

The Impact of Exchange Rate on Clothing Exports in South Africa

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Abstract: The exchange rate is an important macroeconomic variable used as a parameter for determining international competitiveness. It is regarded as an indicator of competitiveness of any currency of any country and an inverse relationship between this competitiveness exists. The study empirically examines the impact of the exchange rate on clothing exports in South Africa, for the period 1994Q1 to 2017Q4 by using the time series data from Quantec Easy Data and the South African Reserve Bank. The study uses a three-step estimation approach in the form of a unit root testing, cointegration analysis and the Vector Error Correction Model to determine the long-run and the short run relationships and to determine the level of impact of exchange rate on clothing exports. The results revealed the presence of a long-run and a negative relationship between the two variables under study. The findings and conclusions are valuable for the clothing sector and the government. The government should make South Africa's exchange rate to be a fixed exchange rate, so that South Africa exports more than it imports having a competitive advantage and more employment.

Keywords: Clothing exports, Clothing imports, Gross Domestic Product, Exchange rates

1. Introduction

The exchange rate is an important macroeconomic variable used as a parameter for determining international competitiveness. It is regarded as an indicator of competitiveness of any currency of any country and an inverse relationship between this competitiveness exists. To this end, the lower the value of the indicator in any country, the higher the competitiveness of the currency of that country will be. Exchange rate is the price of a nation's currency in terms of another currency. An exchange rate thus has two components, the domestic currency and a foreign currency, and can be quoted either directly or indirectly. In a direct quotation, the price of a unit of foreign currency is expressed in terms of the domestic currency. In an indirect quotation, the price of a unit of domestic currency is expressed in terms of the foreign currency (Arize, Malindretos & Kasibhatla, 2003).

An exchange rate that does not have the domestic currency as one of the two currency components is known as a cross currency, or cross rate. Exchange rate system includes set of rules, and arrangements

and institutions under which nations effect payments among themselves. Traditionally, gold exchange standard was used by the Bretton Woods for example the flexible rating system is currently being used in Nigeria. The flexible exchange rates are largely determined by market mechanism uses the forces of demand and supply. For 25 years after WWII, the international monetary system known as the Bretton Woods system was based on stable and adjustment exchange rates. Exchange rate was not permanently fixed, but occasional devaluations of individual currencies were accepted to correct fundamental disequilibria in the balance of payments (BOP). The ever rising attack on the dollar in the 1960's ended in the collapse of the Bretton Woods system in 1971, and it was unwillingly replaced with a regime of floating exchange rates (Obstfeld & Rogoff, 1995).

After the collapse of the Bretton Woods system, where countries were indulged to adopt monetary policies that maintained the exchange rates within a fixed value, many countries around the world started to undertake flexible exchange rate regimes. As this type of exchange rate system increased in

popularity, countries liberalised their economies and at the same time the effect of globalisation intensified resulting in economic cooperation and trade between countries. Because transactions between countries are priced in foreign exchange, the level and the speed of variability of the exchange rate became an important tool to determine countries' competitiveness in foreign markets and to estimate how much profit or loss the exporters could make from trading with foreign countries within a given time (Obstfeld & Rogoff, 1995).

The South African textile and clothing industry has a strong vision, aiming to use all the natural, human and technological resources at its disposal to make South Africa the favoured domestic and international supplier. Since 1994, about US\$900 million has been spent on updating and upgrading the industry, making it efficient, internationally competitive, and ready to become a major force in the world market. Exports account for R1,4 billion for apparel and R2,5 billion for textiles, mostly to the US and European markets. Exports to the US increased by a dramatic 62% in 2001, driven primarily by the benefits offered under the Africa Growth and Opportunity Act (AGOA) which provides for duty-free imports of apparel produced in South Africa (Morris & Barnes, 2014).

South Africa will find it increasingly difficult to compete with Far Eastern countries in low-cost low-value clothing production; the principal opportunities in textiles and clothing lie in the development of niche markets for products with strong local and international demand and in the move to higher-value production Owsley (2013). When the exchange rate increases, there will be a decrease in clothing exports. If a country's exports exceed imports, the demand for its currency rises and therefore, it has a positive impact on the exchange rate. On the other hand, if imports exceed exports, the desire for foreign currency rises and hence, exchange rate for such country moves up. Undoubtedly, any measure that tends to increase the volume of exports more than the rate of importation will definitely raise the value of the domestic currency. In the case of South Africa, the exchange rate is relatively low, however South Africa exports less than it imports. That has become a concern.

In 2009, China became South Africa's largest export market, ahead of the United States (US), and its largest supplier of imports, ahead of Germany.

These imports are overwhelmingly of manufactured goods, while South Africa's exports are mostly natural resources. The growth and composition of bilateral trade flows with China have fed concerns about deindustrialisation and become an issue in South Africa's engagement with China (Mail and Guardian, 2012). The common perception in South Africa is that the effects of the growth of trade with China has been negative for manufacturing, with several industries, most notably textiles and clothing, demanding increased protection from imports from China (Morris & Einhorn, 2008). The Free Trade Agreement between the South African Customs Union (SACU) and China first mooted in 2004 faced considerable opposition by business associations (Lennox, 2008) and unions (Mde, 2005) within South Africa. The current position of the ministry of trade and industry is that a conventional free trade agreement with China is not in the interest of the country (Langeni, 2012).

From the late 1980s onwards, the South African clothing and textile industry was increasingly exposed to international competition, a process that was accelerated when South Africa joined the World Trade Organisation (WTO)'s Agreement on Textiles and Clothing (ATC) in 1994 (van der Westhuizen, 2006). The South African government then introduced and implemented an economic policy that was aimed at promoting international openness, with the purpose of partially addressing the profitability and productivity problems in the manufacturing industry (Gelb, 2005). The tariffs were relaxed more quickly than was required by the ATC, which may have resulted in the industry being unprepared for rising imports, most of them coming from China. This also resulted in the industry being unable to compete with China in the clothing markets of the European Union (EU) and the US after the Multi-Fiber Arrangement (MFA) was abolished in 2004 (Biacuana, 2009). As a result, the exports potential has remained generally low, and is mainly concentrated in the EU and the US markets.

These exports consist mainly of basic product items that are possible in the preferential trade agreements that are duty and tariff-free. However, this has not improved the industry competitiveness, as the country's high cost structure makes it difficult to compete with low-cost competitors such as China, India, Turkey and Pakistan (Barnes, 2005). The clothing and textile industry was planned during a period of political isolation, when domestic production dominated the market (Barnes, 2005). As a

result, the industry was unable to obtain economies of scale, and, moreover, the industry is characterised by import substitution protection and it is finding it difficult to compete internationally due to a lack of investment capital and an inadequate technology base. Barnes (2005) further observed that during the 1990s, the adoption of trade liberalisation and the restructuring of the industry led to a rise in unemployment in the sector, whereas productivity increased purely due to cost minimisation and downsizing, rather than production growth. Therefore, foreign direct investment will be lower when there is higher exchange rate than when the exchange rate is steady. Decreased foreign investment may result in low aggregate output and reduced export volumes. Thus, reducing their exposure to countries with high exchange rate volatility as this will have a negative effect on their expected profits (Brodsky, 1984).

Between January 2002 and July 2005, the South African exchange rate has appreciated by more than 30 per cent. At the same time, there has been widespread news coverage of the decline in several manufacturing sectors, notably clothing and textiles. The Clothing and textile industry plays a significant role in the manufacturing sector of the South African economy in the logic that it is labour-intensive and makes job opportunities available to unskilled labour. The clothing and textile industry accounts for close to a fifth of the total manufacturing employment in the South African economy (IDC, 2014). However, its vulnerability to the world markets the clothing and textile industry faced with stagnating competitiveness and the loss of jobs. According to the IDC (2014), the textile industry employment trend has declined by 7.5%, while clothing and textile imports grew by 21.3% (higher than South African clothing and textile exports, which grew by only 6.9%) during the same period. There is also evidence of a decline in the production volumes and utilisation in the industry.

The current study investigates the impact of exchange rate on clothing export in South Africa. It is envisaged to assist policymakers and other industry stakeholders to promote development and towards a greater understanding of the current level of the international competitiveness of the clothing and textile industry in relation to the exchange rate. The literature review has revealed that not a lot has been written in this area, more especially in relation to the econometric analysis of

such a relationship, to our knowledge. The paper proceeds as follows; Section 2: details the literature review; Section 3: provides extended model and data analysis, interpretation, review of the existing literature, and Section 4: is the conclusion and future research.

2. Literature Review

The balance of payments theory of exchange rate is also named as "General equilibrium theory of exchange rate. According to this theory, the exchange rate of the currency of a country depends upon the demand for and supply of foreign exchange. If the demand of foreign exchange is higher than its supply, the price of foreign currency will go up. In case, the demand of foreign exchange is lesser than its supply, the price of foreign exchange will decline (Kanamori & Zhao, 2006). The demand for foreign exchange and supply of foreign exchange arises from the debit and credit items respectively in the balance of payments. The demand for foreign exchange comes from the debit side of balance of payments. The debit items in. The balance of payments is import of goods and services, loans and investments made abroad (Kanamori & Zhao, 2006).

The supply of foreign exchange arises from the credit side of the balance of payments. It is made up of the exports of goods and services and capital receipts. If the balance of payments of a country is unfavourable, the rate of foreign exchange declines. On the other hand, if the balance of payments is favourable, the rate of exchange will go up. The domestic currency can purchase more amounts of foreign currencies (Kanamori & Zhao, 2006). When the exchange rate of a country falls below the equilibrium exchange rate, it is a case of adverse balance of payments. The exports increase and eventually the adverse balance of payment is eliminated. The equilibrium rate is restored. When the balance of payments of a country is favourable, the exchange rate rises above the equilibrium exchange rate resulting in the decline of exports (Kanamori & Zhao, 2006).

Nordas (2004) investigated that many clothing workers in developing countries would not have an income in the formal sector were it not for the clothing industry. Some trade theorists suggest that workers retrenched from uncompetitive industries will experience a short period of frictional unemployment before undergoing training and accessing

new employment opportunities. However, developing countries frequently suffer low investment levels which result in sub-optimal job creation, as has been seen in South Africa with its capital formation level of only 16 percent of GDP. Hence, restructuring has been associated with growing unemployment, and re-employment levels in the clothing industry have been low, as can be seen in the table below (ESSET, 2003).

Kipling, Baard and Jan Henk Boer (2005) found that the clothing imports into the South African market increased rapidly. China being the most competitive exporter of clothing in the world market, the vast bulk of clothing imports came from the Asian giant, with the value of clothing imports surpassing that of exports for the first time in 1998. In the wake of a significantly stronger South African currency, import growth showed the most dramatic increase between 2002 and 2005. Units from China jumped from 85 million in 2001 to 123 million in 2002 (45 percent); to 215 million in 2003 (75 percent); to 335 million in 2004 (56 percent) (SARS Customs figures quoted in Clothing Trade Council of South Africa 2005). Manufacturers contend that China's success in the South African clothing market can at least partially be ascribed to an 'unequal [international] playing field'.

Clo-Trade (2005) and Lande (2005) explored the benefits that accrue to Chinese producers are a fixed exchange rate undervaluing the Chinese currency by up to 40 percent (only changed in the second half of 2005); lower labour costs in the absence of a human rights regime; non-performing loans at a 1,5 percent interest rate; export incentives; state-subsidised infrastructure; production by state-owned enterprises which sometimes run at a loss; and possible input subsidisation in the Chinese textile industry. Chinese officials have, however denied these claims and insist that China's competitiveness is the result of its 'market economy'.

Theron (2005) examined the South African clothing industry as comparatively unusual, as it supplies both the domestic and foreign markets. In the wake of South Africa's policy decision to join the global regime on clothing and thereby exposing the local market to foreign competition, some manufacturers sought to reorient themselves to produce for the export market. In the clothing and textile sectors combined, 30 percent were supplying foreign markets in 2005, compared with 10 percent in 1994 (Business Report, 2/2/05). The clothing industry

on its own had less exporters by the second half of 2005, at a figure of about 150 out of a total of 2000 clothing manufacturers registered with the Sector Training Authority (SETA). A number of clothing manufacturers had been exporting apparel to the US and EU markets for a substantial period of time. On the back of a weaker rand, some large KwaZulu-Natal CMTs (with around 300 workers) exported jeans to the US, ceasing when the rand turned (Govender, 2005).

3. Results and Discussion

3.1 Estimation Methods

The econometric analysis is completed by using a quarterly time series data from 1994Q1-2017Q4. Data for clothing exports and clothing imports were collected from Quantec Easy Data whilst data on exchange rate and GDP were obtained from South African Reserve Bank. The study uses a three steps estimation method made up unit root testing to determine the order of integration of the variables; co-integration analyses and test and Vector Error Correction Model (VECM) to determine the long-run and the short run analyses of the system.

Moreover, the study adopted the Durbin Watson auto correlation test, to test whether the residuals that form a linear regression or multiple regressions are independent.

Therefore, the paper adopts the following model:

$$CLEXP = \beta_0 + \beta_1 EXR + \beta_2 CLIMP + \beta_3 GDP + \mu \quad (1)$$

Where: $CLEXP$ = Clothing export; EXR = Exchange rate; $CLIMP$ = Clothing import and GDP = Gross Domestic Product. β_0 = intercept of relationship in the model / constant, β_1 , β_2 and β_3 = Coefficients of each of the independent variables and μ = stochastic/ Error terms.

$$\begin{aligned} \text{Log}(CLEXP) &= \beta_0 + \beta_1 \text{Log}(EXR) + \\ &\quad \beta_2 \text{Log}(CLIMP) + \beta_3 \text{Log}(GDP) + \mu \end{aligned} \quad (2)$$

Where: Log = Natural log

From Equation 4, a model can further be derived in a form of a time series as:

$$\begin{aligned} \text{Log}(CLEXP) &= \beta_0 + \beta_1 \text{Log}(EXR) + \\ &\quad \beta_2 \text{Log}(CLIMP) + \beta_3 \text{Log}(GDP) + \mu \end{aligned} \quad (3)$$

Table 1: Unit Root Test at Levels

Variables	Model	ADF Lags	ADF (t-Statistics)	Critical value at 5%	Conclusion
			$\tau_{\tau} \tau_{\mu}$		
$\text{Log}(CLEXP)$	Trend and intercept	3	-2.806654	-3.458856	Unit root
	Intercept	3	-2.748984	-2.892879	Unit root
	None	3	-2.707766	-1.944324	No unit root
$\text{Log}(EXR)$	Trend and intercept	3	-8.928822	-3.457808	No unit root
	Intercept	3	-8.964363	-2.892200	No unit root
	None	3	-9.001419	-1.944248	No unit root
$\text{Log}(CLIMP)$	Trend and intercept	3	-8.610946	-3.457808	No unit root
	Intercept	3	-7.634757	-2.892200	No unit root
	None	3	-2.806283	-1.944324	No unit root
$\text{Log}(GDP)$	Trend and intercept	3	-1.815520	-3.458326	Unit root
	Intercept	3	-0.363659	-2.892536	Unit root
	None	3	3.868514	-1.944286	No unit root

Source: Authors

$$\Delta \text{Log}(CLEXP) = \beta_0 + \sum \beta_1 \text{Log}(EXR)_{t-1} + \sum \beta_2 \text{Log}(CLIMP)_{t-1} + \sum \beta_3 \text{Log}(GDP)_{t-1} + \beta_0 + \sum (VECM)_{t-1} + \beta_0 + \sum_i$$

(4)

In Equation 5, the Error Correction Model appears. Since it appears, its model then is as follows:

$$\text{Where: } \sum_{i=0}^n (VECM)_{t-1} \quad (5)$$

Vector Error Correction term $t-1$ meaning the variables were lagged by one period Σ White Noise Residual.

The study used the following methods for stationarity (Augmented Dickey Fuller) unit-root tests, and for cointegration the study uses Johansen cointegration tests and diagnostic and stability tests.

At this stage the formal testing procedures currently available are used to examine each of the variables. To determine the integrating order of time series variables, the Augmented Dickey Fuller (1981) is used to test each variable for unit root in levels, and then in the first difference form. These tests are based on the following assumptions:

H_0 : unit root exists

H_1 : unit root does not exist

Interpretation of unit root results is based on

comparing their t-statistics with their critical values:

If $t^* > \text{ADF critical values}$: accept the null hypothesis (there is unit root)

If $t^* < \text{ADF critical values}$: reject the null hypothesis (no unit root)

Table 1 above presents the results of running ADF test on all variables at levels in logarithm form with trend and intercept, intercept, and none. The result from above shows that log of clothing exports and GDP shows the existence of unit root, which is non-stationary in levels. While all variables (exchange rate and clothing imports) are stationary (no unit root), therefore, the results from the above Table 1 indicate that the null hypothesis of non-stationarity is rejected (unit root does not exist).

The results from Table 2 on the following page shows that when the ADF test is applied to variables in first differences with the trend and intercept, intercept and none, all of the variables are stationary in first difference. Therefore, the null hypothesis of non-stationarity is rejected (no unit root) and the variables are integrated of order one I (1).

Table 3 on the next page gives the results from Johansen cointegration test. The first column of the table gives tests for hypothesized number of cointegrated equation where the null hypothesis, p_r , ranging from no of cointegration relationship

Table 2: Unit Root Test at First Difference

Variables	Model	ADF Lags	ADF (t-Statistics) $\tau_{\tau} \tau_{\mu} \tau$	Critical value at 5%	Conclusion
<i>dLog(CLEXP)</i>	Trend and intercept	3	-9.214509	-3.459397	No unit root
	Intercept	3	-9.255357	-2.893230	No unit root
	None	3	-9.306225	-1.944364	No unit root
<i>dLog(EXR)</i>	Trend and intercept	3	-12.12190	-3.462912	No unit root
	Intercept	3	-12.18594	-2.892879	No unit root
	None	3	-12.25342	-1.944324	No unit root
<i>dLog(CLIMP)</i>	Trend and intercept	3	-8.951262	-3.459397	No unit root
	Intercept	3	-8.999205	-2.893230	No unit root
	None	3	-9.037613	-1.944364	No unit root
<i>dLog(GDP)</i>	Trend and intercept	3	-5.528643	-3.458326	No unit root
	Intercept	3	-5.558294	-2.892536	No unit root
	None	3	-2.439510	-1.944324	No unit root

Source: Authors

Table 3: Johansen Cointegration Test

Hypothesized No. of CE(s)	Eigen values	Trace Statistic	0.05 Critical value	Max-Eigen Statistic	0.05 Critical value
None	0.320813	73.66068*	47.85613	35.97783*	27.58434
At most 1	0.272505	37.68285*	29.79707	29.58772*	21.13162
At most 2	0.079892	8.095135	15.49471	7.743554	14.26460
At most 3	0.003773	0.351581	3.841466	0.351581	3.841466

Trace test indicates 1 cointegrating equation(s) at the 0.05 level
 Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level
 *denotes rejection of the hypothesis at the 0.05 level

Source: Authors

($r = p$) up to most two cointegration vectors. The second column gives the eigenvalues in descending order, while the third and fifth column reports the corresponding trace statistics and max-eigen statistics generated. The fourth and sixth column reports the critical values at the five per cent levels.

The results of the trace test statistic show two cointegrating equations at 5% level, having the rejection of the null hypothesis of no cointegration of the series. On the other hand, the maximum eigenvalue statistic indicates the presence of two cointegrating equations at 5% level. The trace test shows that there is 5 per cent significance co-integration equation. This is shown by comparing the trace statistics as it shows that 73.66068 is greater than critical value 47.85613 and 37.68285 is also greater than the critical value 29.79707. The max-eigen statistic that indicates that there is 5 percent significance cointegration. This is realised by comparing the max-eigen

statistics as it shows that 35.97783 is greater than the critical value 27.58434 and 29.58772 is also greater than the critical value 21.13162.

The results show that both the Trace and Maximum Eigen value test are significant at 5 percent level. These results prove that the variables are tied together in a single way in the long run; there is no unique long run equilibrium relationship. Thus, there is one cointegration relationship in the trace static model and two cointegration relationships in the maximum Eigen model. Therefore, the existence of a long run relationship of the model can be seen within a Vector Error Correction Model (VECM).

3.2 Vector Error Correction Model

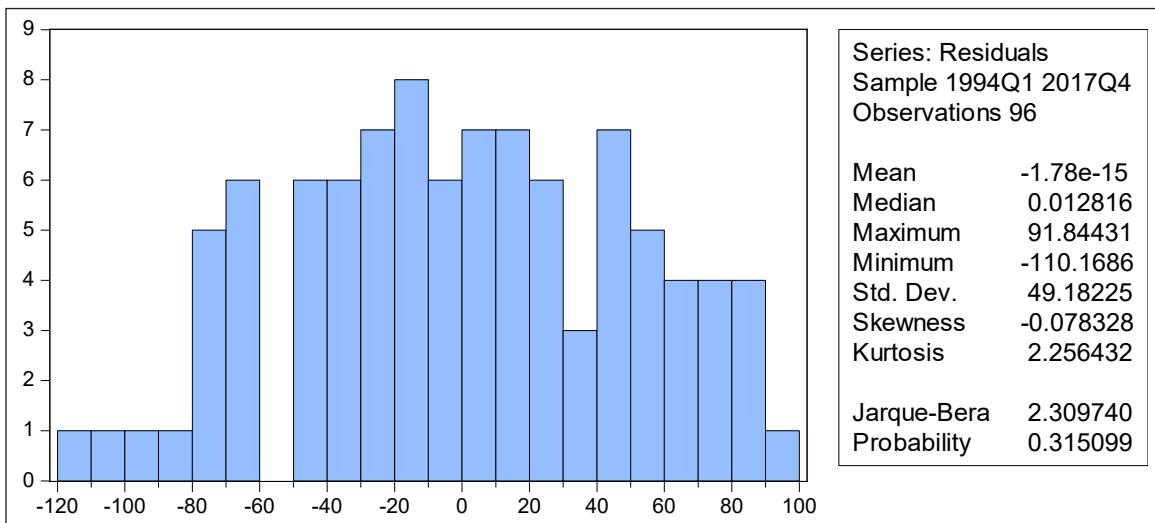
The VECM results indicate that there is correlation between GDP and the four independent variables. The implication is that there is an existence of a short

Table 4: Summary of the VECM Estimation

Variables	Coefficients	Standard error	t - statistic
D(CLEXP (-1))	-22.64119	37.6995	-0.60057
D(EXR (-1))	351.1287	708.622	0.49551
D(CIMP (-1))	52.20218	42.4344	1.23019
D(GDP (-1))	0.487471	0.12062	4.04138
Constant	7240.091	2739.46	2.64289
<hr/>			
R-squared	0.414584	Log likelihood	-965.1757
Adj. R-squared	0.233794	Akaike AIC	21.93724
Sum sq. Resids	1.09E+10	Schwarz SC	22.54830
S.E. equation	12649.67	Mean dependent	16189.40
F-statistic	2.293180	S.D. dependent	14451.28

Source: Author

Figure 1: Normality Test on the Residuals



Source: Authors

run economic relationship. The Adjusted R-squared of 0.579 (58%) indicates that 0.58 of the model is perfectly fit meaning that the regression is not spurious and the F-statistic revealed the absence of serial autocorrelation. Table 4 has a priori (negative) sign that is an indication of the fact that any short-term fluctuations between the independent variables and the dependent variables will give an increase to a steady long run relationship between variables. The estimated coefficient indicates that about 0.5% of this disequilibrium is corrected within one quarter.

Finally, the results estimated on VECM at lag 1, shows that there is a positive relationship between exchange rate, clothing exports, clothing imports and GDP. However, clothing exports is negatively correlated to the independent variables (Exchange

rate, clothing imports and GDP). Therefore, the model is good with 42% and the R-squared 23% can be explained by the independent variables.

Diagnostic Testing

The *Jarque-Bera* test statistics tests whether the residuals are normally distributed. The null hypothesis for the above Figure 1 is that the residuals are not normally distributed. The decision rule for the rest is that if $P < 0.05$ level of significance then the null hypothesis should be rejected. The result for the probability is 0.315099 that is greater than the 0.05 level of signification, therefore the study accepted the null hypothesis. This means that the residuals are normally distributed for the current study.

Table 5: Serial Correlation Test on the Residuals

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	12.57852	Prob.F(2,90)	0.0000
Obs R-squared	20.97202	Prob. Chi-Square(2)	0.0000

Source: Authors

Table 6: Heteroscedasticity Test: ARCH

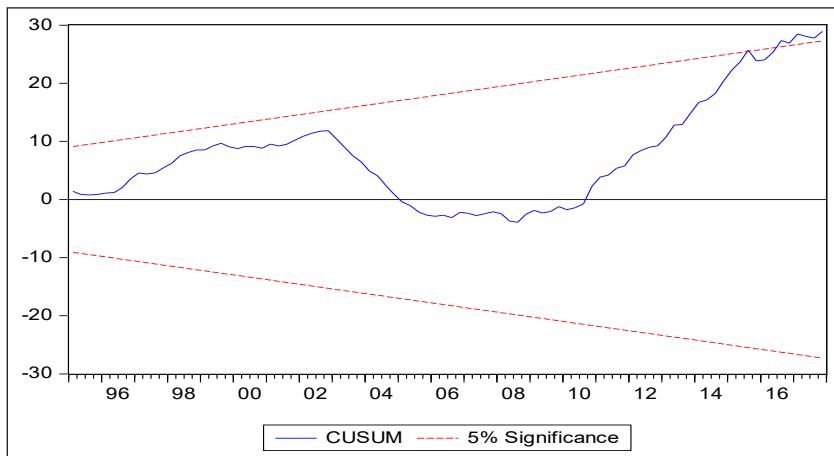
Heteroscedasticity Test: ARCH			
F-statistic	2.388312	Prob.F(1.93)	0.0000
Obs R-squared	2.378589	Prob. Chi-Square(1)	0.0000

Source: Authors

Table 7: Ramsey Reset Test on Residuals

	Value	Df	Probability
F-Statistic	0.693009	(1,91)	0.4073
Likelihood ratio	0.728316	1	0.3934

Source: Authors

Figure 2: Cusum Test

Source: Authors

Table 5 above gives the results for the serial correlation on the residuals, from the output of *Breusch-Godfrey*. The null hypothesis of the study is that there is no serial correlation in the residuals. The probability value from the result is 0.0000; in the case the null hypothesis is rejected. This means that there is serial correlation in the residuals.

Table 6 gives the result of heteroscedasticity on the residuals, from the output of heteroscedasticity test: ARCH the study test the null hypothesis that there is no heteroscedasticity up to order q in the residual. The probability value from the result is 0.0000; the study rejects the null hypothesis. This means that for the current study there is heteroscedasticity up to order q in the residual.

Stability Test

The stability CUSUM test is applied to evaluate the stability of the long run coefficient together with the short run dynamics. The CUSUM test points that the null hypothesis (i.e. that the regression equation is correctly stated) cannot be rejected if the plot of these statistics remains within the critical bound of the 5 percent significant level.

Figure 2 shows the CUSUM test from 1992 Q1 to 2017 Q4 the stability of the parameters remains within the critical bounds of parameter stability, until some point whereby it does not remain inside the critical bond.

The Ramsey reset test shown in Table 7, also known

as the regression specification error test is applied. The p-value from the results is 0.4073 and 0.3934 which are more than the critical p-value=0,05, therefore, the null hypothesis of the mis-specification in the model is accepted. This means that the model is statistically well specified and that the residual is normally distributed.

4. Conclusion and Recommendations

The aim of this study is to find the impact of exchange rate on clothing exports in South Africa. Clo-Trade (2005) and Lande (2005) explored the benefits that accrue to Chinese producers are a fixed exchange rate undervaluing the Chinese currency by up to 40 percent (only changed in the second half of 2005); lower labour costs in the absence of a human rights regime; non-performing loans at a 1,5 percent interest rate; export incentives; state-subsidised infrastructure; production by state-owned enterprises which sometimes run at a loss; and possible input subsidisation in the Chinese textile industry. Chinese officials have, however denied these claims and insist that China's competitiveness is the result of its 'market economy'.

Cointegration test determines that there is a long-run relationship between changes in exchange rate and clothing exports. The result suggests that the variable under consideration are co-integrated and hence, share a common linear common trend, that is, they move together in the long-run.

The VECM result revealed that the speed of adjustment towards the long run equilibrium is significant, meaning that the dependent variables have a long run relationship with the dependent variables. The study examined the impact of Exchange rate on clothing exports in South Africa. The results show that the independent variables such as exchange rate, clothing imports and GDP are negatively correlated to Clothing exports, while dependant variable is negative to the independents (Exchange rate, clothing imports and GDP). Therefore, the model is fairly good and the R-squared can be explained by the independent variables.

Lastly, the results of the diagnostic test and stability test employed in the study presented heteroskedasticity, a problem of serial correlation is found in the residuals, and the residuals are normally distributed. South Africa has floating exchange rates where it is determined by the private market through demand

and supply. If the demand for a currency is low, its value will decline, therefore making imported goods more expensive and increasing the demand for local goods and services. Thus, generate more jobs, causing an auto-correction in the market; floating exchange rate is constantly fluctuating, where imports and exports can have a positive relationship. Where individuals will have more money to spend which will benefit the population. Competitive advantage of floating exchange rate is that policy makers are free to diminish to achieve certain objectives, such as job creation, economic growth and decreasing inflationary pressure.

The government should make South Africa's exchange rate to be a fixed exchange rate, so that South Africa exports more than it imports having a competitive advantage and more employment.

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