National Agricultural Marketing Council
Promoting market access for South African agriculture

NAMC WORKING PAPER SERIES

Economy wide effect of a possible erosion of AGOA preferential access for South Africa

By Bonani Nyhodo, Thandeka Ntshangase & Simphiwe Ngqangweni
Working Paper (NAMC/WP/2016/02)

Economy wide effect of a possible erosion of AGOA preferential access for South Africa

B Nyhodo[1], T Ntshangase and S Ngqangweni

Abstract

The possible erosion of preferential market access, South Africa's access to the USA market under AGOA, is expected to lead to losses in the South Africa economy, albeit minimal. This study used, as a policy shock, the introduction by USA of applied tariffs on selected imported agricultural products (beverages and tobacco; sugar; and vegetables, fruits and nuts) from South Africa. The methodology used to quantify the effects of the stated policy change is the standard GTAP model with database from GTAP database version 7. In terms of the overall effect (looking at Equivalence Variation, EV, in the case of GTAP model) the South African economy stands to lose about $3.11 million as a result of the removal of the preferential access under AGOA. These losses will be driven mostly by losses on terms of trade and allocative efficiencies while other effects are contributing positively (even though very minimally). The quantities of industry outputs for the selected products are expected to decline while the rest will benefit positively. The trade balance for the selected products stand to worsen while other products are expected to benefit (driven by reduction in exports). There will also be labour demand loses (loss of jobs); capital demand loses (reduction in investments) coupled with shift in the land demand. Overall the economy stands to lose because of the erosion of the AGOA treatment.

[1] Is the corresponding author (+27 12 341 1115 or bonani@namc.co.za)

1. Introduction

The African Growth and Opportunity Act (AGOA) is a United States Congress Act which regulates particular aspects of international trade which involve the United States (Erasmus, 2016). It is a trade preference programme which is nonreciprocal and provides duty-free treatment to imports (into USA) of specific products from qualifying Sub-Saharan African (SSA) countries for which South Africa is part. AGOA is aimed at promoting free-market system, expanding USA-African trade and investment, stimulating economic growth and assisting SSA's integration into the global economy (DAFF, 2009). On the 18th of May 2000, Congress passed AGOA, in order to significantly spur and enhance market-led economic growth and development in eligible Sub-Saharan African Countries and to strengthen U.S. trade and investment relations with the region (Williams, 2015). There are 49 candidate SSA countries and currently 39 of these countries (a number that changes periodically) qualify for the preference benefits (Erasmus, 2016).

South Africa, being the most industrialised of all AGOA beneficiary countries, has been consistently in the top three AGOA exporters (Naumann, 2015). Recently, however, against the background of South Africa imposing anti-dumping duties on all US bone-in chicken imports, South Africa's inclusion in the renewal of AGOA until 2025, has been met with resistance by some constituencies within the US (Naumann, *op cit*). The most vocal of these oppositions came from states that stood to benefit from a more open South African poultry market, for example, Georgia and Delaware, who are strong producers, processors and exporters of chicken. These opponents of South Africa's inclusion in a future AGOA contented that there should at least be conditions attached if South Africa were to be included (*op cit*). Chief among these conditions would be South Africa making special provisions to allow a certain amount (65 000 tons annually) of poultry without the special anti-dumping duty.

Following an agreement reached in June 2015 in Paris between South Africa and the US officials, related to poultry, beef and pork sanitary and phytosanitary (SPS) issues, a breakthrough was achieved, which paved the way for South Africa to meet US conditions for South Africa's inclusion in the renewed AGOA[2]. The dispute has now effectively been resolved as the first US chicken imports are reported to have landed in South Africa during early March 2016[3]. An announcement is expected

[2] "Chicken Deal with USA Will Benefit SA". Press Statement by Sidwell Medupe – DTI Departmental Spokesperson, 08 June 2015. Available online at https://www.thedti.gov.za/editmedia.jsp?id=3350

[3] "SA Concludes 'the Three Meats' Negotiations with the US". Press Statement by Sidwell Medupe – DTI Departmental Spokesperson, 03 March 2016. Available online at: https://www.thedti.gov.za/editmedia.jsp?id=3656

to be made by the US president during March 2016, formalising South Africa's inclusion in the new AGOA[4].

Against this background, this paper considers a situation, which, until recently was plausible, whereby South Africa is not able to meet US conditions and is therefore excluded from the new AGOA. It introduces a policy shock in the form of applied tariffs on selected imported agricultural products[5] (beverages and tobacco; sugar; and vegetables, fruits and nuts) from South Africa. The impact of the shock is analysed using GTAP model with database from GTAP database version 7.

2. Literature review on AGOA

Preferential access to developed markets, United States of America in this instance, was perceived (in the post colonial era) to be a rapid process to integrate countries in these continents (Asia and Africa) into the global economy. In spite of such interventions a vast number of African Least Development Countries (LDCs) have failed to reap the economic gains that come with international trade (Condon & Stern, 2010).

Qualification for AGOA preferences is based on a set of requirements incorporated in the AGOA legislation. In order to qualify and remain eligible for AGOA, each country must adhere to these requirements (Erasmus, 2016). The legislation indicates that a country's eligibility for AGOA depends on three major requirements namely: (1) having established, or currently be making progress toward, a market- based economy, the rule of law, the elimination of trade barriers, economic policies that reduce poverty, systems to combat corruption, and protecting workers' rights; (2) not engaging in activities that undermine U.S. national security; and (3) not engaging in gross violations of human rights or support for terrorism. For a country to become an AGOA beneficiary, the President (of USA) must determine that the country fits these criteria (Schneidman & Lewis, 2012). Products from AGOA countries should also meet certain rules of origin requirements in order to qualify for duty-free treatment. Firstly, duty-free entry is only allowed if the article is imported directly from the beneficiary country into the United States. Secondly, at least 35 percent of the appraised value of the product must be the "growth, product or manufacture" of a beneficiary developing country, as defined by the sum of (1) the cost or value of materials produced in the beneficiary developing country (or any two or more beneficiary countries that are members of the same association or countries and are treated as one country for purposes of the

[4] Agoa: First US chicken imports hit SA. Available online at: http://www.iol.co.za/business/news/agoa-first-us-chicken-imports-hit-sa-1992553

[5] These products are most traded by South Africa with USA under AGOA.

U.S. law) plus (2) the direct costs of processing in the country. Up to 15% of the required 35% of the appraised value may be of U.S. origin, and any amount of production in other beneficiary SSA countries may also contribute to the value-added requirement (“regional accumulation”) (Williams, 2015).

The benefits of AGOA incorporate preferential duty-free treatment for specific articles under the U.S. Generalized System of Preferences (GSP). The GSP program is a unilateral trade preference agreement which permits an extensive range of products from eligible developing countries to enter the U.S. duty free, GSP applies to more than 120 developing countries, including SSA countries. (Schneidman & Lewis, 2012). In terms of country eligibility requirements and tariff benefits, AGOA is essentially an expansion of GSP. It is established on GSP by providing preferential access to the U.S. market for more products, such as apparel, and sets out additional eligibility criteria. AGOA also includes other trade and development components, beyond preferences, that are not part of GSP (Williams, 2015).

AGOA has been the basis of the United States economic engagement with Sub-Saharan Africa over the past several years and the African economic conditions have considerably changed since Congress passed the initial AGOA legislation. Annual real gross domestic product (GDP) growth in SSA was a half percentage point lower than global GDP growth (2.7% vs. 3.3%) in the decade leading up to AGOA’s passage (1990-2000). Since AGOA was enacted (2001-2013), however, SSA’s growth averaged 6.3%, more than 2 points higher than the 3.9% world average (Williams, 2015). SSA countries have been afforded an opportunity by AGOA to get liberal market access to the United States without any free trade agreement. At present more than 98% of U.S. imports from AGOA beneficiary countries are duty free. Through AGOA, the eligible SSA countries also have access to U.S. credit and technical skills, and all have economic engagement with the U.S. using the USA-SSA Trade and Economic Forum commonly called the “AGOA Forum”. Consequently, USA firms have established new opportunities for investment and partnerships in Africa through AGOA.

Some opportunities were created through privatisation of state owned enterprises and others through partnerships with African firms in infrastructure projects. Imports by the U.S. from AGOA countries increased over the period 2000 to 2008, despite slumps in 2001 and 2002. AGOA agricultural exports to US made up 18 % (down from 23 % in 2007) of the total exports from SSA. Trade between the USA and SSA countries were highly concentrated on specific products, with a small number of African countries accounting for a large share of the total for both imports and exports (DAFF, 2009). Exports from Sub-Saharan Africa to the US have increased substantially since 2000, with an increasing share of these exports utilising AGOA preferences (Condon & Stern, 2010), the exports under AGOA since legislation went to effects have increased from $8.15 billion in 2001 to $53.8 billion in 2011. Approximately 90% of these exports have been oil, which underscores Africa's growing strategic importance to the U.S (Schneidman & Lewis, 2012).

U.S. imports from AGOA beneficiary countries represent a small share (1%) of total U.S. imports and are highly concentrated in energy-related products. Oil is consistently the top duty-free U.S. import from AGOA countries, accounting for 68% of such imports in 2014. Among non-energy products, apparel is the top export for a number of AGOA countries. Apart from apparel and energy products, South Africa accounts for the majority of U.S. imports under AGOA. As the most economically advanced country in the region, South Africa also exports a much more diverse range of manufactured goods than other AGOA countries; vehicles in particular have become a considerable South African export under AGOA (Williams, 2015).

Over recent years South African trade with the U.S. has increased steadily with South Africa holding a trade surplus since 1999. U.S. exports to South Africa far exceed U.S. exports to any other country in SSA. In terms of SSA exports to the U.S., South Africa's exports are the most diversified and rank third after those of Nigeria and Angola. There is a consistently positive trade balance in favour of South Africa caused by large exports of minerals. In agriculture, the 2008 balance of trade was in favour of the U.S. South African exports under AGOA amounted to $2.4 billion in 2008, increasing from $1.1 billion in the previous year. Bilateral agricultural trade between the USA and South Africa has also increased since 2000 with a positive trade balance in favour of South Africa in most years. South African agricultural exports to the U.S. under AGOA increased from $21.5 million in 2001 to $138 million in 2008. The main South African agricultural exports under AGOA in 2008 were: oranges, mandarins, raisins, frozen orange juice, tobacco, essential oil of lemon, vegetable seeds, wine and other juices (DAFF, 2009).

The authorization of AGOA was due to expire on the 30th of September 2015, and the re-authorization involved a political process. South Africa's continued participation and the conditions under which this would happen there were some tough discussions and "negotiations". It was soon apparent that South Africa is viewed as a *sui generis* AGOA beneficiary. Some Congressmen considering it to be less "in need" compared to other African countries, and perhaps even less deserving of nonreciprocal trade preferences. Previous efforts to negotiate a bilateral trade agreement between the United States and the Southern African Customs Union (SACU) were unsuccessful; largely because of South Africa's unwillingness to negotiate a reciprocal trade agreement with the US. Technically such an agreement would have meant the opening up of SACU markets to US exports and the liberalization of substantially all trade between the parties. South African trade measures were viewed to be in contravention of AGOA's qualifying criteria. These include restrictions imposed on American chicken and pork imports, and proposed legislation that will restrict foreign ownership in the local private security industry sector. The latter is seen as an impediment to US foreign investment interests (Erasmus, 2015).

In March 2015 the US Senate voted to include South Africa in the re-authorized AGOA over the next 10 years under what was referred to as "strict terms". South African participation depended on the removal of, in particular, trade barriers to US chicken exports. This particular aspect, the removal of restrictions on specific American exports, became the focus of intense bilateral negotiations. These bilateral discussions were protracted, difficult, and missed certain deadlines. They also started to involve complicated trade and health issues. It was reported that the Obama administration was, at one point, actively considered the re-imposition of tariffs on a range of South African exports worth billions of R and; including cars, ferromanganese, citrus and wine, unless SA moves rapidly to open its market to US chicken, beef and pork. There was mounting frustration in the US Congress and the administration over what was seen as SA's unjustified and discriminatory use of food safety and animal health regulations (known as sanitary and phytosanitary measures) to keep American farm products out of its market A special arrangement for South Africa became the objective; to ensure that South Africa's continued participation under AGOA would comply with US demands regarding market access conditions for American products (Erasmus, 2015).

This study uses a worst case scenario, the removal of AGOA treatment on South Africa's agricultural products. A closer look is given to the most traded products which include vegetables, fruits and nuts (citrus, macadamia nuts); sugar and beverages and tobacco (mostly wine). This involves quantifying the effects on introduction of the applied tariffs on these products to the overall economy (EV, output, factors and trade).

3. Method used to quantify the effects

3.1 The Model - Standard GTAP model summarised

The standard GTAP model is part of the family of computable general equilibrium (CGE) models. Nyhodo (2009) describe the CGE model as a numerical model based on general equilibrium theory. In that CGE models are capable of illustrating a complete view of an economy (single country or multicounty) as the interconnected activities of economic agents (commodities, activities, endowments, households, government investments/savings, enterprises and the rest of the world). There two broad categories of CGE models: the single country models and the multicountry models, with the GTAP classified under multicountry models. As good as the CGE models are they suffer from a number of weaknesses such as the argument of economies alwaysin equilibrium (disregarding that at time economies are unstable), the argument of existence of markets (not incorporating the phenomena of no markets). Sandrey (2007) argues that the strengths of these CGE models in simulating the interactions of economic activities are undoubtedly the best. However, these models have their weaknesses such as dependency on closure rules (assumptions) and data used. After all model is an abstraction of reality not the actual reality. Hertel et al (2008) argues that the success of the global trade analysis rests on the central ingredient called the GTAP database.

3.2 Database

The database combines detailed bilateral trade, trade protection data together with transport information that is characteristic of economic linkages between regions or within a region/country. The regional economic activity is presented through input-output tables. This study uses GTAP database version 7 (with 2004 [6]as the base year). In the database there are 113 regions and 57 commodities that are aggregated into 11 commodities and 8 regions. It is important to note that detailed description of GTAP database version 7 is found in Bardi et al (2008). In the same light a detailed description of the history (evolution) and mechanics of the GTAP model is presented in Hertel et al (1997). Commodities: Vegetables, fruits and nuts; Grains and crops; Livestock and meat products; Sugar; Beverages and tobacco; Processed food; Mining and extraction; Text and clothing; Manufacturing; Utilities, transport and construction; and Other services. Regions: South Africa; United States of America; Africa; European Union; BRIC; Asia; Americas; and Rest of the world.

3.3 Policy shock or simulation:

The policy shock in this study involves the complete erosion of the AGOA preferential access granted by USA on South Africa's most traded agricultural products. The identified products that are prominent in the bilateral trade between South Africa and USA are fruits (vegetables, fruits and nuts – GTAP concordance), sugar and wines (part of beverages and tobacco GTAP concordance). To practicalise the policy shock within the GTAP framework the broader GTAP concordance for vegetables, fruits and nuts, beverages and tobacco were shocked. A bigger proportions of those products are accounted for

[6] By our own admission this base year is old, with some changes since 2004 (meaning the results are reflective of the policy effect not the actual changes).

by the most bilaterally traded products (as identified). The use of the aggregate applied rate USA levies on importation of these products outside the AGOA framework was made (see the summary below).

Summary of the policy shock (applied tariffs by USA on imports from South Africa):

- Vegetable, nuts and fruits: 3.4%
- Sugar: 6.2%
- Beverages and tobacco: 1.8%

4. Analysis of the results –GTAP model output

4.1 Equivalence variation

In the GTAP model the measure of overall economy welfare effects of a policy is known as the equivalent variation (EV). As a measure of the welfare effects (EV) is composed of a number of effects such as allocative efficiencies, technical efficiency, terms of trade, endowment effects and other effects. In this regard Table x presents the EV with its individual components (to be interpreted as the drivers of the overall change in the EV). The removal of the AGOA preference (or introduction of the applied rates) on South Africa's agricultural most traded products with the USA will result in South Africa's welfare declining by $3.11 million. The biggest contributor to the decline would be the decline in terms of trade as well as allocative efficiency with the effect of other effects being positive. The only regional accounts that stand to benefit are USA ($2.15 million) and Africa (0.33 million or $330 000) while all other regional accounts are expected to lose. The policy shock (introduction for the applied tariffs) would lead to loses of competitiveness as a result of the treatments to be lost leading to loses in terms of trade as a result of reduced exports.

Table 1: Welfare effects (decomposed) of the policy change (in $)

	Allocative efficiency effects	Terms of trade	Other effects	Totals
South Africa	-0.22	-3.1	0.21	-3.11
United States of America	0.33	1.3	0.52	2.15
Africa	-0.14	0.46	0.00	0.33
European Union	-0.38	0.2	-0.19	-0.36
BRIC	-0.1	0.12	-0.19	-0.16
Asia	-0.15	-0.1	-0.17	-0.41
Americas	-0.55	1.05	-0.12	0.38
Rest of the world	-0.03	0.06	-0.07	-0.04
Total	-1.23	0.01	0.00	-1.23

Source: GTAP Output

4.2 Quantity of output

South Africa's industry output stands to be affected by the removal of the AGOA treatment by America. All other industry outputs are expected to increase by a mere 0.01% as a result of the erosion of the AGOA preferential access. The changes in output (qo) will be driven by the rates of returns to the factors of production with sectors whose returns are low compared to other expected to lose out.The three sectors that are directly affected stand to see visible output decreases: Vegetables, fruits and nuts are expected to lose 0.16% of its output, Sugar is expected to experience a 0.24 decline in output, and Beverages and tobacco are expected to experience a 0.04% decline in its output.

Table 2: Effects of the policy change on industry output (in % change)

qo[*SA]	Policy effect (%)
Vegetables, fruits and nuts	-0.16
Grains and crops	0.01
Livestock and meat products	0.01
Sugar	-0.24
Beverages and tobacco	-0.04
Processed food	0.01
Mining and extraction	0.00
Text and clothing	0.01
Manufacturing	0.01
Utilities, transport and construction	0.00
Other services	0.00

Source: GTAP Output

4.3 Effects on factors of production (demand for factor endowments) - % change

South Africa's demand for factor endowments (factors of production) will experience mixed reactions. In terms of land, the policy effect will only have 0.09% decline in land demand for vegetables, fruits and nuts production. In this regard the closure rule on land is that the size (total supply) is fixed and any changes in land use/demand by a commodity would be driven by shift from other commodities (driven by rate of return to land use). It is important to note that only agriculture and forestry activities use land extensively (meaning, the percentage changes in land demand by other sectors that may seem to be high representing a small proportion).

The demand for both skilled and unskilled labour (who are both assumed in the mobile[7] in the model) will decline for all the products that are expected to lose out on AGOA while other are expected to see small positive labour demands: Vegetables, fruits and nuts stand to experience 0.17 % decline for both skilled and unskilled labour, Sugar stands to experience 0.25% decline for both skilled and unskilled labour, Beverages and tobacco are expected to see 0.04 % decline in labour demand. The demand for capital (that is also assumed to be mobile) is expected to decline for vegetables, fruits and nuts (by 0.17), sugar (by 0.24%) and beverages and tobacco (0.04%) while increase for others. It is evident that the policy change will only have recognisable changes (factor demand changes) on the affected commodity while minimally affecting other (in a positive way). A decline in skilled and unskilled labour against a background on high unemployment rate is not desirable. The same can be argued regarding reduction in capital demand while the effects on the demand for land are very minimal (with the land that will be lost on vegetables, fruits and nuts appearing to be relocating to the grain and crops).

Table 3: Effects of the policy change on the demand (quantity) for factor endowment (in%)

qfe[**SA]	Land	UnSkLab	SkLab	Capital
Vegetables, fruits and nuts	-0.09	-0.17	-0.17	-0.17
Grains and crops	0.06	0.01	0.01	0.01
Livestock and meat products	0.08	0.00	0.00	0.00
Sugar	0.02	-0.25	-0.25	-0.24
Beverages and tobacco	0.11	-0.04	-0.04	-0.04
Processed Food	0.14	0.01	0.00	0.01
Mining and extraction	0.05	0.01	0.01	0.01
Textile and clothing	0.14	0.01	0.01	0.01
Manufacturing	0.15	0.01	0.01	0.01
Utilities, transport and construction	0.15	0.00	0.00	0.00
Other services	0.14	0.00	0.00	0.00

Source: GTAP Output

4.4 Trade balance

South Africa's trade balance is expected to be affected differently: Vegetables, fruits and nuts trade balance is expected to decline (reduction of the positive and worsening of the negative) by $7.9 million.

[7] This implies that unskilled and skilled labours can seek employment in all sectors (or shift employment between sectors). This may not hold true for South Africa unskilled labour and with the level of sophistication even skilled labour mobility is not that easy.

Sugar trade balance expected to decline by $3.5 million, Beverages and tobacco trade balance expected to decline by $2.9 million, and trade balances for other products are expected to increase (minimally). The changes in trade balance can be argued along the lines on reduction in exports as presented in Table 43. The value of imported products are expected to declines with only sugar expected to see a 0.01% increase in imports.

Table 4: Effects of the policy change on trade balance (expressed in $)

DTBALi[*SA]	Trade balance - dtbali($ millions)	Changes in values of exports, vxwfob – FOB (%)	Changes in values of imports, viwcif – CIF (%)
Vegetables, fruits and nuts	-7.89	-0.40	-0.04
Grains and crops	0.8	0.07	-0.04
Livestock and meat products	0.43	0.06	-0.03
Sugar	-3.48	0.00	0.01
Beverages and tobacco	-2.88	-1.45	-0.03
Processed food	0.61	-0.26	-0.01
Mining and extraction	-0.51	0.02	-0.01
Text and clothing	0.64	0.03	-0.01
Manufacturing	12.76	0.02	-0.01
Utilities, transport and construction	1.17	0.01	-0.01
Other services	0.81	0.02	-0.01

Source: GTAP Output

5. Conclusion

This study quantifies the effect of erosion of AGOA preferential access for a number of selected products. It has come out clearly that such a change will results to South Africa's welfare declining (by $3.11 million) while that of USA stand to incline (by $2.15 million). The overall welfare effects on other regions will be minimal. This decline will possibly be driven by decreases in industry outputs of the selected products than cannot be countered by the positive (or increased) output of other products. The decrease in industry output will inevitably be transferred to the demand for factor endowment that is also anticipated to decline (an undesirable situation). The trade balance (of absorption of foreign earnings) will be also be affected. Overall the possibility of the removal of the AGOA treatment will be bad for the South African economy.

6. References

Bardi, N. & Walmsley, TL. 2008. Global Trade, Assistance, and Production: The GTAP 7 database, Center fo GTAP, Department of Agricultural Economics, Purdue University.

Condon, N. & Stern, M., 2010. *The effectiveness of African Growth and Opportunity Act (AGOA) in increasing trade from Least Developed Countries: a systematic review*. London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Department of Agriculture Forestry and Fisheries (DAFF), 2009, DAFF [home page]. Available from http://www.daff.gov.za

Erasmus, G., 2016. *The AGOA Saga in a Trade Governance Context*. tralac Working Paper No. US16WP01/2016. Stellenbosch: tralac.

Hertel, T. & Tsigas, ME. 1997. Structure of GTAP, in Hertel ed Global Trade Analysis: Mideling and Applications, Cambridge University Press, Melbourne, Australia

Naumann, E. 2015. An overview of AGOA's performance, beneficiaries, renewal provisions and the status of South Africa. Tralac Working Paper No. US2015WP05, September 2015.

Nyhodo, B. 2009. The impact of the Doha Round of WTO agricultural negotiations on the South African economy. Unpublished MSc thesis, University of Stellenbosch. Online]. Available https://scholar.sun.ac.za/bitstream/handle/.../**nyhodo**_impact%20_2009.pdf*?...*

Schneidman, W. & Lewis, Z. A., 2012. *The African Growth and Opportunity Act: Looking Back, Looking Forward*, Africa Growth Initiative: Brookings Institution.

Sandrey, R. 2007. *The use and limitations of computer models in assessing trade policy.* tralac Trade Brief No 3. [Online]. Available: www.tralac.co.za.

Williams, B. R., 2015. *African Growth and Opportunity Act (AGOA): Background and Reauthorization*. Congressional Research Service, available from http://www.crs.gov

The NAMC Working Paper series is designed to promote discussions on topical issues. Revised versions of working papers may eventually be published in peer- reviewed publications. Comments may be addressed to info@namc.co.za

Contact Us
Tel: +27 (12) 341 1115 | **Fax:** +27 (12) 341 1811
Block A | 4th Meintjiesplein Building | 536 Francis Baard Street
Arcadia | Pretoria | 0002
Email: info@namc.co.za
Web: www.namc.co.za