantage, resulting in increased learning-by-doing and knowledge spill over effects. This improves within-industry and within-firm productivity as a result of increased competition and market access, which improves economic efficiency, growth and development (Jones & Olken, 2005).

The ability to export involves overcoming barriers to trade such as sunk entry costs, which trade preferences indirectly assist firms in overcoming by ensuring that they do not have to compete against other countries exports for a period of time. Roberts and Tybout (1997) argue that if firms are assisted or are able to overcome the initial sunk costs of entering an export market such as establishing distribution networks, marketing costs, and various administrative requirements, then they will be less reluctant to exit such a market upon having entered into it. Thus if firms are given assistance to overcome these entry costs , they will be more willing to invest in exporting activities such as transport infrastructure, financial institutions, overseas contacts and distribution networks (Lall, 2005). This enhances access to foreign technology, which will improve productivity. The extent to which these investments can be shared across other products, even products not granted preferential access, will further enhance the positive impact of preferences on competitiveness and development.

There are a number of factors that restrict preferences from working the way they should, and that prevent them from achieving what they were intended to. As discussed earlier, if preferences are too lax, then they will fail to facilitate domestic industry development as firms have no incentive to invest and exploit the opportunity of preferential market access. However if they are too restrictive, then exports will not be stimulated as firms are unable to comply with the rigid rules. Secondly, the success of preference arrangements is undermined when there is uncertainty regarding their duration, which deters firms from investing (Collier and Venables, 2007). Thirdly, certain countries are too far from the

technology frontier, resulting in distortions in the product mix which is inconsistent with that particular countries development potential (Edwards and Lawrence, 2010).

Finally, the success of preferences is largely dependent on the domestic capability of the beneficiary. This refers to the presence of established and well-functioning institutions, adequate skills and infrastructure, correct policies, and sufficient domestic supply capacity in order for countries to be close to or at global competitive thresholds, to be able to take advantage of the preferences. Collier and Venables (2007) agree that trade preferences will assist African countries in increasing their exports, however the above domestic issues have to complement these preferences to facilitate industrial development. Rodrik et al. (2004) however argue that economic growth and development depends on the presence of adequate institutions to a far greater extent than other factors such as an increase in trade. However Dollar and Kraay (2003) argue that growth is dependent on both an increase in trade, especially in the short run, as well as the presence of adequate institutions.

C. Case Study – AGOA Preferences

The background literature with respect to trade preferences and their theoretical impact on exports and the emergence of competitive industry has been discussed. For the purposes of the paper, it would be useful to analyse a particular case study of trade preferences. The AGOA preferences present a unique case study to evaluate whether preferences lead to development. The reasons for selecting the case study of AGOA preferences, is that they are substantial, they have led to significant export growth and they are current. This paper will move ahead by briefly discussing the AGOA policy framework, provide a brief summary of the main results and provide a comment as to whether these preferences have led to development.

AGOA Policy

The African Growth and Opportunity Act (AGOA) is a preferential trade agreement which allows eligible African countries duty free and quota free access to the US market for approximately 7000 products (Rolfe and Woodward, 2005). The act was born out of US-African development assistance policy in the late 1990's, where the aim was to encourage trade, and not rely entirely on aid to assist development. Hence AGOA was enacted with the intention to improve democratic governance in Africa and foster economic development by assisting the integration of African exports into the world economy. More specifically, the act was setup to stimulate light manufacturing in Africa with the hope that it would contribute to job creation, poverty reduction and greater industrialisation (Schneidman & Lewis, 2012). AGOA was signed into law on May 18, 2000 as Title 1 of The Trade and Development Act of 2000, and is set to expire in September 2015. AGOA over the period has allowed 42 Sub-Saharan African (SSA) countries[1] access to the US market at duty-free or reduced rates for approximately 7000

[1] See Table A1 in the Appendix for the full list of beneficiary countries which have been eligible over the period.

products as defined at the 8-digit HS level (Harmonized System), however certain countries were either granted access after 2000 or were deemed ineligible at a later stage due to country specific reasons (Rolfe and Woodward, 2005; Frazer and Van Briesebroeck, 2007). These products include the 4600 products eligible under the US Generalised System of Preferences (GSP) as well a further 1,800 products specified under the AGOA legislation.

The US government determines annually which countries adhere to the requirements as set out in the legislation, with beneficiary status being either granted or withdrawn by the US President. Beneficiary countries cannot dispute the decision of the US government, which is one of the differences which sets AGOA's non-reciprocal preferences apart from bilateral or reciprocal trade agreements (AGOA.info, 2013c). AGOA's eligibility criteria are comprehensive and include: an established market-based economy with controls to reduce government intervention, a sound legal framework, the removal of barriers to US trade and investment, policies to promote economic development, systems to stem corruption and bribery, the protection of internationally recognised worker's rights, activities that do not threaten US security or foreign policy interests and activities that do not violate international human rights, implementation of policies to combat the worst forms of child labour, and no involvement in supporting acts of international terrorism (AGOA.info, 2013e; Rolfe and Woodward, 2005). It is pointed out by Rolfe and Woodward (2005) that Burundi, Central African Republic, Comoros, Cote d'Ivoire, Equatorial Guinea, Eritrea, Liberia, Somalia, Sudan, Togo and Zimbabwe did not qualify in 2005 based on the above eligibility criteria. Importantly, countries should have either established the above criteria or should be making good progress in achieving such criteria to be granted AGOA eligibility.

The majority of AGOA eligible products previously did qualify under the GSP, however benefits now include not having to comply with the periodic GSP renewal, and the removal of certain quantitative safeguards. Apparel and textile products are not included under the GSP framework, however AGOA under the 'wearing apparel provisions' provides certain eligible countries with duty free access for all clothing and certain textile product exports to the US, subject to certain rules of origin requirements being satisfied (AGOA.info, 2013c). Generally inputs (fabric, yarn or thread) have to be sourced either from the US or from other AGOA countries, however apparel inputs can be sourced from third countries under the 'special rule' or Third-Country Fabric (TBC) provision for apparel (Frazer and Van Briesebroeck, 2007). This special rule was implemented to enable lessor developed AGOA beneficiaries to source yarn and fabric from any country in the world and still qualify for preferential access to the US market, so long as there is evidence of real production taking place within the beneficiary country[2] (Frazer and Van Briesebroeck, 2007; Edwards and Lawrence, 2013). Thus apparel

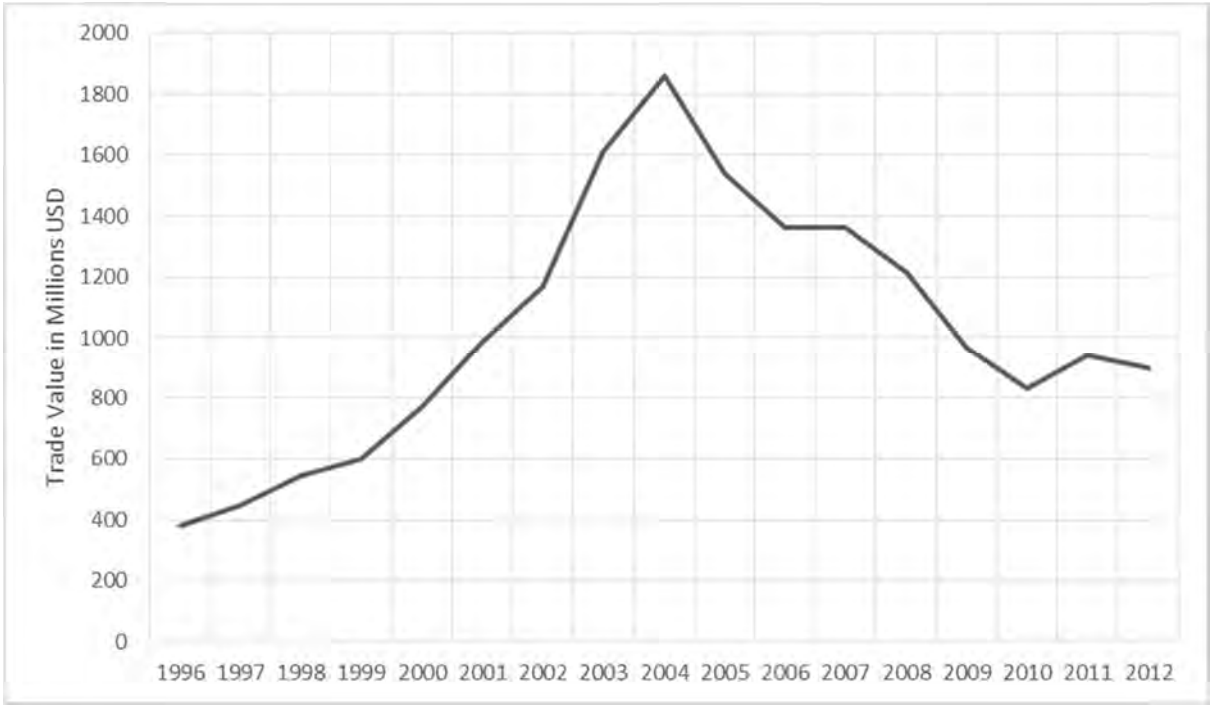
[2] As of January 2007, South Africa was the only country of the 27 who were or had been eligible under the 'wearing apparel provisions', which did not qualify for the special rule (Frazer and Van Briesebroeck, 2007).

exports to the US are granted more flexible rules of origin requirements than other products. This paper focuses on apparel exports to the US as it is a key focus of the AGOA legislation, for the reasons mentioned above.

Background Review of Results

The empirical results of AGOA on SSA trade with the US varies considerably over the period and across countries. However the main point is that between 2001 and 2011, exports to the US from the 40 eligible AGOA countries increased more than 500 percent, from $8.15 billion in 2001 to $53.8 billion in 2011. Mineral oils and fuel accounted for approximately 90 percent of total US imports from AGOA beneficiaries over the period of enactment. AGOA's non-petroleum exports however more than tripled over the period 2001 to 2011, from $1.2 billion to $4.5 billion, with the number of countries exporting non-petroleum products to the US increasing from 13 in 2000 to 22 in 2011. Textiles and apparel exports doubled since 2001, accounting for $850 million in 2011 despite having fallen back from a peak of $1.6 billion in 2004, as illustrated in Figure 1. Mattoo et al. (2003) assess the quantitative impact of AGOA

FIGURE 1
Total US Apparel Imports from AGOA Beneficiaries[3]



Source: UN Comtrade

preferences on African exports in the initial years, from which they estimated that medium term benefits were estimated to be between US$100-US$140 million. Further, they argued that if the strict conditions

[3] AGOA beneficiaries includes the pool of all 42 members which received eligibility under AGOA legislation over the period 2000-2012. This figure does not take into account certain beneficiaries which were granted eligibility after 2000, or those whose eligibility got withdrawn over the period. However this loss of detail does not significantly alter the overall findings.

required for market access were removed, especially the onerous rules of origin requirements, then medium term benefits could have been around 5 times greater at US$540 million.

Importantly, the Third-Country-Fabric provision has allowed many African countries to export apparel products to the US, which would not have been possible otherwise (Kimenyi, 2012; Stevens and Kennan, 2004). De Melo and Portugal-Perez (2013) estimate that the top seven AGOA beneficiaries export volumes to the US increased by approximately 168 percent under the special rule, compared to an increase of 44 percent under the initial AGOA rules of double transformation. Frazer and Van Briesebroeck (2007) find that AGOA increased apparel exports significantly, and significantly reduced the gap between the average numbers of products exported by AGOA countries relative to other countries. They suggest the AGOA effect increases over time, increasing the probability of exporting products.

Hence AGOA's most significant effect in manufacturing has been in the apparel industry. Lesotho, Swaziland, Kenya, Madagascar and Mauritius have been the major beneficiaries with respect to apparel exports. It is estimated that AGOA has created 300 000 direct jobs and 1.3 million indirect jobs in Africa, supporting up to 10 million people (Schneidman & Lewis, 2012). They point out further that in Lesotho alone, employment in the textiles and garment sector increased from 19 000 jobs in 1999 to 45 700 jobs in 2011 (Field, 2005). The growth of textile and apparel exports under AGOA is thus argued to have contributed the greatest to total estimated job creation. It is clear that AGOA has to a certain extent achieved the static results of higher incomes and increased employment (Edwards and Lawrence, 2013). However only a small percentage of available product lines which are eligible to receive preferential market access have actually been utilised, mainly due to the lack of diversification of African economies (Kimenyi, 2012). Also, American investment in SSA still only accounts for approximately 1 percent of its total worldwide direct investment.

AGOA Preferences Impact on Development

Overall, there is a widespread call for AGOA preferences to be extended for a further 10 years after 2015 to 2025. It is argued that AGOA has facilitated job creation, attracted investment and contributed to the gradual industrialisation of certain economies. Further, the rules of origins requirements under AGOA have to a certain extent facilitated the formation of regional value chains in Africa, which could potentially lead to the integration of African and American companies in global value chains. However there are many arguments suggesting that AGOA has not achieved its intended goal of fostering competitive industrial development through enhanced trade.

Edwards and Lawrence (2013) argue that AGOA preferences have increased trade between African countries and the US resulting in gains from trade, however it may have not necessarily led to the dynamic benefits of economic growth and development, product sophistication and diversification.

They further suggest that there is little evidence to suggest that competitive industries have been established which could survive upon the removal of the preference rules, as there has not been much horizontal or vertical diversification.

This is seen in the case of Lesotho, where its apparel industry is completely focused on the 'cut, make and trim' (CMT) market, where all inputs are supplied by the parent company and sourced abroad. The consequence of this system is that the industry is vulnerable to the external market. In 2005, this threat was realised when Lesotho's apparel sector was severely affected by increased competition as a result of the end of the MFA, resulting in many factory closures and the loss of thousands of jobs in a country where 9 out of 10 people were employed in the apparel industry (Wines, 2005; Field, 2005). Further, Lall (2005) argues in order to survive increased competition, Lesotho would have to improve productivity and diversify the product range into more sophisticated products, in order to sustain and retain FDI inflows. He suggests that FDI usually encourages local entrepreneurship and capabilities via skills transfers and backward linkages, however this did not happen in the case of Lesotho where almost no local firms became established enough to compete with the foreign firms.

Lall (2005) also argues that increased apparel exports due to the MFA enabled countries such as Sri Lanka and Bangladesh to mature and survive increased competition, however suggests that the learning-by-doing process in African beneficiaries, with particular reference to Lesotho, has not gone so far. In order for Africa to truly exploit the trade opportunities provided under AGOA, then correct domestic policies have to be put in place and acted upon to improve competitiveness, such as labour market reforms and reducing the costs of inputs. This supports the argument put forth by Collier and Venables (2007) that trade preferences can only act as a catalyst to improve industrial competitiveness, but that correct domestic policies have to be in place to ensure adequate infrastructure, skills and market conditions.

In summary, trade preferences have become an important part of the world trading system. There is both theoretical and empirical support of beneficiaries experiencing an export supply response, increased and enhanced economic growth. However it remains uncertain as to the extent to which preferences, and in particular AGOA preferences, have led to the emergence of competitive industries and development. Thus there are still concerns regarding the viability and long run effects of the AGOA preferences, particularly with respect to the survival of firms upon the removal of preferential market access. This raises the central question of this paper, which is to what extent do trade preferences lead to development. The method as to how this question is going to be analysed will be discussed in detail in the next section.

III. Empirical Work

The central question of this paper is if preferential trade arrangements facilitate permanent economic development. The paper uses the case study of AGOA to evaluate this question. The method involves using exports to third countries as an indicator of competitiveness and economic development. Importantly this is one of many indicators which could have been used, however the literature points to the link between enhanced export performance under preferences, and the channels through which increased exports facilitate improved competiveness and development. Thus is makes sense to use exports to third countries as an indicator as to the extent to which AGOA preferences have led to competitiveness and development. The reason for using third countries is that if AGOA preferences have indeed enhanced competitiveness, then beneficiaries should have been able to increase exports of similar products to markets where no preferential access is extended. If there is evidence to show that exports of eligible products to third countries did increase during the period of AGOA, then it would suggest that the AGOA preferences have facilitated improved competitiveness and development with regard to its beneficiaries.

The conceptual framework underlying this choice of indicator variable and the channel through which it facilitates competitive economic development will briefly be explained. Preferential market access stimulates an export supply response to the country extending preferential treatment. In this case study, AGOA preferences stimulated an export supply response of apparel products from AGOA beneficiaries to the US market. This preferential market access enables apparel exporters to learn-by-doing and over time through this process become more efficient and productive, upgrade their product diversification, diversify into new products and markets and as a result reach a higher level of competitiveness which can be sustained even after preferential market access is removed (Edwards & Lawrence, 2010; Collier & Venables; 2007). Learning-by-doing is therefore the channel through which this paper anticipates preferences to affect industrial competitiveness. Ultimately competitiveness will be developed through many other channels such as productivity gains; increased foreign direct investment; technology spill over effects; ability to overcome scale thresholds, fixed costs and trade barriers; and economic growth. Learning-by-doing will facilitate the entry of many of these other channels and together foster competitive industrial development.

This section will firstly discuss the data and choice of countries included in the analysis. After this, a graphical analysis of the data will be performed in order to understand and visualise the aggregate story of the impact of AGOA preferences. Following this, an econometric analysis will be undertaken to test the relationships identified in the graphical analysis. The econometric analysis will involve outlining the method and specification applied, and conclude by discussing the results.

Data

Mirror data drawn from UN COMTRADE at the 6-digit HS 1996 level is used, as trade data reported by African countries is considered unreliable in the literature. All products at the 6-digit level from Chapters 61 and 62 were included, along with products 650100, 650200, 650300, 650400, 640699, and 650590. Thus the empirical analysis concentrates only on apparel products, as these products have been the main focus of AGOA policy.

The European Union (EU) group consists of thirteen members, all of which were members of the EU prior to 1996, and the Rest of the World (ROW) group consists of thirty-five countries[4]. These countries were selected on the basis that they reported import data from 1996 to 2012 in the HS revision 1996. Very small nations with relatively insignificant trade flows were dropped from the ROW group. Imports to the US, EU countries and ROW countries (49 unique countries in total) from each SSA country which has been eligible for preferential market access under AGOA at a certain stage, was collected over the period 1996-2012 (17 years). This period enables a comparison of export performance both prior to and post the enactment of AGOA preferences. Importantly, the econometric analysis only includes SSA countries which received AGOA eligibility in 2000, in order to simplify the empirical specification[5].

The control group, which is to be explained in more detail when the method is discussed, is derived from a group of Low and Middle Income Economies (LMIE) provided by UN Comtrade. This group actually consists of 142 countries, however after removing AGOA beneficiaries, countries with very infrequent data and those that are deemed relatively insignificant, the group was reduced to 34 countries[6]. The sample of countries are those of similar income and GDP levels as an average AGOA beneficiary.

Graphical Data Analysis

The graphical analysis of the data aims to analyse the aggregate picture of trade under AGOA, in order to provide a background motivation as to the extent to which the data suggests that AGOA facilitated apparel exports to third countries in terms of trade value, destination and product count. Firstly, a general discussion of the export supply response from AGOA beneficiaries to the US will be discussed[7]. The objective then is to analyse the aggregate picture of apparel exports from AGOA

[4] See Appendix Table A2 for the list of third countries included in the analysis.

[5] Congo (Republic), Djibouti and Guinea Bissau were dropped from the AGOA group due to insignificant apparel exports to the US. Thus the AGOA group used in the econometric analysis comprises of 27 beneficiaries (see Table A3 in the Appendix).

[6] See Table A4 in the Appendix for the list of countries included in the LMIE control group. Bangladesh, China and India were left out of the control group due to their greater competitive advantage in apparel manufacturing, which would distort the estimates of the AGOA effect.

[7] Note that mirror data has been used, hence exports from AGOA beneficiaries to destination countries have been captured rather as imports by destination countries from AGOA beneficiaries over the period. Hence exports from AGOA will be referred to as imports by destination countries from AGOA in order to avoid confusion. However they are interchangeable.

beneficiaries to third countries included in this analysis, and based on the results of this indicator, present an argument as to the extent to which the data suggests that AGOA facilitated competitive industrial development in beneficiary countries.

A. US Imports from AGOA Beneficiaries

Total apparel imports by the US from the pool of AGOA beneficiaries increased substantially over the period 2000-2004, the initial years of AGOA, as illustrated in Figure 1. This stellar growth came to a halt in 2005, the year in which AGOA beneficiaries faced increased competition, particularly from China and other Asian economies (Rees and Hathcote, 2004). The end of the MFA at the end of 2004 clearly had a considerable impact on US imports from AGOA beneficiaries, where the trade value of apparel imports peaked at approximately $1.9 billion in 2004 and fell sharply in 2005 to approximately $1.5 billion. This downward trajectory continued in 2006, after which it levelled off in 2007. However a second round of declining trade volumes occurred over the period 2008-2010, the global recession undoubtedly being an important contributory factor. A small recovery occurred over the period 2011-2012, where total apparel imports ended approximately double the 1996 trade value. The important point is that apparel exports from AGOA to the US increased substantially during the period, however were adversely affected by increased competition from China, India and other Asian economies after the end of the MFA.

The nine leading AGOA beneficiaries with respect to US apparel imports remained relatively consistent over the period, together responsible for approximately 98 percent of total apparel imports by the US from all AGOA beneficiaries over the period (see Table 1). US apparel imports in terms of trade value from each leading beneficiary fell after 2005 as a result of greater competition (Figure 2). In 2000, Mauritius commanded the greatest share of total US apparel imports from AGOA, however Figure 3. illustrates how its share approximately halved by 2012. Madagascar's share generally increased until 2009, after which a considerable decline occurred from 2010-2012. Interestingly, Madagascar became ineligible for preferential market access to the US under AGOA in 2010, emphasising the importance of AGOA to Madagascar's apparel exports to the US.

TABLE 1
Leading AGOA Beneficiaries with respect to US Apparel Imports from AGOA

		1996	2000	2004	2005	2008	2012
Botswana	**Trade Value**		**8.99**	**21.44**	**31.54**	**16.57**	**11.13**
	% Share		1.16%	1.15%	2.05%	1.36%	1.24%
Kenya	**Trade Value**	**29.25**	**46.73**	**295.56**	**286.20**	**258.40**	**264.55**
	% Share	7.75%	6.05%	15.88%	18.60%	21.27%	29.41%
Lesotho	**Trade Value**		**146.36**	**481.79**	**408.23**	**358.72**	**311.47**
	% Share		18.96%	25.88%	26.53%	29.53%	34.63%
Madagascar	**Trade Value**	**12.53**	**115.72**	**346.02**	**294.08**	**295.11**	**44.98**
	% Share	3.32%	14.99%	18.59%	19.11%	24.29%	5.00%

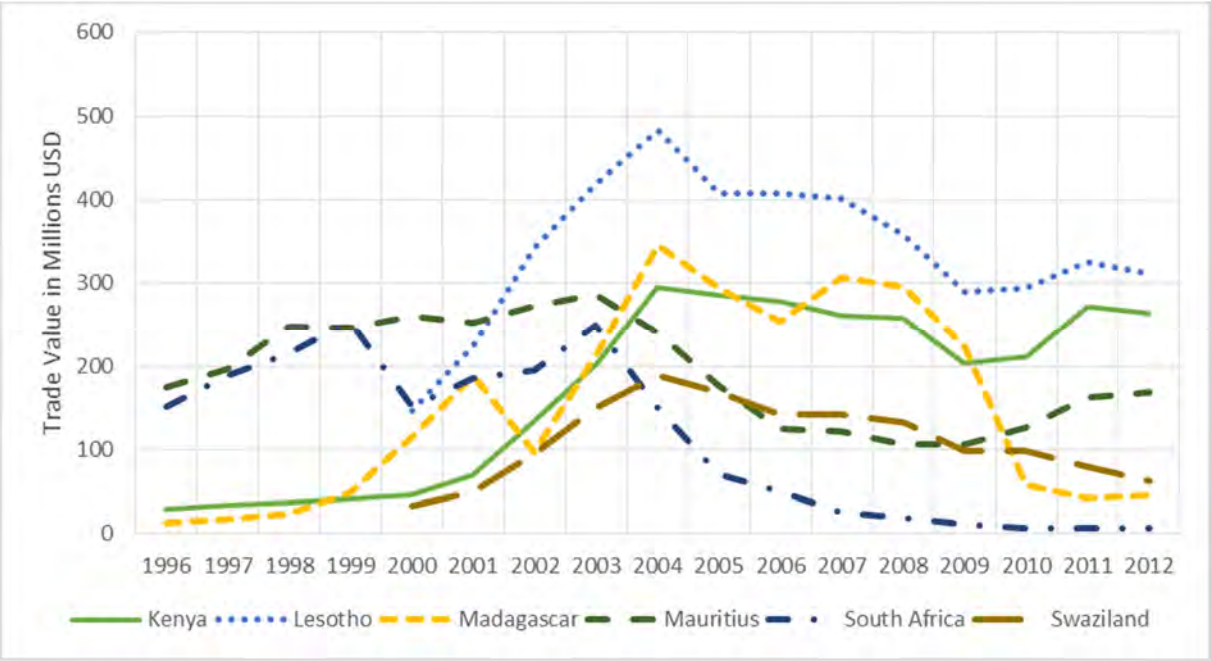
		1996	2000	2004	2005	2008	2012
Malawi	**Trade Value**	**1.41**	**7.65**	**28.80**	**24.02**	**13.19**	**5.85**
	% Share	0.37%	0.99%	1.55%	1.56%	1.09%	0.65%
Mauritius	**Trade Value**	**174.88**	**259.43**	**239.76**	**175.49**	**106.49**	**168.54**
	% Share	46.31%	33.60%	12.88%	11.40%	8.77%	18.74%
Namibia	**Trade Value**		**0.17**	**82.49**	**56.02**	**0.001**	**0.002**
	% Share		0.02%	4.43%	3.64%	0.00%	0.00%
South Africa	**Trade Value**	**151.92**	**150.84**	**149.69**	**70.04**	**19.15**	**6.47**
	% Share	40.23%	19.54%	8.04%	4.55%	1.58%	0.72%
Swaziland	**Trade Value**		**33.36**	**188.48**	**168.67**	**132.43**	**62.40**
	% Share		4.32%	10.13%	10.96%	10.90%	6.94%
Sum	**Trade Value**	**369.99**	**769.246**	**1834.031**	**1514.272**	**1200.059**	**875.388**
	% Share	97.97%	99.63%	98.53%	98.40%	98.80%	97.32%

Notes: Trade Value in Millions USD.
% Share is of Total Apparel Imports by the US from the pool of AGOA Beneficiaries.
Source: UN Comtrade.

The share of total apparel imports to the US originating from Lesotho and Kenya increased substantially over the period, supporting the literature that these countries have been AGOA's best performing beneficiaries (Stevens and Kennan, 2004). The share of US apparel imports from Botswana, Malawi and Swaziland increased until 2005, after which it declined suggesting that these countries were more harshly affected by increased competition. Namibia's[8] apparel industry was non-existent prior to AGOA, however gained a fair share of total US apparel imports by 2004. However increased competition in 2005 reduced Namibian apparel exports to the US significantly, emphasising the uncertainty around the sustainability of industries in the face of increased competition and the removal of preferential market access.

[8] Note that over the period 1996-1999, it would appear that the US did not report apparel import data from Botswana, Lesotho, Namibia and Swaziland. It is likely that imports from these countries would have been included as imports from South Africa instead.

FIGURE 2
US Apparel Imports from Leading AGOA Beneficiaries

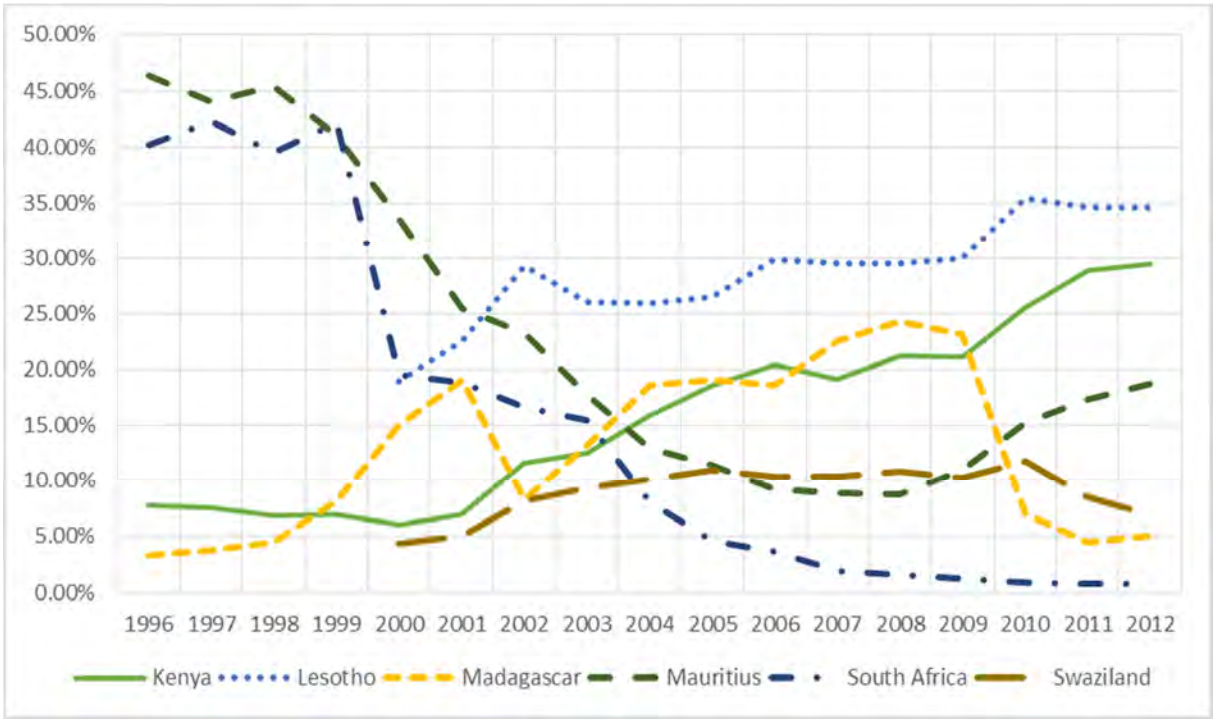


Source: UN Comtrade.

Growth in the 'product by country' count gives an indication as to the extent to which the extensive margin of trade expanded over the period. The extensive margin of trade is important to consider as it refers either to new products going to same or new destinations, or existing products going to new destinations. The 'product by country' count[9] captures all the combinations of specific apparel products being exported by specific AGOA beneficiaries to the US. The 'product by country' count increased upon the enactment of AGOA (see Figure 4.) and increased substantially over the period 2000-2003. The count more than doubled between 1999 and 2005. A small decline occurred after 2005 suggesting the exit of some products and countries in a more competitive environment, however the number remained significantly higher than that prior to the enactment of AGOA.

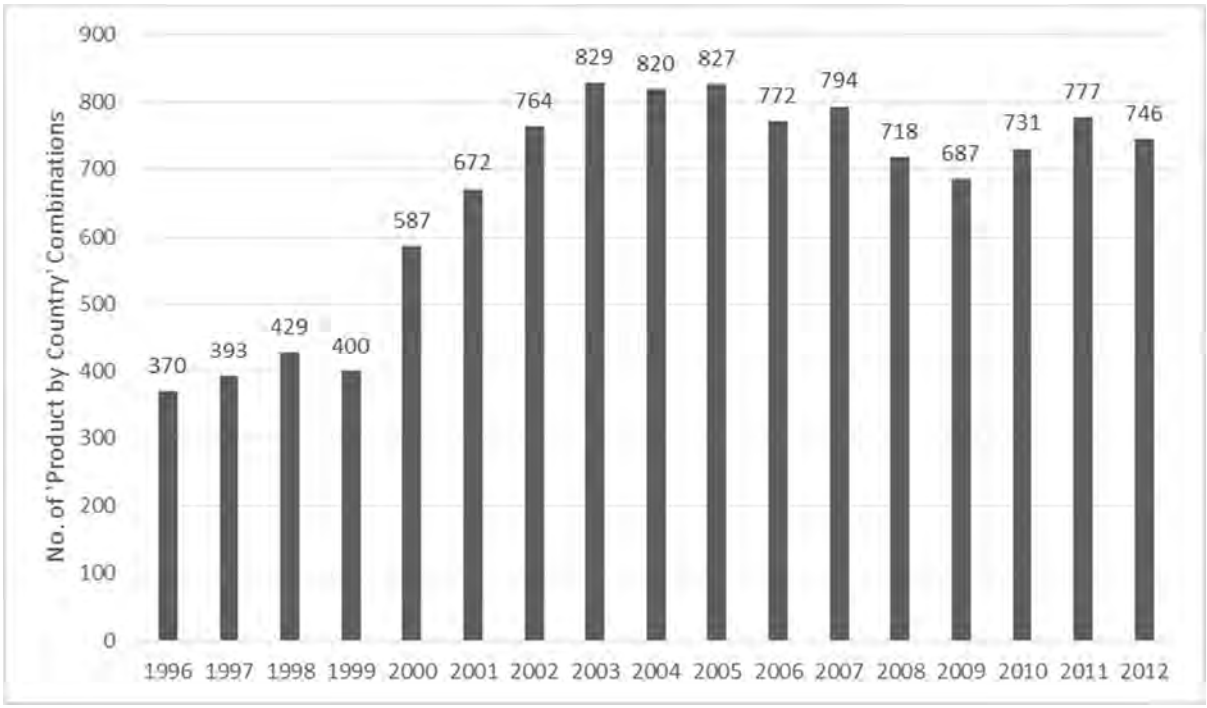
[9] The yearly 'product by country' count is calculated by summing each instance where an AGOA beneficiary exports a particular apparel article to the US. All 42 AGOA members are included in this graphical analysis, which therefore does not account for countries that became eligible and ineligible under AGOA legislation after 2000, however these countries are a minority and relatively insignificant.

FIGURE 3
Leading AGOA Beneficiaries Percent Share of Total US Apparel Imports from AGOA



Source: UN Comtrade.

FIGURE 4
'Product by Country' Count of US Apparel Imports from AGOA Beneficiaries



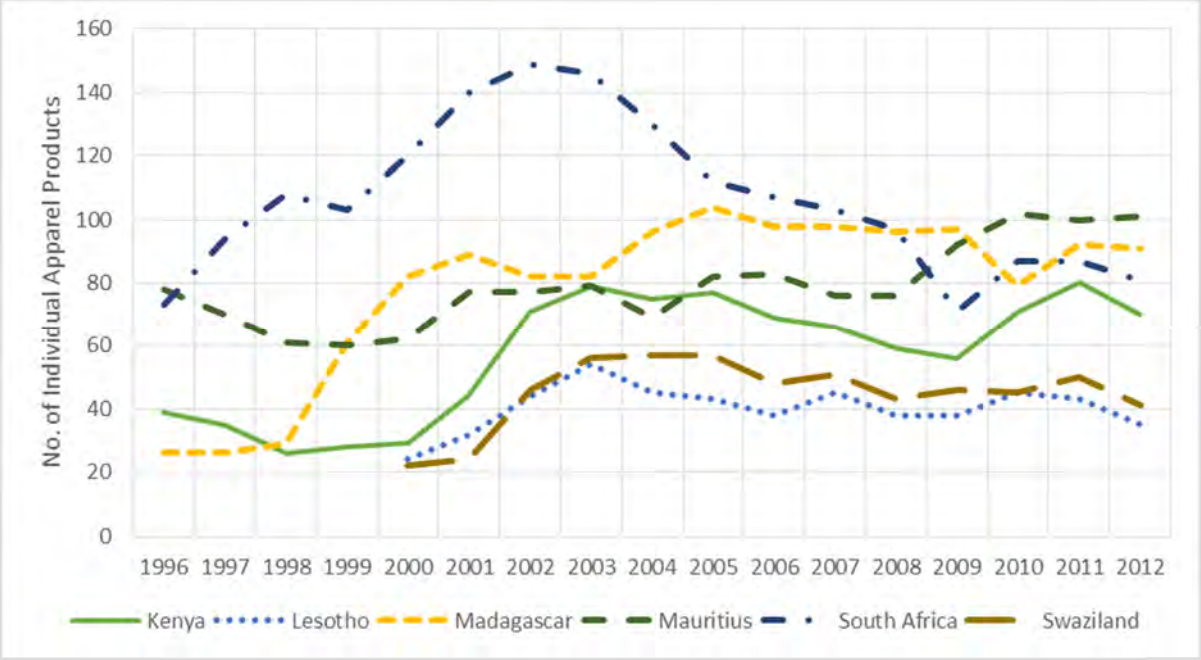
Source: UN Comtrade.

AGOA clearly stimulated the extensive margin of trade, firstly by enabling the number of AGOA beneficiaries exporting apparel products to the US to increase, and secondly by increasing the number

of individual apparel articles exported to the US by each AGOA beneficiary over the period. In 2000, the US did not receive apparel imports from 7 of the 30 (23.3 percent) eligible AGOA beneficiaries. By 2004, this figure reduced to 4 out of 34 (11.8 percent) eligible beneficiaries, and 5 out of 34 (14.7 percent) in 2005. Increased competition and the recession resulted in this figure increasing again to 10 out of 38 in 2008 (26.3 percent), however by 2012 reduced again to 4 out of 39 (10.2 percent). The point being that over the period of AGOA, a greater number of beneficiaries recorded some level of apparel exports to the US.

Secondly, the number of individual apparel products imported by the US from AGOA beneficiaries increased in 21 instances over the period 2000-2012[10]. Frazer and Van Briesebroeck (2007) found that the extensive margin of trade grew impressively, with the probability of a country exporting an apparel product increasing from 1.8 to 3 percent, and found that this value increased over time. They found that the major expansion in apparel product lines exported occurred within the first two year of AGOA, remaining flat thereafter however increasing in volume. The data reflects this where over the period 2000-2004, the number of products imported by the US from AGOA beneficiaries increased in 26 instances, whereas over the period 2005-2012, an increase was recorded in only 16 instances, suggesting that increased competition after 2005 reduced the growth rate of new apparel products being exported to the US.

FIGURE 5
Number of Individual Apparel Products Imported by the US from leading AGOA Beneficiaries



Source: UN Comtrade.

[10] See Appendix Table A5 for a detailed table illustrating the number of apparel products exported by each AGOA beneficiary to the US in selective years.

Further, De Melo and Portugal-Perez (2013) found that the number of apparel product varieties exported by each beneficiary to the US increased faster under the special rule, where many beneficiaries became eligible for this rule over the period 2001-2004, which supports the increased growth rate in the number of products exported to the US over the period 2000-2004. Interestingly, Lesotho and Swaziland exported the least number of individual apparel products to the US relative to the four other leading AGOA apparel exporters, as illustrated in Figure 5. This could be due to the fact that Lesotho has been unable able to diversify its apparel exports along the value chain, instead exporting unsophisticated low value apparel products (Lall, 2005; Edwards and Lawrence, 2013). Other countries which saw a significant increase in the number of individual apparel products exported to the US over the period include: Cameroon, Ethiopia, Ghana, Malawi, Sierra Leone, Tanzania and Uganda. Importantly, AGOA has enabled the expansion of the number of individual apparel products exported to the US from the majority of AGOA beneficiaries relative to the period 1996-1999.

Over the period 1996-2012, US imports of apparel products from AGOA beneficiaries was highly concentrated in a small number of similar products. Brown (1987) points out that most studies conclude that trade expansion is usually concentrated in a few products, and those products are generally ones in which the beneficiary countries already have a large market share. Table 2 shows that in 1996, 71.26 percent of total apparel imports by the US from AGOA beneficiaries in terms of trade value comprised of the top five performing products (75.21 percent in 2000, 68.92 percent in 2005, and 58.48 percent in 2012). This implies that over the period, the importance of the top five performing products imported by the US from AGOA reduced, suggesting that a wider scope of apparel products gained a greater share of US imports. Rolfe and Woodward (2005) find that apparel production in 2003 was concentrated by product in each country, with the top five subcategories of apparel products accounting for approximately 40 percent of total apparel imports by the US from AGOA[11] (38 percent for Lesotho, 39 percent for Madagascar, 46 percent for Kenya, 42 percent for Mauritius, and 39 percent for Swaziland). Secondly, four of the top five apparel products imported by the US from AGOA beneficiaries in 2000 were also ranked in the top five products imported by the US in 2005 and 2012 respectively, suggesting that the apparel imports to a large extent remained concentrated in similar product varieties over the period.

[11] The reason these values are lower is that Rolfe and Woodward's (2005) study was conducted at a more disaggregated level, hence the product shares were split more specifically.

TABLE 2
Top Five Performing Products Imported by the US from AGOA Beneficiaries[12]

Year	Type of Apparel	Commodity Description	Trade Value in Thousands of USD	Percent Share of Total
1996	620520	Men's or boys' shirts: Of Cotton	87,757	23.24%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	82,686	21.89%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	56,402	14.94%
	620462	Trousers, bib and brace overalls, breeches and Shorts: Of cotton	22,378	5.93%
	610510	Men's or boys' shirts, knitted or crocheted: Of cotton	19,878	5.26%
Sum				71.26%
2000	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	188,942	24.47%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	147,932	19.16%
	620462	Women's or girls' suits Trousers, bib and brace overalls, breeches and Shorts: Of cotton:	121,403	15.72%
	620520	Men's or boys' shirts: Of Cotton	81,855	10.60%
	611010	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of wool or fine animal hair:	40,630	5.26%
Sum				75.21%
2005	620462	Women's or girls' suits Trousers, bib and brace overalls, breeches and Shorts: Of cotton:	308,331	20.04%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	307,922	20.01%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	268,955	17.48%
	611030	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of man-made fibres	93,238	6.06%
	620520	Men's or boys' shirts: Of Cotton	81,993	5.33%
Sum				68.92%
2012	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	142,573	15.85%
	620520	Men's or boys' shirts: Of Cotton	134,281	14.93%
	620462	Women's or girls' suits Trousers, bib and brace overalls, breeches and Shorts: Of cotton:	110,359	12.27%
	611030	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of man-made fibres	76,368	8.49%
	610462	Women's or girls' Trousers, bib and brace overalls, breeches and Shorts (con.): Of cotton:	62,405	6.94%
Sum				58.48%
1996-2012	620462	Women's or girls' suits Trousers, bib and brace overalls, breeches and Shorts: Of cotton:	3,274,651	18.73%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	3,115,731	17.82%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	2,963,470	16.95%
	620520	Men's or boys' shirts: Of Cotton	1,409,406	8.06%
	610462	Women's or girls' Trousers, bib and brace overalls, breeches and Shorts (con.): Of cotton:	748,795	4.28%
Sum				65.84%

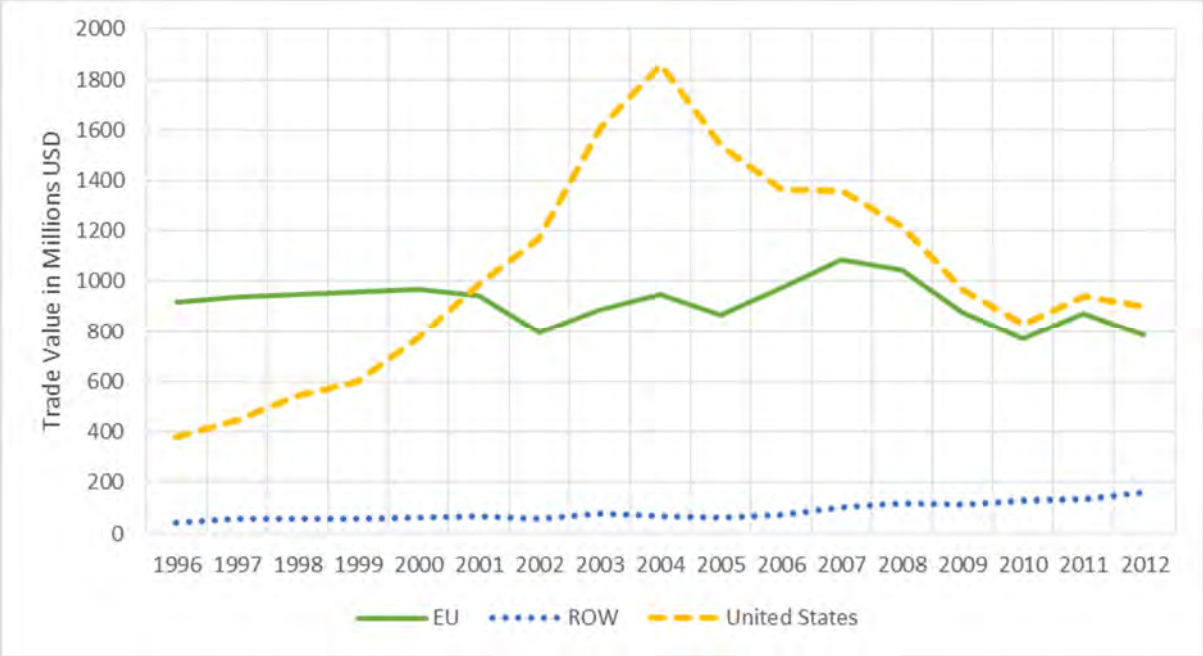
Source: UN Comtrade.

[12] This includes all AGOA beneficiaries over the period.

B. Third Country Imports from AGOA Beneficiaries

The aim now is to evaluate if the data suggests that preferential market access to the US led to an increase in apparel exports from AGOA beneficiaries to third countries, by undertaking a similar analysis of the data as was performed with respect to US apparel imports. The trade value of EU apparel imports from AGOA beneficiaries remained relatively stable over the period 1996-2012, as illustrated in Figure 6. Importantly, there was a small decline immediately after the enactment of AGOA, which is likely as a result of AGOA beneficiaries substituting away from the EU market to the US market. Further, EU apparel imports remained surprisingly resilient after the end of the MFA, growing from 2005-2008, however this is drawn almost entirely from strong apparel exports of Madagascar and Mauritius. Apparel imports by the ROW group from AGOA beneficiaries gradually increased over the period, remaining resilient to increased competition from 2005 and the recession from 2008.

FIGURE 6
Total Apparel Imports from AGOA Beneficiaries by Region



Source: UN Comtrade.

The EU share, of total apparel imports across all regions from the pool of AGOA beneficiaries, declined over the period 1996-2004, however increased again from 2005-2012 as illustrated in Table 3 and Figure 7. The ROW share gradually increased over the entire period, particularly over the period 2006-2012. The US share increased sharply over the period 2000-2004, there after tapering off in the face of increased competition. Overall, the US and included EU countries dominated the share of total AGOA apparel exports to destination countries included in this analysis. Further, it is interesting to note that as apparel exports to the US faced increased competition in 2005, exports to the EU and ROW groups generally increased both in terms of trade value and percent share of total, suggesting that AGOA beneficiaries were able to substitute away from the US market to other export destinations. This

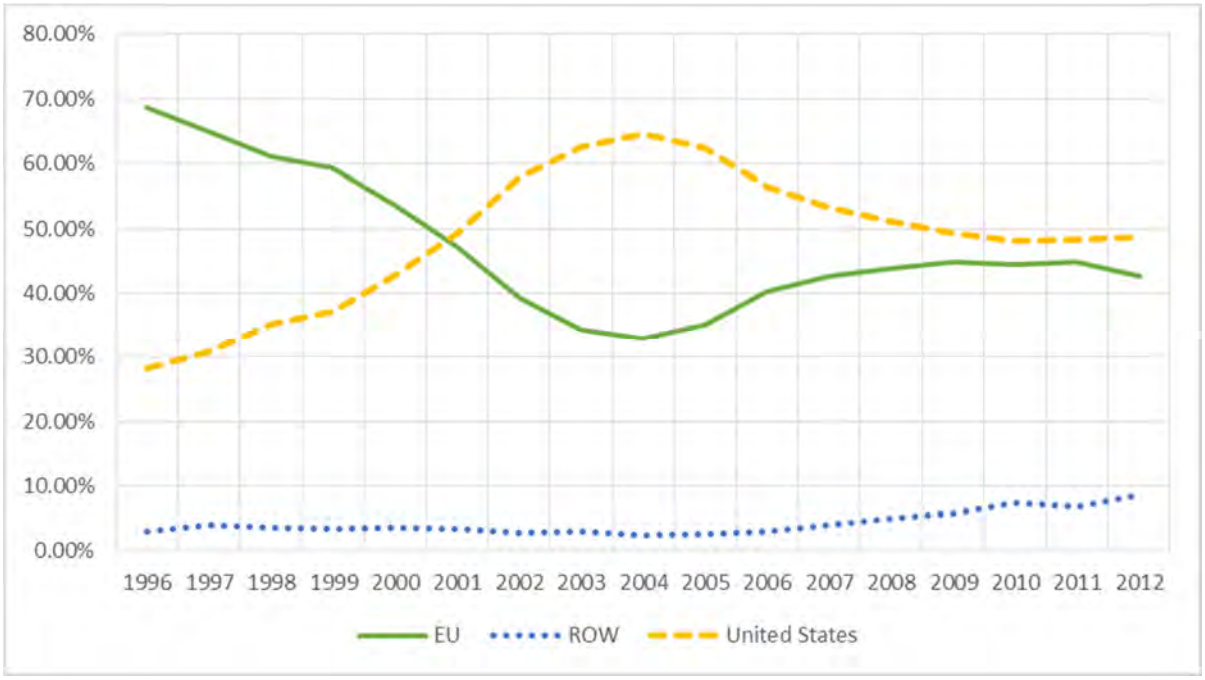
suggests that certain AGOA members had potentially improved their competitiveness over the initial years of AGOA, in order to have been able to switch their apparel exports to third countries to which they received no preferential market access.

TABLE 3
Percent Share of Total Apparel Imports from AGOA Beneficiaries across Region[13]

	EU (13 countries)	ROW (35 countries)	United States
1996	68.66%	3.08%	28.25%
2000	53.66%	3.63%	42.70%
2004	32.90%	2.46%	64.63%
2005	35.05%	2.57%	62.38%
2008	43.90%	5.02%	51.08%
2012	42.64%	8.63%	48.74%

Source: UN Comtrade.

FIGURE 7
Percent Share of Total Apparel Imports from AGOA Beneficiaries across Region



Source: UN. Comtrade

It is important to compare the performance of the leading AGOA beneficiaries listed earlier with respect to apparel exports to the US, to their performance of apparel exports to third countries. The reason for this is to establish a basis to argue that entry to the US market led to improved export performance to third countries in subsequent periods. Table 4 and Figure 8 below emphasise that total apparel imports by the EU group from all AGOA beneficiaries was sourced primarily from Madagascar and Mauritius. Both of these countries apparel exports remained resilient to increased competition at

[13] This refers to total apparel imports from all 49 countries included in the analysis from the pool of AGOA beneficiaries, divided into regional percentage shares.

the end of the MFA, and certainly were the main contributors to the resilience of apparel exports from AGOA to the EU, which was discussed earlier. Kenya, Lesotho and Swaziland exported significantly lower volumes of apparel products in terms of trade value to the EU, with fluctuations over the period. Ethiopia and Cape Verde experienced strong growth in apparel exports to the EU over the period 2005-2012 in particular.

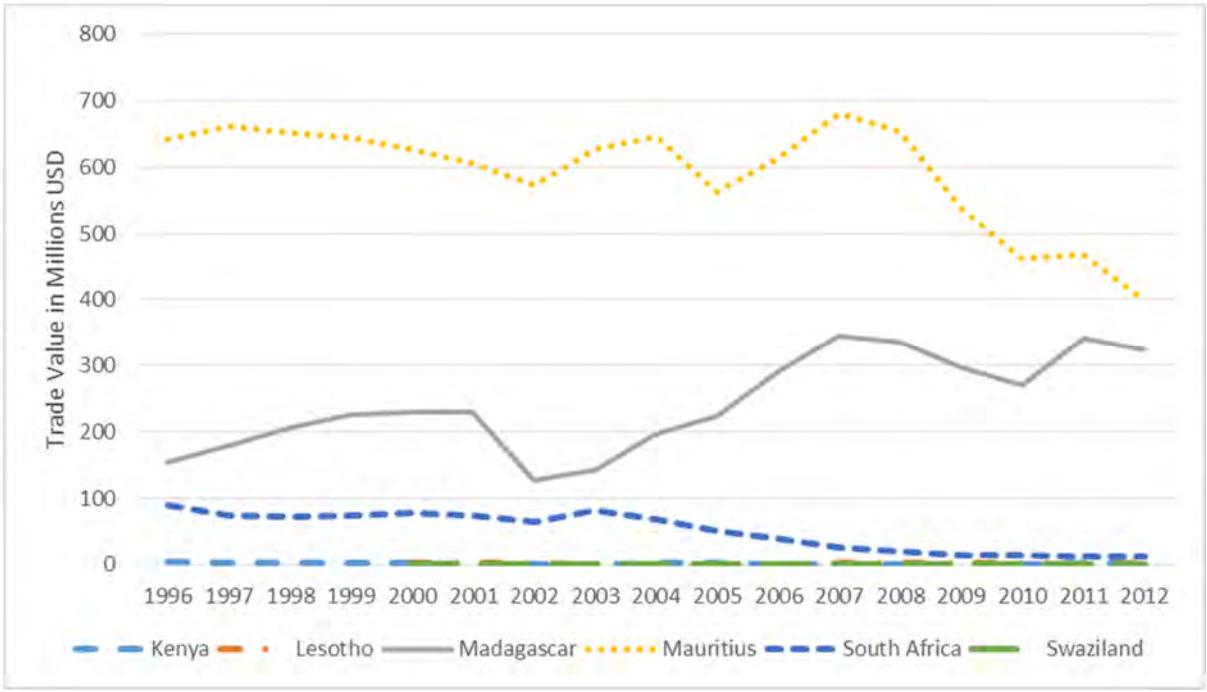
TABLE 4
EU Apparel Imports from Leading AGOA Beneficiaries

		1996	2000	2004	2005	2008	2012
Botswana	**Trade Value**		**15,05**	**13,00**	**5,74**	**12,27**	**0,01**
	% Share		1,55%	1,37%	0,66%	1,18%	0,00%
Kenya	**Trade Value**	**3,55**	**1,84**	**3,22**	**3,07**	**1,34**	**1,92**
	% Share	0,39%	0,19%	0,34%	0,36%	0,13%	0,24%
Lesotho	**Trade Value**		**1,68**	**1,11**	**0,72**	**2,83**	**2,10**
	% Share		0,17%	0,12%	0,08%	0,27%	0,27%
Madagascar	**Trade Value**	**155,18**	**230,51**	**197,00**	**223,62**	**335,47**	**324,97**
	% Share	16,91%	23,76%	20,79%	25,86%	32,13%	41,30%
Malawi	**Trade Value**	**1,10**	**0,64**	**0,12**	**0,23**	**0,01**	**0,05**
	% Share	0,12%	0,07%	0,01%	0,03%	0,00%	0,01%
Mauritius	**Trade Value**	**641,95**	**627,07**	**645,27**	**562,30**	**654,76**	**399,30**
	% Share	69,95%	64,62%	68,10%	65,03%	62,71%	50,74%
Namibia	**Trade Value**		**0,03**	**0,24**	**0,40**	**0,31**	**0,50**
	% Share		0,00%	0,03%	0,05%	0,03%	0,06%
South Africa	**Trade Value**	**88,90**	**77,73**	**68,59**	**50,47**	**19,91**	**12,90**
	% Share	9,69%	8,01%	7,24%	5,84%	1,91%	1,64%
Swaziland	**Trade Value**		**1,16**	**1,09**	**0,01**	**0,19**	**0,03**
	% Share		0,12%	0,12%	0,00%	0,02%	0,00%
Sum	**Trade Value**	**890,67**	**955,71**	**929,64**	**846,56**	**1027,09**	**741,78**
	% Share	97,05%	98,49%	98,10%	97,90%	98,38%	94,27%

Notes: Trade Value in Millions USD.
% Share is of Total Apparel Imports by the EU from the pool of AGOA Beneficiaries.
Source: UN Comtrade.

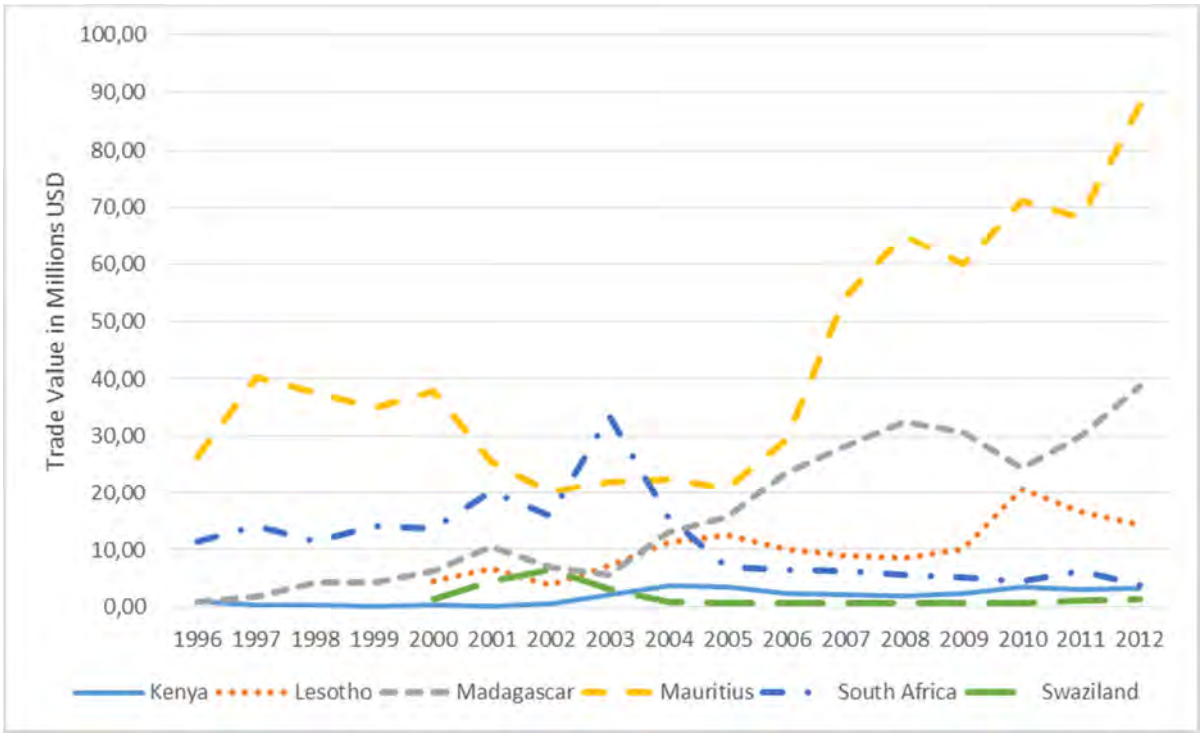
With respect to the ROW group, the trade value of apparel imports increased substantially from Kenya, Lesotho, Madagascar, Mauritius, Ethiopia and Cameroon over the period. Secondly, Table 5 shows that the share of apparel imports was split more evenly across these leading countries than compared to EU imports, which were highly concentrated between Mauritius and Madagascar.

FIGURE 8
EU Apparel Imports from Leading AGOA Beneficiaries



Notes: Kenya, Lesotho and Swaziland are represented to emphasise their insignificance with respect to EU apparel imports from these beneficiaries.
Source: UN Comtrade.

FIGURE 9
ROW Apparel Imports from Leading AGOA Beneficiaries



Source: UN Comtrade.

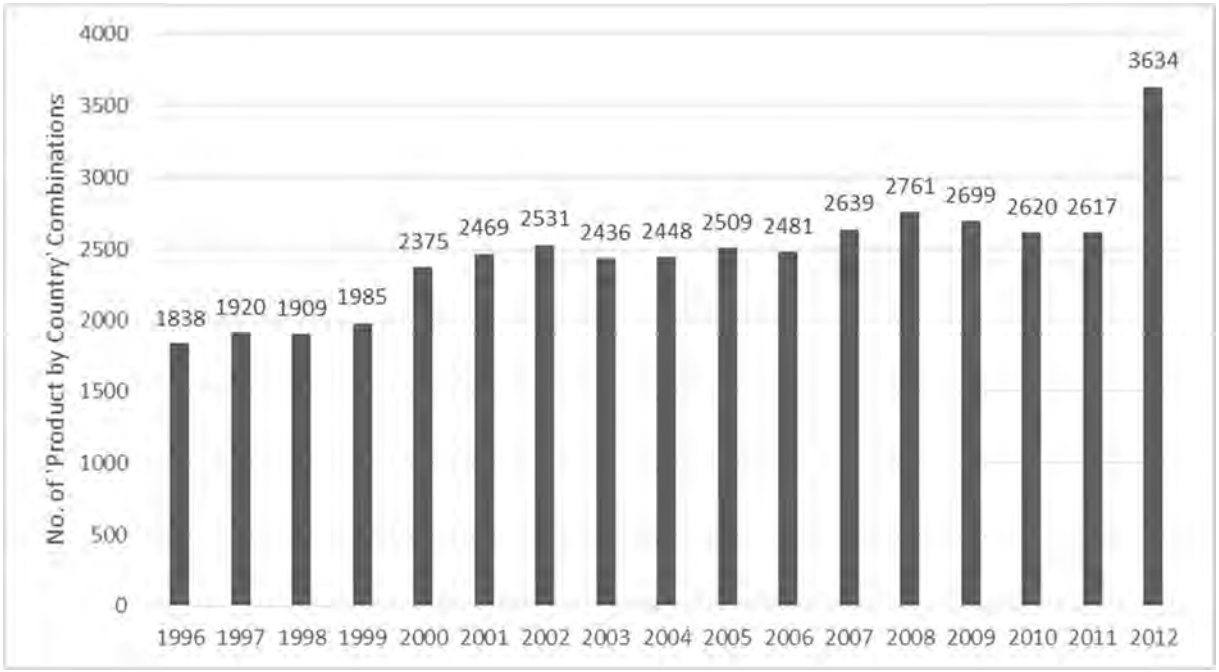
TABLE 5
ROW Apparel Imports from Leading AGOA Beneficiaries

		1996	2000	2004	2005	2008	2012
Botswana	**Trade Value**	**0,00**	**0,36**	**0,44**	**0,41**	**0,72**	**0,03**
	% Share	0,00%	0,55%	0,62%	0,64%	0,60%	0,02%
Kenya	**Trade Value**	**0,98**	**0,30**	**3,62**	**3,56**	**1,85**	**3,36**
	% Share	2,39%	0,46%	5,10%	5,61%	1,55%	2,11%
Lesotho	**Trade Value**	**0,00**	**4,44**	**11,24**	**12,57**	**8,44**	**14,31**
	% Share	0,00%	6,75%	15,86%	19,80%	7,07%	8,99%
Madagascar	**Trade Value**	**0,88**	**6,19**	**13,05**	**15,59**	**32,45**	**38,85**
	% Share	2,12%	9,42%	18,42%	24,55%	27,19%	24,40%
Malawi	**Trade Value**	**0,17**	**0,02**	**0,14**	**0,29**	**0,26**	**0,12**
	% Share	0,42%	0,03%	0,20%	0,46%	0,22%	0,08%
Mauritius	**Trade Value**	**26,35**	**37,79**	**22,44**	**20,75**	**65,06**	**87,79**
	% Share	63,93%	57,51%	31,66%	32,67%	54,51%	55,14%
Namibia	**Trade Value**	**0,00**	**0,00**	**0,62**	**0,05**	**0,27**	**0,07**
	% Share	0,00%	0,00%	0,87%	0,08%	0,23%	0,05%
South Africa	**Trade Value**	**11,35**	**13,58**	**15,69**	**7,02**	**5,63**	**3,86**
	% Share	27,55%	20,67%	22,13%	11,05%	4,72%	2,43%
Swaziland	**Trade Value**	**0,00**	**1,42**	**0,96**	**0,77**	**0,69**	**1,44**
	% Share	0,00%	2,15%	1,35%	1,21%	0,57%	0,90%
Sum	**Trade Value**	**39,73**	**64,10**	**68,19**	**61,01**	**115,38**	**149,84**
	% Share	96,41%	97,55%	96,21%	96,07%	96,66%	94,12%

Notes: Trade Value in Millions USD.
% Share is of Total Apparel Imports by the ROW from the pool of AGOA Beneficiaries.
Source: UN Comtrade.

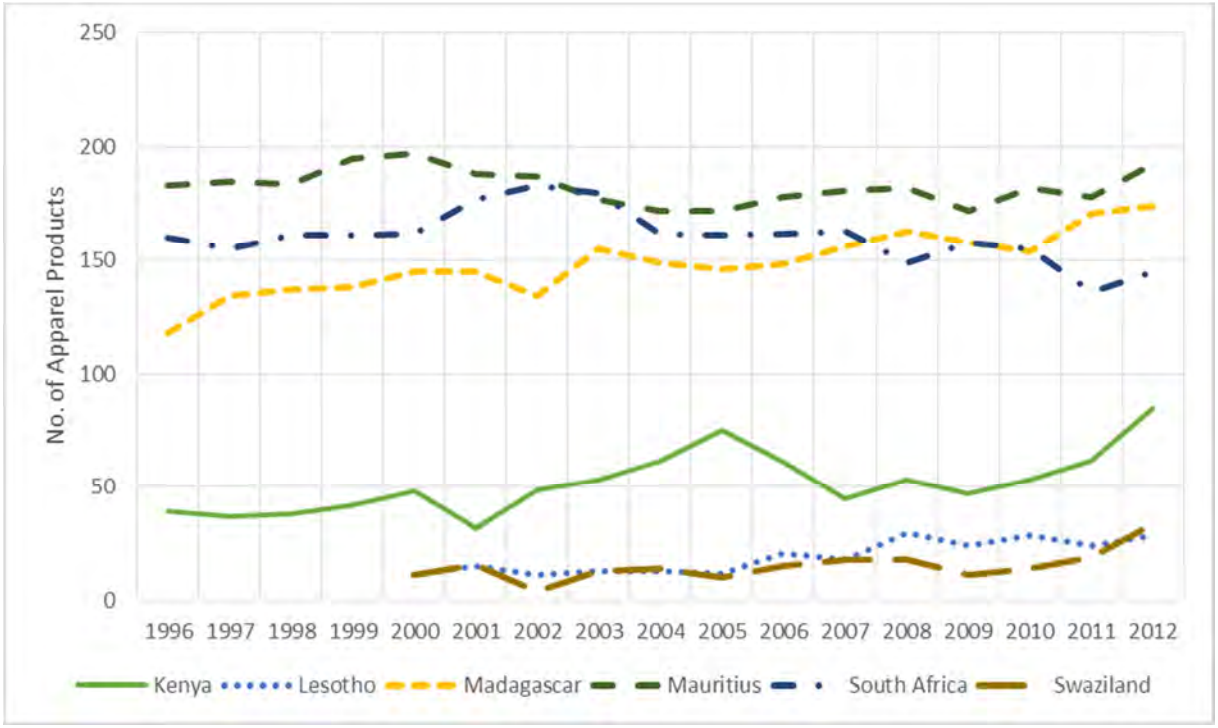
The extensive margin of trade gradually increased with respect to EU imports of apparel products from AGOA beneficiaries over the period. This is indicated firstly by the increase in the 'product by country' count of apparel imports by the EU from AGOA beneficiaries, particularly in 2012 as illustrated in Figure 9. Secondly, over the period 2000-2012, the number of individual products imported by the EU from AGOA beneficiaries increased amongst 38 of the 42 beneficiaries. This increase occurred in particular from Madagascar, Kenya, Cameroon and Ethiopia, as seen in Figures 10 and 11. Mauritius, Madagascar, Lesotho and Swaziland did not see a reduction in the number of individual apparel products exported to the EU after 2005, suggesting that these countries had developed more resilient apparel industries. A significant increase occurred across most beneficiaries from 2010-2012, which is likely as a result of the Economic Partnership Agreements, which aim to increase trade between the EU and African, Caribbean and Pacific (ACP) region in the hope that through trade development, sustainable economic growth and poverty reduction will result.

FIGURE 9
'Product by Country' Count of EU Apparel Imports from AGOA Beneficiaries



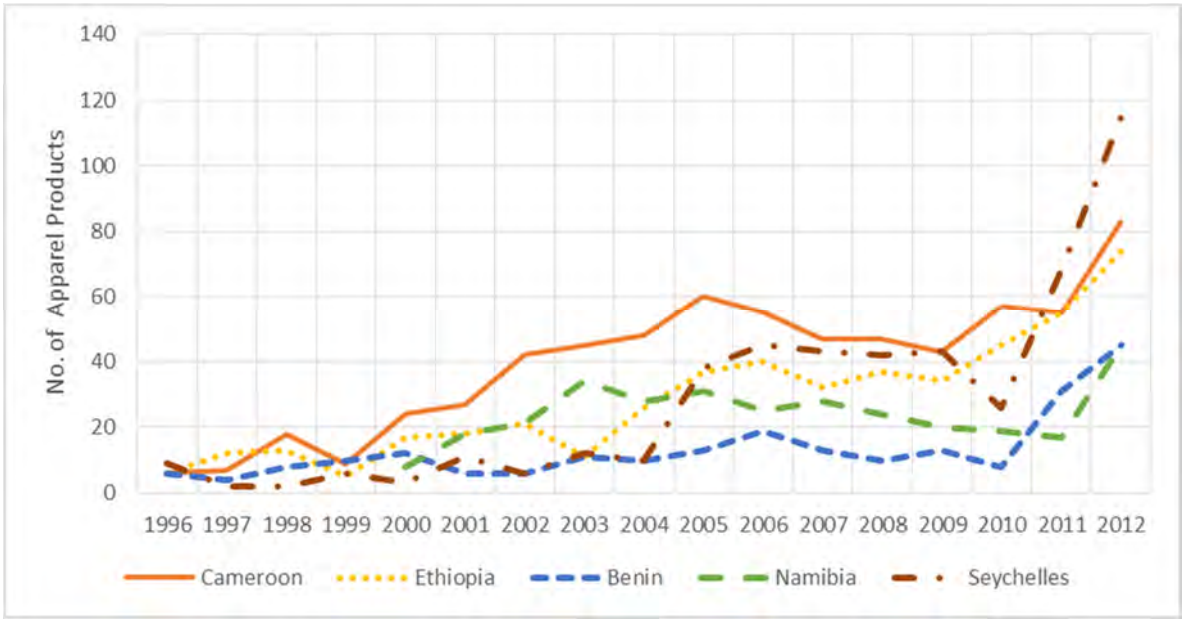
Source: UN Comtrade.

FIGURE 10
Number of Individual Apparel Products Imported by the EU from leading AGOA Beneficiaries



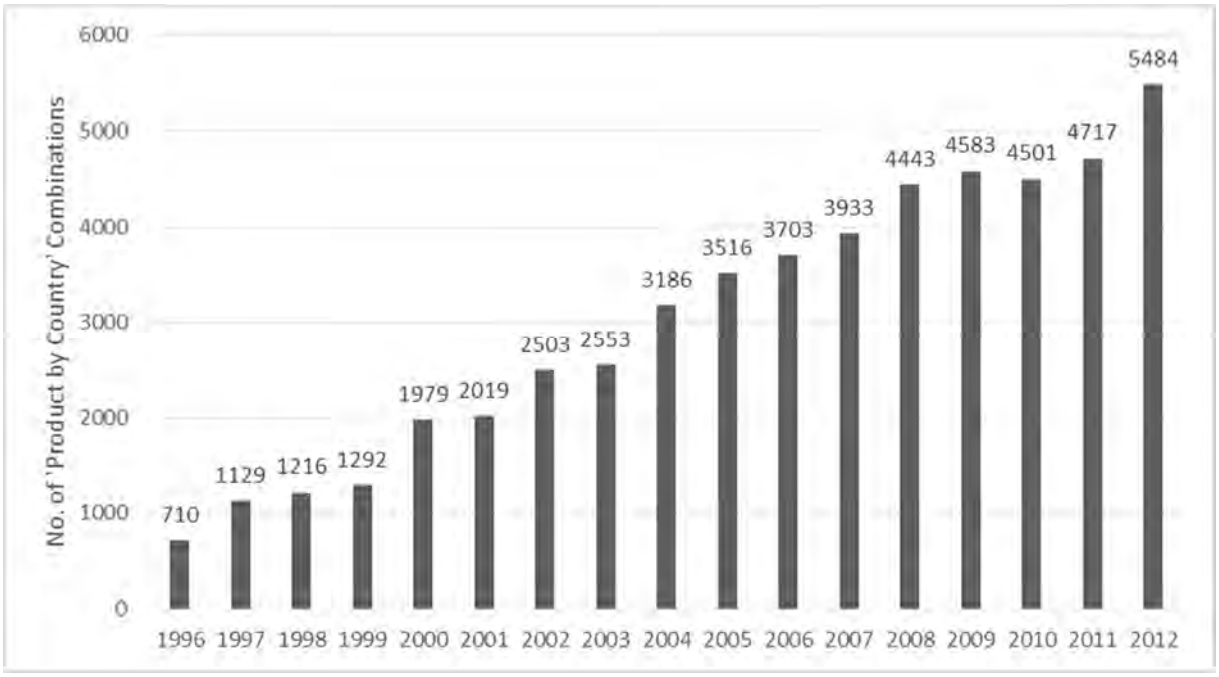
Source: UN Comtrade.

FIGURE 11
Number of Individual Apparel Products Imported by the EU from Other AGOA Beneficiaries



Source: UN Comtrade.

FIGURE 12
'Product by Country' Count of ROW Apparel Imports from AGOA Beneficiaries[14]



Source: UN Comtrade.

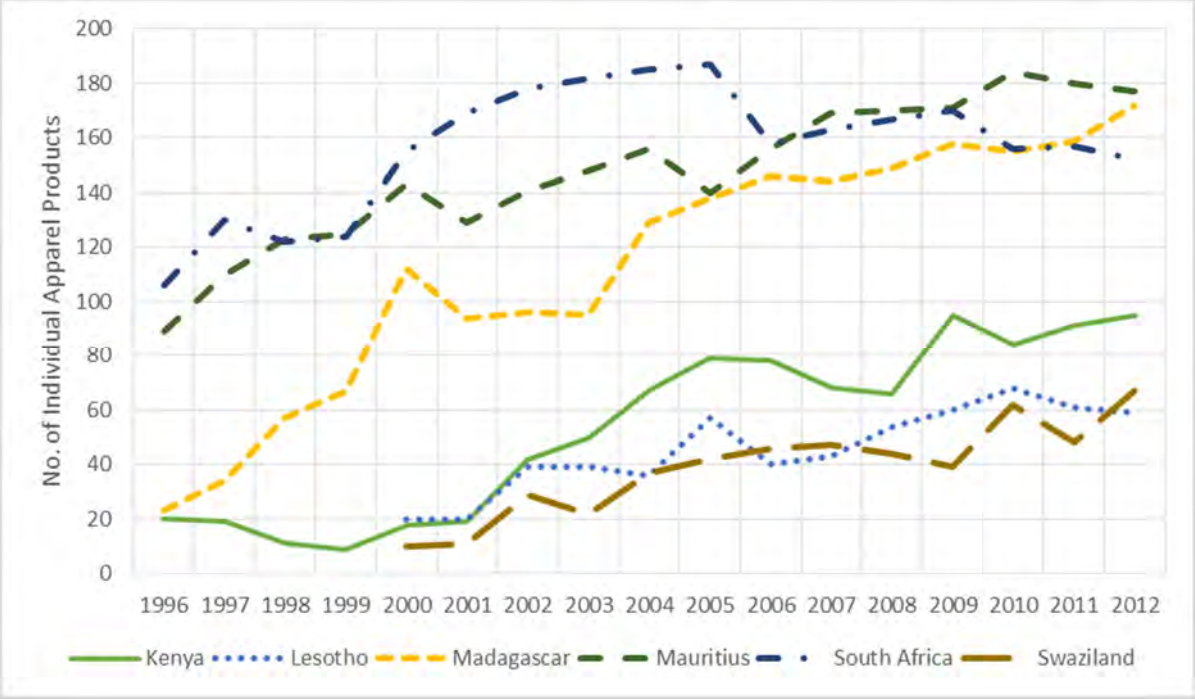
The extensive margin of trade expanded strongly with respect to apparel imports by the ROW group from AGOA beneficiaries. Firstly, the 'product by country' count increased significantly over the

[14] The 'product by country' count are higher for the EU and ROW groups relative to the US, as these groups comprise of 13 and 35 countries respectively, enabling many more combinations to exist.

period 2000-2012 as seen in Figure 12. Secondly over the period 2000-2012, 39 of 42 AGOA beneficiaries increased the number of individual apparel products exported to third countries included in the ROW group. Significant increases occurred with Cameroon, Cape Verde, Ethiopia, Kenya, Madagascar, Namibia, Swaziland and Tanzania. It appears that for the best performing countries, as illustrated in Figures 13 and 14, the number of individual products exported to the ROW group generally continued to increase even after the end of the MFA and associated increased competition. This suggests that certain AGOA beneficiaries apparel industries were able to develop and expand into markets other than the US and EU countries.

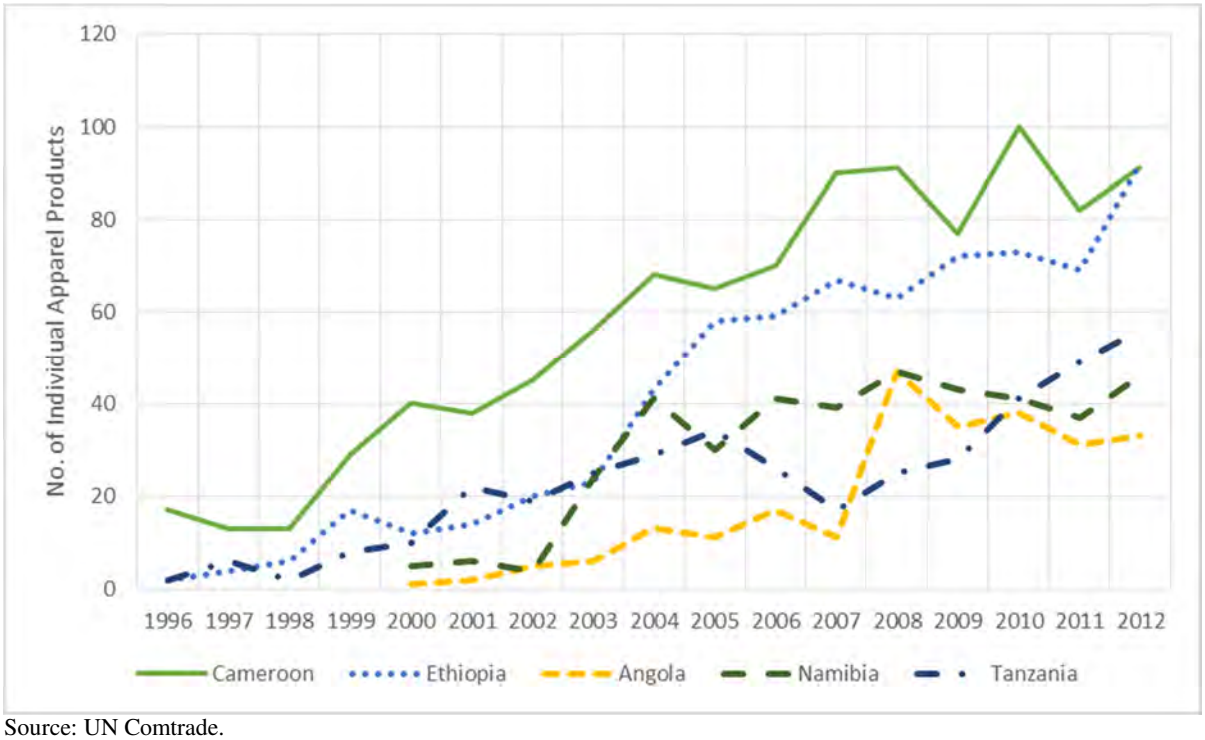
The most important apparel products imported by the EU from AGOA beneficiaries are similar to those imported by the US from AGOA beneficiaries, with total apparel imports by the EU being concentrated in these few products. Firstly, over the entire period three of the five best performing products imported by the US from AGOA in terms of trade value, were also the best performing products imported by the EU group from AGOA (four out of five in 2000, and three out of five in 2005). Secondly, total apparel imports by the EU from AGOA beneficiaries was concentrated in these top five performing apparel products, comprising a share of 61.3 percent of total apparel imports in 2000 as illustrated in Table 6 (66.16 percent in 2005, and 51.76 percent in 2012). After 2005, the dominance of the top five performing apparel products reduced, suggesting that an increased number of apparel products gained a larger share of total EU imports.

FIGURE 13
Number of Individual Apparel Products Imported by the ROW from leading AGOA Beneficiaries



Source: UN Comtrade

FIGURE 14
Number of Individual Apparel Products Imported by the ROW from Other AGOA Beneficiaries



Source: UN Comtrade.

TABLE 6
Top Five Performing Products Imported by the EU from AGOA Beneficiaries

Year	Type of Apparel	Commodity Description	Trade Value in Thousands of USD	Percent Share of Region Total
1996	**610910**	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	169,455	18,46%
	611010	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of wool or fine animal hair:	122,659	13,37%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	94,763	10,33%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	76,063	8,29%
	620520	Men's or boys' shirts: Of Cotton	73,135	7,97%
Sum				58,42%
2000	**610910**	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	200,488	20,66%
	611010	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of wool or fine animal hair:	145,124	14,96%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	97,997	10,10%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	80,212	8,27%
	620520	Men's or boys' shirts: Of Cotton	70,938	7,31%
Sum				61,30%
2005	**610910**	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of Cotton	289,326	33,46%
	611010	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of wool or fine animal hair:	124,954	14,45%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	61,674	7,13%
	620520	Men's or boys' shirts: Of Cotton	55,246	6,39%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	40,859	4,73%
Sum				66,16%
2012	**610910**	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	135,185	17,18%
	611010	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of wool or fine animal hair:	111,285	14,14%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	59,103	7,51%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	52,439	6,66%
	610990	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of other textile materials	49,314	6,27%
Sum				51,76%
1996-2012	**610910**	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	3,917,454	25,14%
	611010	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of wool or fine animal hair:	2,140,407	13,74%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	1,275,671	8,19%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	1,193,537	7,66%
	620520	Men's or boys' shirts: Of Cotton	941,988	6,04%
Sum				60,77%

Source: UN Comtrade.

Over the period, four of the five top performing products imported by the US from AGOA were also the top performing products imported by the ROW group from AGOA (four out of five in 2000, four out of five in 2005, and three out of five in 2012). As with the US and EU apparel imports from AGOA beneficiaries, ROW apparel imports were concentrated across these top preforming products, as shown in Table 7.

TABLE 7
Top Five Performing Products Imported by the ROW from AGOA Beneficiaries

Year	Type of Apparel	Commodity Description	Trade Value in Thousands of USD	Percent Share of Region Total
1996	**620520**	Men's or boys' shirts: Of Cotton	7,387	17.92%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	4,196	10.18%
	610910	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	3,145	7.63%
	620462	Trousers, bib and brace overalls, breeches and Shorts: Of cotton	2,866	6.95%
	610620	Women's or girls' blouses and shirts, knitted or crocheted: Of man-made fibres	2,317	5.62%
Sum				48.30%
2000	**620342**	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	9,968	15.17%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	8,694	13.23%
	620520	Men's or boys' shirts: Of Cotton	6,873	10.46%
	620462	Women's or girls' suits Trousers, bib and brace overalls, breeches and Shorts: Of cotton:	6,032	9.18%
	610910	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	5,814	8.85%
Sum				56.89%
2005	**611020**	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	9,319	14.68%
	620520	Men's or boys' shirts: Of Cotton	8,932	14.07%
	620342	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	8,493	13.38%
	610910	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	7,949	12.52%
	620462	Women's or girls' suits Trousers, bib and brace overalls, breeches and Shorts: Of cotton:	6,530	10.28%
Sum				64.93%
2012	**620342**	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	38,170	23.98%
	620520	Men's or boys' shirts: Of Cotton	18,465	11.60%
	620462	Women's or girls' suits Trousers, bib and brace overalls, breeches and Shorts: Of cotton:	13,870	8.71%
	610910	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	9,771	6.14%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	7,586	4.76%
Sum				55.19%
1996-2012	**620342**	Men's or boys' Trousers, bib and brace overalls, breeches and shorts: Of Cotton	219,975	15.13%
	620520	Men's or boys' shirts: Of Cotton	151,913	10.45%
	610910	T-shirts, singlets, tank tops and similar garments, knitted or crocheted: Of cotton	146,705	10.09%
	620462	Women's or girls' suits Trousers, bib and brace overalls, breeches and Shorts: Of cotton:	134,055	9.22%
	611020	Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton	131,251	9.03%
Sum				53.92%

Source: UN Comtrade.

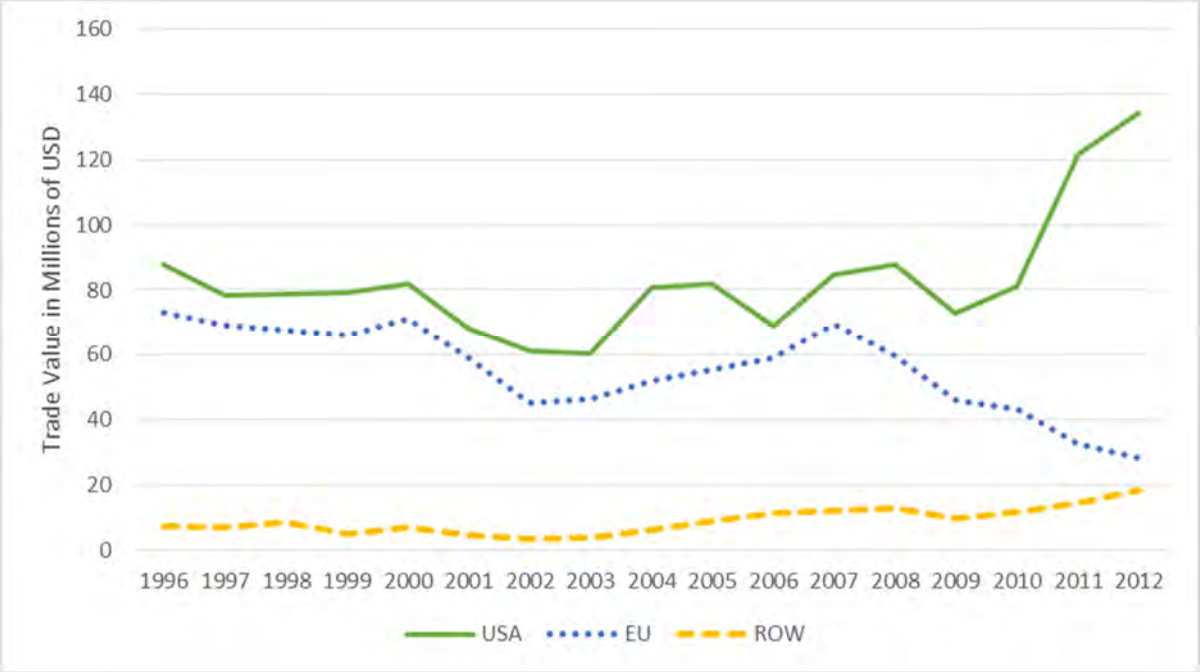
C. Top Performing Apparel Products Imported Across Each Region

It is useful to specifically look at the trade value of exports to each region of the most important apparel products, as this will give some indication as to the response of these exports to third countries following trade with the US. The most important products imported across each region from AGOA

include: men's or boy's shirts (of cotton); men's and boy's trousers, bib ad brace overalls, breeches and shorts (of cotton); sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted (of cotton); T-shirts, singlets, tank tops and similar garments, knitted or crocheted (of cotton) and women's or girls' suits trousers, bib and brace overalls, breeches and shorts (of cotton). Generally these products are consistent with the top performing products ranked in terms of trade value from Kenya, Lesotho, Madagascar, Mauritius and Swaziland found in Rolfe and Woodward (2005). Note however that the authors undertake that analysis at the 10 digit HS level, whereas this study is at the 6 digit level. Regardless, the top performing products identified above are generally consistent with those identified by Rolfe and Woodward (2005).

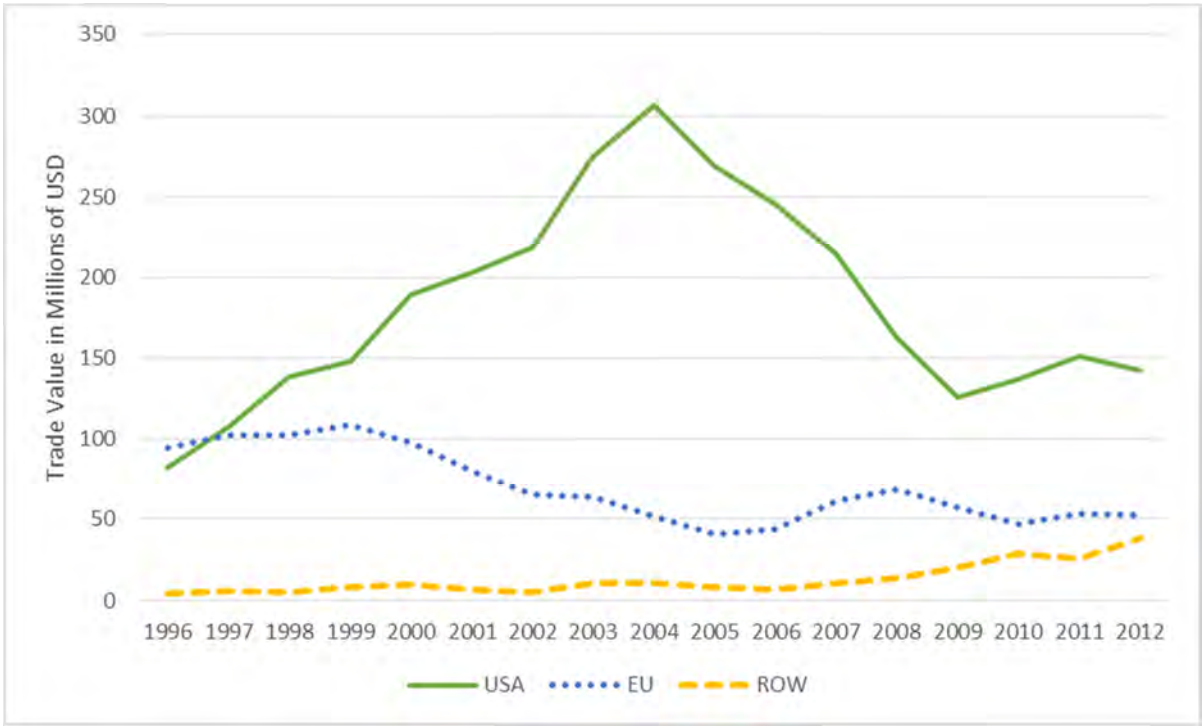
Figures 15,16 and 17 below display the trade value of imports of the three most important apparel products imported by the US, EU and ROW from the pool of AGOA beneficiaries over the period. The results are mixed, with some indication that EU and ROW imports remained resilient after 2005, compared to the substantial decline in US imports of these products with exception to men's and Boys' Shirts (Of Cotton). Generally EU imports of these products increased after 2005, primarily due to Madagascar and Mauritius, however declined again after 2008 most likely due to the impact of the recession. ROW imports of Men's or Boys' Shirts (Of Cotton) and Men's or Boys' Trousers, bib and brace overalls, breeches and shorts (Of Cotton) increased over the period, and quite substantially after 2005 in both cases.

FIGURE 15
Imports from AGOA Beneficiaries of 620520



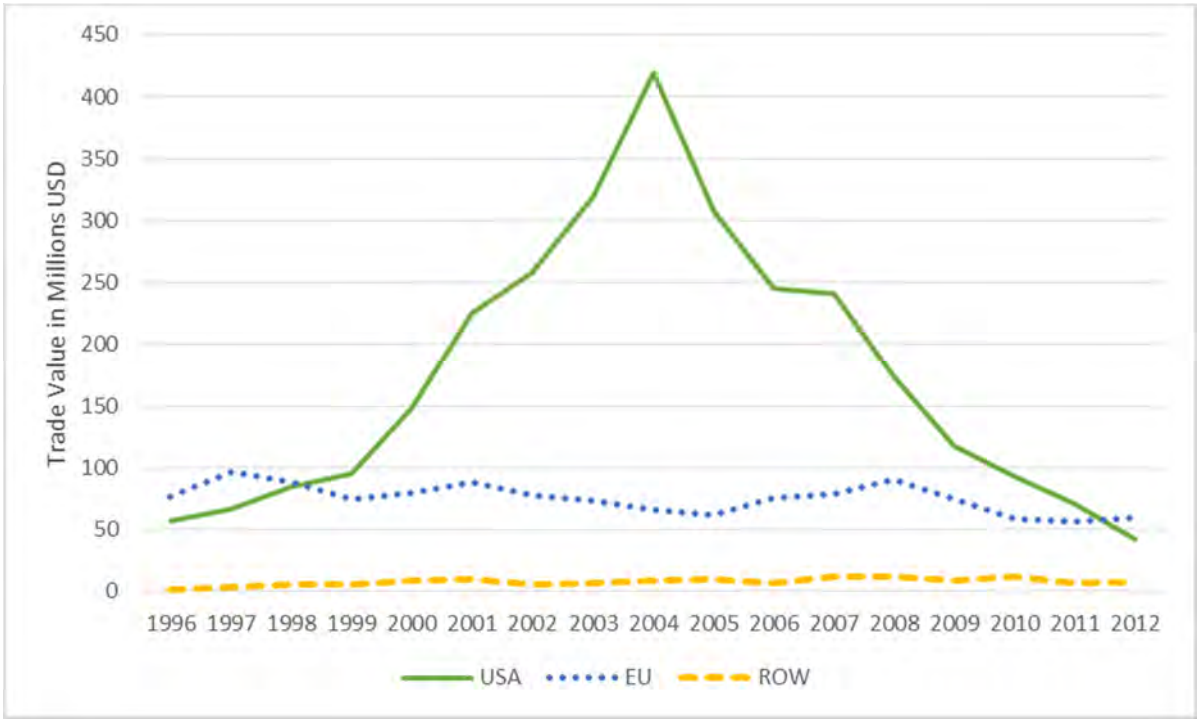
Notes: 620520 is Men's or Boys' Shirts (Of Cotton)
Source: UN Comtrade.

FIGURE 16
Imports from AGOA Beneficiaries of 620342



Notes: 620342 is Men's of Boys' Trousers, Bib and Brace Overalls, Breeches and Shorts (Of Cotton)
Source: UN Comtrade.

FIGURE 17
Imports from AGOA Beneficiaries of 611020



Notes: 611020 is Sweaters, pullovers, sweatshirts, waistcoats (vests) and similar articles, knitted or crocheted: Of Cotton
Source: UN Comtrade.

In conclusion, it is clear that apparel exports to the US from AGOA beneficiaries certainly increased as a result of preferential market access, however theses trade volumes were adversely affected by increased market competition at the end of the MFA from 2005. Trade increased both in terms of trade value, as well as by the number of apparel products exported to the US which remained relatively resilient post 2005.

However it is exports of apparel products from AGOA beneficiaries to third country markets which is of particular interest. The reason for this is that exports to third countries in response to AGOA preferences is the indicator of competitiveness and development. Firstly, the extensive margin of trade increased to both the EU and ROW regions over the period, both in terms of the number of individual apparel products exported to each region, and the number of unique country combinations (origin and destination pairing). Secondly, apparel exports to the EU and ROW markets were concentrated in a handful of similar products to the US, which is important for the analysis. Within some of these top performing products, exports to the EU and ROW regions increased post 2005 as exports to the US decreased, suggesting that firms were able to divert exports away and compete in third country markets without preferential market access. This supports the aggregate trend of exports to the EU region remaining resilient post 2005, and exports to the ROW region increasing gradually over the period. Based on the descriptive analysis of the data, it would suggest that AGOA led to increased apparel exports to the US, EU group and the ROW group both in terms of trade value, and in the number of apparel products.

However is certainly does appear that apparel exports to all regions was highly concentrated amongst a few leading countries, and that these exports were concentrated in a limited range of products over the period. This raises the issue as to what extent AGOA preferences have enabled a greater spectrum of beneficiaries to gain a larger share of apparel exports to each region, and to what extent apparel exports have diversified to each region. The econometric analysis will attempt to test for the relationships identified in this graphical data analysis.

Econometric Analysis

The graphical analysis certainly indicates that apparel exports to third countries did increase in subsequent years after the enactment of AGOA, both in terms of trade value and product variety. The concentration of this growth is an issue, however the indictor is suggestive of some degree of competitive development. The econometric analysis aims to test for relationships which the graphical and descriptive analysis suggest exist, by using econometric techniques. This section will firstly discuss the method and specification to be used to test for the relationships suggested in the descriptive analysis. The results will then be evaluated, and conclusions provided.

A. Method and Specification

The logic of the analysis is to firstly have a product level indicator of the effect of AGOA preferences on apparel exports to the US from AGOA beneficiaries. The purpose will then be to access whether this indicator is also associated with subsequent exports to third countries. It has been shown in the graphical analysis that AGOA preferences have boosted apparel exports to both the US and third countries, hence using an indicator associated with exports is an appropriate indicator of enhanced competitiveness and development. The method outlined above involves two distinct stages, which will be discussed in turn.

In the first stage, it is necessary to test if AGOA led to increased apparel exports to the US, both in terms of trade flow and the number of apparel products. This is done by applying a simple linear difference-in-differences regression specification to measure the size of the AGOA effect on apparel exports to the US. Imports into the US from AGOA beneficiaries is the treatment group, and imports by the US from Low Middle Income Economies (LMIE) is the counterfactual or control group. The control group is composed of countries of similar development and income levels as AGOA-eligible SSA countries. It would be expected that US apparel imports from these two groups would grow at similar rates over time, given their income levels. However it is expected that AGOA preferences might well have increased the growth rate of apparel exports to the US upon the enactment of AGOA, above that of the LMIE control group. Thus the intuition behind this specification is to capture the marginal effect of receiving preferential market access under AGOA on US apparel imports.

$$DD = \left(lnUSIMP_{post}^{AGOA} - lnUSIMP_{pre}^{AGOA}\right) - (lnUSIMP_{post}^{LMIE} - lnUSIMP_{pre}^{LMIE}) \quad (1)$$

[15]

The above equation measures the difference in the pre-post differences in apparel imports into the US between AGOA beneficiaries and the LMIE control group or counterfactual. The regression form of the above equation is as follows:

$$lnUSIMP_{ijt} = \alpha_0 + \beta_1 DAGOA_j + B_2 D2001_i + B_3 DAGOA_j \cdot D2001_t + \varepsilon \quad (2)$$

The left- hand side variable refers to the log of US imports of product i from country j in period t. The variable $DAGOA_j$ is a time-invariant dummy that takes the value of one if a country has been declared eligible for AGOA preferences. The variable $D2001_t$ is a dummy that switches from zero to one for all countries in 2001, which is the year AGOA began to fully take effect[16]. The interaction term $DAGOA_j \cdot D2001_t$ captures the additional effect of AGOA on US apparel imports from eligible SSA countries relative to LMIE countries.

[15] Where $lnUSIMP_{post}^{AGOA}$ refers to the log of US imports from AGOA beneficiaries during the AGOA period (2001-2012),

[16] This follows Frazer and Van Briesebroeck (2007), where they argue that the effect of AGOA only fully started in 2001, as the US President made the list of eligible AGOA-GSP products official on 21 December 2000. Further beneficiaries only became eligible for the apparel provisions in 2001.

When estimating the effect of AGOA on the product count, it is necessary to create a left-hand side variable which counts all of the country-product-time observations which have positive values of imports into the US. The right-hand side of equation (2) remains the same, however $DAGOA_j$ can be removed by including exporter fixed effects if wanted. The left-hand side variable in equation (3) refers to the log of the count of apparel products imported by the US from country j in period t.

$$lnCount_{jt} = \alpha_0 + \beta_1 DAGOA_j + B_2 D2001_i + B_3 DAGOA_j \cdot D2001_t + \varepsilon \quad (3)$$

In both of the approaches above, estimates are made when looking at the entire period 1996-2012, and then when restricting the period to 1996-2004. The reason for analysing both periods is as a result of the large decline in US apparel imports from AGOA countries post 2005. This specification attempts to control for the effect of the MFA removal in 2005. The above steps aim to replicate the results of international studies which show that in the post-AGOA period, the value of trade flows and the number of apparel products imported into the US from AGOA beneficiaries increased.

The second stage is to test if an increase in apparel exports to the US led to increased apparel exports to third countries in terms of new product entry. This stage will be broken into two separate parts, which aim to capture the extensive and intensive margins of growth with respect to new product entry into the EU and ROW regions.

The first part aims to determine the probability of a new product entering into the US resulting in that same product entering into the EU and ROW regions, also as a new products in subsequent periods. This was tested by creating an indicator of the AGOA effect that is defined as an export of a new product to the US between 2001 and 2003. The first part breaks the period 1996-2012 into US apparel imports prior to 2001, and US apparel imports during the period 2001-2003. The reason for this limitation is to capture the effect of AGOA preferences whilst reducing the chance of capturing other effects which may have influenced US apparel imports in later years, such as demand shocks.

Four new dummy variables were created to specify four classes of apparel products being imported into each region from AGOA beneficiaries. These variables are: new products (products that were not imported prior to 2001), existing products (products that were imported in both periods), exit products (products that were imported in period 1, but not in period 2), and no products (products that were not imported in either period). These dummy variables were similarly created for EU and ROW imports from AGOA beneficiaries. The assumption is that new products entering the US would be as a result of preferential market access, as the period of entry in restricted to 2001-2003. This is firstly estimated by regressing the dummy variable of new products entering into the EU region on the dummy variable of new products entering the US.

$$Dimp^{EU}_{newprod} = \alpha_0 + \beta_1 Dimp^{US}_{newprod} + \varepsilon \quad (4)$$

The above equation if left as it is would imply that the control group is US imports of all existing products, exit products and those which the US never imported in either period. Instead, in the analysis the control group is restricted to no products, or those which the US does not import in either period, in order for a clean control to be used. The Alpha coefficient captures the probability of entry of a new product into the EU if a product was not exported in either period to the US. The Beta coefficient captures the marginal probability that entry of a new product into the US has on entry of a new product into the EU.

This relationship is estimated again, however allowing for more product heterogeneity.

$$Dimp_{newprod}^{EU} = \alpha_0 + B_1 Dimp_{newprod}^{US} + B_2 Dimp_{existprod}^{US} + B_3 Dimp_{exitprod}^{US} + \varepsilon \quad (5)$$

The purpose of the above estimation is to identify the marginal effect of each product dummy variable relative to the no product control group. Further, both estimations above are conducted similarly with respect to ROW apparel imports from AGOA beneficiaries. Finally, different time intervals are included with respect to EU and ROW apparel imports. The first period is from 2001-2003, the second period is from 2004-2005, and the final period is from 2006-2010. Thus four product dummy variables associated with the EU and ROW regions, were created by adjusting for each of the three periods listed above. The aim of the above adjustment is to capture the probability of a new product being imported into the EU and ROW regions in later periods given that it was imported into the US as a new product in the period 2001-2003.

The second part involves estimating the intensive margin effect, by asking if higher growth in exports to the US increase the probability of the product being exported as a new product to third countries. This is approached by regressing the dummy variable of new products entering the EU and ROW regions in each period (2001-2003, 2004-2005, 2006-2010) on the log of the change in the trade value of apparel imports into the US over the period 2001-2003.

$$Dimp_{newprod}^{EU} = \alpha_0 + B_1 ln\Delta IMP^{US} + \varepsilon \quad (6)$$

The aim is to estimate the extent to which the trade value of apparel imports into the US over the period 2001-2003, leads to an increase in the number of new products imported into the EU and ROW regions in each of the three periods listed above.

The above specification attempts to control for shocks which could influence the export response of beneficiary countries, such as institutional changes, technology shocks or demand shocks. This is attempted to be controlled for by breaking the post-AGOA period into three periods (2001-2003; 2004-2005; 2006-2010) so as to minimise the risk of capturing other shocks in later years which could distort the AGOA effect. Of particular importance in this paper is to identify if entry of new apparel products

to the US at the start of AGOA led to the entry of those products into the EU and ROW group[17], also as new products but in subsequent periods. The issue that arises here is that other shocks could be the driver of new product entry in the EU region and ROW group in subsequent periods.

Frazer and Van Briesebroeck (2007) control for this by using a triple difference-in-differences specification, which allows for other low value or labour-intensive commodities to be used as a control. Collier and Venables (2007) control for time varying factors other than trade preferences by extending their analysis to a quadruple difference-in differences, where the AGOA apparel effect is identified by comparing apparel exports to textile exports. The intuition is that any domestic or international shocks would affect all labour-intensive or low-valued commodities similarly. Thus by controlling across different kinds of commodities, the potential impact of other time varying shocks which could drive the apparel export supply response of AGOA beneficiaries is minimised or controlled for. Therefore this specification could be refined further to include more controls, in order to control for time-varying unobserved factors specific to beneficiaries more precisely.

B. Results

Impact of AGOA on US Imports from Beneficiary Countries

The first set of results presents the effect of AGOA preferences on exports to the US. The results for equation (2) of stage one, estimated on the unbalanced panel of the US, AGOA beneficiaries and LMIE countries from 1996-2012 are displayed in columns (1) and (2) of Table 8. When running a pooled regression with no country, product or time fixed effects, the estimated difference-in-differences coefficient suggests that AGOA preferences increased apparel imports by 38.4 percent (= exp (0.382)-1) from beneficiaries into the US relative to LMIE imports into the US. When restricting the period to 1996-2004, this estimated coefficient increases to 44.1 percent. These results are similar to Frazer and Van Briesebroeck (2007), who estimated a 53 percent increase in apparel imports into the US over the period 1996-2006, although theirs was a triple difference in differences model. Surprisingly, when including a range of country, product, product-by-country, and year fixed effects, the coefficients on the interaction variable all become negative (columns (3) to (8) in Table 8). This is contrary to what would be expected, and indeed to what empirical studies find[18]. One possible reason for these results, is that the database does not include exports from Botswana, Lesotho, Swaziland and Namibia prior to 2000. When restricting the period to 2000-2004 to control for this missing data, the effect of AGOA on US apparel imports is positive as would be expected.

[17] The control group is other low-middle income countries.

[18] A possible explanation for this is that prior to 2000 Botswana, Lesotho, Namibia and Swaziland did not have reported apparel imports into the US. These countries are mostly strong performing beneficiaries, hence the effect of this missing data could be causing the negative coefficients.

The results of the estimated effect of AGOA preferences on the number of apparel products imported into the US are shown in columns 10, 11 and 12 of Table 8. Over the entire period, it is estimated that AGOA preferences led to an 18.5 percent increase in the number of products imported into the US from beneficiaries relative to the control group. Over the period 1996-2004, this percentage is higher at 22.1 percent. When controlling for the fact that exports from Botswana, Lesotho, Namibia and Swaziland were not recorded prior to 2000, the estimated growth in products is 32.6 percent. This supports Frazer and Van Briesebroeck (2007) who found that the probability that an eligible country exports an apparel product to the US increased under AGOA.

Impact of AGOA on Third Country Imports from Beneficiary Countries

Stage 2 attempts to estimate the effect of AGOA preferences on apparel exports to third countries as an indicator of permanent economic development. Tables 9 and 10 show results estimated on a strongly balanced panel of the US, AGOA beneficiaries, EU and ROW countries from 1996-2012 for equation (4). The results show that if the US imported new apparel products during the period 2001-2003, there is a positive probability that the EU and ROW regions will also import those new products in all three sub-periods examined, relative to the control group of products that are not exported in either period into the US. However the problem with a positive coefficient in the first period is that the positive correlation could be driven by common demand effects occurring in both the US and EU markets. This issue is dealt with by looking at entry into the EU and ROW in subsequent periods relative to entry into the US market in the first period. The coefficients remain positive when looking at entry into the EU and ROW markets in subsequent periods relative to entry into the US market in the first period 2001-2003.

Table 8: The Response of US Imports from Beneficiaries under AGOA Preferences

Dependent Variable	lnUSIMP	lnUSIMP	lnUSIMP	lnUSIMP	lnUSIMP	lnUSIMP	lnUSIMP	lnUSIMP	lnUSIMP	lnCount	lnCount	lnCount
Period	1996-2012	1996-2004	1996-2012	1996-2004	1996-2012	1996-2004	1996-2012	1996-2004	2000-2004	1996-2012	1996-2004	2000-2004
Column	1	2	3	4	5	6	7	8	9	10	11	12
Explanatory Variables												
DAGOA	-1,325	-1,325	-1,218	-0,789								
	(18.56)**	(18.56)**	(3.09)**	(1,82)								
D2001	-0,339	-0,158	0,068	0,271	0,29	0,45				0,339	0,319	0,11
	(11.64)**	(4.38)**	(3.19)**	(11.13)**	(9.07)**	(16.96)**				(8.96)**	(8.31)**	(3.75)**
DAGOA*D2001	0,382	0,53	-0,433	-0,173	-0,538	-0,029	-0,535	-0,017	0,253	0,185	0,221	0,326
	(4.75)**	(5.53)**	(6.88)**	(1,46)	(5.71)**	(0,73)	(5.67)**	(0,2)	(2.66)**	(2.24)*	(2.4)*	(2.33)*
Constant	4,851	4,851	1,668	1,65	4,29	4,41	4,21	4,27	4,328	4,43	4,412	4,692
	(194.08)**	(194.07)**	(37.3)**	(24.98)**	(185.2)**	(332.55)**	(110.95)**	(140.5)**	(190.62)**	(80.92)**	(56.30)**	(39.00)**
Fixed Effects	None	None	Country Product	Country Product	Product by Country	Product by Country	Product by Country Year	Product by Country Year	Product by Country Year	Country	Country	Country
Observations	73717	35714	73717	35714	73717	35714	73717	35714	22560	957	487	284

Notes: Absolute values of t-statistics in brackets; * significant at 5 percent; ** significant at 1 percent.
Standard Errors are Robust.
lnUSIMP refers to the log of apparel imports into the US.
Columns (1) and (2) is a pooled regression with no fixed effects.
Columns (3) and (4) include country and product fixed effects.
Columns (5) and (6) include product-by-country fixed effects.
Columns (7) and (8) include product-by-country and year fixed effects.
Column (9) restricts the sample to the period 2000-2004, in order to control for Botswana, Lesotho, Namibia and Swaziland having no recorded apparel import data into the US prior to 2000.
Columns (10), (11) and (12) looks at the log of the count of products, including country fixed effects.

Interestingly, column (8) of Table 9 suggests that when looking across products within exporting countries, there is a positive correlation between new products exported to the US and new products exported to the EU and ROW. This would suggest that the positive association was driven by new exports of the same product, which could be a sign of specific demand effects in both US and EU regions at the time. However by including both country and product fixed effects in column (9) of Table 9, this problem is controlled for and the estimated coefficient instead becomes negative. This would suggest exporting new products to the US during the period 2001-2003 reduced the probability of exporting those products as new products to the EU region in subsequent periods. This would imply that new exports to the EU and ROW regions would more likely occur in products that beneficiaries did not export as new products to the US during the period 2001-2003. This could suggest that AGOA beneficiaries do not show evidence of developing exports of products to the US which then at a later stage get exported to the EU and ROW markets. However there are two other potential explanations to this finding. Firstly, it could suggest that AGOA preferences resulted in the entry of new product exports to the US, which then in later periods enabled exports of products which were not exported in the first period through spill over effects. The beneficiary then also exports these newer products to the EU and ROW markets in the subsequent periods. Secondly, preferences could have encouraged exports of products in which China has a comparative advantage, but where Chinese exports of these products were restricted by quotas prior to 2005. Upon the removal of these quotas in 2005, China was able to export those products to both the US and EU markets. This increased competition from 2005 then resulted in a relatively high exit rate of these new products being exported by AGOA beneficiaries in the periods after 2005, resulting in a negative coefficient.

Tables 12 and 14 clearly show the share of products not exported in either period fall for both the EU and ROW, which supports the argument in the graphical analysis that the number of products and hence the extensive margin has been growing over the period of AGOA. When estimating the results for equation (5) in Tables 11 and 13, the coefficients on the new products dummy variable follow a similar pattern as to those estimated in equation (4) for the ROW region. However a positive coefficient is estimated for the period 2004-2005 of exports to the EU region, even when both country and product fixed effects are taken into account. Thus when accounting for a greater degree of product heterogeneity, the result suggest that entry of new apparel exports to the US in the first period does lead to subsequent entry of those products being exported into the EU region. This association once again becomes negative during the period 2006-2010, suggesting that increased competition could well have resulted in the exit of products.

An issue to consider more closely is the impact of the removal of the MFA quota structure in 2005. The results suggest that after including both country and product fixed effects, that the entry of new products into the US over the period 2001-2003 reduces the probability of exporting those same products as new products to the EU region is subsequent periods. As mentioned already, a potential

explanation for this is that after 2005, AGOA exporters faced increased competition from the likes of China, resulting in a high exit rate of those new apparel product exports to the EU region post 2005. The results suggest that the entry of new apparel product exports to the US over the period 2001-2003 increased the probability of those product entering as new products into the EU region over the period 2001-2003, with this effect becoming negative thereafter. The paper therefore does indirectly control for the effect of the MFA removal in 2005 to a certain extent, by splitting the period of AGOA into various time intervals.

It is likely that increased competition from the likes of China post 2005 could well have resulted in diversionary responses to other markets, which confounds the identification of the impact of AGOA. Intuitively, this could be a possible indicator that AGOA preferences have been unable to adequately facilitate the development of apparel industries in AGOA beneficiaries to the level of competitiveness required to compete against the more productive apparel exporters, such as China.

A method to potentially identify the effect of the MFA removal more precisely could be to determine to what extent any new apparel exports from AGOA beneficiaries which entered into the EU region over the period 2001-2005 exited the region post 2005. External shocks could be controlled for by using other labour intensive commodities as a control.

The descriptive analysis suggests that apparel exports to the EU increased post 2005, which at a descriptive level could indicate that AGOA exporters were able to divert apparel exports to the EU market upon increased competition in the US market from the removal of the MFA. However the removal of the MFA theoretically should also have led to an increase in competition in the EU market for AGOA apparel exports as well. In fact, competition would have been worse in the EU market post 2005 as AGOA beneficiaries still received a preference margin into the US market under AGOA, however at a reduced level after 2005. It is clear that the EU effect is ambiguous when looking across the descriptive and econometric results. It is important to note that apparel exports to the EU from AGOA was dominated by Mauritius and Madagascar, both countries having relatively more established apparel sectors by 2005 relative to other beneficiaries, which could explain the growth in trade value to the EU post 2005. However when looking across countries and apparel products econometrically, new product entry into the US reduces the probability of new entry into the EU in subsequent periods.

Table 9: Entry of New Products into the EU Region in Different Periods as a Result of Entry of New Products into the US during 2001-2003

Dependent Variable	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU
New Product Entry Restriction		2001-2003			2004-2005			2006-2010	
Column	1	2	3	4	5	6	7	8	9
Explanatory Variables									
newprod	0,069	0,076	0,011	0,019	0,023	-0,003	0,006	0,012	-0,014
	(28.74)**	(30.15)**	(4.4)**	(10.92)**	(12.35)**	(1,72)	(3.27)**	(5.76)**	(6.85)**
Fixed Effects	None	Country	Country Product	None	Country	Country Product	None	Country	Country Product
Observations	286620	286620	286620	286620	286620	286620	286620	286620	286620

Notes: Absolute values of t-statistics in brackets; * significant at 5 percent; ** significant at 1 percent; Columns vary in terms of included fixed effects. Standard Errors are Robust; the Control Group are those products that are not exported prior to 2001 or during the period 2001-2003 into the US. NP-EU refers to the dummy dependent variable of new apparel products imported into the EU region in each of the respective entry period restrictions.

Table 10: Entry of New Products into the ROW Region in Different Periods as a Result of Entry of New Products into the US during 2001-2003

Dependent Variable	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW
New Product Entry Restriction		2001-2003			2004-2005			2006-2010	
Column	1	2	3	4	5	6	7	8	9
Explanatory Variables									
newprod	0,177	0,144	0,096	0,058	0,044	-0,019	0,048	0,037	-0,025
	(68.58)**	(48.68)**	(32.34)**	(25.27)**	(18.41)**	(7.13)**	(18.62)**	(13.49)**	(8.39)**
Fixed Effects	None	Country	Country Product	None	Country	Country Product	None	Country	Country Product
Observations	286620	286620	286620	286620	286620	286620	286620	286620	286620

Notes: Absolute values of t-statistics in brackets; * significant at 5 percent; ** significant at 1 percent; Columns vary in terms of included fixed effects. Standard Errors are Robust. ; the Control Group are those products that are not exported prior to 2001 or during the period 2001-2003 into the US. NP-ROW refers to the dummy dependent variable of new apparel products imported into the ROW region in each of the respective entry period restrictions.

Table 11: Table: Entry of New Products into the EU Region in Different Periods as a Result of Entry of New Products into the US during 2001-2003

Dependent Variable	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU
New Product Entry Restriction		2001-2003			2004-2005			2006-2010	
Column	1	2	3	4	5	6	7	8	9
Explanatory Variables									
newprod	0,069	0,081	0,025	0,019	0,025	0,003	0,006	0,011	-0,015
	(28.74)**	(32.97)**	(9.92)**	(10.92)**	(13.92)**	(1,68)	(3.27)**	(5.5)**	(6.5)**
existprod	-0,011	0,022	-0,085	-0,019	-0,001	-0,037	-0,051	-0,024	-0,061
	(6.62)**	(9.84)**	(32.12)**	(16.42)**	(0,42)	(18.67)**	(39.3)**	(13.86)**	(28.37)**
exitprod	0,049	0,054	-0,008	0,002	0,005	-0,019	0,015	0,02	-0,004
	(16.34)**	(17.18)**	(2.65)**	(0,9)	(2.19)*	(8.62)**	(5.65)**	(6.83)**	(1,42)
Fixed Effects	None	Country	Country Product	None	Country	Country Product	None	Country	Country Product
Observations	329103	329103	329103	329103	329103	329103	329103	329103	329103

Notes: Absolute values of t-statistics in brackets; * significant at 5 percent; ** significant at 1 percent; Columns vary in terms of included fixed effects. Standard Errors are Robust;
NP-EU refers to the dummy dependent variable of new apparel products imported into the EU region in each of the respective entry period restrictions.

Table 12: EU Product Breakdown across Four Product Types

	2001-2003		**2004-2005**		**2006-2010**	
DchangeEU	Freq.	Percent	Freq.	Percent	Freq.	Percent
1	30,192	9,17	18,360	5,58	29,325	8,91
2	49,725	15,11	56,610	17,2	81,345	24,72
3	23,766	7,22	47,073	14,3	40,698	12,37
4	225,420	68,5	207,060	62,92	177,735	54,01
Total	329,103	100	329,103	100	329,103	100

Notes: DchangeEU=1 is new products entering the EU, DchangeEU=2 is existing products, DchangeEU =3 is products which exit out of the EU, and DchangeEU=4 is products imported in neither period.

Table 13: Entry of New Products into the ROW Region in Different Periods as a Result of Entry of New Products into the US during 2001-2003

Dependent Variable	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW
New Product Entry Restriction		2001-2003			2004-2005			2006-2010	
Column	1	2	3	4	5	6	7	8	9
Explanatory Variables									
newprod	0,177	0,155	0,118	0,058	0,047	-0,005	0,048	0,038	-0,019
	(61.58)**	(52.91)**	(39.88)**	(25.27)**	(20.26)**	(2.18)*	(18.62)**	(14.09)**	(6.74)**
existprod	0,092	0,083	0,016	-0,02	-0,004	-0,098	-0,078	-0,057	-0,133
	(40.96)**	(28.65)**	(5.01)**	(14.05)**	(2.14)*	(38.48)**	(54.58)**	(28.93)**	(51.97)**
exitprod	0,102	0,089	0,045	0,019	0,028	-0,024	0,023	0,023	-0,017
	(30.36)**	(28.65)**	(12.95)**	(7.08)**	(10.28)**	(8.66)**	(6.79)**	(8.06)**	(4.92)**
Fixed Effects	None	Country	Country Product	None	Country	Country Product	None	Country	Country Product
Observations	329103	329103	329103	329103	329103	329103	329103	329103	329103

Notes: Absolute values of t-statistics in brackets; * significant at 5 percent; ** significant at 1 percent; Columns vary in terms of included fixed effects. Standard Errors are Robust. NP-ROW refers to the dummy dependent variable of new apparel products imported into the ROW region in each of the respective entry period restrictions.

Table 14: ROW Product Breakdown across Four Product Types

	2001-2003		**2004-2005**		**2006-2010**	
DchangeROW	Freq.	Percent	Freq.	Percent	Freq.	Percent
1	33,048	10,04	26,673	8,1	41,565	12,63
2	36,567	11,11	52,326	15,9	82,212	24,98
3	16,116	4,9	33,405	10,15	30,192	9,17
4	243,372	73,95	216,699	65,85	175,134	53,22
Total	329,103	100	329,103	100	329,103	100

Notes: DchangeROW=1 is new products entering the EU, DchangeROW=2 is existing products, DchangeROW =3 is products which exit out of the EU, and DchangeROW=4 is products imported in neither period.

Finally, Tables 15 and 16 aim to estimate the extent to which the intensive margin growth of US imports led to an increase in new products imported by the EU and ROW regions. Surprisingly, the coefficients are generally negative for both the EU and ROW imports. This suggests that the greater the log of trade value is over the period 2001-2003, the less likely that those products will be imported into the EU and ROW regions as new products.

Table 15: Intensive Margin of Trade to EU

Dependent Variable	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU	NP-EU
New Product Entry Restriction	2001-2003		2004-2005		2006-2010	
Column	1	2	3	4	5	6
Explanatory Variables						
lUSIMP2	-0,004	-0,004	-0,004	-0,004	0,004	0,003
	(11.76)**	(12.13)**	(13.09)**	(16.09)**	(17.88)**	(13.20)**
Fixed Effects	None	Country	None	Country	None	Country
Observations	329103	329103	329103	329103	329103	329103

Note: lUSIMP2 in the log of US imports during the period 2001-2003
Absolute values of t-statistics in brackets; * significant at 5 percent; ** significant at 1 percent; Columns vary in terms of included fixed effects. Standard Errors are Robust;
NP-EU refers to the dummy dependent variable of new apparel products imported into the EU region in each of the respective entry period restrictions.

Table 16: Intensive Margins of Trade to ROW

Dependent Variable	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW	NP-ROW
New Product Entry Restriction	2001-2003		2004-2005		2006-2010	
Column	1	2	3	4	5	6
Explanatory Variables						
lUSIMP2	-0,018	-0,015	-0,005	-0,006	-0,006	-0,008
	(42.87)**	(35.34)**	(17.25)**	(20.81)**	(17.5)**	(22.06)**
Fixed Effects	None	Country	None	Country	None	Country
Observations	329103	329103	329103	329103	329103	329103

Note: lUSIMP2 in the log of US imports during the period 2001-2003
Absolute values of t-statistics in brackets; * significant at 5 percent; ** significant at 1 percent; Columns vary in terms of included fixed effects. Standard Errors are Robust;
NP-ROW refers to the dummy dependent variable of new apparel products imported into the ROW region in each of the respective entry period restrictions.

IV. Conclusion

This paper has evaluated the effect that the African Growth and Opportunity Act (AGOA) has had on apparel exports from beneficiary countries to the US and third countries included in the analysis. This has been done in order to ascertain to what extent enhanced trade under AGOA preferences has

facilitated the emergence of competitive industrial development. The results of which give an indication as to how effective trade preferences are as a policy tool to facilitate economic development.

The objective of the paper has been to argue to what extent AGOA preferences have facilitated competitive development in beneficiary countries. The empirical method required the use of exports to third countries as an indicator variable to proxy for competitive development. At a descriptive level, the paper finds that AGOA preferences have certainly increased apparel exports in terms of trade value, product count and destination. This supports the descriptive findings in the literature that trade preferences can facilitate an export supply response and increase the number of product varieties exported. However, it is evident that the majority of apparel exports from AGOA beneficiaries have been concentrated in approximately seven unique varieties, both across regions and over the period 1996-2012. Exports in terms of trade value have originated from approximately eight leading AGOA beneficiaries over the period. Thus apparel exports under AGOA preferences have been concentrated in terms of the number of beneficiaries exporting any significant level of trade value of apparel products, and in terms of the number of individual products exported.

In order to answer the central question of the paper, an econometric analysis was performed with the intent of revealing the relationship between the entries of new apparel product imports into the US from AGOA beneficiaries, and new apparel product imports into 3rd countries in subsequent periods. By applying simple linear regression techniques, it was found that after accounting for country and product fixed effects, there was a negative relationship between the entry of new products into the US over the period 2001-2003, and the entry of those products into the EU and ROW regions in subsequent periods. After accounting for greater product heterogeneity, these results remained relatively unchanged. There are at least two possible explanations for the estimated negative coefficient. Firstly, exports of new products to the US in the period 2001-2003 could have enabled beneficiaries, through spill over effects, to export different new products to the EU and ROW regions in subsequent periods. As a result, the relationship appears to be negative. Alternatively, increased competition after 2005 could have led to the exit of new products exported to the EU and ROW, resulting in a negative coefficient.

It is clear that AGOA preferences have increased apparel exports to the US and third countries included in the analysis. There has been particularly strong growth in the extensive margin of trade, where the number of product varieties exported to each region has increased quite significantly over the period. These findings are consistent with international studies. However the econometric analysis does not yield suitable results to suggest that AGOA preferences have led to enhanced competitive industrial development in beneficiary countries as a whole. Potential explanations for this finding is that AGOA countries remains concentrated in low value-added products, with only a minority of countries exporting these products to any significant level. Further, the literature argues that the preferential access to the US market has not been sufficient as of yet to establish sufficient domestic supply chain linkages and

greater product value added. Domestic issues such as inadequate institutions, poor infrastructure and skills, and domestic supply constraints provide significant challenges to competitive industrial development. Potential policy measures and actions to enhance the permanent economic effectiveness of preferential market access to the US under AGOA will now be discussed.

AGOA beneficiaries face domestic supply side constraints such as inadequate institutions, poor infrastructure, shortages of adequate skills, high transport costs and complex business environments that create significant challenges to competitive industrial development. An enabling policy environment which addresses these issues will assist apparel industries in these countries to diversify and move further along the value chain, and in the process improve the sustainability of domestic apparel exporters. Appropriate domestic laws, regulations and policies are required to alleviate such domestic supply side constraints, as it is difficult for industries targeted by preferential agreements to respond when they face productivity and expansion constraints.

Tariffs on products excluded from the AGOA rules remain relatively high, which if lowered or included under AGOA could improve the broader economic impact in beneficiary countries. This is particularly applicable to a large number of manufacturing and agricultural products which are either excluded from preferential access under AGOA or receive little additional benefit over the GSP system implemented prior to AGOA (Condon & Stern, 2010; Brenton & Ilezuki, 2004; Dean & Wainio, 2006). Further they argue that products which are subject to tariff quotas should be fully liberalised, as they are considered an important impediment to new investment in export industries.

Rules of origin requirements need to be less-restrictive, with the rapid growth in apparel exports to the US under AGOA displaying the important effect that liberal rules of origin requirements can have, particularly after the special rule was implemented (Condon & Stern, 2010; Brenton & Hoppe, 2006; Collier & Venables, 2007). Value-added requirements should be lowered for non-apparel products which would enable AGOA exporters to source inputs globally and exploit their comparative advantage in labour-intensive products. Collier and Venables (2007) argue that for trade preferences to have economic impact, countries need to be able to participate in fragmentation and production networks which is achieved more easily through liberal rules of origin. Countries can then specialise is more narrowly defined tasks which add value and which exploit their comparative advantage.

Portugal Perez (2008) found that the liberalised rules of origin requirements implemented under the special rule resulted in export diversification, with the range of exported apparel products increasing from the top performing beneficiaries. The threat of liberal rules of origin is that products get imported into the beneficiary country, undergo a minor transformation and then get exported out to receive the benefit of the preference margin, with little domestic economic impact. However the evidence that AGOA has had little impact on non-apparel sectors would suggest that liberal rules of origin can certainly facilitate export expansion and facilitate to some extent a broader economic impact.

However, Edwards and Lawrence (2010) argue that the special rule distorted production incentives relating to value addition and fabric input use. The lower rules of origin requirements effectively encourage low quality goods that require little value-addition and the use of more expensive fabrics as inputs. They argue that this limits the dynamic benefits which would want to be achieved such as encouraging skills development, product diversification and quality enhancement, and value chain linkages. Instead, liberal rules of origin requirements need to be accompanied by industrial strategies which improve the capabilities of the private sector and government (Edwards and Lawrence, 2010).

The duration of AGOA preferences need to be firmly fixed for a longer period, as this would improve the chance of attracting greater domestic investment and supply responses which will assist in sustaining industries upon the removal of the preferences (Condon & Stern, 2010). This policy measure is applicable to the US however, as it has full discretion over the extension and duration of AGOA preferences. More certainty would be beneficial for increased domestic investment.

A problem identified by Condon and Stern (2010) is that a large proportion of the price margins accrue to foreign buyers and investors. Further, weak linkages between the apparel sector in beneficiary countries and the local economy is an area of concern. The authors argue that governments and donors need to find ways to better capture the benefits of the preferences by increasing the use of local skills and local participation in export industries.

AGOA has played a significant role in growing apparel exports from a limited number of AGOA beneficiaries to the US market. Evidence suggests that the broader economic impact of preferential market access to the US has been less significant (Condon & Stern, 2010). Further, linkages to the local economy are weak in the apparel sector, with little capital or skills transfer. When looking across other commodities, preference margins remain relatively low suggesting that AGOA preferences have had little impact on exports of non-apparel commodities (Condon & Stern, 2010). In light of the many challenges discussed above, Lall (2005) argues that there is a strong case to extend trade preferences and provide a longer period of industry protection, however this has to be accompanied by strategic industrial development policies which aim to overcome the structural constraints which restrict the growth and development of many African economies.

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VI. Appendix

Table A1: Sub-Saharan African (SSA) countries eligibility history under AGOA

Country	Date declared eligible under AGOA	Date eligible for 'wearing apparel' provisions
Angola	30-Dec-03	NOT ELIGIBLE
Benin	02-Oct-00	28-Jan-04
Botswana	02-Oct-00	27-Aug-01
Burkina Faso	10-Dec-04	04-Aug-06
Burundi	01-Jan-06	NOT ELIGIBLE
Cameroon	02-Oct-00	01-Mar-02
Cape Verde	02-Oct-00	28-Aug-02
Chad	02-Oct-00	26-Apr-06
Comoros	30-Jun-08	NOT ELIGIBLE
Congo(Republic)	02-Oct-00	NOT ELIGIBLE
Congo (DRC)	Declared ineligible 1/1/2011	NOT ELIGIBLE
Cote d'Ivoire	25-Oct-11	19-Mar-13
Djibouti	02-Oct-00	NOT ELIGIBLE
Ethiopia	02-Oct-00	02-Aug-01
Gabon	02-Oct-00	NOT ELIGIBLE
Gambia	31-Dec-02	28-Apr-08
Ghana	02-Oct-00	20-Mar-02
Guinea	25-Oct-11	NOT ELIGIBLE
Guinea-Bissau	Declared ineligible 1/1/2013	NOT ELIGIBLE
Kenya	02-Oct-00	18-Jan-01
Lesotho	02-Oct-00	23-Apr-01
Liberia	29-Dec-06	February 7, 2011
Madagascar	Declared ineligible 2010	NOT ELIGIBLE
Malawi	02-Oct-00	15-Aug-01
Mali	Declared ineligible 1/1/2013	NOT ELIGIBLE
Mauritania	01-Jan-10	NOT ELIGIBLE
Mauritius	02-Oct-00	18-Jan-01
Mozambique	02-Oct-00	08-Feb-02
Namibia	02-Oct-00	03-Dec-01
Niger	25-Oct-11	25-Oct-11
Nigeria	02-Oct-00	14-Jul-04
Rwanda	02-Oct-00	04-Mar-03
Sao Tome Principe	02-Oct-00	NOT ELIGIBLE
Senegal	02-Oct-00	23-Apr-02
Seychelles	02-Oct-00	NOT ELIGIBLE
Sierra Leone	23-Oct-02	05-Apr-04
South Africa	02-Oct-00	07-Mar-01
South Sudan	02-Jan-13	NOT ELIGIBLE
Swaziland	02-Oct-00	26-Jul-01
Tanzania	02-Oct-00	04-Feb-02
Togo	17-Apr-08	NOT ELIGIBLE
Uganda	02-Oct-00	23-Oct-01
Zambia	02-Oct-00	17-Dec-01

Source: (AGOA.info, 2013d)

Table A2: List of Third Country Destinations

EU Group	ROW Group	
Austria	Algeria	Indonesia
Denmark	Argentina	Israel
Finland	Australia	Japan
France	Brazil	Korea, Rep.
Germany	Bulgaria	Lebanon
Greece	Canada	Malaysia
Ireland	Chile	Mexico
Italy	China	New Zealand
Netherlands	Colombia	Norway
Portugal	Costa Rica	Poland
Spain	Croatia	Romania
Sweden	Cyprus	Russian Federation
United Kingdom	Czech Republic	Singapore
	Estonia	Slovak Republic
	Hong Kong, China	Slovenia
	Hungary	Switzerland
	Iceland	Turkey
	India	

Source: UN Comtrade.

Table A3: AGOA beneficiaries included in the Econometric Analysis

AGOA Exporter	
Benin	Malawi
Botswana	Namibia
Cameroon	Nigeria
Cape Verde	Rwanda
Ethiopia	Senegal
Gabon	Sao Tome and Principe
Ghana	Swaziland
Kenya	Seychelles
Lesotho	Chad
Madagascar	Tanzania
Mali	Uganda
Mozambique	South Africa
Mauritania	Zambia
Mauritius	

Table A4: List of Low Middle Income Economies (LMIE) included in the Control Group

Low and Middle Income Economies (LMIE) – Control Group	
Algeria	Malaysia
Argentina	Mexico
Belarus	Morocco
Bolivia	Pakistan
Brazil	Paraguay
Bulgaria	Peru
Cambodia	Philippines
Chile	Romania
Colombia	Russian Federation
Ecuador	Sri Lanka
Egypt	Tunisia
Indonesia	Turkey
Jamaica	Ukraine
Jordan	Uruguay
Latvia	Venezuela
Lebanon	Vietnam
Lithuania	Yemen

Note: This group excludes Bangladesh, China and India.
Source: UN Comtrade.

Table A5: Number of Individual Apparel Products imported by the US from each AGOA Beneficiary

	1996	2000	2004	2005	2012	Change from 2000-2012	Change from 2000-2004	Change from 2005-2012
Angola						0	0	0
Benin	1	2	4	3	1	-1	2	-2
Botswana		20	31	26	15	-5	11	-11
Burkina Faso	5	8	7	7	1	-7	-1	-6
Burundi	1	1			3	2	-1	3
Cameroon	8	7	11	17	23	16	4	6
Cape Verde		4	11	10	4	0	7	-6
Chad			1	1	1	1	1	0
Comoros	1		1	1	2	2	1	1
Congo, Dem. Rep.	1	4	1	1	2	-2	-3	1
Congo, Rep.			3		1	1	3	1
Cote d'Ivoire	14	19	11	12	13	-6	-8	1
Djibouti					2	2	0	2
Ethiopia	7	3	29	40	46	43	26	6
Gabon	1	1	3	2	1	0	2	-1
Gambia, The	4	9	6	9	4	-5	-3	-5
Ghana	21	37	41	40	39	2	4	-1
Guinea	5	9	12	9	9	0	3	0
Guinea-Bissau						0	0	0
Kenya	39	29	75	77	70	41	46	-7
Lesotho		24	45	43	35	11	21	-8
Liberia	2	2	1	5		-2	-1	-5
Madagascar	26	82	96	104	91	9	14	-13
Malawi	2	14	28	25	7	-7	14	-18
Mali	5	8	10	10	17	9	2	7
Mauritania	1	9	6	8	4	-5	-3	-4
Mauritius	78	62	69	82	101	39	7	19
Mozambique	3		5	9		0	5	-9
Namibia		1	18	22	2	1	17	-20
Nigeria	37	34	31	24	28	-6	-3	4
Rwanda			2	2	2	2	2	0
Sao Tome and Principe		1		1	1	0	-1	0
Senegal	20	19	9	9	15	-4	-10	6
Seychelles		2	2	2	2	0	0	0
Sierra Leone	1	25	33	25	37	12	8	12
South Africa	73	120	130	112	81	-39	10	-31
South Sudan					1	1	0	1
Swaziland		22	57	57	41	19	35	-16
Tanzania	4	4	15	12	14	10	11	2
Togo	9	4	3	7	6	2	-1	-1
Uganda			9	11	22	22	9	11
Zambia	1	1	4	2	2	1	3	0

Table A6: Number of Individual Apparel Products Imported by the EU from each AGOA member

	1996	2000	2004	2005	2012	Change from 2000-2012	Change From 2000-2004	Change From 2005-2012
Angola		8	4	13	12	4	-4	-1
Benin	6	12	10	13	45	33	-2	32
Botswana		19	34	21	57	38	15	36
Burkina Faso	9	15	11	13	22	7	-4	9
Burundi		10	11	4	11	1	1	7
Cameroon	6	24	48	60	83	59	24	23
Cape Verde	9	15	24	32	30	15	9	-2
Chad	1	12	1	20	6	-6	-11	-14
Comoros	12	5	8	2	8	3	3	6
Congo, Dem. Rep.	2	5	20	13	14	9	15	1
Congo, Rep.	1	3	6	4	14	11	3	10
Cote d'Ivoire	37	43	32	24	91	48	-11	67
Djibouti	5	5	7	6	18	13	2	12
Ethiopia	6	17	26	37	74	57	9	37
Gabon	3	5	25	29	30	25	20	1
Gambia, The	2	29	14	16	1	-28	-15	-15
Ghana	20	17	35	31	45	28	18	14
Guinea	6	5	6	10	15	10	1	5
Guinea-Bissau			1	1	8	8	1	7
Kenya	39	48	62	75	85	37	14	10
Lesotho		11	13	12	29	18	2	17
Liberia	6	2	10	14	19	17	8	5
Madagascar	118	145	149	146	174	29	4	28
Malawi	6	10	5	11	12	2	-5	1
Mali	11	25	16	25	18	-7	-9	-7
Mauritania	19	40	26	20	34	-6	-14	14
Mauritius	183	197	172	172	193	-4	-25	21
Mozambique	17	13	19	14	31	18	6	17
Namibia		8	28	31	45	37	20	14
Nigeria	22	25	66	56	68	43	41	12
Rwanda	5	5	2	10	6	1	-3	-4
Sao Tome and Principe	2	3	3	1	6	3	0	5
Senegal	27	32	44	50	58	26	12	8
Seychelles	9	3	10	38	115	112	7	77
Sierra Leone	55	90	51	31	72	-18	-39	41
South Africa	160	162	162	161	145	-17	0	-16
Swaziland		11	14	10	34	23	3	24
Tanzania	13	12	23	31	34	22	11	3
Togo	7	14	15	17	24	10	1	7
Uganda	10	13	9	6	21	8	-4	15
Zambia	3	5	6	8	9	4	1	1

Table A7: Number of Individual Apparel Products Imported by the ROW from each AGOA member

	1996	2000	2004	2005	2012	Change from 2000-2012	Change From 2000-2004	Change From 2005-2012
Angola		1	13	11	33	32	12	22
Benin		2	2	11	20	18	0	9
Botswana		18	30	41	20	2	12	-21
Burkina Faso	5	8	23	31	16	8	15	-15
Burundi	3	4	13	8	18	14	9	10
Cameroon	17	40	68	65	91	51	28	26
Cape Verde	4	4	6	15	34	30	2	19
Chad		2	9	14	15	13	7	1
Comoros			2	2	15	15	2	13
Congo, Dem. Rep.	2	7	10	18	22	15	3	4
Congo, Rep.	1		2	5	8	8	2	3
Cote d'Ivoire	2	16	14	21	32	16	-2	11
Djibouti		19	12	5	12	-7	-7	7
Ethiopia	2	12	43	58	92	80	31	34
Gabon		2	10	9	11	9	8	2
Gambia, The	1	6	8	21	20	14	2	-1
Ghana	14	15	38	28	42	27	23	14
Guinea		6	10	10	21	15	4	11
Guinea-Bissau	1		2	4	6	6	2	2
Kenya	20	18	67	79	95	77	49	16
Lesotho		20	36	57	59	39	16	2
Liberia	3	2	6	6	11	9	4	5
Madagascar	23	112	129	138	172	60	17	34
Malawi	4	7	19	31	20	13	12	-11
Mali	5	14	19	23	35	21	5	12
Mauritania	12	55	45	35	50	-5	-10	15
Mauritius	89	143	156	140	177	34	13	37
Mozambique		3	14	26	34	31	11	8
Namibia		5	41	30	46	41	36	16
Nigeria	4	16	37	33	46	30	21	13
Rwanda	1	2	17	19	5	3	15	-14
Sao Tome and Principe	1	2	8	4	4	2	6	0
Senegal	7	18	14	20	34	16	-4	14
Seychelles		3	12	17	33	30	9	16
Sierra Leone	23	41	53	56	78	37	12	22
South Africa	106	155	185	187	152	-3	30	-35
South Sudan					11	11	0	11
Swaziland		10	37	42	67	57	27	25
Tanzania	2	10	29	34	56	46	19	22
Togo	4	9	9	15	7	-2	0	-8
Uganda	1	2	21	26	27	25	19	1
Zambia	2	1	5	10	7	6	4	-3