Are Economic Agreements (EAs) relevant to Zambia's trade? The case of the Southern African Development Community (SADC)

Chonzi Mulenga

cmulenga@mu.ac.zm
Mulungushi University, Zambia
P.O. Box 80415, Kabwe

Abstract

Economic Agreements (EAs) present various opportunities to developing countries like Zambia in the form of enhanced market access, access to lower cost imports, enhanced inflows of foreign direct investment and access to improved technologies among others. Due to these opportunities, many countries have taken keen interest in them. The study aimed at assessing the extent of Zambia's participation in EAs, particularly the Southern African Development Community – Free Trade Area (SADC-FTA) and establishing its impact on the country's trade.

The study employed descriptive and correlational designs. The descriptive design(trend and tariff schedule analysis) were used to assess the extent of Zambia's participation in the EAs with a view of establishing the country's uptake of the preferences offered in different EAs. The correlation design used the Poisson Pseudo-Maximum Likelihood (PPML) estimator in a panel data fixed effects framework to evaluate the impact of the SADC-FTA on Zambia's trade using disaggregated Harmonized System (HS) 6-digit trade data for the period 1997–17 for Zambia and two of its major trade partners in the SADC-FTA (South Africa and Zimbabwe).

The study establishes that a large proportion of the country's trade increasingly takes place in preferential markets and is dominated by regional trade. The Southern African Development Community (SADC) is the country's main import source while the European Union stands as its major export destination. The study also establishes that the SADC-FTA has had a positive impact on Zambia's trade. Results indicate that tariff reductions following the SADC trade protocol have been quite effective on the growth of Zambia's exports. However, despite the increase in trade, the trade shares have not increased correspondingly and this could be attributed tofailure by the member states to completely eliminate tariffs due to fear of losing tariff revenue and protecting existing domestic industries among other trade bottlenecks. The country therefore needs to address these bottlenecks by pushing for the complete liberalization of trade through theremoval of all pending tariff and non-tariff barriers if it has to benefit more from the EAs.

Keywords

Economic Agreements, Trade, Southern African Development Community (SADC), Free Trade Agreement (FTA), Zambia.

INTRODUCTION

Over the past three decades, the global economy has been witnessing an unprecedented phase of economic integration. This process was triggered by the adoption of open-door policies by almost every major economy in the world. Several countries sought ways of forging close relations with their immediate neighbors, while some, particularly developed countries sought ways to offer special treatment to developing countries. This paved the way for the formalization of agreements aimed at increasing regional and bilateral trade and investment, formally called economic agreements (EAs). Advocates for economic integration contend that, EAs present various opportunities to developing countries like Zambia in the form of enhanced market access for the country's products, access to lower cost imports of consumer, intermediate and capital goods, productivity improvements arising from increased competition, enhanced inflows of foreign direct investment (FDI),access to improved technologies, and they enable participation in global/regional value chains (OECD, 2001; OECD, 2015; Goldberg and Pavcnik, 2016; IMF et al. 2017; UNCTAD, 2018). These opportunities foster higher economic growth, increased long-run employment growth, and ultimately lead to substantial reduction in poverty (World Bank, 1989; Rodriguez and Rodrik, 1999; Jin, 2000; Yasmin *et al*, 2006 and Khan and Qayyum, 2006).

Zambia is faced with many development challenges, among them, deep-rooted levels of poverty, low economic growth rates, high unemployment rates, low global share of trade and investment, among others. As a way of overcoming some of these challenges, the country has since the 2000's signed various EAs at the regional and global level to liberalize trade (OECD, 2001). Within the regional initiatives, Zambia is a member of the Southern African Development Community – Free Trade Area (SADC-FTA) and the Common Market for Eastern and Southern Africa (COMESA) Customs Union. The country has also signed the recently launched but yet to be ratified Tripartite Free Trade Area (TFTA) between COMESA, the East African Community (EAC) and SADC andthe African Continental Free Trade Area (AfCFTA). At the global level, as a Least Developed Country (LDC), Zambia enjoys non-reciprocalpreferential access to Developed country markets under Part 4 of the General Agreement on Tariffs and Trade (GATT) (www.wto.org). The country also enjoys non-reciprocal duty-free access for its exports tothe European Union (EU) market under the Cotonou Agreement, which allows African Caribbean Pacific (ACP) countries (excluding South Africa) duty-free access for their mineral and agriculture exports (Turkson, 2012). In addition, Zambia also has non-reciprocal duty-freeaccess to the EU market under theEverything But Arms (EBA) agreement, the United States (US) under the African Growth and Opportunity Act (AGOA) and enjoys preferentialtariffs under the Generalized System of Preferences (GSP) granted by the EU, the US, Japan and Canada, among others (UNCTAD, 2016).

PROBLEM STATEMENT

Due to the opportunities that economic agreements (EAs) present, global trade and incomes have in the last three decades, expanded at unprecedented rates (World Bank, 2020). It therefore comes as no surprise why developing countries like Zambia have taken keen interest in them.However, while thesepreferential schemes are intended to bolster economic growth, propel employment andultimately reduce poverty (Higgins and Prowse, 2010), they seem to have done very little to achieve their intended objectives inZambia. This is evidenced from the weak performance of the major macroeconomic variables since the signing of the various agreements in the 2000s. For instance, in terms of economic growth, the country's annual average economic growthrate has been low, averaging 3.7 percent from 2000 to 2017, the unemployment rate has remained high, averaging 7.78 percent annually in the same period. Furthermore, thecountry's poverty levels also remain high, with 54.5 percent of the people in Zambia beingpoor as of 2015(CSO, 2016; www.zamstats.gov.zm).

It is therefore of interest to the researcher to analyze the extent of Zambia's participation in the existing EAs with a view of establishing the country's uptake of the preferences offered in different EAs and evaluating their impacts on Zambia's trade. The objectives of this study aretwofold: (i) to assess the extent of Zambia's participation in the existing EAs, and (ii) to evaluate the impact of EAs on Zambia's trade, making particular reference to the SADC-FTA.

SIGNIFICANCE OF THE STUDY

This study is significant in the following aspects. Firstly, the study will be able to provide policy makers with empirical evidence on Zambia's uptake of the economic agreement (EAs)therefore provide insights on which of these agreements are beneficial to the country and worth pursuing further. Secondly,methodologically, there are serious gaps in the area of finding the impact of EAs on trade using disaggregated data in Africa, let alone in Zambia. Many studies undertaken previously have used aggregated data to examine the impact of these agreements on trade, however, the use of aggregated data may give misleading results considering that most of these preferential agreements have certain products which are not given preferential treatment. Therefore, this study's use of product disaggregated data gives a much more realistic picture of the impact of the agreements on trade in Zambia.

The rest of the paper is organised as follows: the next section outlines the relevant literature reviewed, thereafter the paper gives an overview of Zambia's trade in the Southern African Development Community (SADC) in terms of the SADC treaty, its implementation and its performance. The study then presents the methodology and the results and discussion of the study beforefinally giving the conclusions and policy recommendations.

LITERATURE REVIEW

Many studies undertaken in Africa have revealed a fairly mixed picture on the impact of economic agreement (EAs) on trade. While some studies have found these preferential agreements to have a positive impact on trade, others have not. Moreover other studies have been inconclusive. Alemayehu and Haile (2002) for the Common Market for Eastern and Southern Africa (COMESA), found that the regional grouping had had an insignificant effect on the flow of bilateral trade. Gunning (2001) in assessing the relevance of trade blocks for Africa found that African economies were so small for any meaningful gains from regional blocks to be attained.Peridy (2005) contended that the Agadir agreement betweenJordan, Egypt, Morocco and Tunisia had limited trade effects. Furthermore, Hartzenberg (2011) argued that regional integration agreements had done very little to promote

intra-regional trade, or indeed to enhance the global trade performance of African countries. The author also found that the agreements had dismally poor implementation record. He attributed their failure to their inherent focus on border measures such as import tariffs while totally ignoring behind the border measures such as services, investment, competition policy which arguably could address the national-level supply-side constraints far more effectively.

In contrast, the following studies found EAs to have had a positive effect on trade. For instance, Turkson (2012) found that the European Union – African Caribbean Pacific (EU-ACP) agreement and EAs such asthe Economic Community of West African States (ECOWAS) and the Southern African Development Community (SADC) had a positive and significant impact on bilateral trade involving sub-Saharan Africa (SSA) countries. He therefore concluded that there was need for developing countries especially SSA to focus on expanding and integrating regional markets in order to significantly improve trade performance. Afesorgbor and Bergeijk (2011) also found similar results, however, their study further found that ECOWAS and SADC increased bilateral trade flows more than the EU-ACP agreement and SADC membership had a stronger impact compared to ECOWAS. Carrere (2004) found that during their implementation, African regional trade agreements (particularly ECOWAS and SADC) had generated a significant increase in trade between members, although initially often through trade diversion.

Yet further, other studies have found inconclusive results for instance a study by Ghosh and Yamarik (2004) found no evidence of trade creation or trade diversion for any Free Trade Area (FTA). In the same way, Di Mauro (2000) was unable to conclusively determine the impact of the agreements as the results varied for the three expected impacts of economic integration used (i.e. commercial changes; monetary integration; and market integration). The studyrevealed that commercial changes e.g. non-tariff barriers (NTBs) had a negative impact on exports while the impact of monetary integratione.g. exchange rate volatility was positive.

Zambia's Trade in the Southern African Development Community(SADC)

SADC has stood out to be the most important and beneficial agreement to the country as demonstrated by the huge trade flows taking place. For this reason, this study focusses on this agreement. The declaration and treaty officially creating SADC was signed in 1992 under Article 2 of the SADC Treaty to spearhead economic integration of Southern Africa.However, it was only in 2001 when the treaty was amended with the adoption of two important trade and regional development-related instruments: the SADC Protocol on Trade (signed in 1996 and effective since 2000) and the Regional Indicative Strategic Development Plan (RISDP) (approved by SADC Summit in 2003) (Cheelo et al., 2012) that the economic integration agenda gained impetus.The trade protocol which subsequently led to the launch of the SADC-FTA in the year 2000, advocated liberalization of intra-SADC trade through the phased elimination of tariffs and non-tariff barriers (NTBs). These provisions were contained in various articles of the trade protocol, particularly Article 4, which provides for the phased reduction and eventual elimination of import duties, and Article 6, which provides for the adoption of policies and implementation of measures that seek to eliminate all existing forms of NTBs, and also to avoid imposing any new barriers. The RISDP on the other hand provided clear time-bound targets for a trade-driven regional integration approach of SADC(Peters, 2011).

SADC has since 2008 been a Free Trade Area (FTA) following a period of phased reduction and eventual elimination of import tariffs on goods originating in member states. The transition to an FTA began with countries in the bloc agreeingto categorize goods into four categories: A, B, C and E. Countries were then given different timelines to implement tariff reductions based on the categorization of the goods. Category A involved goods whose liberalization was immediately after the trade protocol came into force while Category B involved goods that were subject to gradual liberalization. For Category C, product liberalization was not to take place earlier than eight years after the protocol coming into force (Muntschick, 2017). Category E comprised of goods that were exempted from any form of tariff liberalization, and included products such as arms and ammunitions. Anasymmetric strategy of phasing down tariffs for goods between countries was adopted by classifying countries into three categories based on their economic strengths and levels of socio-economic development (Muntschick, 2017). The front-loaders included countries with comparably strong economies, particularly those that were in the Southern African Customs Union (SACU)[1], who were required to start reducing tariffs from the first year onwards and complete the process within eight years after the protocol came into force (Munstchick, 2017). The mid-loaders consisted of countries like Mauritius and Zimbabwe that could initiate their liberalization process gradually i.e. within four to eight years. The back-loaders included countries like Malawi, Mozambique, Tanzania

---

[1] Comprises Botswana, Lesotho, Namibia, South Africa, and Swaziland.

and Zambiawhich were given six to eight years to initiate trade liberalization(Muntschick, 2017).

A number of successes were reported following the tariff phase-downs. The most notable success being the attainment of the SADC-FTA in August, 2008 after 12^2 of the 15 SADC members reached the minimum 85 percent zero duty threshold. Another achievement was the attainment of the maximum tariff liberalization in January 2012, when the tariff phase down process for sensitive products was completed. There were a few exceptions however, notably countries that requested for derogations[3] and those that hadmaintained relatively high tariffs on 'sensitive' products (tariff peaks) (Hartzenberg and Kalenga, 2015). Another success has been the significant increase in intra-SADC trade, having grown from $13.2 billion in 2000 to $34 billion in 2009, representing an increase of about 155 percent (www.sadc.int). However, after the establishment of the SADC-FTA in 2008, growth in intra-SADC trade has been very modest. The relatively weak performance of SADC intra-trade after the formation of the FTA is, in part, explained by the similar economic structures of its members (Fall and Gasealahwe, 2017) and also by the infant industry argument.

Coming to Zambia, a large proportion of the country's trade increasingly takes place in preferential markets and is dominated by regional trade – a trend that has continued even after the establishment of the SADC-FTA in 2008. Figure 1.1 shows Zambia's trade with select regional and preferential trade partners, in the period prior to the establishment of the FTA and in the period past the FTA.The figure shows that prior to the FTA, Zambia traded more within SADC and with the EU, with SADC as the dominant import source and the EU as its major export destination. After the establishment of the SADC-FTA, the country has continued to trade with SADC and the volumes have increased considerably. Interestingly, COMESA and China have also emerged among Zambia's leading trade partners, with the trade volumes increasing considerably between the 2015-17 period. During this period, Zambia's trade balance with China has been in surplus. This could be attributed to the unilateral trade preference that China has extended to developing countries since 2010.

Figure 1.1: Zambia Merchandise Trade within selected preferential Markets

---
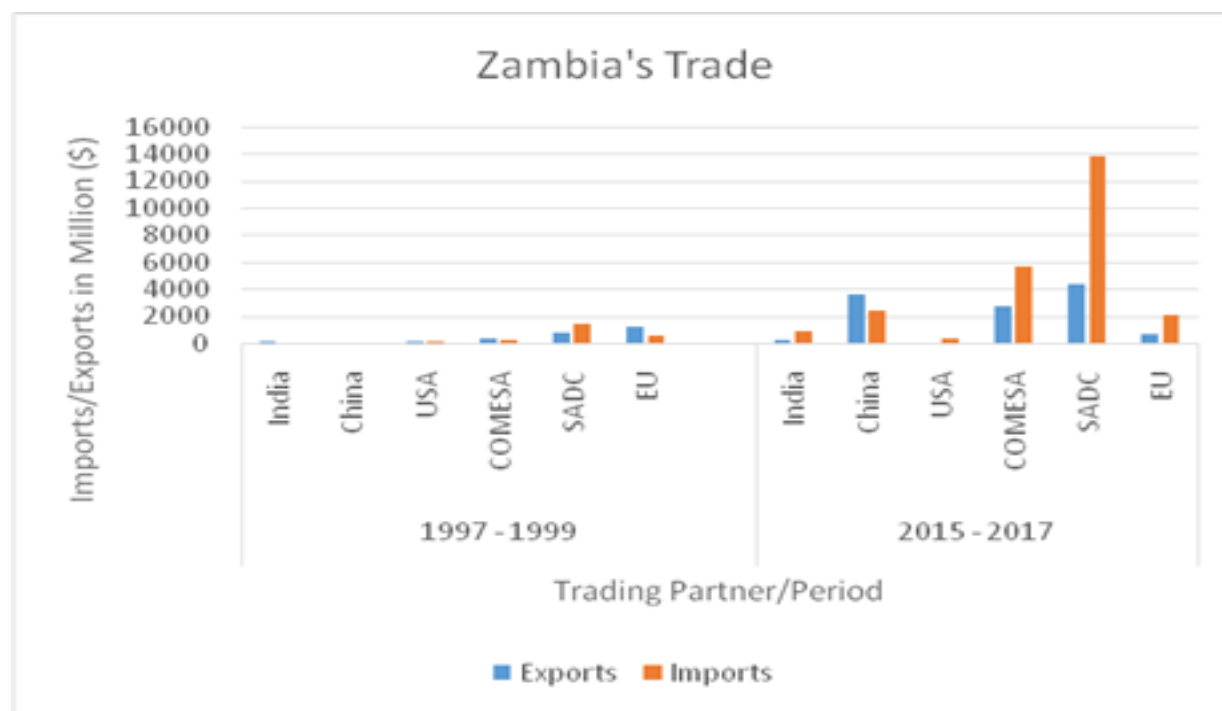
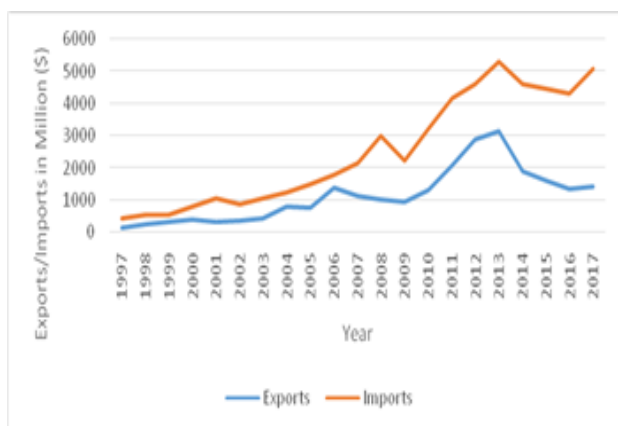[2] There are currently 13 members of the SADC FTA after the accession of Seychelles in May 2015.
[3] Article 3.1(c) of the SADC trade protocol provides for member states which consider they may be or have been adversely affected by removal of tariffs and non-tariff barriers to – upon application to the Committee of Ministers responsible for Trade (CMT) – be granted a grace period to afford them additional time for the elimination of tariffs and non-tariff barriers.

Source: Authors computation from UN COMTRADE database

As already alluded, SADC has been Zambia's key trading partner over the years. The regional bloc has been the country's major source of its imports and destination of its exports since the 1990s. In 2017, SADC accounted for 17.2 percent of Zambia's exports and was source to 65.1 percent of its imports (SADC, 2017). This trade pattern can mainly be attributed to two factors: (i) the low cost of transportation due to the geographical proximity of the country to SADC member states, and (ii) the trade liberalization process following the adoption of the SADC treaty. Generally, the country has experienced a growth trajectory in its trade over the years particularly after the SADC-FTA was launched in 2000 with the country's imports seemingly responding more than the exports to the preferences. The country experienced a slight decline in its imports in 2008–09 largely as a result of the global economic meltdown and another in 2013–14 as a result of a drop in global commodity prices[4]. Exports have also been rising over the years although their growth has been lower than that of imports. The country's exports also experienced a massive drop in the 2012–14 period also due to the fall in global commodity prices. Figure 1.2 shows the trends in Zambia's exports and imports prior and after the launch of FTA.
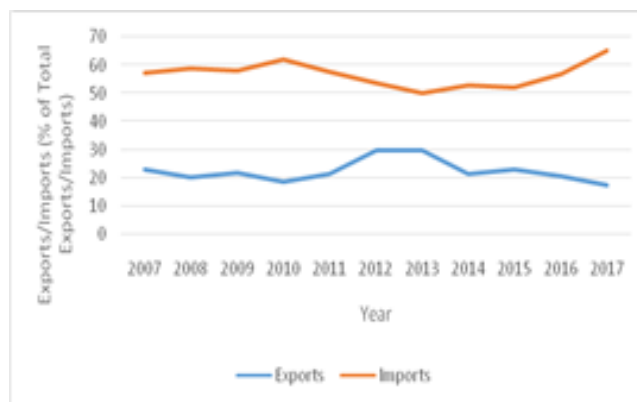
Figure: 1.2: Zambia's Trade with SADC

Source: Authors computation from UN COMTRADE database

As a share of total trade, however, the country's trade within SADC has remained relatively unchanged between the periods 2007-17. Figure 1.3shows that Zambia's intra-SADC import share has been high, and had maintained the same level over the period 2007 to 2017 while the country's intra-SADC export sharehas been low over the same period and even shown some slight decline. Figure 1.3 further reveals that the country has been a net importer of goods in its trade within SADC since the establishment of the FTA. This could be attributed to the fact that since 2012, Zambia has been applying a tariff rate of zero on goods imported from the other SADC members, including South Africa, if the goods carry the relevant certificate of origin (WTO, 2016) hence making the country an attractive export destination for the partner countries. However, on the export side, the country may have been exporting less because many commodities that are of export interest to the country have been put on their partner countries' exclusion lists (for example, prepared food stuff, animals and animal products, textile and clothing, some mineral products, and also sugar (Sandrey, 2013).

Figure 1.3: Zambia's MerchandiseImports and Exports from SADC as a Percentage of Total Imports and Exports, 2007-2017


Source: SADC Selected Economic and Social Indicators, 2016 and 2017

As already alluded to earlier, SADC remains Zambia major trading partner and is an important market for both the country's imports and exporters. Zambia's trade with SADC countries

---

[4] The non-oil nominal commodity price index decreased significantly between 2011 and 2014 UNGC (2015).

is substantial and has been increasing over the years. Figure 1.4 shows Zambia's imports and exports with individual countries in SADC.

Figure 1.4: Zambia's Trade with Individual SADC Countries, 1997 – 2017
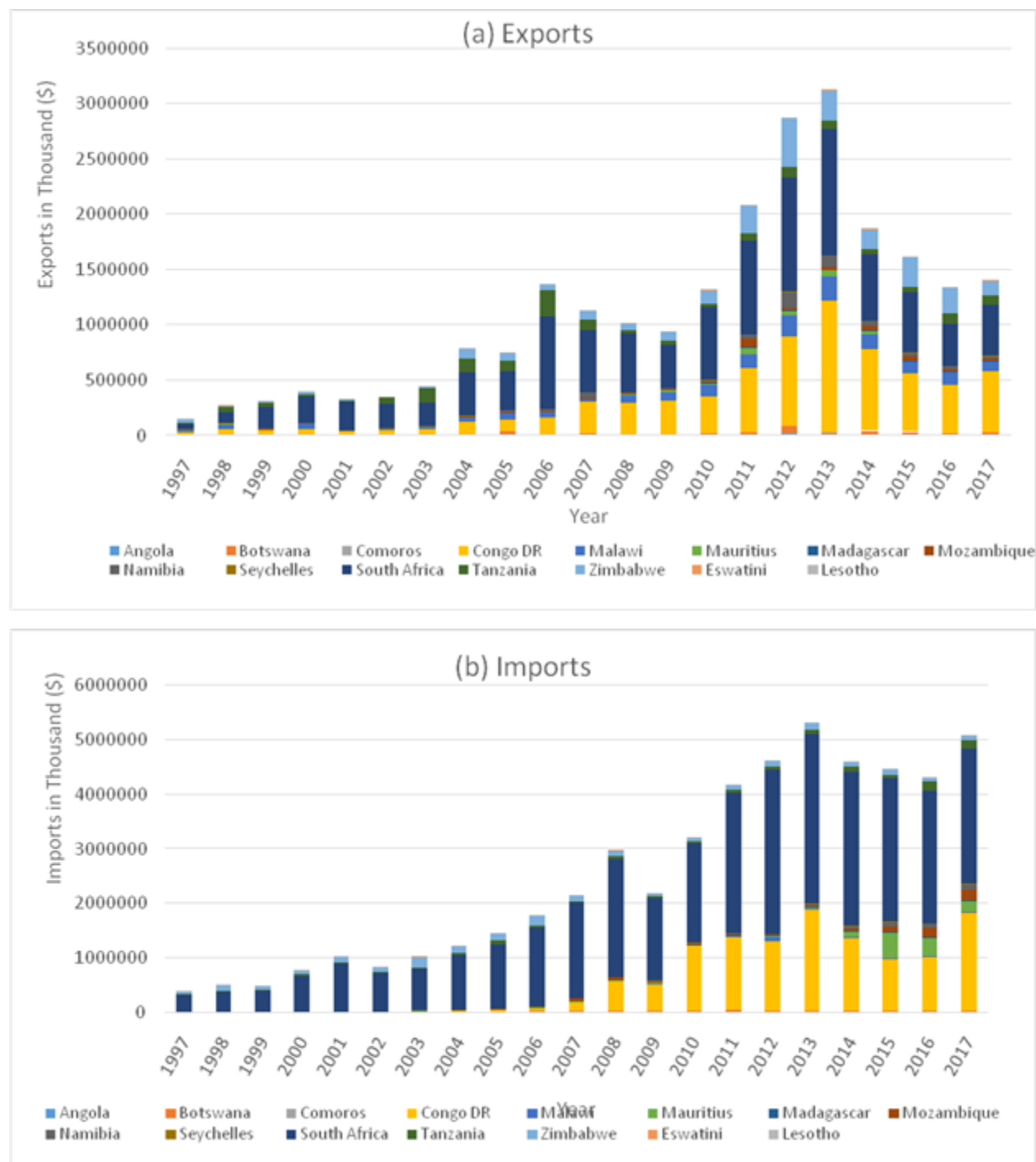
Source: COMSTAT database

What is evident from Figure 1.4 is that South Africa, Zimbabwe and the Democratic Republic of Congo (DRC)clearly stand out as Zambia's major trade partners in both imports and exports. In terms of trade shares, the DRC has been the major export destination for Zambian products. It contributed to 34.3 percent of Zambia's total SADC exports in the period 2015-17. Other major destinations are South Africa, Zimbabwe, Malawi and Tanzania. On the import side, South Africa is the country's major import source accounting for more than half of the country's imports from SADC during the 2015-17 period. It was followed by DRC, Mauritius, Mozambique and Tanzania for the same period. South Africa and DRC the top two import partners accounted for over 80 percent of the country's imports from SADC. This goes to show how important these two markets are to the country.Surprisingly, while DRC stands out as one of Zambia's leading trade partners in both the country's imports and exports, it remains outside the SADC-FTA and the two countries do not have any standing bilateral agreement on trade though attempts were made in 2015.

METHODOLOGY

Descriptiveand correlational designs were used in this study. The descriptive design particularly trend and tariff schedule analysis were used to assess the extent of Zambia's participation in the EAs. The correlation design on the other hand was used to evaluate the impact of EAs particularly the impact of the SADC-FTA on Zambia's trade. The data used in this study was secondary data. The study used annual product disaggregated data for the bilateral trade between Zambia and two of its major trade partners in the SADC-FTA (South Africa (SA) and Zimbabwe) as opposed to the entire bloc. This is because items enjoying preferential tariffs under a regional Free Trade Area (FTA)are different for each member[5], thus making it impossible to estimate the preference margins for the FTA. SA is selected because of its importance as Zambia's trade partnerand also because of its overwhelming presence within the regional bloc while the selectionof Zimbabwe is based on its importance as Zambia's trade partner over the years.

As official trade statistics do not give data on the amount of trade conducted through preferential routesthere was needto first identify the preferential items (Category E) for

the three countries and delete them from their bilateral trade lists. We then compared the trends of Zambia's trade in these preferential items against its total bilateral trade with the two countries. A similar pattern would be an indication that the change in trade was as a result of the preferences that the countries offered to each other.

We estimated two regression models, one for Zambia's exports to South Africa and the other for Zambia's exports to Zimbabwe. We used product specificdisaggregated data at the harmonized system (HS) 6-digit level for Zambia's top 20 exports whose Most Favoured Nation (MFN) value was greater than zero (to avoid methodological and computational complications) to these countries over a period of 18 years (2000-17). Since trade data has a tendency to fluctuate especially at high levels of product aggregation (HS 6-digit), the top 20 products were calculated by averaging their export values, over the 18 years for which the SADC-FTA has been in force. The study used panel data and employed a panel fixed effects model.Panel data was used because it gives more informative data, more variability, less collinearity among the variables, more degrees of freedom and more efficiency(Baltagi, 2001). Moreover, the study's use of panel datafixed effectsprovides ways of dealing with heterogeneity and adjusts for endogeneity of the trade policy variable (Baier and Bergstrand, 2005). Due to the relatively long panel, the study tested for stationarity and serial correlation.

As opposed to using a gravity model to evaluate the impact of the SADC-FTA on Zambia's trade, a Poisson Pseudo-Maximum Likelihood (PPML) estimatorwas used. The PPML estimator has been used in studies by Santos Silva and Tenreyro (2006) and Westerlund and Wilhelmsson (2011). The choice to use this estimator was based on the following: (i) it permits one to get rid of the problems of zero trade which is perculiar of our dataset given the level of disaggregation; (ii) it gets rid of the problem of heteroskedasticity while simultaneously taking care of the bias caused by product specific heterogeneity (Westerlund and Wilhelmsson, 2011). Hence, the PPML model produces unbiased and consistent estimates even in the presence of heteroskedasticity or zero trade flows.

The PPML model estimated is given in equation 1.1. The dependent variable is Zambia's trade which is proxied

---

[5] Each country within a regional FTA has separate negative lists and differing concessions on certain commodities they consider sensitive. The hypothesis is that there is no commonly agreed criterion and benchmarks within these EAs of how to define these sensitive products, and as such, countries have come up with long negative lists to ensure that their national interests are well catered for (Mundigwa, 2010:1)

bythe country's exports to the partner countries. The exports are measured in United States dollars (US$) while the independent variables are the tariff preference margins which are measured as the difference between the MFN tariff and the preferential tariff. The tariff preference margins are measured in percentages.We included current, first order and second order lags of the independent variable as extra regressors due to the possibility that the preferences extended to the country may have a lagged impact on the country's exports as established by a study by Baier & Bergstrand (2005). The choice of the number of lags was arbitrarily determined by the researcher though we could only include two lags as the addition of lags leads to loss of observations. This could greatly affect our results as we may fail to capture issues that may have a significant impact on our results. A product-specific fixed effects model was employed as the products sampled were not randomly selected over-all exports.

$$X_{it} = \beta_0 + \beta_1 \ln PM_{it} + \beta_2 \ln PM_{it-1} + \beta_3 \ln PM_{it-2} + \ln u_{it} \qquad (1.1)$$

Where X_{it} are the preferential exports of product i from Zambia to its partner (South Africa or Zimbabwe) at time t.The data on exports was obtained from PM_{it}, PM_{it-1} and PM_{it-2} are the tariff preference margins of product i in the time periods t, t-1 and t-2 respectively due to the FTA. u_{it} is the error term.

We expect that due to the preferences under the SADC-FTA, Zambia's exports to both countries will increase if the preferences are in fact effective i.e. we expect a positive relationship between the tariff preference margin and exports. The trade data was sourced from the COMESA statistical database COMSTAT and the World Trade Organisation (WTO) Tariff Online database while data on tariffs was obtained from the TRAINS and WTO Tariff Online database. The econometric model was estimated using STATA 13.

RESULTS AND DISCUSSION

Zambia's exports to both South Africa and Zimbabwe for the top 20 products (MFN > 0) accounted for $94 million on average annually representing 66 and 73 percent of the country's exports to the two country's respectively.In terms of tariff schedules, Zambia has zero-rated over 97 percent of the tariffs on its offers to both South Africa and to the rest of SADC. Only 3 percent of the lines to both SADC and the rest of SADC remain with taxes. These are the Category E items or negative list items and they include: clothing, footwear, fuels and minerals, and arms and ammunition from South Africa (Sandrey, 2013). From the rest of SADC, among the excluded products are: fuels and mineral, and arms and ammunition (Sandey, 2013). However, this to some extent shows failure of SADC to completely liberalize all intra-SADC trade.

The comparative trendanalysis of Zambia's bilateral trade in the preferential items against its total trade produces some very important and interesting results (see Figures 1.5 and 1.6). First is the fact thatgenerally therehas been an increase in trade since the SADC-FTA came into force in 2000. Second, it can also be observed that Zambia's preferential trade with both countries has increased, particularly more so for Zambia's trade with South Africa (both exports and Imports) and Zambia's imports from Zimbabwe.However, Zambia's preferential exports to Zimbabwe, particularly during the period 2004-05 fell despite the total exports increasing during this period. This could be explained by adjustments in Zimbabwe's trade profile due to the economic difficulties the country was experiencing at the time. Moreover, during this time Zimbabwe's concessionary offer to SADC was only on 37.4 percent of all tariff lines (Simwaka, 2011). Also important to note is that preferential items (both imports and exports) seem to have been the major drivers of Zambia's trade with its trading partners in SADC as both imports and exports seem to have been following a similar trend. These results show that the concessions exchanged between Zambia and its partners have been beneficial as the countries have been able to increase their trade.

Figure 1.5: Zambia's Trade with South Africa

Exports   **Imports**

Figure 1.6: Zambia's Trade with Zimbabwe

Exports   **Imports**
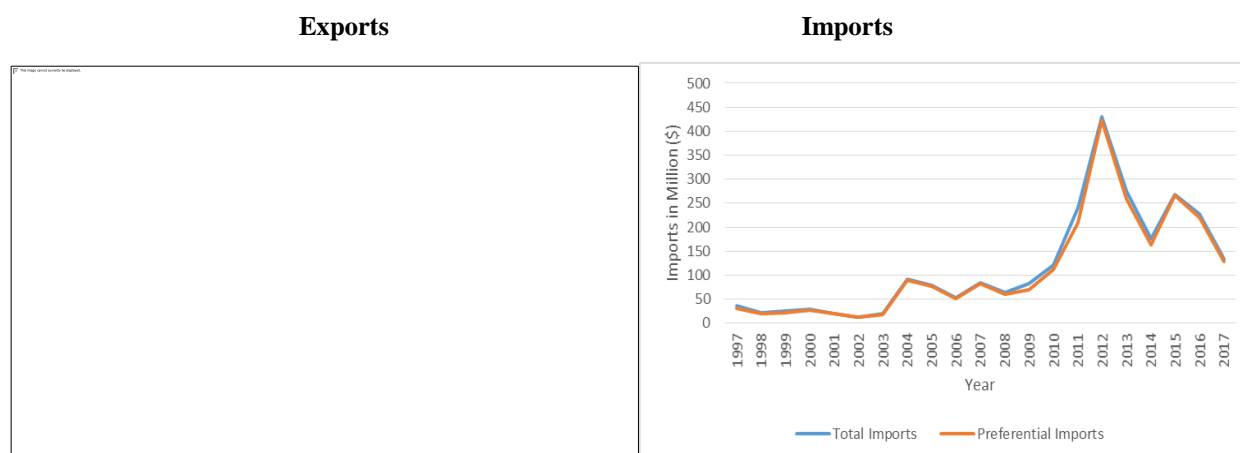
Source: Authors computation from COMSTAT database

With the analysis given above, we cannot definitively state that Zambia's increase in trade was as a result of the preferences given in the SADC-FTA. To do this, econometric analysis was used to evaluate the impact of preferences on exports, as the exports are of more interest to the country.From the two regression models estimatedresults showed that the series on Zambia's exports to South Africa and Zimbabwe were both stationary at level. For tariff preference margins (PM), the series were stationary for Zambia's trade with South Africa however, for Zambia's trade with Zimbabwe, the tariff preference margins (PM) were non-stationary at level but became stationary at first difference, hence integrated of order one I(1). Since the preference margins for Zambia's trade with Zimbabwe, were integrated of order one I(1), the study therefore conducted the Pedroni tests whose results showedthat our variables were cointegrated and therefore could be used for estimating the model. The results from the bias-corrected Born & Breitung (2016) Q(p)-test for serial correlation showedno presence of second order serial correlation for Zambia's trade with South Africa. However, for Zambia's trade with Zimbabwe, second order serial correlation was detected. This problem was contained by the use of robust standard errors.The panel Poisson Pseudo-Maximum Likelihood (PPML) results for Zambia's trade with South Africa and Zimbabwe are presented in Table 1.1 and Table 1.2.

Table 1.1: Zambia – South Africa PPML Estimation Results

Conditional fixed-effects Poisson regression Group Variable: Product				Number of Observations = 380 Number of Groups = 20 Observations per group: min. = 19 avg = 19.0 max = 19	
Log likelihood = -1.372e+09				Wald chi2(3) = 3.13e+07 Prob > chi2 = 0.0000	
EX	**Coefficient**	**Standard Error**	**z**	**P>z**	**[95% Conf. Interval]**
PM$_t$	.0213342	.0000458	466.26	0.000	.0212446 .0214239
PM$_{t-1}$	-.0546735	.0000393	-1390.64	0.000	-.0547506 -.0545965
PM$_{t-1}$	-.1322111	.0000265	-4986.11	0.000	-.132263 -.1321591

Table 1.2: Zambia – Zimbabwe PPML Estimation Results

Conditional fixed-effects Poisson regression Group Variable: Product				Number of Observations = 380 Number of Groups = 20 Observations per group: min. = 19 avg = 19.0 max = 19	
Log likelihood = -1.319e+09				Wald chi2(3) = 35.95 Prob > chi2 = 0.0000 (standard error adjusted for clustering on product)	
EX	**Coefficient**	**Robust Standard Error**	**z**	**P>z**	**[95% Conf. Interval]**
PM$_t$	-.0684486	.0278837	-2.45	0.014	-.1230996 -.0137977
PM$_{t-1}$	-.008262	.0072385	-1.14	0.254	-.0224492 .0059251
PM$_{t-1}$	-.0279899	.0214364	-1.31	0.192	-.0700044 .0140246

The study shows that preference margins have had a significant impact on Zambia's exports, however, instead of the effect being positive, they seem to actually depress the country's exports save for the current period preference margin for Zambia's trade with South Africa. The results from the PPML model for Zambia's trade with South Africa, show that overall preference margins had a significant impact on Zambia's exports to that country. They revealed that the current period preference margins in South Africa had a significant and positive impact on Zambia's exports, that is, on average Zambia's exports increased by 2.1 percent with a 1 percent increase in the current period preference margins in South Africa. This implies that when South Africa reduces tariffs on its imports, Zambian exportersrespond immediately to take advantage of the tariff reduction thereby exporting more of their products to South Africa.The increase in trade can be explained by the fact that the products being granted preferences are in actual fact the products of export interest to Zambia. Take for instance, Zambia's top commodity exports to South Africa include raw materials particularly cotton, copper and other copper products. These products have been granted duty free status into the South African economy hence Zambia has seized this opportunity and therefore expanded its exports to that country. However, for the first and second order lags for preference margins, despite being significant in explaining Zambia's exports to South Africa, their signs were negative. This was similar in the case of Zambia's trade with Zimbabwe. Despite the current period preference margins being significant, they were negatively related to Zambia's exports. This negative result can be interpreted as follows, a 1 percent increase in the current period preference margin in Zimbabwe on average reduced Zambia's exports to that country by 6.8 percent. This results infers that Zimbabwe's reduction of tariffs reduced Zambia exports to that country. This adverse result is quite perplexing however, it could be explained by the fact that despite receiving tariff preferences, the products receiving the preferences were not of export interest to Zambia, hence instead of increasing the exports of those commodities, the country

resorted to exporting more of the commodities of their export interest which may not have received preferential treatment. The other likely explanation is that Zambia may have diverted its exports to other countries where the exports received preferential treatment. It maybe be important to state that Zimbabwe was granted a 2-year derogation in its tariff phase out commitments under the SADC Trade Protocol for Category C products(BUSA, 2018:2). While the derogation was set to be completed in 2014, its termination was never enforced and therefore Zimbabwe kept or re-imposed tariffs on a range of SADC products and in some cases additionally imposed surcharges on certain products (BUSA, 2018:2). This may have had a negative impact on Zambia's exports which were of interest to country, particularly Tobacco[6] and other agricultural[7] products. Another reason that could be attributed to the negative relationship between preference margins and Zambia's exports to Zimbabwe could be the economic downturn that Zimbabwe has been undergoing since the early 2000s. This could have resulted in a change in the country's demand patterns thereby resulting in a reduction in Zambia's exports as the products being demanded may not have been those of export interest to Zambia.

CONCLUSIONS

The study set out to analyze the extent of Zambia's participation in the existing economic agreements (EAs) and evaluate their impact on Zambia's trade.The study has established that despite the low uptake of preferences, a large proportion of Zambian trade increasingly takes place in preferential markets and is dominated by regional trade – a trend that has continued even after the establishment of the SADC-FTA in 2008. Prior to the FTA, Zambia traded more within SADC and the EU, with SADC dominating the country's imports while the EU dominating its exports. With the establishment of the SADC-FTA, the country's trade with SADC has increased further in terms of volumes. Interestingly, COMESA and China have also emerged as Zambia's leading trade partners therefore signifying the importance of preferential schemes. It has also been established that the country has generally experienced growth in its trade particularly after the SADC-FTA was launched in 2000. South Africa, Zimbabwe and DRC clearly stand out as Zambia's major trade partners in both imports and exports within SADC. Surprisingly, while DRC stands out as one of Zambia's leading trade partners in both the country's

imports and exports, it remains outside the SADC-FTA and the two countries do not have any standing bilateral agreement on trade though attempts were made in 2015.

In terms of the impact of EAs on Zambia's trade, using a PPML estimator in a panel data fixed effects framework,the study established that the SADC-FTA has had an impact on Zambia's trade, particularly for Zambia's trade with South Africa and with Zimbabwe. Therefore, for the 1997-17 period, our baseline results show that tariff reductions implemented by countries in SADC following the SADC trade protocol have been quite effective on the growth in Zambia's exports although the effect has been relatively small. This shows that preferential trade schemes have had an impact on Zambia trade. This could be attributed tofailure by the member states to completely eliminate tariffsdue to fear of losing tariff revenue and protecting existing domestic industries of strategic and economic importance among other trade bottlenecks. Moreover, while these preferences maybe available to the country, there is no automatic uptake as the country needs to do a lot more if it has to benefit more from these preferential schemes as many obstacles still remain. Among the obstacles are costly rules of origin (RoO) requirements, technical barriers to trade (TBT), sanitary and phytosanitary (SPS) regulations, cumbersome paper work requirements, and insufficient trade facilitation.

RECOMMENDATIONS

Based on the study findings, the following recommendations are suggested:

- Push for the complete liberalization of trade in the various economic agreements (EAs) particularly in SADC *i.e.* removal of all pending tariff and non-tariffbarriers on all goods and services.
- The country should focus on expanding its trade within the regional markets, particularly the Southern African Development Community (SADC) insteadof pursuing new economic agreements which tend to be costly to the country.
- Tackle the internal (supply side) and external (e.g. rules of origin (RoO) requirements, technical barriers to trade (TBT), sanitary and phytosanitary (SPS) regulations, among others)

---

[6] Zimbabwe applies duties of up to 75% in some product lines for tobacco and cigarette products.

[7] Zimbabwe's Category 'C' SADC Tariff Liberalization schedule contains 410 eight-digit tariff lines in a wide variety of good such as beverages, wheat flour, potatoes,

vehicle and vehicle parts, iron, aluminum, ceramic and oil and petrol products, electrical machinery, matches, paper, printed matter, tools and tubes (Iwanow, 2011:10).

constraints which prevent the growth in the country's export shares.

DECLARATION OF INTEREST STATEMENT

The author declares that there is no conflict of interest.

REFERENCES

Afesorgbor, S. andBergeijk, V.P.(2011).Multi-membership and the Effectiveness of Regional Trade Agreements in Western and Southern Africa: A Comparative Study of ECOWAS and SADC.*Institute of Social Sciences Working Paper, 520*.

Alemayehu, G. and Haile, K.(2002).*Regional Economic Integration in Africa: A Review of Problems and Prospects with a Case Study of COMESA*.https://www.soas.ac.uk/economics/research/workingpapers/file28853.pdf

Baier, S.L. and Bergstrand, J.H.(2005).Do Free Trade Agreements Actually Increase Members International Trade?*SSRN Electronic Journal, 71(1),72-95*.

Baltagi, B.H.(2001).*Econometric Analysis of Panel Data*.West Sussex: John Wiley& Sons Ltd.

Born, B. andBreitung, J.(2016). Testing for Serial Correlation in Fixed-Effects Panel Data Models.*Econometric Reviews 35(7)*.

Business Unity South Africa (BUSA) (2018). *Zimbabwe's Application for Special Dispensation on Implementation of Outstanding Tariff Commitments under the SADC Protocol on Trade*.Johannesburg: BUSA.

Carrere, C.(2004).African Regional Economics: Impact on Trade with or without Currency Unions.*Journal of African Economics 13(2),199-239*.

Cheelo, C., Malata, N. andTembo, J.(2012).What do the COMESA Customs Union and COMESA-EAC-SADC Tripartite Free Trade Area mean for Zambia's Import Trade and Trade Tax Revenue? *Zambia Institute of Policy Analysis and Research Working Paper No. 6*.

Central Statistical Office (CSO)(2016). 2015 Living Conditions Monitoring Survey Report. Lusaka: CSO.

Di Mauro, F.(2000).The Impact of Economic Integration on FDI and Exports: A Gravity Approach.*CEPS Working Document No. 156*.

Fall, F. andGasealahwe, B. (2017).Deepening Regional Integration within the Southern African Development Community (SADC).*OECD Economics Department Working Papers No. 1450.*

Ghosh, S. andYamarik, S.(2004).Are Preferential Trade Agreements Trade Creating? An Application of Extreme Bounds Analysis.*Journal of International Economics63, 369-95*.

Goldberg, P.K. and Pavcnik, N.(2016). The Effects of Trade Policy. *National Bureau of Economic Research (NBER) Working Paper 21957*.

Gunning, J.(2001).Trade Blocs: Relevant for Africa?*Journal of African Economies 10(3), 311-35*.

Hartzenberg, T.(2011). Regional Integration in Africa.*WTO Staff Working Paper ERSD 2011-14*.

Hartzenberg, T. and Kalenga, P.(2015).National Policies and Regional Integration in the South African Development Community. *WIDER Working Paper 2015/056*.

Higgins, K. and Prowse, S. (2010). Trade, Growth and Poverty: Making Aid for Trade Work for Inclusive Growth and Poverty Reduction. *Overseas Development Institute Working Paper 313*.

International Monetary Fund (IMF)*et al.*(2017). Making Trade an Engine of Growth for All. *Discussion paper at the G20 meeting, March 23-24, 2017*, Frankfurt, Germany.

Iwanow, T.(2011).*Technical Report: Impact of Derogations from Implementation of the SADC FTA Obligations on Intra-SADC Trade*. Submitted by AECOM International Development to USAID/Southern Africa.

Jin, J.C.(2000). Openness and Growth: An Interpretation of Empirical Evidence from East Asian Countries.*The Journal of International Trade and Economic Development, 9(1), 5-17*.

Khan, M.A. andQayyum, A.(2006). Trade, Financial and Growth Nexus in Pakistan: Economic Analysis.*MPRA Economic Analysis Working Paper No. 6(14).*

Mudungwe, N.(2010).*Is there a Common Criteria or Approach for Selecting Sensitive Products in Regional Trading Blocks: The Case for COMESA, EAC and SADC?*

Muntschick, J.(2017).*The Southern African Development Community (SADC) and the European Union: Regionalism and External Influence*. Cham: Springer International Publishing AG.

Organisation for Economic Co-operation and Development (OECD)(2001). *New Horizons and Policy Challenges for Foreign Direct Investment in the 21st Century: Growth, Technology Transfer and Foreign Direct Investment.*Paris: OECD Publications Service.

Organisation for Economic Co-operation and Development (OECD), (2015). Participation of Developing Countries in Global Value Chains: Implications for Trade and Trade Related Policies. *OECD Trade Policy Paper No. 179.*

Péridy, N.(2005). Toward aPan-Arab Free Trade Area: Assessing Trade Potential Effects of the Agadir Agreement.*The Developing Economies Xl(3), 329–45.*

Peters, C.(2011).Is SADC Losing Track? In Bosl, A, du Pisani, A, Erasmus, G, Hartzenberg, T, &Sandey, R, (Eds),*Monitoring Regional Integration in Southern Africa yearbook 2010*, 10. Stellenbosch:Trade Law Centre for Southern Africa, the Konrad-Adenauer-Stiftung.

Rodriguez, F and Rodrik, D.(1999). Trade Policy and Economic Growth: A Skeptics Guide to the Cross-National Evidence. *National Bureau of Economic Research (NBER) Working Paper No. 7081.*

Sandrey, R.(2013).An Analysis of the SADC Free Trade Area.*TRALAC Trade Brief No. D13TB01/2013.*

Saygli, M., Peters, R., and Knebel,C.(2018). African Continental Free Trade Area: Challenges and Opportunities of Tariff Reductions. *UNCTAD Research Paper No. 15.*

Santos Silva, J. and Tenreyro, S. (2006). The log of gravity. *The Review of Economics and Statistics*, *88*(4), 641–658.

Simwaka, K.(2011)**.** An Empirical Evaluation of Trade Potential in Southern African Development Community.*African Economic Research Consortium (AERC) Research Paper 235*.

Southern African Development Community (SADC) (2017). *SADC Selected Economic and Social Indicators, 2017*. Gaborone: SADC Secretariat.

Turkson, E.F.(2012).Trade Agreements and Bilateral Trade in Sub-Saharan Africa: Estimating the Trade Effects of the EU-ACP PTA and RTAs. *Credit Research Paper 12(07).*

United Nations Conference for Trade and Development (UNCTAD)(2016). *Zambia: Harnessing the Potential for Trade and Sustainable Growth in Zambia. Trade Policy Framework.*New York and Geneva: United Nations.

United Nations General Assembly (UNGA), 2015.*World Commodity Trends and Prospects: Report Of The Secretary-General, Seventieth Session Item 18 Of The Provisional Agenda. Macroeconomic Policy Questions*.New York: United Nations.

Westerlund, J. and Wilhelmsson. F.(2011). Estimating the Gravity Model without Gravity Using Panel Data.*Applied Economics Journal 43(6),641-49.*

World Bank(1989). *World Development Report 1989*. New York: Oxford University Press.

World Bank (2020). *World Development Report 2020*. Washington DC: Oxford University Press.

World Trade Organisation (WTO) (2016).*Trade Policy Review of Zambia*. Geneva: WTO.

Yasmin, R. *et al.* (2006). Trade Liberalization and Economic Development: Evidence from Pakistan. *The Lahore Journal of Economics, 11(1), 19-34.*

www.sadc.int. Accessed 27 July, 2019.

www.wto.org. Accessed 13 October, 2019.

www.zamstats.gov.zm. Accessed on 26th July, 2019.