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Relationship between Financial Development and Economic Growth: Evidence from 12 SADC Countries

Chilizani Phiri[1] & Gregory Phiri[2*]
[1]Department of Economics, School of Social Sciences, ZCAS University, Lusaka, Zambia
Co-Author's Email: chilizaniphiri@gmail.com
[2]Graduate School, Center for Development Economics, Williams College, Massachusetts, USA
Corresponding Author's Email: greg.mphiri@gmail.com

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Abstract

Purpose: The purpose of this study was to examine the causal relationship between financial development and economic growth in 12 SADC countries for the period 2008-2020.

Materials and Methods: The study utilized panel data from 12 SADC member states for the period 2008-2020. This dataset was compiled from the World Bank database, Penn tables, and National Bureau of Statistics websites for the member states. The study employed the Autoregressive Distributed Lag Model (ARDL) to estimate the causal relationship between financial development and economic growth.

Findings: The empirical results show that there is bi-directional causality between financial development and economic growth in the SADC region. The findings also suggest that while financial development positively correlates with economic growth in the long run, the short-run effects may vary, with factors such as physical capital accumulation and government expenditure playing significant roles. Trade openness, life expectancy and population growth were also found to have implications for economic growth in the SADC region, highlighting the complex nature of development dynamics.

Implications to Theory, Practice and Policy: The presence of bidirectional causality between financial development and economic growth calls for coordinated economic and financial policies as both variables mutually influence each other's dynamics.

Keywords: *Financial Development, Economic Growth, Causality, SADC Region*

JEL Classification: G20, 047, C23

1.0 INTRODUCTION

The relationship between financial development and economic growth has been a subject of great interest and debate among economists for many years. The belief in the importance of financial institutions on economic growth stretches back to the 18th century, with figures such as Alexander Hamilton, the first Secretary to the Treasury for the US, who played a key role in establishing and developing the financial system (Levine et al. 2000, p. 32). However, there have been different studies with different findings regarding whether financial development leads to economic growth or vice versa. Schumpeter (1912) argues that the financial sector drives innovation and fosters economic growth, a theory commonly known as the supply-leading theory (Odhiambo 2007: p. 258). Another group of economists, such as (Robinson, 1952; Lucas, 1988), challenged the supply-leading theory of the relationship between financial development and economic growth. This group proposed an alternative view, known as the demand-following theory, which argues that economic growth creates demand for financial services, leading to the development of the financial sector. As the economy expands, businesses and individuals require more sophisticated financial services, which drives the growth and development of the financial system.

The debate over the role of financial development in stimulating economic growth or the reverse relationship still exists, and a new body of literature emphasizes the efficient allocation of resources by financial development, which leads to accelerated accumulation of physical and human capital, enhanced technological progress and, thereafter, drive economic growth. For instance, King & Levine (1993) argue that the financial sector mobilizes savings from agents with excess resources and allocates resources to productive investments. The financial sector development reduces information and transaction costs, diversifies risks and facilitates the exchange of goods and services. These factors contribute to a more efficient allocation of resources, accelerated accumulation of physical and human capital, enhanced technological progress and leads to growth.

Many empirical studies have been done to understand the causal relationship between financial development and economic growth in different parts of world. In the SADC regional bloc, many studies have focused on individual countries. For instance, Akinboade (1998) explored this relationship in Botswana from 1972 to 1995 and found a bidirectional causal relationship between financial development and economic growth. Odhiambo (2005) investigated this relationship in Tanzania from 1969 to 2001 and found a unidirectional causal flow from economic growth to financial development. Muyambiri & Odhiambo (2017) examined the causal relationship between financial development and economic growth in Zambia from 1970-2013 and found a unidirectional causality from economic growth to financial development.

However, a few studies have been done to look at the relationship between financial development and economic growth in the SADC region as a block. Further, due to data challenges, these studies have used up to a maximum of 10 countries. For instance, Taiwan & Nene (2016) studied this relation across 10 SADC countries and established bidirectional causality. Therefore, this study contributes to the literature in understanding the causal relationship between financial development and economic growth in SADC using data from 12 countries, namely Angola, Botswana, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Mauritius, Namibia, South Africa, United Republic of Tanzania, Zambia and Zimbabwe for the period 2008 to 2020. To the author's knowledge, this is the first study to do so. The study utilized the Granger causality test and the ARDL model to estimate this causal relationship.

Understanding the relationship between financial development and economic growth in SADC countries is crucial for several reasons. Firstly, it can help policymakers in SADC countries formulate appropriate policies to promote economic growth and development. For instance, a positive relationship would imply that policymakers focus on implementing policies that foster financial sector development, such as improving access to credit, increasing financial inclusion, and strengthening the regulatory framework (Odhiambo, 2010; Akinboade & Kinfack, 2014). Further, SADC countries are working towards greater regional integration, including financial integration. Studying the relationship between financial development and economic growth in the region can help policymakers identify areas where regional cooperation can be enhanced to promote financial development and economic growth across the member states. Many studies have been done on the subject matter. Therefore, the findings of this study will contribute to the existing body of knowledge.

Problem Statement

Governments throughout the globe have been implementing various policies to promote economic growth and financial development, considering their close relationship. Economic growth in the Southern African Development Community (SADC) has averaged roughly 5 percent per year over the past decade, improving living standards and bolstering regional human development indicators. Since its formation in 1992, the community has promoted initiatives for financial liberalization to improve people's living standards across the region (Odhiambo 2007, p. 258). The regional bloc was originally established to promote economic integration by reducing tariffs to promote trade and economic development. This led to a 100 percent phase-down of tariffs on qualifying imported goods when trading among member states by 2000. In 2006, the regional bloc signed the Protocol on Trade 2007. The initiatives outlined in this protocol liberalized the financial sector, including allowing interest rates to fluctuate based on market dynamics, reducing direct and subsidized credit, revising financial and banking regulations, adopting indirect monetary policy instruments, privatizing banking systems and easing conditions for participation in stock markets. Considering the above, understanding the nexus between financial development and economic growth is of great importance for the regional bloc. Thus, this study aimed at examining the causal relationship between financial development and economic growth in 12 SADC countries for the period 2008-2020.

Research Questions

- What is the short-run and long-run relationship between financial development and economic development?
- Is this relationship between financial development and economic growth uni-directional or bi-directional?

2.0 LITERATURE REVIEW

Theoretical Review

Schumpeter (1912) and Bagehot (1873) were among the earliest scholars to recognize the importance of the financial sector in driving economic growth. Schumpeter's economic development theory emphasizes the role of financial sector in facilitating innovation and entrepreneurship. He argued that a well-functioning financial system could identify and fund the most promising innovative projects, promoting technological progress and economic expansion.

The argument that the financial sector drives innovation, fueling economic expansion, is the supply-side theory (King & Levine, 1993). The work of Schumpeter was further enhanced by Bagehot (1873), who also highlighted the significance of the financial sector in his work, focusing on the role of banks in England's industrialization. Bagehot contended that the ability of banks to mobilize savings and allocate capital efficiently to productive investments was crucial for the country's economic development. In addition, McKinnon (1973) and Shaw (1973) backed the endogenous theory of the significance of financial development for long-run economic growth. McKinnon and Shaw argued that government repression of financial systems through interest rate ceilings and directed credit to preferential non-productive sectors, among other restrictive measures, impedes financial development, which is essential for economic growth.

However, Robinson (1952) and Kuznets (1955) contend that the role of financial development is either overstated or that financial development follows the expansion of the real economy. They challenged the supply-side view of financial development and proposed a demand-following response instead. According to Robinson, as the economy grows and becomes more complex, there is a greater need for various financial services like loans, insurance, and investment opportunities. In response to this demand, financial systems expand and develop. This perspective suggests that the causality runs from economic growth to financial development rather than vice versa (Odhiambo 2007, p. 259).

Patrick (1966) developed a theory that posits that the relationship between financial development and economic growth evolves throughout development. Initially, financial development stimulates investment innovation, laying the groundwork for sustained economic growth. As modern economic growth takes root, the significance of supply-led financial stimulus diminishes, giving way to a demand-driven financial response. Patrick suggests that this sequential transition can occur within specific industries or sectors, with some initially supported by supply-led financing before transitioning to demand-driven financing as they mature. However, industries influenced more by governmental policy than private demand may experience different timing in their development phases.

Greenwood & Jovanovic (1990) developed a theoretical model that explores the interplay between financial intermediation and economic growth. In their model, the extent of financial intermediation and the economic growth rate are endogenously determined, meaning they are influenced by factors within the model rather than being treated as exogenous variables. The authors argue that when financial intermediaries such as banks and investment firms allocate capital more efficiently, it increases productivity and economic growth. At the same time, economic growth provides the means to implement costly financial structures, such as building and maintaining a robust financial system. This mutual relationship between financial intermediation and economic growth aligns with Goldsmith, McKinnon, and Shaw's view on economic development, which emphasizes the importance of financial development in fostering economic growth. The model suggests that a well-functioning financial system is crucial for channeling savings into productive investments and promoting the efficient allocation of resources.

In conclusion, theoretical research on the relationship between financial development and economic growth has stimulated a growing body of empirical studies. These studies have provided evidence supporting both the supply-leading hypothesis, where financial development drives economic growth, and the demand-following hypothesis, where economic growth spurs financial

development. Additionally, there is evidence suggesting a bidirectional relationship, indicating that financial development and economic growth may reinforce each other. This growing body of work highlights the complexity of the relationship and suggests that the dynamics between financial development and economic growth may vary depending on the context and specific conditions of different economies.

Empirical Review

Levine et al (2000) investigated the relationship between financial intermediary development and economic growth and the role of legal and accounting systems in explaining cross-country differences in financial development. Using the cross-section instrumental variable method and dynamic panel techniques, they found that the exogenous component of financial intermediary development significantly boosts total factor productivity growth, leading to economic growth. The authors argue that access to financial services can enhance productivity by enabling firms to invest in new technologies, research and development and human capital. Financial development supports innovation and technological advancements, crucial drivers of long-term economic growth. The study also highlighted that financial markets and intermediaries mitigate information and transaction costs in goods markets by pooling savings, allowing a large group of savers to access the same information, which can identify good investment opportunities or monitor investment management. Furthermore, they discovered that cross-country differences in legal and accounting systems, such as creditor rights, contract enforcement, and accounting standards, help account for differences in financial development.

Agbetsiafa (2004) conducted a study to establish a causal relationship between financial development and economic development in a sample of eight Sub Sahara Africa (SSA) countries, namely, Ghana, Ivory Coast, Kenya, Nigeria, Senegal, South Africa, Togo, and Zambia. The study used a vector error-correction model and established a unidirectional causality from financial development to economic development in Ghana, Nigeria, Senegal, South Africa, Togo, and Zambia. Based on different indicators of financial development, the study also established mixing results on a bi-directional causality of financial indicators to economic growth.

Ang & McKibbin (2007) conducted a study investigating the relationship between financial development and economic growth in Malaysia, a small open economy, using time series data from 1960 to 2001. They employed cointegration and causality tests to assess the finance-growth link while also considering the impact of the real interest rate and financial repression. The study's findings suggest that financial liberalization, which involves the removal of repressionist policies, has a positive effect on the development of the financial sector. The author's findings support Robinson's view, which argues that output growth leads to higher financial depth in the long run rather than the other way around. Similarly, Odhiambo (2010) conducted a study investigating the relationship between financial development, investment, and economic growth in South Africa using ARDL-Bounds testing. The study included investment in the model between financial development and economic growth, creating a simple three-variable causality model. Three use three proxies of financial development, namely the broad money to GDP ratio, the ratio of private sector credit to GDP, and the ratio of liquid liabilities to GDP, were used, and the results suggest that economic growth significantly impacts the development of the financial sector. In addition, there is a one-way causal relationship from economic growth to investment.

Abu-Bader & Abu-Qarn (2008) conducted a study investigating the link between financial development and economic growth in Egypt from 1960 to 2001. The study utilized the VAR method, focusing on three main variables: financial development, economic growth, and investment, and established strong evidence that financial development and economic growth influence each other. Similarly, Taivan & Nene (2016) employed the vector autoregression (VAR) approach to conduct Granger causality tests to determine the direction of the causality relationship between financial development and economic growth across 10 SADC countries using data from 1994 to 2013. The study employed the vector autoregression (VAR) method. The results revealed evidence supporting two unidirectional causalities, implying the supply-leading theory, where financial development causes economic growth, and the demand-following response 'where economic growth drives financial development.

Research Gaps

Despite numerous empirical studies exploring the causal relationship between financial development and economic growth in the SADC region, there remains a significant research gap. Most existing studies have focused on individual countries within the bloc, such as Botswana, Tanzania and Zambia, often finding varying directional causalities. However, comprehensive regional analyses are limited, with only a few studies attempting to address this relationship across multiple SADC countries. These studies have been constrained by data availability, typically encompassing a maximum of 10 countries. Consequently, there is a paucity of research that examines the entire SADC region as a unified entity, utilizing a broader dataset. This study aims to fill this gap by analyzing the causal relationship between financial development and economic growth across 12 SADC countries from 2008 to 2020, employing the Granger causality test and the ARDL model. This approach provides a more holistic understanding of the regional dynamics and contributes to the existing literature.

3.0 MATERIAL AND METHODS

Data Sources and Description

The study utilized a quantitative research approach, employing panel data from 12 SADC member states (excluding four countries due to inadequate data) for the period 2008-2020. This dataset was compiled from the World Bank database, Penn tables, and National Bureau of Statistics websites for the member states. Based on the literature, the following variables will be used to assess the relationship between financial development and economic growth.

Table 1: Description of Variables

Variable	Description	Expected sign
L_GDPC	Natural log of GDP, a proxy for economic growth	
L_CREDIT	Natural log of credit to the private sector, a proxy for financial development	Positive
L_FIXEDCAPITAL	Natural log of gross capital formulation	Positive
L_GOV	Natural log of government expenditure	Ambiguous
L_TRADE	Natural log of Trade Openness	Positive
L_LIFEXP	Natural log of life expectance, a proxy for human development	Positive
L_POP	Natural log of population growth	Ambiguous

Measuring financial development is complex due to the diversity of financial institutions and agents involved, such as banks and stock markets. Capturing a complete picture requires considering various aspects, such as whether banks, stock markets, or both dominate a country's financial sector. Various indicators have been used in different studies to measure financial development. For instance, Samargandi et al. (2015) used M3 as a fraction of GDP, while the studies by Arcand et al., 2012, and Levine et al., 2000, used credit to the private sector as a proportion of GDP. This study adopted credit to the private sector because SADC's stock and bond markets are not well-developed (Khan & Senhadji 2003, p. 4).

Model Specification

According to Phillips & Bruce (1990), a long-run equilibrium relationship, also known as cointegration, can exist only among variables with the same order of integration. The order of integration refers to the number of times a variable has to be differenced to become stationary. Variables are said to be integrated into order 0, denoted as I(0), if they are stationary in their levels and integrated into order 1, denoted as I(1). However, Pesaran & Shin (1999) demonstrated that the panel ARDL model can be applied even when variables have different orders of integration, whether they are I(0), I(1), or a combination of both, a significant advantage of the ARDL model. Additionally, short- and long-run effects can be estimated simultaneously from a large cross-sectional and time-dimension dataset. Finally, the ARDL model, particularly the Pooled Mean Group (PMG) and Mean Group (MG) estimators, provides consistent coefficients despite potential endogeneity issues because it includes lags of the dependent and independent variables (Pesaran & Shin, 1999).

The ARDL(p,q) model specification for assessing the relationship between financial development and economic growth is specified as follows:

$$\Delta L_GDPC_{it} = \delta_i + \sum(j = 1\ to\ p)\beta_1 L_GDPC_{t-j} + \sum(j = 0\ to\ q)\beta_2\, L_CREDIT_{t-j} + \gamma Z_{it} + \varepsilon_{it}$$

Where i represents the country, t represents the year, p is the optimal lag length for the dependent variable (L_GDPC), ranging from 1 to 4, q is the optimal lag length for the independent variable (L_CREDIT), Zit represents the vector of control variables (L_FIXEDCAPITAL, L_GOV, L_TRADE, L_LIFEXP, L_POP), γ is the coefficient vector associated with the control variables. δ_i is the country-specific intercept, and ε_{it} is the error term. The optimal lag lengths p and q are determined using information criteria like AIC. The ARDL model provides the cumulative long-run impact of a change in L_CREDIT on L_GDPC, accounting for the autoregressive dynamics captured by the lags of L_GDPC. Further, the error correction representation of the ARDL model was obtained by reparameterizing the above equation to provide the short-run dynamics and the speed of adjustment toward the long-run equilibrium.

4.0 FINDINGS

Stationarity Test

The Im-Pesaran-Shin (IPS) was used to test for the presence of unit roots in panel data, where the null hypothesis is that all panels contain a unit root, and the alternative hypothesis is that at least one panel is stationary. The results of the IPS test indicated *L_GDPC, L_CREDIT, L_FIXEDCAPITAL, L_GOV L_TRADE, L_LIFEXP, L_POP* to be I(1 1 1 1 0 0 1), respectively. Therefore, since some variables are I(0), and others are I(1), the ARDL model would be an

appropriate choice to test for cointegration and estimate the long-run relationship between financial development and economic growth.

Cointegration Test

Testing for cointegration is essential to determine if they share a long-run equilibrium relationship. If cointegration is established, it would suggest that these variables cannot wander arbitrarily far from each other in the long run, and any deviations are temporary. This information is valuable for understanding the dynamics of these macroeconomic variables and their interactions over time. The table below shows the cointegration results.

Table 2: Cointegration Test Results

H0: No cointegration	Number of panels = 12	
Ha: Some panels are cointegrated	Avg. number of periods = 13.917	
Cointegrating vector: Panel specific		
Panel means: Included		
Time trend: Not included		
AR parameter: Panel specific		
	Statistic	p-value
Variance ratio	3.1991	0.0007

Note: The above table shows Westerlund test for cointegration

The null hypothesis of the Westerlund test is no cointegration, while the alternative hypothesis is "Some panels are cointegrated. Since the p-value (0.0007) is less than the conventional significance levels (e.g., 0.05 or 0.01), we can reject the null hypothesis of no cointegration. Therefore, the Westerlund panel cointegration test results suggest that there is evidence of cointegration among the variables D.L_GDPC, D.L_CREDIT, D.L_FIXEDCAPITAL, D.L_GOV, L_TRADE, L_LIFEXP, and D.L_POP for at least some of the cross-sectional units in the panel data.

Short Run and Long Run Estimates

Table 3 below presents the ARDL model's results. Column 1 shows the names of the variables. Column 2 shows the ARDL gravity model without fixed effects, known as the pooled mean model (PMG). Column 3 shows the results of the ARDL model with country-fixed effects, known as dynamic fixed effects (DFE).

Table 3: Short and Long-Run ARDL Model

	LGDCP	LGDPC
VARIABLES	**PMG Model**	**DFE Model**
Short Run Coefficients		
ECT	-0.001	-0.085*
	(0.023)	(0.048)
D.L_CREDIT	-0.033	-0.005
	(0.061)	(0.030)
D.L_FIXEDCAPITAL	0.121***	0.050**
	(0.035)	(0.025)
D.L_GOV	-0.158*	-0.028
	(0.076)	(0.028)
D.L_TRADE	0.034	0.048
	(0.048)	(0.035)
D.L_LIFEXP	-0.010	0.043
	(0.749)	(0.123)
D.L_POP	-0.182	0.012
	(0.153)	(0.011)
Long Run Coefficients		
L_CREDIT	1.030***	0.034
	(0.346)	(0.167)
L_GOV	-0.167*	-0.028
	(0.019)	(0.028)
L_FIXEDCAPITAL	-0.916**	-0.013
	(0.451)	(0.249)
L_TRADE	2.692**	0.758
	(1.186)	(0.562)
L_LIFEXP	11.411***	-2.270
	(4.197)	(2.027)
L_POP	0.498**	0.185
	(0.252)	(0.172)
Constant	-0.032	1.164***
	(1.205)	(0.395)
Observations	167	.
YEAR FE	No	No
Country FE	No	Yes

Standard errors in parentheses. **** p<0.01, ** p<0.05, * p<0.1.*

Note: The Hausman robust check shows that the PGM model has consistent and efficient estimates and hence the adopted model.

The regression results from a PMG estimation of a panel ARDL model show that the Error Correction Term (ECT) is not statistically significant, suggesting no short-run adjustment towards the long-run equilibrium. The coefficient for domestic credit to the private sector was insignificant, implying no association between financial development and economic growth in the short run. The coefficient of physical capital accumulation is positive and statistically significant at 1 percent. A

10 percent increase in physical capital accumulation is associated with 12.1 percent GDP per capita growth in SADC. The positive relation between physical capital and economic growth is consistent with the literature's prediction. An increase in physical capital increases the capital-labor ratio, making labor more productive and promoting growth.

The coefficient for government expenditure is negative and statistically significant at 1 percent. A 10 percent increase in government expenditure is associated with a 16.7 percent loss of economic growth. The results are similar to those of Samargandi et al (2015), who studied the relationship between financial development and economic growth using a sample of 52 Middle-Income over the 1980–2008 period and established a negative relationship between Government expenditure and economic growth. The negative relation can happen because government consumption usually has distortionary effects, as it translates into present and/or future tax burdens on citizens, lowering private spending and investment (Barro, 1991). Trade openness, life expectance, and population growth were statistically insignificant, implying that they are not associated with economic growth in the short run in SADC countries.

In the long run, the empirical results show that financial development positively correlates with economic growth, consistent with the literature's predictions. A 10 percent increase in domestic credit is associated with a 10.3% increase in GDP per capita. Surprisingly, both physical capital accumulation and government expenditure were established to have a negative correlation with economic growth. As highlighted above, the negative correlation between government expenditure and economic growth may be due to the distortionary effects of fiscal policy (Khadraoui & Smida 2012, p. 102).

Trade openness was established to correlate with economic growth, consistent with the literature's positive predictions. Theoretically, trade agreements are expected to foster exports by eliminating tariffs, reducing non-tariff barriers, streamlining customs procedures, facilitating trade, and enhancing market access. Since forming the SADC in 1992, the regional block has successfully phased down tariffs to 0 percent on qualifying goods when imported from a member state. The results are similar to those of Samargandi et al (2015, p. 75). In addition, the empirical findings also show a positive correlation between life expectance population growth and economic growth in SADC. This implies that, in the long run, a growing population and improved lifestyle promote people in SADC, which leads to a productive labor force associated with economic growth. The results are similar to those of Bloom et al (2004).

Lead-Lag Relationship

Granger Causality Test

The results of the Granger causality test from financial development to economic growth are presented in Table 4a below. A Granger causality test examines whether past values of financial development indicators help predict future values of economic growth or the opposite or in both directions or none of the above, beyond the information contained in the past values of the latter variable alone. In Table 5a below, the null hypothesis of the Granger causality test is that financial development does not cause economic development, while the alternative hypothesis is that financial development does cause economic development in at least one panel.

Table 4a: Granger Causality from Financial Development to Economic Growth

Lag order: 2	
W-bar =	4.5056
Z-bar =	4.3398 (p-value = 0.0000)
Z-bar tilde =	1.6892 (p-value = 0.0912)

Note: Dumitrescu and Hurlin (2012) Granger non-causality test results

H0:L_CREDIT does not Granger-cause L_GDPC.
H1: L_CREDIT does Granger-cause L_GDPC for at least one panel.

Based on these results, the highly significant Z-bar statistic (p-value = 0.0000) provides strong evidence to reject the null hypothesis that LCREDIT does not Granger cause LGGDPC for the panel as a whole. The marginally significant Z-bar tilde statistic (p-value = 0.0912 at 10% level) also suggests evidence of Granger causality from LCREDIT to LGGDPC, even after accounting for potential cross-sectional dependence. Therefore, the overall conclusion from this Granger causality test is that financial development does Granger cause economic development for at least some countries in the panel and potentially for the panel as a whole. Table 4b examines the Granger causality test from economic growth to financial development.

Table 4b: Granger Causality from Economic Growth to Financial Development

Lag order: 2	
W-bar =	10.3643
Z-bar =	14.4875 (p-value = 0.0000)
Z-bar tilde =	7.0708 (p-value = 0.0000)

Note: Table shows Dumitrescu & Hurlin (2012) Granger non-causality test results.

H0: L_GDPC does not Granger-cause L_CREDIT.
H1: L_GDPC does Granger-cause L_CREDIT for at least one panel.

Based on the Granger test results above, the highly significant Z-bar statistic (p-value = 0.0000) provides strong evidence to reject the null hypothesis that LGGDPC does not Granger cause LCREDIT for the panel as a whole. The significant Z-bar tilde statistic (p-value = 0.0000) also suggests evidence of Granger causality from LGGDPC to LCREDIT, even after accounting for potential cross-sectional dependence. Therefore, the overall conclusion from this Granger causality test is that economic growth does Granger-cause financial development for the panel as a whole and at least some countries in the panel.

From Tables 5a and 5b above, Granger causality tests show Bidirectional causality. This means that financial development granger causes economic growth, and economic growth granger causes financial development in SADC. In other words, both variables contain information that helps predict each other's future values. The findings are consistent with many studies, such as Agbetsiafa (2004), which found bidirectional causality for many Sub-Saharan African countries. Using panel data, the study by Rousseau & Wachtel (2005) and Kemal et al. (2007) found a two-way causality relationship in developing countries but no such causality in advanced countries. In addition, Agbetsiafa (2004) conducted a study to establish a bidirectional causal relationship

between financial development and economic development in a sample of eight SSA countries. Establishing a bidirectional causal relationship between financial development and economic growth has policy implications for policymakers in the SADC regional body. The following section provides policy recommendations and a conclusion of the study.

5.0 CONCLUSION AND RECOMMENDATIONS

Conclusion

This study examined the causal relationship between financial development and economic growth in 12 Southern African Development Community (SADC) countries: Angola, Botswana, Democratic Republic of Congo, Eswatini, Lesotho, Madagascar, Mauritius, Namibia, South Africa, United Republic of Tanzania, Zambia, and Zimbabwe. The study adopted the PMG and DFE ARDL model to study this relationship's short-run and long-run dynamics and the potential bidirectional causality between financial development and economic growth. The findings suggest that while financial development positively correlates with economic growth in the long run, the short-run effects may vary, with factors such as physical capital accumulation and government expenditure playing significant roles. Trade openness, life expectancy, and population growth were also found to have implications for economic growth in the SADC region, highlighting the multifaceted nature of development dynamics. Granger causality tests revealed bidirectional causality between financial development and economic growth, indicating that both variables mutually influence each other's dynamics. These findings are consistent with the findings of Taivan & Nene (2016). This underscores the importance of considering feedback mechanisms and interdependencies when formulating policies to promote the region's financial development and economic growth.

Overall, this study contributes to the existing body of knowledge on the relationship between financial development and economic growth in the SADC region and provides valuable insights for policymakers. However, the study is not without limitations. Potential omitted variable bias and the limited scope of panel data from 12 SADC member states suggest caution in interpreting results and emphasize the need for further research and data collection to refine policy recommendations, emphasizing establishing causal inference. Future research endeavors should address these limitations by employing more granular data sources, conducting country-level analyses, and employing sophisticated econometric techniques to enhance the validity and reliability of the results.

Recommendations

Given the bidirectional causality between financial development and economic growth, policymakers should adopt a holistic approach that recognizes the interconnectedness of these two variables and seeks to leverage their interactions for sustainable development in the SADC region. Policymakers should prioritize initiatives that foster financial sector development, such as enhancing access to credit, promoting financial inclusion, and strengthening regulatory frameworks (Odhiambo 2010, p. 265). This can be achieved by improving the ease of business for financial institutions and implementing regulations safeguarding financial stability while encouraging innovation. Additionally, efforts to enhance regional cooperation and integration, particularly in the financial sector, should be intensified. This includes initiatives to harmonize

financial regulations, facilitate cross-border investments, and promote the development of regional financial infrastructure.

Furthermore, there is a need for continued investment in physical and human capital, as evidenced by the positive correlation between physical capital accumulation and economic growth. This implies that, in the long run, a growing population and improved lifestyle promote people in SADC, which leads to a productive labor force associated with economic growth. The results are similar to those of Bloom, Canning, and Sevilla (2004). Governments should focus on policies encouraging infrastructure, technology, and education investment to boost productivity and drive long-term economic expansion. On the other hand, the negative relationship between economic growth and government expenditure implies that fiscal policies should be carefully designed to avoid distorting effects on economic growth, particularly by ensuring that government expenditure is directed towards productive investments and does not crowd out private sector activity.

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