

SOUTHERN AFRICAN DEVELOPMENT COMMUNITY FREE TRADE AGREEMENT IMPACT ON SOUTH AFRICA STOCK RETURNS

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ABSTRACT

This paper examines the impact of the Southern African Development Community free trade agreement on the stock returns on South Africa Stock returns. The free trade area was officially implemented on August 18th 2008. The available literature shows that free trade areas create positive returns for investors. In this study, the author examined daily data and used an OLS regression. The Event Window covered 90 days. The results showed that the free trade area had a positive impact on the stock returns in South Africa.

JEL: F13, F15, F36

KEYWORDS: South Africa, Event Studies, Free Trade Agreement

INTRODUCTION

This paper examines impact of the Southern African Development Community (SADC) free trade agreement on the stock returns in South Africa. The SADC is a regional organization that includes 15 southern African nations (Angola, Botswana, Republic Democratic of Congo, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Swaziland, Tanzania, Zambia, Zimbabwe, South Africa, Seychelles and Madagascar). The organization aims at implementing economic and social integration amongst its member countries. The SADC `s regional integration process will introduce a Common Market in 2015 and a Monetary Union in 2016. The SADC free trade area negotiations started in 1996 with the Protocol on Trade. The implementation (full removal of tariffs) was officially launched on August 18th 2008 and marked a new step in the region`s economic integration. The free trade agreement eliminated tariffs and trade barriers among the member countries. South Africa joined the SADC in August 1994 and was one of the original members of the free trade area in 2000 (along with Swaziland, Botswana, Lesotho and Namibia). Since joining the SADC free trade area, South Africa has enjoyed higher exports to SADC members. The following Table 1 shows the South African exports over the years. The table shows that the trade has increased by 31% in 2007 and by 34% in 2008.

Table 1: South Africa`s Exports to SADC Countries, EU Countries And NAFTA Countries (In Millions Of Rands)

Countries	Year 2006	Year 2007	Year 2008
SADC countries	49,040	71,936	110,090
EU countries	283,522	334,328	410,591
NAFTA countries	85,125	108,391	137,178

This table shows South Africa`s exports to other SADC countries, EU countries and NAFTA countries over the years (in Millions of South African Rands). The table shows that the trade has increased by 31% in 2007 and by 34% in 2008. This data was pulled from the website www.sadctrade.org.

The change of Trade volumes led to the development of the study`s ex ante hypothesis. Given that the trade volumes have increased, we anticipate that the SADC free trade area had positive returns on the stock returns in South Africa. The Johannesburg Stock Exchange (JSE), one of the largest and oldest stock market in Africa, was established in 1887. During the last two decades, the JSE has grown to be a premier securities exchange in Africa. The JSE offers modern trading platforms for equities and

derivatives. The following Table 2 shows the market indicators of JSE for the last 3 years. The JSE listed 400 companies in 2010, 406 companies in 2011 and 407 companies in 2013.

Table 2: Market Indicators of the JSE

Indicator	Year 2010	Year 2011	Year 2012
Number of Companies listed	400	406	407
Market Capitalization (Billions of Rands)	8,383.6	6,908.5	6,698.7
Trade Volume (Millions)	71,252	71,464	61,844
Trade Value (Millions of Rands)	2,990,123	3,286,828	3,431,584
Foreign Trading Purchases	485,495	462,985	43,227
Foreign Trading Sales	449,085	480,169	37,937
Equity Capital raised (Millions of Rands)	78,059	87,549	80,857

This table shows the market indicators of the JSE. The Market Capitalization is the number of listed shares multiplied by the Market Price at End of Year. The JSE listed 400 companies in 2010, 406 companies in 2011 and 407 companies in 2013. This historical data was pulled from the website www.jse.co.za

The motivation of this paper is to examine the impact of the SADC free trade area on the stock returns in South Africa. The available literature showed that Free Trade Areas (FTAs) create positive returns for investors. This study is also a contribution to the literature on this topic. This study used an OLS regression and the daily data was retrieved from DataStream. The Event Windows covered 90 days around the SADC implementation data. The regression result showed that the SADC had a positive impact on the Stock Returns in South Africa.

The rest of this paper is as follows: Section 2 reviews the literature on the topics of this paper. Section 3 describes the data and methodology used in the study. Section 4 provides the results and Section 5 concludes the study.

LITERATURE REVIEW

The current Global arena suggests that countries can approach international trade through an international approach or a regional approach. The international approach is through the General Agreement on Tariffs and Trade (GATT). It is an international organization of about 88 countries and promotes international trade and reduction of trade barriers. GATT members periodically meet to talk about tariff concessions. The reductions agreed upon by any two or more partners are then extended to all member nations. The Unconditional Most Favored Nation Principle is helpful against discrimination in international trade. The lengthy GATT rounds of talks typically end up with new tariffs reductions. The regional approach includes examples like the European Union, the East African Community, the SADC and others.

Paul Krugman (1991), a prominent economist and Nobel Prize winner, formulated an extensive explanation on the move towards free trade zones. He attempted to explain why numerous trading blocs were being formed in the 1980's and the benefits of those trading blocs. In another study, Krugman (2001) says that the benefits of trade liberalization cannot be neglected. FTAs have widely been researched by economists. Tadesse and Fayissa (2007) said that free trade agreements, whether unilateral or bilateral, are historically expected to raise trade flows among the partners to the agreement and contribute to economic growth. The North American Free Trade Agreement (NAFTA) went into effect in 1994 after lengthy negotiations. It was very difficult to see how two industrialized economies (US and Canada) would match up with the Mexican economy. The NAFTA created the largest free trade area in the world (444 million people producing about \$17 trillion of goods and services). Burfisher (2001) developed a macroeconomic analysis on the impact of NAFTA on the United States. He concluded that the NAFTA had small positive effects on the US economy and relatively large positive effects on Mexico. Gould (1998) also concluded that NAFTA did not significantly increase the trade volume between the US and Mexico. After long negotiations, Canada and the US finally signed a Canada-US Free Trade Agreement (CUSTA) in 1988. The negotiations took approximately 7 years because of the various

changes of political administrations in the US and Canada. Beaulieu (2000) studied the impact of the CUSTA on the Canadian labor market. He found a significant impact of tariffs elimination on the less-skilled labor market. His economic explanation was that less-skilled intensive industries were more protected before the implementation of CUSTA.

Europe is a continent that has been committed to regional economic integration for a long time. The European Union (EU) is now a political and economic group of 27 countries. The EU is a single market in which people, goods and services can move freely. The monetary union has also been implemented and the “Euro” currency is now in circulation. Member countries agreed to share the same trade and economic policies. Cappelen (2003) found a significant positive impact of the EU in the growth performance of European regions. In 2004, Seven South East Asian formed the South Asia Free Trade Agreement (SAFTA) in an effort to promote trade and economic development. Banik (2006) examined the potential future benefits of SAFTA. While noting that most member nations’ economies are agricultural-based, he concluded that these nations will benefit from increased trade. The Greater Arab Free Trade Area (GAFTA) was created in 2006 by 17 Arab nations. The GAFTA nations are very wealthy because of oil revenues. Mahmoud (2008) examined the impact of GAFTA on Syrian Trade after its implementation. He mentioned that GAFTA created more opportunities for the private sector in the Arab region.

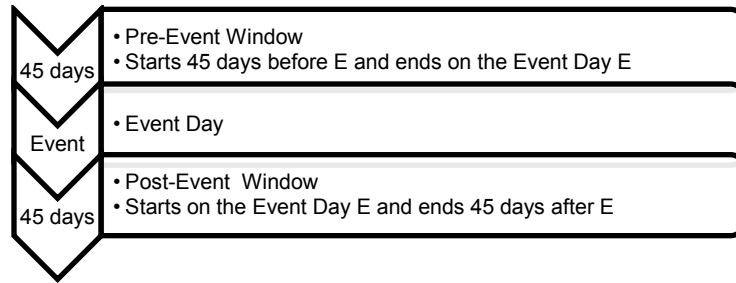
In Africa, there are numerous FTAs such as the American Growth Opportunity Act (AGOA), the East African Community (EAC), the SADC and others. The AGOA provided free trade benefits for selected African products to the United States. Most of the available literature on the AGOA is on the changes in trade volumes between the US and African eligible countries. Ikiara and Ndirangu (2003) noted that, within only two years of qualifying for AGOA, Kenya’s exports of clothing and investments in the textile sector have experienced remarkable growth. Shapouri and Trueblood (2003) also found that many African countries were successful in taking advantage of the US market opportunities through AGOA. Nove (2003) analyzed if the AGOA would indeed increase the African agricultural exports to the US. The evidence of his study showed that the predicted increase of agricultural exports is unlikely. The EAC, a regional bloc of 5 east African countries, is already a common market since 2010. As a fairly recent trade agreement, the EAC has a small literature available on its impact. Khorana (2007) suggested that the EAC trade liberalization increased the benefits for Uganda. The literature on SADC free trade area is dominated by the trade benefits. Lewis and Robinson (2003) mentioned that the SADC free trade area will create more trade between countries. The 2009 SADC Annual Report (2009) noted that South Africa’s exports have increased after the implementation of the SADC Free Trade area.

Some studies have reviewed the Impact of FTAs on stock returns. Aggarwal (1998) studied the impact of NAFTA on the valuation of US companies. The study covered various industries on the US stock market and some of the results were surprising. The telecommunication and auto industries, predicted as NAFTA beneficiaries, experienced stock price declines at the signing of the treaty. The impact of NAFTA was different across industries. Rodriguez (2003) and Thompson (1994) analyzed the impact of NAFTA and the Canada-Free Trade Agreement on equities in the US and Canada. The results could not establish a direct relationship between trade liberalization and profits. Hanson and Song (1998) conducted a detailed research on NAFTA and its impact on US and Mexican stockholders. They found that US stockholders experienced abnormal returns and that Mexican stockholders experienced positive abnormal returns. At the industry-level, the agricultural, textile and apparel industries showed positive abnormal returns. The communication, equipment and financial services industry were actually harmed by the NAFTA agreement. The research economic conclusion was that value-added growth firms and labor intensive firms gained from the trade liberalization with Canada and Mexico. Labor is cheaper in Mexico and it was expected that labor-intensive firms would benefit from NAFTA. As reviewed in this section, we do not have an extensive literature on the impact of FTAs on stock returns. This study is therefore a contribution to the available literature on this topic.

DATA AND METHODOLOGY

This study used a standard event methodology, similar to Floros (2008), in examining the impact of the SADC free trade area on the JSE index. The JSE index data was pulled from DataStream. This study analyzed August 18th 2008 (removal of all tariffs – fully liberalized trade) as an event. The event window starts 45 days before the event and ends 45 days after the event. The following figure 1 shows the event window:

Figure 1: Event Window Used in the Study (90 Days)



This figure shows the Event Window and covers a total of 90 days. The Pre-event window starts 45 days before E and ends on the Event day E. The Post-Event window (45 days) starts on the Event day E and ends 45 days after E.

The daily return was calculated as:

$$R_t = \log(P_t) - \log(P_{t-1}) \quad (1)$$

Where R_t is the return of the JSE index on day t ; P_t is the price of the JSE index on day t ; P_{t-1} is the price of the index on day $t-1$.

An ordinary least square (OLS) model was used. The OLS model was as follows:

$$R_t = a + bD_t + \varepsilon_t \quad (2)$$

Where R_t is the return of the index on day t and ε_t is an error term.

The Dummy variable D_t shows how the JSE index changes as a result of the event. This Dummy variable was named “SADC effect”. The “SADC effect” is equal to 0 when there is no SADC event. The “SADC effect” is equal to 1 when there is a SADC event. T-tests were performed to assess the significance of the “SADC effect”. Table 3 shows the data around the Event. The Event was the implementation of the fully liberalized trade area (August 18th 2008). On August 18th 2008, the JSE index gained 2.2% from the previous trading day. On August 19th 2008, the JSE index fell by 3% from the previous trading day.

Table 3: Selected JSE Data around SADC Free Trade Area Implementation (August 18th 2008)

Date	JSE index
August 13 th 2008	4,880
August 14 th 2008	5,025
August 15 th 2008	5,220
August 18 th 2008	5,340
August 19 th 2008	5,175
August 20 th 2008	5,020
August 21 st 2008	5,140
August 22 nd 2008	5,100

This table shows the data around the SADC Event. The Event was the implementation of the fully liberalized trade area (August 18th 2008). On August 18th 2008, the JSE index gained 2.2% from the previous trading day. On August 19th 2008, the JSE index fell by 3% from the previous trading day.

The daily data was pulled from DataStream. The window period starts on June 12th 2008 and ends on September 30th 2008. Table 4 shows Summary Statistics of the data used in the study. There are 122 observations and the different statistics were calculated using the Excel program. The skewness measures the asymmetry of the series' distribution around its mean. A negative skewness shows that the series is skewed to the left. The kurtosis measures the peakedness of the distribution of the series.

Table 4: Summary Statistics

	JSE index
Observations	122
Mean	0.0010
Median	0.0002
Standard Deviation	0.0143
Skewness	-0.5401
Kurtosis	2.0378

This table 4 shows Summary Statistics used in the study. There are 122 observations used. The skewness measures the asymmetry of the series' distribution around its mean. A negative skewness shows that the series is skewed to the left. The kurtosis measures the peakedness of the distribution of the series.

RESULTS

The regression analysis was performed for the daily data of the event window. Table 5 shows the regression estimates of the equation: $R_t = a + bD_t + \varepsilon_t$. The dummy variable takes the value of 0 on non-event days and the value of 1 on the event. The second column represents the different coefficients (Dummy Coefficient and α Coefficient). The third column represents the coefficient values. The last column shows the T-Test.

Table 5: Regression Results on SADC Event (August 18th 2008)

Event	Coefficient	Coefficient Value	T-Test
August 18 th 2008	Dummy	0.0135	0.1730
	A	0.0800	1.1005*

*This table shows the regression estimates of the equation: $R_t = a + bD_t + \varepsilon_t$. The dummy variable takes the value of 0 in non-event days and the value of 1 on the event. The second column represents the different coefficients (Dummy and α). The third column represents the coefficient values. The last column represents the T-Test. * indicates the significance at 5% level.*

The results show that the SADC free trade area had a positive impact on the Stock Returns in South Africa. The T-Test showed a statistical significance (at the 5% level). The ex ante hypothesis has been confirmed by the study's results. Some implications could be derived from this study:

1. The SADC agreement created Trade and a positive impact on the stock returns in South Africa. South African policy-makers could use this study's results in negotiating future FTAs.
2. This study is a contribution to the existing literature in Asset Pricing and International Trade.

CONCLUSIONS

The purpose of the study was to examine the impact of the SADC free trade agreement on the stock returns in South Africa. The SADC free trade area was fully implemented on August 18th 2008. This study is a contribution to the available literature on the relationship between free trade agreements and Stock Returns. The study used an OLS regression and the daily data was pulled from DataStream. The results showed that the SADC implementation had a positive impact on the stock returns in South Africa. South Africa has several other active FTAs such as the American Growth Opportunity Act (AGOA) and the Common Market of Eastern and Southern Africa (COMESA). Future research studies may look into the impact of these FTAs on the stock returns and trade patterns in South Africa. Also, we noted that this study focused on the JSE at the market-level. Future studies may focus on the impact of the SADC on JSE's different industries.

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