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RESEARCH ARTICLE / ARAŞTIRMA MAKALESİ

The nexus between financial development and economic growth in the SADC region: Empirical evidence using ARDL-PMG estimation techniques

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Abstract

This study aims to provide empirical insights into the financial development and economic growth nexus in the SADC region by examining how much financial development translates to economic growth in the short or long run. Also, the examination of economic growth is impacted more by external or internal factors. Also, causality testing economic growth on financial development. The study applies the panel Autoregressive Distributive method (ARDL-PMG) on a panel data set of 11 SADC countries in the period 1998-2021. The study finds a negative and significant relationship between economic growth and financial development at a 1% level of significance in the long run whereas in the short run, the relationship is negative but not significant. Furthermore, the study findings suggest that economic growth in the SADC region is more influenced by external factors than internal factors as signified by the significant negative long-run influence of external debt and the significant positive influence of trade openness. On the other hand, financial development has a neutral impact on economic growth. The study recommends that SADC countries should embrace outward-looking policies as an avenue to learn new ideas from the world

Keywords: ARDL, Economic Growth, Financial Development, SADC

JEL codes: G1, O4, O16

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1. INTRODUCTION

The subject of financial development (FD) impact on economic growth (EG) has been one of the most controversially debated subjects in Economics dating to the seminal work by Schumpeter (1934) and continues to give mixed empirical findings even today (Matei, 2020). Studies by Valickova, Havranek, and Horvath (2015), Beck, Demirgüç-Kunt, and Merrouche (2013), Nguyen, Le, Ho, Nguyen, and Vo (2022), found a positive and significant relationship between FD and EG. However, opposing results were found from studies Smolo (2024), Elhassan and Braima (2020) and Marques, Fuinhas, and Marques (2013), where FD was found to impact EG negatively. The Southern African Development Community (SADC) region with South Africa excluded, has attracted little empirical inquisition on this subject despite its relative importance to the Economics scholarship. Against this background, this study follows the debate and attempts to provide empirical insights into the subject in the SADC region.

In the SADC region, most studies have proxied FD using market capitalisation, deposits to gross domestic product (GDP), and the stock market index. However, FD has not been proxied using the IMF's broader FD index with South Africa (SA) excluded from the sample of SADC countries. Most SADC countries' financial markets are not that developed to the level of South Africa's financial markets. This follows that in this study SA data is not included to eliminate outlier characteristics from the sample of SADC countries. Also, external factors are included as control factors like external debt and trade openness which adds to the robustness of the findings. Specifically, this study attempts to answer the following research questions. Firstly, can financial development translate to economic growth in the short or long run in the SADC region? Secondly, is economic growth impacted more by external or internal factors in the SADC region? Lastly, what is the causality between economic growth and financial development in the SADC region?

The organisation of the rest of the paper is as follows: a review of the literature follows in section 2. Thereafter, there is a presentation of the methodology in section 3. Also, a discussion of the results follows in section 4 and finally in section 5 there is a presentation of the conclusion and policy implications.

2. REVIEW OF LITERATURE

The theories that explain the nexus between financial development (FD) and economic growth (EG) can be explained from the hypothesis highlighted by Matei (2020), which originated from the work of Patrick (1966), who formulated four hypotheses to explain the relationship between financial development and economic growth. Firstly, the supply-leading hypothesis is that FD is responsible for accelerating EG. The second hypothesis is the demand following hypothesis which postulates that EG is responsible for FD. Furthermore, the third feedback hypothesis states that FD and EG are independent. The last neutral hypothesis states that there is no causal link between FD and EG. On the other hand, the endogenous growth theories by Lucas Jr (1988) and Romer (1986) found that FD enhanced EG.

On the empirical side, Smolo (2024), carried out a study on 38 European countries from the period 2002-2019 using a bias-corrected least squares dummy variable method. The study found that financial development (FD) impacts economic growth (EG) negatively when countries in the European Union (EU) are considered, but insignificant when transitional economies are considered. However, Matei (2020), found that FD impacts EG positively and significantly at the 1% level using a Dynamic Pooled Mean Group Estimator on a sample from 11 emerging European countries from 1996-2016. In contrast to these findings, Alshubiri (2021), proxied FD using domestic credit as a percentage of GDP and was found to negatively and significantly impact EG at the 5% level.

Nguyen et al. (2022) did a study from 22 emerging economies from 1980-2020 using the Advanced Common Correlated Estimator method and FD was proxied using the broad-based IMF financial development index. The study found that FD had a positive and significant effect on economic growth and the relationship was found to be linear. In agreement with these findings, Chu

(2020)'s study used a 2 step Genialised Method of Moments (GMM) on 99 emerging countries from 1971-2015 and found that financial structure activity impacts economic growth positively and significantly at the 1% level. Furthermore, stock market development was found to influence economic growth more than financial sector development. Moreover, the stock market was measured using the stock market capitalisation to GDP ratio whereas the financial sector was measured using deposit money of bank assets as a percentage of GDP. Also, another study on the public debt and economic growth nexus was conducted by Attard (2019), using data from 25 advanced and emerging economies in the European Union. The study found that public debt had a negative and significant impact on economic growth in both the short and long term.

Empirical studies from individual country studies from Africa yielded mixed results. For instance, a study in Sudan was done by Elhassan and Braima (2020), using the Autoregressive Distributed Lag (ARDL) bounds test on the Khartoum Stock Exchange from 1995-2018. The findings suggest that the Khartoum Stock Exchange has a limited impact on economic growth. Similarly, Nathaniel, Omojolaibi, and Ezeh (2020), did a study from Nigeria using data from 1980-2016 using ARDL and found that financial development promotes economic development with most of the influence generated by the stock market development. The positive significant influence was in the short run, but in the long run, the relationship was insignificant. Further, they separated internal influences on economic growth from external influences and found that internal factors dominated economic growth in Nigeria than external influences. In the same vein, Adebayo, Awosusi, and Eminer (2020), did a study on Nigeria using the ARDL bounds test from a sample from 1989-2017 and found that the stock market turnover impacted economic growth positively only in the long run. On the other hand, Marques et al. (2013), did a study using data from Portugal using quarterly data from 1993-2011 and found that there was a Granger bidirectional relationship between stock market growth and economic growth. They used the ratio of domestic credit to GDP as a proxy of financial development in contrast to other studies that used bank assets to GDP as a proxy.

Contextually, studies from developing, developed, emerging and country-specific studies yielded mixed results, and this lack of consensus on the findings motivated the need to probe further and contribute to the debate using data from the SADC region from 1998-2011 where there is little empirical evidence on the subject. Furthermore, most studies proxied financial development using the stock market capitalisation index or the bank assets deposits to GDP ratio with South Africa included in the SADC sample. This study departs from this approach and excludes South Africa from the SADC sample given it has a more developed financial sector than its SADC counterparts and this study proxies FD using the broader IMF financial development index. Furthermore, external factors like trade openness and external debt are included to improve the robustness of the results. To further illustrate how the variables, interact with each other, Figure 1 provides a conceptual framework to be adopted in this study.

In this respect, this study seeks to specifically answer the following research questions:

1. Can financial development translate to economic development in the short or long run in the SADC region?

2. How is economic development impacted by external and internal factors?

3. What is the causality between economic development and financial development?

3. METHODOLOGY

The endogenous growth theory is based on the Neo-Classical growth theory by Solow (1956) and Swan (1956) forms the theoretical framework adopted in this study. The model derives from the Cobb-Douglas function as specified below.

$$Y_t = f(K_t, L_t) \quad (1)$$

Where Y_t refers to the output at a time t, and L_t is the labourforce at the time t.

Following the work of Matei (2020), Nathaniel et al. (2020), Smolo (2024), Chu (2020), and Nguyen et al. (2022), the modified model to be adopted in this study is specified as follows.

$$EG_t = f(FD_t, TO_t, ED_t) \quad (2)$$

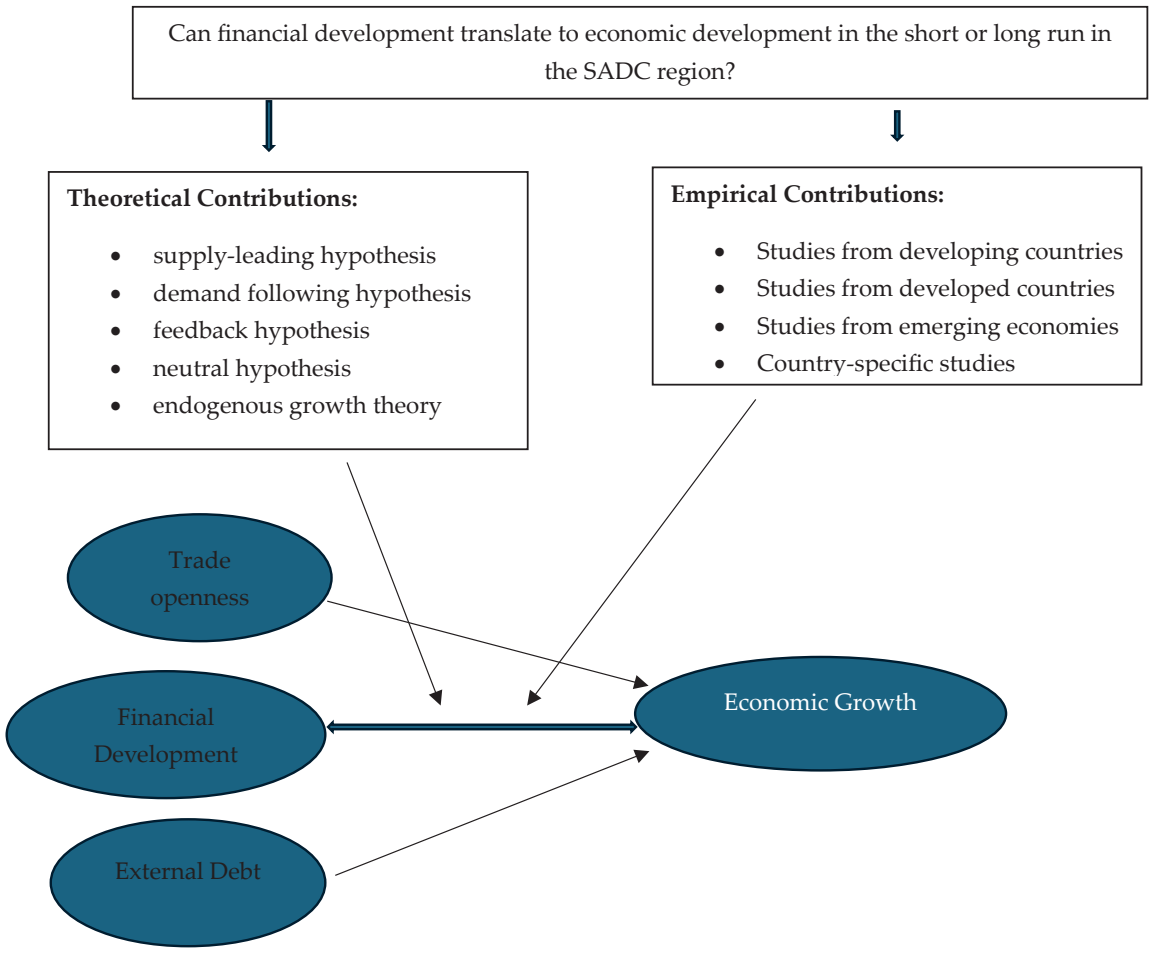
3.1. Data Sources

Table 1 below presents data types and offers variable descriptions from secondary annual data sourced from the World Bank database (WDI). This study sampled 11 SADC countries (Angola, Botswana, Comoros, DRC, Eswatini, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, and Zambia) based on data availability over 26 years from 1998 to 2021. The variables used were selected from SADC countries based on data availability. The choice is motivated by theoretical and empirical motivation. The GDP per capita growth rate (EG_t), is a dependable variable as specified in studies by Odhiambo (2021). TO_t is adopted in line with specifications by Mogashwa and Molele (2023). Also, is adopted from Akinlo and Okunlola (2021)'s specification.

3.2. Estimation Technique and Model Specification

The estimated model adopted in this paper is the ARDL model utilised, which exhibits the following properties according to Mlambo (2021). Firstly, ARDL combines a combination of variables integrated of order I (0) and I (1). Also, it is suitable for estimating small sample sizes. Furthermore, Olayungbo and Quadri (2019), noted that ARDL allows free independent groups, and potential homogeneity between groups is not considered. Panel Mean Group (PMG) is also considered for estimation in this study which was developed by Pesaran, Shin, and Smith (1999), which according to Guei and Le Roux (2019), has its usefulness in estimating regressors for each observation and averaging them across groups

Figure 1. Conceptual Framework for FD and EG nexus in the SADC region



Source: Authors compilation

so that in the short run the coefficients, error term, and intercept are similar across groups yet different across units. Also, PMG has the added advantage that estimators are less sensitive to regression outliers, and thus homogeneity of parameters is withheld. The ARDL and PMG models are illustrated below.

ARDL Model Specification

Nguyen et al. (2022), proposed the use of ARDL in their study and the modified ARDL model adopted for this study for estimation of the long-run coefficient is shown in equation 3 as follows.

$$\Delta EG_{it} = \propto_{it} + \beta_1 FD_{it} + \beta_2 TO_{it} + \beta_3 ED_{it} + \sum_{it=1}^{p} \beta_4\, it\Delta EG_{it-1} + \sum_{it=1}^{q} \beta_5\, it\Delta FD_{it-1} + \sum_{it=1}^{r} \beta_6\, it\Delta TO_{it-1} + \sum_{it=1}^{s} \beta_7\, it\Delta ED_{it-1} + \varepsilon_{it} \quad (3)$$

PMG Model Specification

According to Mlambo (2021), the Pooled Mean Group (PMG) was proposed by Pesaran et al. (1999), where cross-sectional unit coefficients are averaged and pooled. Furthermore, PMG is chosen because both non-stationary and stationary variables are combined in their traditional form as shown in equation 4 below.

$$\Delta Y_{it} = \emptyset_i\left(Y_{i,t-1} - \beta^I_{x_{i,t-1}}\right) + \sum_{j=1}^{r-1} \delta_{ij}\, \Delta Y_{i,t-j} + \sum_{j=1}^{s-1} \partial^I_{ij}\, \Delta X_{i,t-j} + u_i + \varepsilon_{it} \quad (4)$$

The error term is shown by $\emptyset_i$, which is expected to be negative and statistically significant, when it is insignificant then it follows that there is no long-run equilibrium (Masih & Majid, 2013). According to Guei and Le Roux (2019), the PMG has the advantage that it tends to be less sensitive to outliers and this helps reduce the bias of the estimates. Also, PMG considers the heterogeneity of the coefficients. Where Δ is a symbol for the first difference in the exports, while $\propto_{it}$ is the constant and ε_{it} is the disturbance error term. Also, parameters β_1 to β_7 represents short-run relationships between variables of the model. For testing for short-run estimates. The PMG estimator specified for this study is shown in Equation 5 as follows.

$$\Delta EG_{it} = \propto_0 + \beta_1\left[Y_{it} - \propto^I_{x_{2,1}} (FD_{it} + TO_{it} + ED_{it})^I\right] + \sum_{it=1}^{p} \beta_2\, it\Delta EG_{it-1} + \sum_{it=1}^{q} \beta_3 it\, \Delta FD_{it-1} + u_i + \varepsilon_{it} \quad (5)$$

4. DISCUSSION OF RESULTS

An understanding of the moments of data distribution is important in any econometric analysis. This section starts by providing a descriptive analysis of the results. After understanding the order of integration of each variable, then panel cointegration and causality testing are conducted. Table 2 provides descriptive statistics for each variable under study below showing the mean, standard deviation, skewness, kurtosis, minimum, and maximum values. The dependable

Table 1. Data types and variable description

Variable	Symbol	Type	Variable definition	Data source
GDP growth rate	EG_t	Dependent	GDP per capita growth (%)	WDI (1998-2021)
Trade openness	TO_t	Independent	(exports + Imports) (%) GDP	WDI (1998-2021)
Financial Development	FD_t	Independent	Broad-based index of financial development and other proxies	IMF (1998-2021)
External debt	ED_t	Independent	External debt as a % of GNI	WDI (1996-2021)

Source: Author's compilation

variable (EG_t) has a mean value of 1.602. All independent variables registered positive medians in the period 1998-2021. Also, all variables have a significant Jarque- Bera statistic (p-values<0.05), suggesting that they emerge from normally distributed panels.

Table 3 below presents the correlation matrix that suggests that economic growth is negatively correlated to external debt but positively related to financial development and trade openness.

The cross-sectional dependence test is tested using the Breusch- Pagan LM, Pesaran Scaled LM, and the Bias-corrected Scaled LM as presented below.

H_0 : There is no cross-sectional dependence

H_1 : There is cross-sectional dependence

Given p values for the Breusch- Pagan LM, Pesaran Scaled LM, and Bias-corrected Scaled LM <0.05, reject H_0 indicating that there is cross-section dependence among the selected SADC countries. According to Nev, Sidi, Adofu, and Gimba (2023), a shock in one of the countries selected will be transmitted to other countries within the region.

The existence of unit roots in panel data is reported in Table 5 below using LLC and IPS unit root tests. LLC results are presented in the upper part of the table, whereas IPS results are presented in the bottom part of the table.

H_0 : panels are not stationary

H_1 : panels are stationary

Table 2. Descriptive Statistics for SADC panel data

	EG_t	FD_t	ED_t	TO_t
Mean	1.602	0.181	162.366	0.657
Median	1.787	0.123	34.668	0.619
Maximum	11.010	0.593	434.518	1.527
Minimum	-15.891	0.004	3.895	0.078
Std. Dev.	3.907	0.145	68.939	0.345
Skewness	-1.156	1.148	2.785	0.677
Kurtosis	6.676	3.123	12.655	2.662
Jarque-Bera	207.412	58.141	1366.612	21.412
Probability	0.000	0.000	0.000	0.000
Sum	423.044	47.733	16464.73	173.474
Sum Sq. Dev.	4014.053	5.893	1249919	31.35369
Observations	264	264	264	264

Source: Author's compilation from E-Views 13

Table 3. Correlation Matrix for SADC panel data

	EG_t	FD_t	ED_t	TO_t
EG_t	1.000	0.035	-0.176	0.086
FD_t	0.062	1.000	0.031	0.179
ED_t	-0.176	0.031	1.000	0.004
TO_t	0.086	0.179	0.004	1.000

Source: Author's compilation from E-Views 13

From the Table 5 above, H_0 is rejected, this implies the unit root results from both LLC and IPS suggest that the variables EG_t, ED_t and TO_t are stationary at levels I(0). On the other hand, unit root results from the variable suggest that it is stationary at the first difference I(1).

Table 6 below reports the Panel Granger causality results of the Johansen -Fisher Panel Cointegration test. The first column shows the hypothesised number of cointegration vectors. The second column shows the Fisher statistics from the trace test and the last column is the probability values.

H_0 : panels are not cointegrated

H_1 : panels are cointegrated

Table 4. Cross-Sectional Dependence Test results

	Breusch- Pagan LM	Pesaran Scaled LM	Bias-corrected Scaled LM
EG_t	160.856***	10.092***	9.853***
FD_t	319.158***	25.186***	24.947***
ED_t	413.425***	34.175***	33.935***
TO_t	314.085***	24.703***	24.464***

Source: Author's compilation from E-Views 13

Note: **** significant at 1% level of significance and () are the p-values

Table 5. Panel Unit Roots results for variables EG_t, FD_t, ED_t and TO_t

LLC	Levels		1st Difference		Remark
	Individual intercept	**Individual intercept + trend**	**Individual intercept**	**Individual intercept + trend**	
EG_t	-3.462***	-3.582***	-11.739***	-10.281***	I(0) Stationary
FD_t	0.239	2.127	-5.643***	-3.594***	I(1) Stationary
ED_t	-2.905***	-1.754**	-7.151***	-5.480***	I(0) Stationary
TO_t	-3.261***	-1.191	-6.226***	-4.092***	I(0) Stationary
IPS	**Individual intercept**	**Individual intercept + trend**	**Individual intercept**	**Individual intercept + trend**	**Remark**
EG_t	-4.087***	-3.646***	-14.398***	-13.194***	I(0) Stationary
FD_t	-0.490	-3.390	-10.245***	-8.169***	I(1) Stationary
ED_t	-1.782**	0.347	-7.722***	-7.914***	I(0) Stationary
TO_t	-2.615***	-2.309**	-8.911***	-7.316***	I(0) Stationary

Source: Author's compilation from E-Views 13

** 5% statistically significant with values in () p-values

***1% statistically significant and * 10% statistically significant

From the Johansen -Fisher Panel Cointegration test result, reject H_0. The cointegration results indicate that in the Fisher trace test, there are 2 cointegration vectors in the system at 1%, one cointegration vector at 5%, and another cointegration vector at the 10% level. On the other hand, the Fisher maximum eigentest indicates that there exist 2 cointegration vectors at 1%, and at 5% there is one cointegration vector. This implies there exists long-run panel cointegration between the GDP growth rate, trade openness, external debt, and financial development. According to Mosikari (2017), the Johansen-Fisher Panel Cointegration assumes more than one cointegration vector and provides superior results to the Pedroni and Kao tests. However, it will also be worthwhile to investigate the cointegration results from the Pedroni tests presented in Table 7 to reinforce findings from the Johansen -Fisher Panel Cointegration results as follows.

From Table 7 it can be observed from the top part of the table that illustrates the Within-dimension statistics that most of the test statistics are signif-

Table 6. Johansen -Fisher Panel Cointegration Results

Hypothesised No. of CE(s)	**Fisher Stat* (from trace test)**	**Probability**
None	159.6	0.000***
At most 1	61.94	0.000***
At most 2	32.87	0.064*
At most 3	39.19	0.013**
Hypothesised No. of CE(s)	**Fisher Stat* (from max-eigen test)**	**Probability**
None	124.5	0.000***
At most 1	47.22	0.001***
At most 2	25.61	0.269
At most 3	39.19	0.013**

Source: Author's compilation from E-Views 13

***1% statistically significant, ** 5% statistically significant and * 10% statistically significant

Table 7. Pedroni panel cointegration results

Within-dimension statistics	**Panel t- statistics**	**Panel p-value**
Panel v-Statistic	1.159	0.123
Panel rho-Statistic	-3.756	0.000***
Panel PP-Statistic	-10.844	0.000***
Panel ADF-Statistic	-4.464	0.000***
Within-dimension statistics	**Panel t- statistics**	**Panel p-value**
Group rho-Statistic	-2.441	0.007***
Group PP-Statistic	-11.152	0.000***
Group ADF-Statistic	-4.346	0.000***

Source: Author's compilation from E-Views 13

***1% statistically significant, ** 5% statistically significant and * 10% statistically significant

icant at the 1% level. Also, from the bottom part of the table, all test statistics are significant at the group level. It can be concluded from the results that in the long run there is panel cointegration between the GDP growth rate, trade openness, external debt, and financial development.

Table 8 reports the results from the Kao panel cointegration results. According to the results, the Kao ADF t-statistic is -5.002 and is significant at the 1% level. The null hypothesis of no panel cointegration amongst variables is rejected. Therefore, based on the Kao test results, it means that there is a long-run equilibrium between the GDP growth rate, trade openness, external debt, and financial development.

Panel Pooled Mean Group Results

Table 9 reports the short-run and long-run coefficients of the Panel Pooled Mean Group estimation technique (PMG). From the PMG results, the short-run speed of adjustment of the error term (COINTEQ) is -1.412 and significant at the 10% level which suggests convergence in the long run after a shock. Furthermore, the results indicate that there is a negative and significant relationship between economic growth and financial development at a 1% level of significance in the long run, in agreement with findings by Smolo (2024). Whereas in the short run, the relationship is negative but not significant. External debt was found to significantly influence economic growth at 1% in both the short run and long run in agreement with findings by Attard (2019). On the other hand, trade openness has a positive and significant influence on economic growth at the 1% level in the long run but is insignificant in the short run concurring with findings by Nathaniel et al. (2020).

The short-run PMG results of the Individual SADC countries cross-section are presented in Table 10. The results suggest that there is a significant and negative relationship between economic growth and financial development in Lesotho and Mozambique. Results further suggest that external debt negatively impacts economic growth in Angola, Botswana, Lesotho, Malawi,

Table 8. Kao panel cointegration results

Statistics methods	t-statistic	P-Value
ADF Residual variance HAC variance	-5.002	0.000***

Source: Authors compilation from E-Views 13

***1% statistically significant, ** 5% statistically significant and * 10% statistically significant

Table 9. ARDL estimation results of full panel: Pooled Mean Estimator
Dependent variable: EG_t (GDP growth rate)

Within-dimension statistics	**Panel t- statistics**	**Panel p-value**
Panel v-Statistic	1.159	0.123
Panel rho-Statistic	-3.756	0.000***
Panel PP-Statistic	-10.844	0.000***
Panel ADF-Statistic	-4.464	0.000***
Within-dimension statistics	**Panel t- statistics**	**Panel p-value**
Group rho-Statistic	-2.441	0.007***
Group PP-Statistic	-11.152	0.000***
Group ADF-Statistic	-4.346	0.000***

Source: Author's compilation from E-Views 13

***1% statistically significant, ** 5% statistically significant and * 10% statistically significant.

and Zambia. Furthermore, trade openness and economic growth were found to have a positive and significant relationship for Botswana and Lesotho in agreement with findings by Nguyen et al. (2022).

Panel Causality Test Results

Table 11 below presents Panel Granger Causality results for SADC countries considered in this study. The findings suggest no causality between financial development and economic growth in agreement with neutrality hypothesis posited by Matei (2020). Also, external debt has no causality with economic growth. Furthermore, trade openness has no causality with economic growth. However, external debt has a bilateral causality with financial development. Also, trade openness has a unidirectional causality with financial development running from trade openness to financial development. On the other hand, no causality exists between trade openness and external debt as shown in Table 11.

5. CONCLUSION AND POLICY IMPLICATIONS

The study was aimed at providing empirical insights into the financial development and economic growth nexus in the SADC region. More specifically, there was an empirical inquisition on the extent to which financial development translates to economic growth in the short or long run in the SADC region. Also, the study examined if economic growth was impacted more by external or internal factors in the SADC region. Furthermore, there was causality tests on economic growth and financial development in the SADC region. The study found that there is a negative and significant relationship between economic growth and financial development at a 1% level of significance in the long run where-

Table 10. Short-run PMG results of Individual SADC Countries Cross-Section

Countries	Independent Variable		
	FD_t	ED_t	TO_t
Angola	0.195	-0.198	26.871
	(0.999)	(0.060) *	(0.357)
Botswana	94.363	-0.730	0.424
	(0.775)	(0.087) *	(0.986) *
Comoros	-237.810	-0.113	11.296
	(0.260)	(0.236)	(0.492)
DRC	-68.016	-0.078	13.894
	(0.511)	(0.125)	(0.173)
Eswatini	52.655	0.058	0.798
	(0.720)	(0.900)	(0.962)
Lesotho	-242.605	-0.276	-8.989
	(0.005) ***	(0.006) ***	(0.055) *
Madagascar	94.849	-0.042	47.242
	(0.546)	(0.780)	(0.254)
Malawi	-77.337	-0.064	-1.441
	(0.379)	(0.055) *	(0.875)
Mauritius	-1.398	-0.195	-44.469
	(0.988)	(0.349)	(0.522)
Mozambique	142.257	-0.016	2.063
	(0.084) *	(0.432)	(0.792)
Zambia	-3.926	-0.075	3.421
	(0.879)	(0.016) **	(0.525)

Source: Author's compilation from E-Views 13

*10%, ** 5% and ***1% statistically significant

Table 11. Pairwise Granger Causality Test Results

Null Hypothesis	F-Statistic	P-Value
FD does not Granger Cause EG	0.716	0.490
EG does not Granger Cause FD	2.015	0.136
ED does not Granger Cause EG	0.844	0.431
EG does not Granger Cause ED	0.545	0.581
TO does not Granger Cause EG	0.919	0.400
EG does not Granger Cause TO	0.066	0.936
ED does not Granger Cause FD	5.903	0.003***
FD does not Granger Cause ED	4.602	0.011**
TO does not Granger Cause FD	7.864	0.001***
FD does not Granger Cause TO	1.414	0.245
TO does not Granger Cause ED	0.796	0.452
ED does not Granger Cause TO	0.538	0.585

Source: Author's compilation from E-Views 13

*10%, ** 5% and ***1% statistically significant

as in the short run the relationship is negative but not significant. Also, the study findings suggest that economic growth in the SADC region is more influenced by external factors than internal factors as signified by the significant negative long run influence of external debt and the significant positive influence of trade openness. On the other hand, financial development has a neutral impact on economic growth.

From the study findings, the following study findings emerge. Firstly, economic growth can be enhanced by focusing on external factors to growth like refocusing the economies to become more outward-looking and embracing trade openness as an avenue to learn new ideas from the world. Also, SADC nations are encouraged to check their heavy reliance on external debt financing which has been proven to impact economic growth negatively in both the short and long run. Instead, foreign direct investment should be encouraged though there has been a negative trend in that respect in the SADC region. In the same vein, this study opens new areas of further research by probing how the SADC region may compare with other regions like the ECOWAS region considering other control variables like real inflation rate and foreign direct investment.

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