



The Impact of Trade Liberalization on Economic Growth in South Africa

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ABSTRACT

The failure of the South African economy to achieve the desired economic expansion raised a serious concern to investigate the potency of trade liberalization policy adopted in the country. This is evidence in macroeconomic indices such as high level of unemployment, poverty and most importantly sluggish economic growth. It is against this back drop that this study was spurred to conduct an analysis of the impact of trade liberalization on economic growth in South Africa covering the period of 1986-2022. The mixed order of integration revealed by the unit root test informed the decision to adopt the ARDL method of estimation. The main findings of interest in this study is the existence of a strong positive relationship between trade liberalization and economic growth in South Africa. Thus, the study concludes that economic integration is healthy for the national economy and hence more liberalization policies should be strategically embrace. The study recommends that the African governments especially South Africa should further open it economic border to allow for free trade with other economies of the world.

Keywords: Trade Liberalization, Economic Growth, Autoregressive Distributed Lag Model

JEL Classifications: F13, F43, E61, C22

1. INTRODUCTION

Economic interdependence between nations is inevitable as no nation can survive successfully without interacting with the global market. It is a general assertion that developing countries particularly lack sufficient resources to sustain their path to achieving economic growth. That is why most time they resort to attracting foreign resource to augment their domestic endowment which is typically achieve through the medium of international trade.

Thus, the concept of trade liberalization entails complete elimination or minimization of trade barriers by the participating countries (Nteegah et al., 2017). This means that free trade involves unhindered economic transaction across the economic borders of the participating economies which is expected to promote economic growth. Traditionally, the theory of comparative advantage as postulated by David Ricardo (1817) serves as a

channel of global wealth redistribution, prevent wastage, and also enhances export diversification among others (Bittencourt, 2004). Closely supported is the modern theory of economic growth- the Export Growth. This theory postulate that growth can be achieved in any economy through openness to trade or globalization. It is pertinent to notes that, trade liberalization set the environment for global competitive, permits the diffusion of knowledge and transfer of technology, enhances the competitiveness of export, increases access to the international market, enlarge the local market among others (Duru et al., 2020). All thing being equal, trade liberalization is expected to lubricate the domestic economy thereby causing a drastic change and transformation.

South Africa is seen as one of the largest and most liberalized economies in Africa. For instances, South Africa just like every other African country has adopted several trade policies such as import substitution and industrialization in an attempt to set the national economy in the path of speedy growth. From 1925 to

1970 in particular, the dominant trade policy in South Africa was import substitution. The failure of import substitution to achieve economic growth and the debt crisis experienced by the country in 1980 triggered the drift from import substitution policies to trade liberalization policies and the adoption of Structure Adjustment Programme (SAP) in 1990 (Mabugu and Chitiga-Mabugu, 2007 and Manwa et al., 2019). According to Mabugu and Chitiga-Mabugu (2007), the switched from imported substitute and the subsequent increase in trade associated with economic openness in South Africa is dominated by expansion in import.

Particularly, from 1990 forwards, South Africa begin to liberalize the national economy for international integration. For instance, in the early 1990s, there was a sea transformation to South Africa's trade connection with the rest of the world. Trade sanction was speedily eliminated because the apartheid regime was losing its support. The new government set up in 1994, quickly announced its ready plan to be more committed to the commitment made by the previous government in the Uruguay Round, resulting to the formulation of a tariff rationalization process in 1996, with the objective to simplify the tariff structure. In the same 1996, the United States granted generalized system of preferences (GSP) status to South Africa. The liberalization of the trade regime was meant to replace the quantitative restrictions with ad valorem tariff lines, a simplification of the tariff regime, followed by step by step and tangible reduction in tariff rates, and a phasing out of a substantial export subsidization scheme.

The reduction of the simple average tariff on manufacturing goods stood at 21% in 1992 which is less than that 15.6% in 1997 as well as 11.5% in 2002. While, the level of tariff lines minimized from over 13,000 in 1993 to about 7,900 in 1998. Thus, quantitative restrictions was completely removed in 1998. To boost the multilateral trade liberalization, South Africa's trade reform further involves in some bilateral or regional trade agreements. For instance, Southern African Customs Union—comprising South Africa, Botswana, Lesotho, Namibia, and Swaziland—provides for tariff-free trade for members of the union. South Africa joined the Southern African Development Community (SADC) in 1994 and a trade protocol, with the aim to create a free-trade zone over 8 years, which was signed in 1996. From this time forward, South Africa widely open up its economy for global integration.

Unfortunately, this seems not to achieve the economic need that propelled the adoption of trade liberalization policies in the nation, which is to increase trade flows (Mabugu and Chitiga-Mabugu, 2007). Despite the various trade liberalization policies adopted by South African successive government, the desired economic growth is yet to be achieved relative to the incredible export-led-growth achieved by countries such as the Singapore which practice similar policies. Instead, the country keeps struggling to achieve economic growth since independence (Amoasah, 2018). Similarly, report on export performance of Sub-Saharan economies after liberalization revealed that exports had not tangibly improve, in addition to the deteriorating state of balance of payment UNCTAD (2008). The conclusion of the study was that African countries (including South Africa) remained an import dependent

countries with the demand for their goods to be very elastic in the international market.

Recently, the trend of global trade suffered severe setback due to the COVID 19 pandemic which started in 2019 and spanned through 2021. Particularly, in 2020, it was recorded that world trade declined by 7.4%, while Africa's export and import decreased by 19.3% and 13.2% respectively (UNCTAD, 2020). This decline to a greater extend was associated with the closing of borders orchestrated by COVID-19 pandemic. Thus, it resulted in a high reduction in the volume of trading activities which by extension causes a severe fall in the level of global demand due to declining demand and tight labour market condition (CBN, 2021).

In 2020, South Africa experienced a decline in its exports and import by 14% and 21% respectively and a decline in its GDP by 7% compared to 2019 (Erero & Makananisa, 2021). From the foregoing, it appears that the South Africa's economy has not really benefitted from the adoption of trade liberalization as expected. This is due to the fact that the country has been suffering from the problem of balance of trade after embarking on so much successive trade liberalization policies. In addition to this, the rate of poverty and unemployment and inequality also characterized the economy of the country. The contending question here remain as follows: does the trade liberalization policies widely embraced by the country account for any meaningful economic growth in South Africa? This salient question demands an urgent investigation to re-verify the validity of the potency of trade liberalization in achieving economic growth in South Africa. The choice of South as the study areas is justify by the fact that the economy is among the few most liberalized economies in the continent which has adopted significant trade liberalization policies. In essence, the economy of South Africa is widely open for economic integration, as such is expected to benefit from the by-products of trade liberalisation such as technological transfer. These by-products if properly manage, is expected to propel economic growth in the country.

2. EMPIRICAL REVIEW

Globally, several scholars have tried to explain the relationship between trade liberation and economic growth without reaching a consensus. As a result, this chapter discusses the review of pertinent literature studies on the impact of trade liberalization on economic growth in South Africa and some other countries.

Duru (2021) investigated the impact of trade liberalization on economic growth for Mexico, Indonesia, Nigeria and Turkey from 1986 to 2020 with the help of Autoregressive Distributed Lag Bounds approach to co-integration and Toda and Yamamoto causality test. The long run results revealed that there is no relationship between trade liberalization and real gross domestic product per capita except for Mexico.

Qabobho et al. (2022) examined the relationship between FDI, Trade Openness and economic growth, and the role of exchange Rate regime in South Africa for the period 1995-2018 with the use of ARDL and Granger Causality test. According to the study, there

was a unidirectional causal relationship flowing from Economic growth to trade openness.

Using the nonlinear autoregressive distributed lags (NARDL) approach, Udeagha and Ngepah (2021) studied the asymmetric effect of trade openness on economic growth in South Africa from 1960 to 2016. The study revealed that Trade openness has both long and short run asymmetric effect on the economy of South Africa.

Joshua et al. (2020) employed the use of ARDL estimation technique to examine the export-led growth hypothesis for the economy of South Africa from 1981 to 2018. The findings of the study reveals that Trade Openness and exchange rate exert positive significant impact on economic growth, while FDI and external debt exert positive impact also but were insignificant. The study therefore recommends that the government of the country encourage bilateral trade in order for the country to benefit more from economic liberalization.

Akinwale and Grobler (2019) investigated the linkage between Education, Trade openness and economic growth in South Africa. The study covered the period 1984-2015 and VECM approach was used for the estimation. The result of the study shows that trade openness impact economic growth more than education.

Odebode and Oladipo (2021) adopted the vector error correction model (VECM) to examine the connection between trade liberalization and economic growth in Nigeria from the first quarter of 1981 to the fourth quarter of 2018. Finding revealed a strong positive impact of economic openness economic growth.

Emehelu (2021), examine the empirical validity of the potency of trade openness in promoting economic growth in Nigeria from 1981 to 2018 using the ordinary least squares (OLS). The empirical finding shows that exchange rates in the country exerts negative insignificant effect on economic growth. Similarly, it was revealed that trade policies adopted in Nigeria is harmful to economic growth (see also Fraihat et al., 2023).

The work of Danladi et al. (2021) from 1981 to 2016 using vector error correction model (VECM) found that a unidirectional long run causal relationship between trade liberalization and industrialization; but no short run causal relationship between the variables. Further result indicate that trade openness is a determinant of economic growth in South Africa.

Omoke and Opuala-Charles (2021) investigate the impact of economic openness on economic growth in Nigeria by incorporating the role of institutional quality from 1984 to 2017 using ARDL approach. Finding shows that an improvement in institutional quality will trigger an increase in economic growth cause by import trade in the long supported by the work of Duru et al. (2020) in Nigeria and Alugbuo and Uremadu (2020) in Nigeria.

Malefane and Odhiambo (2018) examined the impact of trade openness on economic growth in South Africa from 1975 to 2014 with the use of autoregressive distributed lag (ARDL). The variables employed in the study includes trade openness,

investment, government consumption expenditure, inflation rate, and financial development. The long run result shows that there exists a positive and significant impact on economic growth when the ratio of total trade to GDP is used as a proxy, but not when the three other proxies are employed aligning with the work of Iorember et al. (2019) in South Africa. This research paper explores the dynamic relationship between trade openness, financial development, and economic growth in Lesotho. Sanusi and Dickason-Koekemoer (2024) utilize quarterly time series data spanning from 1970 to 2021 for Lesotho. The empirical results indicate that there is no cointegration relationship between economic growth, financial development, and trade openness. However, the evidence shows a unidirectional causality from economic growth to trade openness in Lesotho.

Ogbokor and Meyer (2017) investigated the impact of foreign trade on economic performance using the economy of South Africa from 1995Q1 to 2015Q4. Vector autoregressive method (VAR) and Granger Causality test was employed for this analysis. The findings of the study show that export contributed more to economic performance compared to openness of the economy and exchange rates. Also, the result of the causality test shows that economic growth granger causes exports and also openness of the economy granger causes exports.

3. RESEARCH ANALYTICAL APPROACH

The main objective of the researcher is to investigate the impact of trade liberalization on economic expansion in South Africa spanning from 1986 and 2022, to achieve this objective, this study will employ the use of some econometric techniques which will be discussed in this chapter. The time span is limited by the availability of data which stopped at 2022.

3.1. Model Specification

This study is model after the theory of comparative advantage. According to the theory, economic growth can be achieved through the benefits or gain associated with economic openness. Gains from trade openness includes technological progress, consumption of varieties of goods and services, lower prices and so on. Empirically, this study stands on the submission of previous studies such as Qabhobho et al. (2022) and Duru et al. (2020) in the case of South Africa country.

By linear function, the model of this study is stated as follows:

$$GPD = f(TO, GGFCE, FDI, EXR) \quad (1)$$

Where; GDP is gross domestic products, TO indicates trade openness, FDI is foreign direct investment, GGFCE is general government final consumption expenditure, and EXR is exchange rate.

3.2. Research Methodology

This study employs the ARDL model to investigate the impact of trade liberalization on economic expansion in South Africa. The ARDL approach to co-integration is critical in empirical analysis as it helps to resolve the problem of endogeneity. Since individual

underlying variables stands as a single equation, endogeneity is not a problem given the absence of residual correlation. In essence, if the F-statistics demonstrates that there is a long run relationship, the ARDL error correction representation becomes relatively more efficient (Joshua, 2019).

According to Peasaran et al. (2001) the bound test for co-integration equation employed by this study to estimate the ARDL co-integration is specified as:

$$\begin{aligned} \Delta LNGDP_t &= \alpha_{01} + \beta_{11}LNGDP_{t-1} + \beta_{21}TO_{t-1} + \beta_{31}GGFCE_{t-1} \\ &+ \beta_{41}FDI_{t-1} + \beta_{51}EXR_{t-1} + \sum_{i=1}^p \alpha_{1i}\Delta LNGDP_{t-1} \\ &+ \sum_{i=1}^q \alpha_{2i}\Delta TO_{t-1} + \sum_{i=1}^q \alpha_{3i}\Delta GGFCE_{t-1} \\ &+ \sum_{i=1}^q \alpha_{4i}\Delta FDI_{t-1} + \sum_{i=1}^q \alpha_{5i}\Delta EXR_{t-1} + \mu_{it} \end{aligned} \quad (2)$$

Hypotheses:

$$H_0 \text{ (longrun relationship does not exists): } \beta_{1i} = \beta_{2i} = \beta_{3i} = \beta_{4i} = \beta_{5i} = \beta_{6i} = \beta_{7i}$$

$$H_1 \text{ (longrun relationship does exists): } \beta_{1i} \neq \beta_{2i} \neq \beta_{3i} \neq \beta_{4i} \neq \beta_{5i} \neq \beta_{6i} \neq \beta_{7i} \text{ (i = 1, 2)}$$

Decision rule: Reject H_0 if F-statistics is greater than the upper bound critical value. That is, there is a long run relationship between the explained and the explanatory variables.

3.3. Error Correction Model

The error correction model (ECT) is a mechanism that give the feedback effect or speed of adjustment of the model. It reveals how much and faster the disequilibrium in the short term have been adjusted. In essence, it entails the extent to which any imbalance in the previous period has been corrected in the independent variable (Y). The generalised ARDL regression model is limited because it provide only the short run result. However, the long run finding is more critical to researchers as it guide serve as a guide for policy formulation. Hence, the co-integration test and error correction model becomes imperative (Nkoro and Uko, 2016). An error correction model allows us to study the short run dynamics in the relationship between y and x (Wooldridge, 2015).

The ECM specification for the models (without the lag of the independent) of this study are given as (Nkoro and Uko, 2016; Wooldridge, 2015):

$$\begin{aligned} \Delta LNGDP_t &= \alpha_{01} + \sum_{i=1}^p \alpha_{1i}\Delta LNGDP_{t-1} \\ &+ \sum_{i=1}^q \alpha_{2i}\Delta TO_{t-1} + \sum_{i=1}^q \alpha_{3i}\Delta GGFCE_{t-1} + \\ &\sum_{i=1}^q \alpha_{4i}\Delta FDI_{t-1} + \sum_{i=1}^q \alpha_{5i}\Delta EXR_{t-1} + \lambda ECT_{t-1} + \mu_{it} \end{aligned} \quad (3)$$

Where;

- $\lambda = (1 - \sum_{i=1}^p \delta_i)$, speed of adjustment parameter with a negative sign.
- $ECT = (lngdp_{t-1} - \theta X_t)$, the error correction term

- $\theta = \frac{\sum_{i=0}^q \beta_i}{\alpha}$, is the long run parameter
- $\alpha_{1i}, \alpha_{2i}, \alpha_{3i}, \alpha_{4i}, \alpha_{5i}, \alpha_{6i}, \alpha_{7i}$ are the short run dynamic coefficients of the model's adjustment long run equilibrium.

If $\lambda > 0$ and $lngdp_{t-1} > \theta X_t$ then it implies that GDP in the previous period has overshoot the equilibrium. But since $\lambda > 0$, the error correction term works to push y back toward the equilibrium. The same thing applies when $lngdp_{t-1} < \theta X_t$, the error correction term induces a positive change in GDP back toward the equilibrium (Wooldridge, 2015).

Thus, a positive coefficient of ECT_t signifies a divergence, while a negative coefficient present a convergence. A coefficient of $ECT = 1$, suggest that 100% of the adjustment occurred speedily within the period, while an estimated coefficient of $ECT = 0.5$, implies that 50% of the adjustment takes place each period/year. More critically, $ECT = 0$, shows that there is no adjustment, hence, making a meaningless representation of the long run relationship Nkoro and Uko (2016).

4. EMPIRICAL RESULTS

This section focuses on the presentation of the result of the analysis. These results are computed from secondary data sources of different macroeconomic variables in South Africa. The descriptive statistics is traditionally adopted to ascertain the nature and the characteristics of the series under investigation. The series incorporated in the model includes gross domestic product (GDP), trade liberalization (TO), foreign direct investment (FDI), general government final consumption expenditure (GGFCE) and exchange rate (EXR). The finding as reported in Table 1 revealed that GDP is at the minimum of 25.9 and maximum at about 26.6, and averaged at 26.3. This gap between the minimum and maximum indicate that over the time frame of the study, GDP was averagely stable. The maximum values of 4.1, 27.5, 2.3, 75.9 achieved by trade liberalization, government general consumption expenditure, foreign direct investment and exchange rate respectively portray that exchange rate generate the highest value among the variables incorporated in the model of the study. In contrast, FDI achieved the lowest value of -6.1 among all the series under investigation. The probability of Jacque-Bera statistic which is used to determine normality of series indicates that gross domestic product (GDP) and trade liberalization (TO) trend normally (prob. >0.05), whereas the trend of foreign direct investment (FDI), general government final consumption expenditure (GGFCE) and exchange rate (EXR) failed to fulfil the condition of normal distribution as their probability values are <5% level of significant.

Furthermore, all the variables of this study were subjected to unit root test to ascertain the level of integration which in turn informed the choice of appropriate method of estimation. This is done to avoid spurious regression result which can be misleading in policy implication. To achieve this critical objective, this study

Table 1: Summary statistics

Frequency	LNGDP	LNT0	LNGGFCE	LNFDI	EXR
Mean	26.30500	3.890766	3.625471	-0.404090	10.14787
Median	26.36708	3.920112	2.878841	-0.101610	7.321222
Maximum	26.61133	4.189269	27.52571	2.269850	75.96437
Minimum	25.91265	3.535768	2.763847	-6.081368	2.273468
SD	0.253270	0.173103	4.291053	1.630434	12.45013
Skewness	-0.256761	-0.459059	5.477878	-1.739816	4.648958
Kurtosis	1.498359	2.449566	31.01569	7.008376	25.19856
Jarque-Bera	3.463116	1.575639	1244.248	38.74051	796.4375
Probability	0.177008	0.454836	0.000000	0.000000	0.000000
Sum	868.0651	128.3953	119.6406	-13.33498	334.8797
Sum Sq. Dev.	2.052655	0.958866	589.2202	85.06610	4960.187
Observations	33	33	33	33	33

Source: Author's computation. SD: Standard deviation, EXR: Exchange rate

employed the use of the Philip Peron (PP) unit root test to test for the stationarity of the series incorporated in the model. The unit root test resulted reported in Table 2 shows that only foreign direct investment was stationary at level at 1% significant level. Thus, GDP, GGFCE, TO and EXR were integrated of order one (that is I[1]) at 5% level of significance. This suggest that the ARDL is the most suitable method of estimation for the model of this study.

It was Pesaran and Shin (1999) who developed the ARDL dynamic model and was later upheld by Peasaran et al. (2001) for the purpose of testing for cointegration of an economic model. According to Nkoro and Uko (2016), ADRL approach to cointegration is more realistic and efficient relative to other methods. The result of the long run cointegration is presented in Table 3. Based on the result, this study failed to accept the null hypothesis of no co-integration among the variables in the long run since the F-Statistics (6.809334) is greater than all the lower I (0) bound test (2.4, 2.9 and 4.1) as well as all the upper I (1) bounds (3.4, 4.1 and 5.5) at 5% level of significances. Therefore, the study concluded that there exists a long run relationship between GDP and the independent variables in the model.

Table 4 shows the short run dynamic estimates of the link between trade liberalization and economic growth in South Africa. The outcome of the model estimation shows that trade liberalization was discovered to exert positive significant influence on economic growth at 1% level of significance in the current year. Thus, a 1% increase in trade liberalization would induce a 0.54% increase in GDP. This implies that trade liberalization is a major promoter of economic expansion in South Africa in the current year aligning with the work of Qabobho et al. (2022) but negate the finding of Udeagha and Ngepah (2021) both in South Africa. According to Udeagha and Ngepah (2021), trade openness exerts significant impact on economic growth in the short run only. Unfortunately, in the last 1 year and 2 years trade liberalization demonstrates strong negative impact on economic growth in South Africa, such that a 1% increase in trade liberalization will cause inverse direction in growth by 0.51 and 0.24 respectively. This might not be unconnected to inconsistent policy but must have been corrected in the current year. In general, trade liberalization remains an exponential determinant of growth in South Africa. Similarly, government general final consumption expenditure (GGFCE) confers a strong positive impact on economic growth in the current year (this outcome contravened the result of the last 2 year where

Table 2: ADF stationarity test result

Frequency	PP	PP	Order of integration
Variables	Level	First difference.	O (I)
<i>LnGDP</i>	4.3491 (1.0000)	-2.7985*** (0.0065)	I (1)
<i>LnFDI</i>	-2.7631*** (0.0074)	-8.4520*** (0.0000)	I (0)
<i>LnGGFCE</i>	-1.0366 (0.9181)	-32.9073*** (0.0000)	I (1)
<i>LnTO</i>	-0.8541 (0.8904)	-5.4385*** (0.0000)	I (1)
<i>LnEXR</i>	-1.9586 (0.9863)	-5.6967*** (0.0000)	I (1)

Source: Author's computation. PP: Philip peron

Table 3: Cointegration test

F-Bounds test		Null hypothesis: No levels relationship		
Test statistic	Value	Signif. (%)	I (0)	I (1)
Asymptotic: n=1000				
F-statistic	6.809334	10	2.2	3.09
K	4	5	2.56	3.49
		2.5	2.88	3.87
		1	3.29	4.37
Finite sample: n=35				
Actual sample size	28			
		10	2.46	3.46
		5	2.947	4.088
		1	4.093	5.532

Source:

Source: Author's computation

Table 4: ARDL short run dynamic estimation

Variables	Coefficient	Std. error	t-statistics	Prob.
C	9.885058	2.005583	4.928770	0.0079
D (LNT0)	0.541295	0.081888	6.610204	0.0027
D (LNTO[-1])	-0.511403	0.108548	-4.711307	0.0092
D (LNTO[-2])	-0.246843	0.081430	-3.031357	0.0387
D (LNGGFCE)	0.036783	0.006998	5.255954	0.0063
D (LNGGFCE[-1])	-0.405642	0.169550	-2.392457	0.0750
D (LNGGFCE[-2])	-0.885865	0.243870	-3.632527	0.0221
D (LNFDI)	-0.016095	0.007101	-2.266643	0.0860
D (LNFDI[-1])	0.003981	0.004835	0.823508	0.4565
D (LNFDI[-2])	0.010740	0.004347	2.470874	0.0689
D (EXR)	-0.014411	0.002883	-4.998935	0.0075
D (EXR[-1])	-0.009232	0.003127	-2.952477	0.0419
D (EXR[-2])	-0.016538	0.004767	-3.469520	0.0256
CointEq(-1)*	-0.590834	0.061624	-9.587806	0.0007

Source: Author's computation. ARDL: Autoregressive distributed lag, EXR: Exchange rate

the impact of GGFCE was negatively felt in the economy). Thus, a 1% increase in GGFCE would enhance GDP by 0.03%. This suggests that the expansion of government budget in South Africa is yielding positive results through the promotion of economic activities and capacity expansion in the economy.

Furthermore, the result showed that the influence of foreign direct investment is negative and insignificant in the current year, implying that FDI entry exerts a negative and weak influence on economic growth in South Africa, aligning with the work of Qabobho et al. (2022) in South Africa. A 1% increase in FDI entry would reduce economic growth by 0.01%. In contrast, the effect of FDI entry in the last 1 year and 2 years is positive though insignificant. Specifically, a 1% increase in FDI entry will sluggishly improve growth by 0.003% and 0.01% in the last 1 year and last 2 years respectively.

On the other hand, exchange rate proves to be the determinant of economic growth in South Africa in the short run through its strong influence on growth. A 1% increase in exchange rate in the current year, last 1 year and the last 2 years, generated a strong and significant inverse growth rate of 0.01%, 0.009% and 0.01% respectively. This suggests that the exchange rate currently practiced in South Africa is anti-growth in nature due to its instability. From the above outcome, a conclusion can be made on the fact that the South African economy is trade-openness-induced in the short run.

The long run result presented in Table 5 indicates that trade liberalization strongly projects economic growth in South Africa. Thus, a 1% increase in Trade liberalization would significantly drive economic growth by 1.8%. This result is in accordance with the a priori theoretical expectation of the endogenous growth theory. Endogenous growth models, therefore, hold that trade provides access to imported products, which embody that new technology; additionally, trade alters (mainly increases) the effective size of the market facing producers which raises returns to innovation; and affects a country's specialization in research-intensive technologies and production systems. The findings also corroborate with the empirical work of (Qabobho et al., 2022; Joshua et al., 2020; Akinwale and Grobler, 2019; and Malefane and Odhiambo, 2018) in South Africa.

According to Qabobho et al. (2022), trade openness policies adopted by the South African successive governments do significantly promote economic growth of the country. Noticed that the relationship between trade liberalization and economic expansion is elastic, implying that a little change in trade liberalization will cause a more than proportional transformation

in economic growth. Thus, the South African economy cannot experience the desired growth without engaging in economic openness. This is critical and educative to the government and stakeholders of South Africa.

Further results discovered that a 1% increase in general government final consumption expenditure causes a strong 0.8% advancement in economic growth in the long run. By this, we conclude that government expenditure is a critical factor for the enhancement of economic growth in South Africa, aligning with our a priori expectation and the theoretical underpinning of the Keynesian theory of national income. According to the theory, increased government expenditure has the capacity to revive an economy from any decaying position. Empirically, this is supported by the work of Joshua (2019) in Nigeria.

Contrary to our a priori expectation, foreign direct investment exerts weak and negative influence on economic growth in the long run. Specifically, a 1% increase in FDI entry will lead to a 2.4% decrease in economic growth which collaborates the work of Qabobho et al. (2022) in South Africa. According to the study, FDI is not a major determinant of economic growth in the economy of South Africa. Unfortunately, this negates our a priori expectation as well as the theoretical foundation of modernization theory which claims that foreign direct investment inflow will benefit the recipient economy. Exchange rate was also discovered to have a weak negative influence on economic growth. As a 1% increase in Exchange rate would degenerate intangible reversal in GDP by 0.01%. Throughout 2023 and the first/second quarter of 2024, the rand weakened against the US dollar. "A stable exchange rate is desirable as it decreases inflation volatility, lowers uncertainty and interest rates, and promotes foreign direct investment in the country" (Ngalawa et al., 2023).

In order to ensure the validity, stability, credibility of the model, this study conducted four diagnostic tests on both model South Africa. The results of these tests are depicted in Table 6 below. The residual normality test measures the normality of the variables residuals. Based on the result in Table 6 and Figure 1, the probability value of the Jarque-Bera Normality test is greater than the standard 5% significance level. This implies that the variables in the model are normally distributed, hence we fail to reject the null hypothesis. Similarly, the presence of a serial correlation was tested using the Breusch-Godfrey Serial Correlation LM Test. The null hypothesis assumption of no serial correlation cannot be rejected since the probability value is >5% significance level. Furthermore, the result of the Heteroscedasticity test conducted

Table 5: Estimated ARDL long run result

Variables	Coefficient	Std. error	t-statistic	Prob.
TO	1.925417	0.130476	14.75692	0.0001
GGFCE	0.811328	0.185313	4.378149	0.0119
FDI	-0.040699	0.018382	-2.214103	0.0912
EXR	-0.014141	0.005490	-2.575539	0.0616
C	16.73068	0.600367	27.86743	0.0000

Source: Author's computation. ARDL: Autoregressive distributed lag, EXR: Exchange rate, TO: Trade liberalization, FDI: Foreign direct investment, GGFCE: General government final consumption expenditure

Table 6: Diagnostics tests

Tests	F. statistics	Prob.	Decision rule
Normality test	0.0202	0.9899	Residuals are normally distributed
Serial correlation	7.1031	0.2675	Absence of serial correlation
Heteroscedasticity	1.1804	0.4901	Absences of heteroscedasticity
Ramsey-reset	0.0695	0.8092	Model is well specified

Source: Author's computation

Figure 1: Normality test

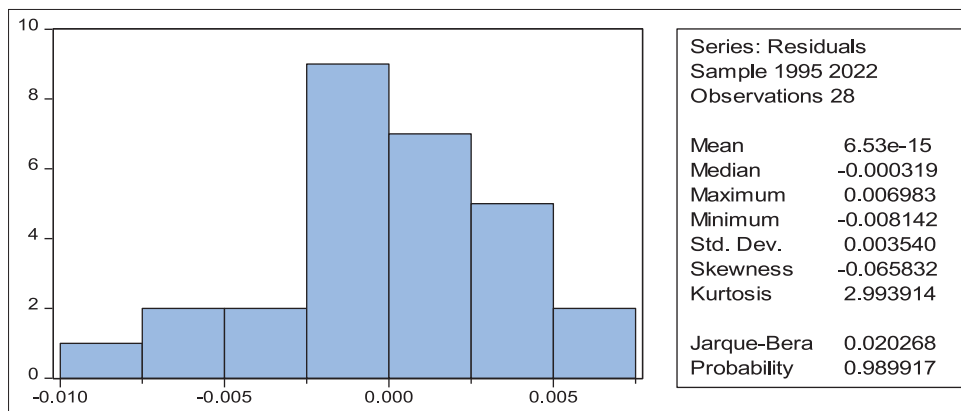
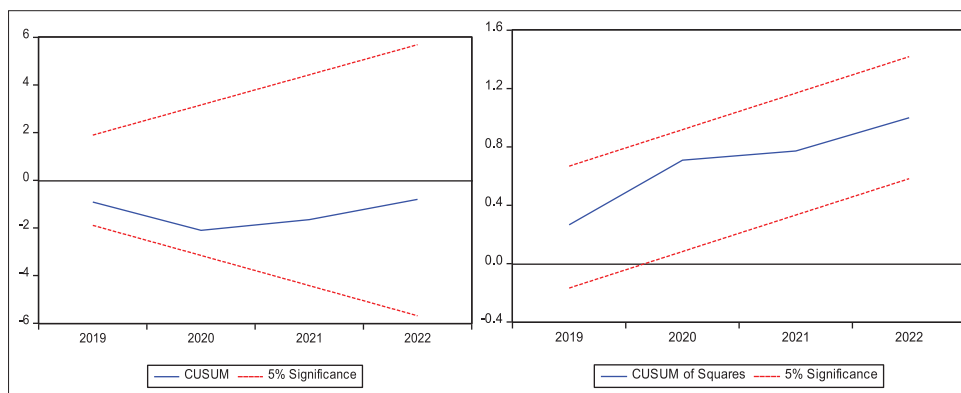


Figure 2: Cumulative sum of recursive residuals (CUSUM) test and CUSUM of square



using the White test shows the absences of heteroscedasticity in both models. Lastly, the Ramsey-Reset test was used to show if the explanatory variables are sufficient enough to explain the dependent variable. Since the Ramsey-Reset probability value is >5% significance level, hence, we conclude that the models are well specified, suggesting no misspecification of the model.

To ascertain the stability of the model, the study subjected the model to cumulative sum of recursive residuals (CUSUM) and the cumulative sum of recursive residuals of the squares (CUSUM of square) tests. The stability test shown in Figure 2 indicates that the plot of the CUSUM statistics and CUSUM of square for the model is within the critical bound (the straight lines represents the critical bounds at 5% level of significances). Hence, the model is stable and fitted for policy implication. In conclusion, the model estimated in the study is reliable, stable, valid and credible since the model passed all the diagnostics and stability tests.

Furthermore, the model of this study was subjected to a granger causality test. Causality test is adopted to determine the prediction of the dependent variable by the independent variable. The finding is presented in Table 7 which revealed that only GDP is a predictor of trade openness in South Africa as indicted in the unidirectional causal effect running from GDP to trade openness aligning with the work of Qabhobho et al. (2022) in South Africa. In essence, economic openness does not predict the growth of the gross domestic product. Thus, as the economy of South Africa grows, it

Table 7: Granger causality test

Null hypothesis	Obs	F-statistic	Prob.
O does not granger cause GDP	33	0.30399	0.8724
GDP does not granger cause TO		4.80352	0.0055
GGFCE does not granger cause GDP	33	1.28340	0.3042
GDP does not granger cause GGFCE		6.73671	0.0009
FDI does not granger cause GDP	28	0.72046	0.5885
GDP does not granger cause FDI		0.38925	0.8137
EXR does not granger cause GDP	33	0.21140	0.9295
GDP does not granger cause EXR		7.16369	0.0006

Source: Authors computation. GDP: Gross domestic product, TO: Trade liberalization, FDI: Foreign direct investment, GGFCE: General government final consumption expenditure

will attract more trading opportunities. More countries are willing to trade with the South African economy due to the evidence of the expansion of the domestic market available for their goods and product for transactions. Similarly, the finding reveal a one way causal effect running from the GDP to GGFCE, implying that economic growth drive government expenditure, aligning with the theoretical underpinning as posits by the Wagner’s law. According to the theory, economic expansion will naturally induce state spending. However, this is the opposite of the Keynesian theory of national which posits that government expenditure is the promoter of economic growth. A none causal relationship was found between FDI entry and economic growth in South Africa in the period under review corroborating the work of Qabhobho et al. (2022) in South Africa. Finally, a unidirectional relationship exist between GDP and exchange rate, indicating that the former is a driver of the later.

5. CONCLUSION AND RECOMMENDATIONS

The issue of trade liberalization is a current issue of global concern. This issue is sensitive especially to African countries who have adopted several trade liberalization policies such as export-led growth nexus in their quest to attain economic growth. The most important finding of the analysis shows that trade liberalization is a key factor that promote economic growth in South Africa. The implications is that the national economy will benefit from trade liberalization. Secondly, general government final consumption expenditure exerts a strong effect on economic growth of South Africa. The overall finding indicates that, the involvement of the economy in foreign trade, will generate trickle-down effects resulting to larger economic of scale, gains from information and technological advancement, enhancement of the competitiveness of the nation's export and by extension induce growth within this economy.

In view of the above findings, the following recommendation are made for policy implication:

It is advisable for the government of the country to further strategically open it economic border for full economic interaction with her sister African countries and the rest of world. Furthermore, the economy should adopt liberalization promoting policies such as diversify the structure of their export, by ensuring that more manufactured products are exported. This is pertinent so as to increase their gains from trade openness. Thus, policies targeted at intensifying domestic production by revitalizing the domestic industries to enable them produce goods that can compete favourably with foreign goods should be adopted. There is the need to strengthen the current liberalization policies which are already yielding results for better performance.

Finally, exchange rate is an important component of trade, it is a major price that influence the operation of the economy as a whole. It determines the rate of international transaction between the domestic economy and the rest of the world. It is therefore important for monetary authorities to monitor and moderate the movements in the rates, keeping it at a stable rate that is healthy for the domestic economy. That way, it will foster competitiveness, boost investors' confidence and improve export growth.

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