

DOMESTIC DEMAND OR TRADE LED GROWTH HYPOTHESIS FOR SOUTHERN AFRICA DEVELOPMENT COMMUNITY (SADC) COUNTRIES? A SEARCH FOR A NEW DEVELOPMENT PARADIGM.

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Abstract: There have been weaker growth rates, globally, being coupled with an increase in trade protectionist policies, fall in commodity prices, and high economic uncertainty in developed nations. Developing countries face weak external positions due to overreliance on trade to improve growth. In this context, this study uses the Auto Regressive Distributed Lag (ADRL) approach to evaluate the applicability of the trade led and domestic demand led growth (DDLG) hypothesis using a sample of 12 SADC countries over the period 1994-2019. The DDLG hypothesis is more applicable over both the short and long run. The exports led growth hypothesis is not applicable while the imports explain growth in the long run. There is joint causality from domestic demand and imports to growth. Individual countries adjust to the long run equilibrium at different speeds which confirms short run heterogeneity while long term outcomes converge. The study offers some policy implications.

JEL Codes: E21, F18, F43, H54

Key Words: Domestic Demand, Trade, Economic Growth, SADC, ADRL

1. INTRODUCTION

This study evaluates the contribution, to economic development, of trade and domestic demand led growth strategies within the Southern Africa Development Community (SADC). This follows the changes in the current environment in which global demand is falling due to the shocks experienced in SADC's traditional markets. The region's growth potential currently relies on revenues from trade mainly with the United States and European Union who may not always need products from outside their borders. The trade led growth (TLG) paradigm is explained using import and/or export led growth paradigms. Export led growth (ELG) focuses on enhancing the productive capacity by considering demand in foreign markets. It came about in the 1970s as economists agreed on the importance of openness to growth. All countries would benefit based on the theory of comparative advantage (Ricardo, 1817). It plays a key role in economic growth as the earnings potential of commodities sold outside the country increases (Palley, 2002). Import led growth (ILG) paradigm is supported by Rivera-Batiz and Romer (1991) who argue that high growth is followed by high import demand. Imports help to attain industrialization in countries that are less capital intensive through the transfer of advanced technology. Imports increase the variety of products and enhance efficiency in local production by promoting competition. They increase the

production capacity of the economy as new technologies flow in, generate revenue from tariffs and create additional products for sale abroad to raise foreign currency (Grossman & Helpman, 1991, Mujahid et al, 2019).

However, these views are losing support due to changes in market conditions in different nations. For example, recessions have seen a fall in global demand and stagnation in developed economies. Debt saturation in developed markets results in a fall in demand of products from emerging markets. Rising economies like China are seen to crowd-out emerging economies following the ELG strategy by diverting foreign direct investment (FDI) and demand away from them (Palley, 2011a). The TLG strategy suffers from the problem that it largely links growth to demand in another country (Blecker, 2001). This may lead to excess supply and later deflation. Developing countries suffer as their terms of trade deteriorate which result in a fall in foreign currency earnings and failure to service debts. They are adversely affected by a fall in demand in their target export markets. Evidence shows that TLG strategy is no longer tenable for developing countries. Instead, such countries may maintain exports and/or imports whilst shifting towards domestic demand led growth (DDLG) strategy. This strategy involves the building of social safety nets, linking remuneration to productivity, restructuring of fiscal policies, and improving investment in infrastructure to build local capacity. It is accompanied by provision of health care and education to improve human capital. However, this strategy should be supported by collective action by all countries to end undervalued exchange rates systems, use of global standards and reduce incentives to attract export oriented FDI. It requires improved income distribution, good governance, financial stability, and supply of priced development finance (Palley, 2002).

The current external environment is faced with challenges which have resulted in weaker than expected rates of economic growth. Globally, increase in trade protectionism policies, fall in commodity prices, and economic uncertainty in developed nations have posed challenges that slow the recovery path even before the advent of Covid-19 pandemic. The International Monetary Fund (2020) report shows that economic activity slowed down from 3.6% (2018) to 2.9% (2019). Further decline is expected in 2020 which may worsen more than what was experienced during the 2008/9 global crisis. There is trade policy uncertainty and stress in emerging economies is rising. Domestic demand has declined and there is pressure on financial resources. This reduces demand for export from emerging and less developed economies. Demand and prices for primary products like oil and minerals, mainly coming from the developing world, is falling which affects their revenue flows. Debt levels are rising, and investment is falling in the developing countries. The increasing lockdowns, due to Covid-19, are causing the platform to trade fairly to remain skewed and developing countries are losing much. The most severely affected sectors include, but not limited to, tourism, aviation, construction, real estate, education, energy, manufacturing, and financial services. The external position for SADC is also expected to decline further with weak demand in commodities and the need to import vaccines. Opportunities have emerged in retail, technology, food processing and communications which can improve local demand (SADC, 2020). Considering the current developments in the global economy inward

looking policies may be ideal for the developing world as traditional destinations for their products are susceptible to shocks which adversely affect demand.

SADC promotes integration to develop the Southern Africa region. It has sixteen (16) member states which collectively seek to promote sustainable and equitable economic growth and socio-economic development. This is supported by efficient productive processes, strong cooperation, peace and security and good governance. Most of the economies are driven by agricultural activities and trade in primary products like minerals and oil. Exports are not diversified and are vulnerable to changes in global prices which reduces the terms of trade. More so, exports from the region are less diversified in terms of destinations as they are mainly sent to the United States and European Union. Thus, revenues are adversely affected by global shocks, for example, like what happened during the 2008/9 crisis (Mutenyo, 2011). Member states still face the need to develop local capacity by investing in infrastructure and supporting local firms to increase manufacturing output. This in turn requires developing demand to increase consumption levels at home and reduce overreliance on external demand.

Some key indicators are summarized in Table 1 for the period 2007 to 2017. The region has growth rates in GDP (GDPg) of less than 6% per annum on average. The level of growth rate is 1.8% (2018) compared to 2.1% (2017). This shows a fall in growth rate in general. Disparities have been registered in the rate of growth by individual countries. For example, in 2018, Seychelles has a growth rate of 7.9%, Tanzania has a growth rate of 7% while Angola and Namibia have negative growth rates in 2018. Zimbabwe and Tanzania have high growth rates of 12.1% and 8.3% respectively in manufacturing in 2018. An alternative source of growth is manufacturing value added (MVA) which accounts for between 11% and 13% of GDP. The region has been on slow growth path post the 2009 global financial crisis and manufacturing shows huge potential to drive growth. The inflation rate for region has been low and stable being between 5% and 10% on average. Intra-SADC imports of goods as a % of total imports (IIMP) has been around 20% of total imports into the region while Intra-SADC exports of goods as a % of total exports (IEXP) has shown a steady rise reaching its highest of 22.6% in 2016. Both the share of exports as a % of GDP (EXP) and the share of imports (IMP) have shown a steady decline between 2008 and 2017. There is potential to improve growth by focusing on intra-trade in SADC considering the decline in the trade with the rest of the world (SADC, 2018).

Table 1: Key Indicators

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
GDPg	6.8	5.1	0.2	4.5	4.2	4.5	4.0	3.5	2.2	1.5	2.1
Inflation	8.9	13.4	10.8	7.0	7.5	8.7	6.4	5.3	5.4	9.2	10.1
MVA	12.1	13.0	13.1	12.3	11.3	11.1	10.9	11.2	11.2	11.5	11.2
IIMP	18.1	17.5	20.1	19.8	19.1	18.6	19.1	17.7	20.1	20.7	19.7
IEXP	15.3	15.2	18.7	17.9	16.5	18.6	19.2	19.8	21.8	22.6	20.3
IMP	27.3	31.1	29.7	25.4	27.1	29.9	31.0	30.5	28.0	25.2	23.6
EXP	31.1	36.7	27.9	30.1	31.5	30.4	30.5	28.8	25.4	25.3	25.0

Source: SADC Selected indicators 2018.

The current global Covid-19 pandemic has brought challenges for the region as well. Among them, the health sector has been strained as it experiences shortage of drugs and equipment, increase in gender-based violence, food insecurity and slow down in economic activity in member states. While the wide spread of Covid-19 has been curbed on the greater part, the measures taken expose the region to socio-economic challenges. Global supply chains have been disrupted which lowers global demand for exports by member states. Both intra and extra trade have been falling following the pandemic. The flows of foreign capital from developed nations have been disrupted as they divert resources locally to deal with the impending health and economic crisis. The main sectors of the economy that rely on external demand like tourism, agriculture, mining, and manufacturing have been adversely affected. This has resulted in a decline in revenues flows of resource rich SADC member states like Democratic Republic of Congo (DRC), Botswana and Angola. The movement of goods and people is still restricted globally which further affects trade and hence economic growth. This is likely to persist considering that the role out of Covid-19 vaccination will take time to administer and ensure that the economies recover. The region is still faced with the need to develop uniform guidelines that seek to contain the negative impact of Covid-19 by reducing the supply chain disruptions and improving trade flows. Thus, SADC is susceptible to global shocks which requires the discovery of new sources growth.

This study argues that one such strategy is to develop local capacity in the manufacturing sector and boost sustainable domestic demand. The latter is an alternative source of growth which does not relies on external markets. This is supported by previous studies (Felipe and Lim, 2005, Medina-Smith, 2001, Tsen, 2007) that advocate for a shift from TLG to DDLG. Increase in domestic demand helps to weak external demand (Yeah, 2017). The ELG & ILG approaches can still be retained (Mishra and Nancharaiah, 2016, Mohanty, 2012) while building capacity to increase domestic demand and supporting local firms. The latter can be a source of diversification for economies within the SADC region and transform themselves into the higher income brackets as they intensify on manufacturing and later industrialization. It is therefore critical to rely on empirical evidence to gauge the applicability of DDLG hypothesis within the region. There is need for justification to support this new growth paradigm as opposed to the TLG paradigm. For a policy maker the key question is: Does evidence support the trade led growth hypothesis or DDLG hypothesis or both for SADC member states? This is further broken down as follows: Do exports or import matter for growth over the short and long term? How does domestic demand affect the rate of growth over both the short and long run? Does domestic investment affect the rate of growth?

Findings show that the DDLG hypothesis is more applicable within SADC over both the short and long run. The ELG is not applicable while the ILG hypothesis is important in the long run. Specifically, the study shows that final consumption expenditure drives growth in the short term while final government expenditure drives growth in the long term. The study confirms joint causality from domestic demand and imports to growth. Individual member states also adjust to the long run equilibrium at different speeds which confirms short run heterogeneity while long term outcomes converge.

The rest of the study is organised as follows: section two reviews literature on the export/import led growth hypothesis and DDLG hypothesis, section three explains the methodology applied, section four presents and discusses major findings and section five concludes the study and gives policy implications.

2. LITERATURE REVIEW

Evidence shows that there are several patterns of economic growth: consumption driven, export led, import led, oil rich, savings based, government spending and domestic investment based (Kim, 2017). Furthermore, Priewe (2015) identifies four traditional mainstream development strategies (Washington consensus, neo liberalism, good governance, and millennium development goals) and three long debated key strategies (foreign aid development based, industrialization or growth dominated by exports of primary products and inward or outward development with export led growth). This study focuses on three strategies for growth: export led growth (ELG), import led growth (ILG) and domestic demand led growth strategy (DDLG).

Felipe and Lim (2005) argue that as much as most Asian countries are claiming to be shifting from ELG strategy to DDLG strategy there has not been evidence to that effect. Countries hit by the 1997 crisis in the region have reduced DDLG strategy at the expense of ELG strategy. Domestic demand and net exports increase in countries which did not experience a crisis. However, the ELG strategy does not contribute to the Asian crisis. Their study advocates for both ELG and DDLG strategies for sustainable growth. Oreiro et al (2012) argue that the DDLG hypothesis explains the rate of growth in GDP for the economy. Their study finds no evidence of supply side constraints limiting growth. The absence of consistent patterns in aggregate demand expansion result in stagnation of the economy. Their study, however, advocates for ELG strategy on the premise that domestic demand marginally stimulates growth. Thus, maintaining an undervalued exchange rate is ideal in this context.

In Africa, the ELG hypothesis is found to be valid. However, growth rises by a less than proportionate amount to a change in exports (Biyase and Zwane, 2014). Furthermore, Palley (2011b) argue that the ELG hypothesis may harm developing countries due to global shocks. Razmi (2008) opines that the ELG model may become ineffective where there are changes in global demand due to a rise in protectionism tendencies by other countries. Global shocks negatively affect countries using this strategy. These views are supported by Yeah (2017) who suggests that the global financial crisis in 2008/9 marked the onset of the shift from ELG to DDLG strategy. The latter helps a country to offset the challenges experienced in employing the former. DDLG requires support in form of efficiency in the use of resources, skills, human capital, physical and other social infrastructures. Furthermore, this strategy requires high productivity growth in domestic oriented firms more than export-oriented ones. In addition, the study shows that these two strategies are complementary and not substitutes in promoting growth. This is consistent with Mishra and Nancharaiah (2016) who show that though growth rate may be largely explained by domestic demand, external demand is still key as well.

Furthermore, Lukin, Leonidova and Sidorov (2018) support the DDLG hypothesis which should be underpinned by developing policies that stimulate local demand through improving household consumption patterns. The promotion of products that meet local preferences would be ideal. This is supported by previous studies (Mohanty and Reddy, 2010, Robertson, 2010) which show that an economy grows because of domestic demand. It is a result of an increase in total factor productivity as opposed to investment. On the contrary, Isaiah Zayone, Henneberry and Radmehr (2020) support the ELG hypothesis since long run growth is driven by exports from manufacturing, mineral and non-mineral categories while short run growth is driven by non-manufacturing exports. Furthermore, agricultural exports drive growth in the short run while mineral exports drive non-export GDP in the long run. The ELG hypothesis holds in manufacturing and service exports (Tekin, 2012). This is supported by a study Shafiullah, Selvanathan, & Naranpanawa (2017) which shows that economic growth is driven by mining and fuel exports. Kalaitzi and Cleeve (2018) opine that manufactured exports contribute to growth more than primary exports in the long run. Their study shows bidirectional causality between manufactured exports and growth. Sunde (2017) supports a bidirectional causality between exports and growth. In addition, findings by Hye, Wizarat and Lau (2013) support the ELG hypothesis for different countries in Asia. They find that the ELG model is applicable to all countries. The ILG hypothesis is also applicable suggesting that both domestic and international demand are important for growth (Hye et al, 2013).

Literature also confirms the existence of imports led growth (ILG) hypothesis. For example, Rivera-Batiz (1985) shows that imports grow as economic activity rises in the country. Growth arises as more products are availed to the local economy and revenues increase. The local economy benefits from externally created innovations and information technology. Previous studies (Ugur, 2008, Amiri and Gerdtham, 2011, Dutta and Ahmed, 2004, Evans, 2013, Moroke and Manoto, 2015, Bakari & Mabrouki, 2017) confirm the existence of import-GDP relationship. Awokuse (2003) suggests that the ILG hypothesis exists and there is potential reverse causality. Alam (2012) argues that the ILG hypothesis does not hold in both short and long run periods. On the contrary, Mujahid et al (2019) suggests that ILG play a more significant role in growth than exports in an economy in which raw materials, intermediate manufacturing and capital goods have a large share in imports.

Some countries are using both TLG & DDLG strategies but with varying effects. For example, Mohanty (2012) shows that India employed them alternatively in different periods to evade effects of global business cycles and to achieve sustainable growth. Both DDLG strategy and ELG strategy are cointegrated with growth in the long term. The use of ELG strategy is ideal where a country has not fully exhausted its global competitiveness. Alvarado, Ochoa-Jimenez and Garcia-Tinisaray (2018) argue that the effect of internal demand on growth is higher than that of external demand for Latin American countries. Their study shows that findings are influenced by the level of development. Exports are important in driving growth in high income countries while internal demand matters more for growth in upper middle-income countries. However, results remain inconclusive for

lower middle-income countries. Tsen (2007) shows that there is evidence of causality between exports, consumption, and growth. Growth is important to these variables including investment. Findings show differences in relationships across countries. For example, countries with a higher ratio of openness tend to be more inclined to ELG compared to DDLG. Countries with higher consumption to gross domestic product ratio did not show strong support for DDLG hypothesis. However, consumption is still more important in explaining growth compared to investment.

3. METHODOLOGY

The empirical analysis applied in this study is drawn from previous work (Asteriou, Pilbeam & Pratiwi, 2020, Mallick, Mallesh & Behera, 2016) that applied panel Autoregressive Distributed Lag (ARDL). Studies (Pesaran and Shin, 1999, Pesaran, Shin & Smith 1999) show that this approach is more efficient in explaining both short and long run relationships and it is applicable when using I(0) and I(1) variables and samples with small N and large T. Analysis can be done using the pooled mean group (PMG) estimator which postulates that a long-term equilibrium is homogeneous across countries and it allows heterogeneity for relationships in the short term. Country specific heterogeneity is driven by responses to stabilization policies and external shocks. It is also possible to use the mean group (MG) estimator which allows for heterogeneity in both short and long run relationships. This estimator requires many countries which is not applicable in our context. Considering that the study assumes heterogeneity in relationships found under the short run due to country differences and behavior is similar in the long term, the PMG is applicable. However, the Hausman test is applied to select the best model between PMG and MG estimators. Both estimators can easily deal with the problem of endogeneity by using lags in the model as suggested by Pesaran et al, (1999). The model employed is specified as follows:

$$LNGDPg_{it} = \alpha_i + \sum_{j=1}^p \beta_0 LNGDPg_{i(t-j)} + \sum_{j=0}^q \beta_1 LNEXP_{i(t-j)} + \sum_{j=0}^q \beta_2 LNFGGE_{i(t-j)} + \sum_{j=0}^q \beta_3 LNFCE_{i(t-j)} + \sum_{j=0}^q \beta_4 LNGFCF_{i(t-j)} + \sum_{j=0}^q \beta_5 LNIMP_{i(t-j)} + \mu_{it} \quad (1)$$

Where α is a constant and β are parameters to be estimated; i and t represent country and time components. We find the error correction term (ECT) by re-parameterization of equation (1)

$$\begin{aligned} \Delta LNGDPg_{it} = & \alpha_i + \omega_i (LNGDPg_{i(t-j)} - \theta_1 LNEXP_{i(t-j)} - \theta_2 LNFGGE_{i(t-j)} - \theta_3 LNFCE_{i(t-j)} - \\ & \theta_4 LNGFCF_{i(t-j)} - \theta_5 LNIMP_{i(t-j)}) + \sum_{j=1}^{p-1} \delta_1 \Delta LNGDPg_{i(t-j)} + \\ & \sum_{j=0}^{q-1} \delta_2 \Delta LNEXP_{i(t-j)} + \sum_{j=0}^{q-1} \delta_3 \Delta LNFGGE_{i(t-j)} + \sum_{j=0}^{q-1} \delta_4 \Delta LNFCE_{i(t-j)} + \\ & \sum_{j=0}^{q-1} \delta_5 \Delta LNGFCF_{i(t-j)} + \sum_{j=0}^{q-1} \delta_7 \Delta LNIMP_{i(t-j)} + \mu_{it} \end{aligned} \quad (2)$$

Where δ and θ are short and long run coefficients respectively and ω is the speed of adjustment.

Diagnostics and Data:

The study employs variance inflation factors (VIF) to test for multicollinearity. The ordinary least squares (OLS) regression for each explanatory variable is estimated. After this a value for R^2 for each model are extracted and used to calculate the VIF for each coefficient as follows:

$$VIF(\widehat{\beta}_i) = \frac{1}{1-R_i^2} \quad (3)$$

Where: β_i are the coefficients for explanatory variables and R_i^2 is the value for R^2 for each estimated model. Severe multicollinearity exists where the value of $VIF(\widehat{\beta}_i)$ is greater than 5. Moderate correlation exists where the value for VIF is less than 5 (Daoud, 2017, Jensen and Ramirez, 2013).

The study also employs the methods by Levin, Lin and Chu (LLC) (2002), Breitung (2000) and by Im, Pesaran and Shin (IPS) (2003) to test for stationarity. This helps in determining variables that are stationary at levels and/or after first difference. More so, the method by Pedroni (1999) is applied to test for cointegration.

The study employs a heterogeneous panel, number of groups (N) is less than number of years(T), for 12 SADC countries¹ for the period 1994 to 2019. Selection countries and period is based on availability of data. Data is obtained from World Development indicators (WDI) (2020). The variables are defined in Table 2 and expected signs in relation to growth are guided by literature. All variables are denoted in current United States Dollars and definitions are adopted from WDI. Gross fixed capital formation is also used as a control variable capturing the effect of domestic investment. Studies (Bakari, 2017a, Onyinye, Idenyi & Ifeyinwa, 2017, Ongo & Vukenkeng, 2014, Mbulawa, 2015) show that it has a positive effect on growth. Its negative effect on growth is confirmed by past studies in the long run (Bakari, 2017b, Phetsavong & Ichihashi, 2012) while others show that it is cointegrated with growth (Farhani et al, 2014, Keho, 2017, Ullah et al, 2014).

Table 2: Definition of Variables

Variable	Definition	Sources	Expected sign
Economic Growth (GDPg)	Annual Growth rate of GDP as a %	Kim, 2017, Sunde, 2017, Mujahid et al, 2019.	
Exports (EXP)	Exports of goods and services (current US\$) as a % of GDP	Biyase and Zwane, 2014, Keho, 2017, Razmi, 2008, Isaiah et al, 2020	Positive/Negative
Imports (IMP)	Gross fixed capital formation as a % of GDP	Evans, 2013, Alam, 2012, Moroke and Manoto, 2015	Positive/Negative
Final Consumption	General government final consumption	Mishra and Nancharaiah, 2016,	Positive/Negative

¹ Botswana (1), Democratic Republic of Congo (DRC) (2), eSwatini (3), Madagascar (4), Malawi (5), Mauritius (6), Mozambique (7), Namibia (8), Seychelles (9), South Africa (10), Tanzania (11), Zimbabwe (12).

Expenditure (FCE)	expenditure (Current US\$) as a % of GDP	Lukin et al, 2018, Mohanty, 2012, Alvarado et al, 2018	
Final Government Expenditure (FGE)	Final consumption expenditure (current US\$) as a % of GDP	Mishra and Nancharaiyah, Biyase and Zwane, 2014, Lukin et al, 2018, Alvarado et al, 2018, Mohanty, 2012	Positive/Negative
Gross Fixed Capital Formation (GFCF)	Gross capital formation (current US\$) as a % of GDP.	Keho, 2017, Ongo & Vukenkeng, 2014, Bakari, 2017b, Kedir, 2017	Positive/Negative

Source: Compiled by author from literature

4. RESULTS AND DISCUSSION

This study provides summary statistics in Table 3. The average level of final consumption expenditure is 85.28% of GDP (highest) while the final government expenditure is 17.36% of GDP (lowest). The average rate of growth of GDP is 3.82% per annum within the region. There is much variability in the level of imports while the rate of growth of GDP shows minimal variability. Final consumption expenditure reaches highest levels as a % of GDP compared to final government expenditure.

Table 3: Summary Statistics

	Obs	Mean	Std Dev	Min	Max
GDPg	312	3.82	4.32	-17.67	19.67
EXP	312	37.46	19.78	8.86	107.99
IMP	312	45.88	21.12	13.05	117.15
FCE	312	85.28	11.46	46.70	121.63
FGE	312	17.36	6.62	2.05	39.45
GFCF	312	21.39	9.10	2.00	53.99

Source: Compiled by author from STATA

The results show that variables have no perfect or exact linear representations of one another. This is reflected by the correlation coefficients which are less than 0.80 (Table 4). This is further supported by findings from VIF. All the values are less than 10 and closer to 5 (Table 5) which confirms that there is no serious problem of multicollinearity in the estimated model.

Table 4: Correlation Coefficients

	GDPg	EXP	IMP	FCE	FGE	GFCF
GDPg	1.000					
EXP	-0.0381	1.000				
IMP	0.0123	0.6605	1.000			
FCE	-0.1447	-0.2495	-0.0115	1.000		
FGE	0.1243	0.1521	0.2113	0.2331	1.000	
GFCF	0.2771	0.1530	0.3601	-0.4246	0.3422	1.000

Source: Compiled by author from STATA

Table 5: Variance Inflation Factors (VIF)

Dependent Variable	VIF
EXP	6.45
FCE	4.53
FGE	1.38
GFCF	3.62
IMP	5.07

Source: Compiled by author from STATA

The three methods applied to test for unit root show the null hypothesis is rejected at levels for GDPg, IMP and FGE while it is rejected at first difference for EXP and FCE (Table 6). Thus, variables are stationary at both levels and first difference which makes it appropriate to investigate the presence of any cointegration.

Table 6: Panel Unit root

	Levels		
	Breitung	Levin, Lin & Chu	Im, Pesaran & Shin
Variable	Statistic	Statistic	Statistic
GDPg	-4.2782***	-4.2460***	-5.6714***
EXP	-0.7542	-1.9613**	-0.796
IMP	-1.7803**	-2.6642***	-2.7511***
FCE	-1.0957	-1.0631	-2.3236**
FGE	-1.7290**	-2.0052**	-2.3786***
GFCF	-2.6206***	-0.0565	-1.0841

***Significant at 1%, **Significant at 5%, *Significant at 10%

Source: Compiled by author from STATA

The study performs panel cointegration tests using the approach by Pedroni (1999) and results show that the null hypothesis of no cointegration is rejected at the 1% level for all group statistics. Four of the seven statistics show values that are greater than 2 which suggests a long run relationship (Results withheld). This has also been ascertained using the statistical significance of long run coefficients and error correction term.

The study shows results (Table 7) using all three models PMG, MG and DFE. Hausman tests are done to test the appropriate estimator. Results show p-values of 0.7720 and 0.5564 which are greater than 0.05 and we cannot reject the null hypothesis. Thus, the PMG estimator is efficient under the null hypothesis of homogeneity and therefore results and conclusions are drawn based on it. Long run coefficients are assumed to be the same for all countries in the panel while short run

coefficients differ. Findings show that there is long run cointegration at 1% among variables. Any deviations from the long run equilibrium are corrected 82% adjustment speed using the PMG model.

Findings confirm that the share of exports in GDP does not explain levels of growth within SADC in both the short and long run. This is because the coefficients in both periods are not significant. Firstly, in the context of this study, SADC member states do not benefit from overreliance on external demand. Secondly, the region relies mainly on raw products for trade which explains their ineffectiveness in driving growth. This is consistent with the notion that the relevance of export led growth strategy in driving growth is waning off (Palley, 2011b, Lukin et al, 2018). This is also supported by past studies (Tegenu, 2011, Alvarado, et al, 2018) who argue that the ELG is not effective for low-income countries.

The share of imports in GDP does not affect growth in the short term. However, the study confirms a long run relationship between imports and growth. A 10% increase in imports results in a 0.574% rise in growth in the long term. This is synonymous with the idea that imports, though regarded as a leakage in the economy, provides the basis upon which a country produces products for both local and international markets in the future. In this context, imports are key in SADC in providing the basis upon which production capacity can be expanded while domestic revenues may increase. Thus, findings are consistent with past studies that support import led growth strategy (Moroke and Manoto, 2015, Bakari & Mabrouki, 2017, Syzdykova et al, 2019). Mujahid et al (2019) argue that imports are critical for growth when they are composed of production inputs for the manufacturing sector. This has policy implications for SADC member states considering that, comparatively, the proportion of imports to GDP is higher than that for exports on average.

Findings show that final consumption expenditure explain the rate of growth in the short run and it becomes insignificant in the long run. This study suggests that a 10% increase in final consumption expenditure gives rise to a 2.129% increase in growth. Furthermore, the study shows that final government expenditure explains growth in the long term. A 10% increase in FGE results in a 1.926% increase in growth. This suggests that long run domestic demand is mainly accounted for by the volume of government activities which is synonymous with developing economies. Results are consistent with previous studies (Oreiro et al, 2012, Handriyani et al, 2018, Lukin et al, 2018) which advocate for domestic demand led growth hypothesis. However, findings have implications on the development of different strategies for boosting growth over the short and long term.

This study suggests that domestic investment is related to growth in both the long and short run. The effect in the short term is negative while a positive effect is experienced in the long run. Growth would fall by 1.844% where investment rises by say 10% in the short term. In the long term a 10% increase in investment is associated with an 0.84% increase in growth. The importance of domestic investment in explaining growth is consistent with past studies (Bakari, 2017b, Keho, 2017, Onyinye et al, 2017) which explain changes in its effect over the short and long run.

Table :7 Long run and Short run Coefficients

Variable	Estimated coefficients (PMG)	Estimated coefficients (MG)	Estimated coefficients (DFE)
EXP	0.0322	1.7577	0.1976***
IMP	0.0574*	-1.7903	0.2291***
FGE	0.1926***	-0.2022**	0.0092
FCE	0.0062	1.7714	-0.2927***
GFCF	0.0840**	2.0380	-0.1611*
ECT	-0.8256***	-1.0281***	-0.7253***
d.EXP	-0.0197	0.1613	0.1673***
d.IMP	-0.0952	-0.0947	-0.1107*
d.FGE	0.0428	0.0967	-0.0748
d.FCE	0.2129**	-0.0941	-0.0063
d.GFCF	-0.1844**	0.0317	0.0686
C	5.4219***	-19.6287	21.0785***
Observations	300		
Groups	12		
Log likelihood	-630.4311		
Hausman (p-value)		0.7720	0.5564

***Significant at 1%, **Significant at 5%, *Significant at 10%

Source: Compiled by author from STATA

The study makes a comparison among countries in the group by estimating the PMG model using the ‘full’ command. This is done to extract the short run coefficients and error variances. This is meant to show the potential short run heterogeneity among countries though the assumption of long run homogeneity holds. Thus, the long run coefficients are still the same as reported in Table 7. Findings (Table 8) show that all countries adjust to the long run equilibrium, albeit at different speeds. This is explained by differences in the level of growth and sizes of their economies. It can also be explained by differences in which countries employ resources and differences in the structure of their economies. Countries build their productive capacities at different rates, and this also explains the differences in the rate at which they adjust to sustainable rates of growth.

Table 8: Short run Coefficients and ECT at Country Level

Var	C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
ECT	-1.10***	-0.19**	-1.42***	-0.94***	-1.21***	-1.07***	-1.00***	-0.58***	-0.53**	-0.83***	-0.57***	-0.56***
d.EXP	0.41***	-0.15	-0.29	0.58	0.03	0.24	-0.58*	-0.05	-0.30	0.004	0.16	-0.05
d.IMP	0.14	0.37	0.62	-0.47	-0.11	-0.03	0.27	-0.10	0.66**	0.09	-0.31	0.02
d.FGE	0.54	0.39	0.28	0.51**	0.85*	0.34**	-0.02	0.21	0.04	-0.09	0.48	-0.30**
d.FCE	0.25	-0.38	-0.83	0.24	-0.20	-0.21	0.59**	-0.26*	-0.33	0.05	0.33***	-0.11
d.GFCF	-0.35	-0.38	-0.33	0.03	0.09	0.06	-0.04	0.07	-0.49	0.09*	-0.46	-0.50***

C	7.56***	0.87	7.00*	5.83**	7.71**	9.96***	7.82**	5.86***	2.48	5.09**	1.26	3.61*
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***Significant at 1%, **Significant at 5%, *Significant at 10%. The columns labelled C represents countries as follows: Botswana (C1), DRC (C2), eSwatini (C3), Madagascar (C4), Malawi (C5), Mauritius (C6), Mozambique (C7), Namibia (C8), Seychelles (C9), South Africa (C10), Tanzania (C11), Zimbabwe (C12). Source: Compiled by author from STATA

5. CONCLUSION

The aim of this study was to evaluate the applicability of the trade led and domestic demand led growth hypothesis using a sample of 12 SADC countries over the period 1994-2019. The study employed panel mean group approach to test relationship in both short and long run periods. Furthermore, the study isolated adjustment speeds to the long run equilibrium for individual countries. Overall, the effect of domestic demand on growth was higher than that of external demand. Domestic demand was underpinned by the final government expenditure, final consumption expenditure and investment which explained growth in both short and long run periods. Thus, the study clearly showed that domestic demand led growth hypothesis largely explained growth for countries in SADC. The study also confirmed the relevance of import led hypothesis over the long term while the export led growth hypothesis was not applicable. The study suggested that there is joint causality moving from domestic demand to growth over both short and long run. External demand may still be relevant in view of other propositions that it brings foreign currency for servicing foreign obligations like debt, Mishra and Nancharaiyah (2016). Over the short-term import are a leakage as countries build their production capacity which brings long term gains. The study confirmed the different adjustment speeds in individual member states which explains different short-term approaches that can be adopted to improve future growth. Long term outcomes will eventually converge for member states.

This study favours the development of demand side focused policies that promote consumption locally. This is possible by using approaches that improve household expenditure in the short term and government expenditure over the long term. Investment expenditures may reduce growth in the short term, but this is corrected as countries gradually shifts towards the long-term equilibrium. Policies that improve inflow of capital-oriented imports are plausible to strengthen the capacity to produce and meet domestic demand. The support of domestic demand-oriented production capacity is key within the region. This raises the capacity for local firms to be innovative and meet domestic demand with better products which will subsequently improve welfare and hence growth. Policies that reduce precautionary saving, improve the welfare of workers, develop human capital, and improve disposable income are more plausible.

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