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Investigating South Africa's Economic Growth: The Role of Financial Sector Development

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Abstract
This paper explores the factors contributing to the notable growth rate of the South African economy, particularly examining the role of its financial sector development. The study seeks to understand whether the South African economy's prominence in the Sub-Saharan African region can be attributed to the strength and resilience of its financial sector. If not, the paper aims to identify alternative explanations for the country's recent economic growth trajectory. Firstly, the discovery of a non-monotonic relationship between financial development and GDP growth underscores the complexity of economic dynamics in South Africa. While a strong financial sector is often considered a catalyst for economic growth, the short-term negative influence of certain financial indicators, such as M3, raises questions about the nuances of this relationship. Policymakers and economists may need to explore underlying factors driving this unexpected outcome, such as the structure of the financial sector, regulatory frameworks, or external economic shocks. Moreover, the identification of the low productive contribution of the population as a key long-term constraint highlights systemic challenges within the South African economy. Addressing this issue requires a multifaceted approach, including investments in education and skills development, promoting innovation and entrepreneurship, and fostering an enabling environment for business growth. Additionally, efforts to enhance labor market participation and productivity could play a pivotal role in unlocking the country's economic potential. Furthermore, the study underscores the importance of a holistic approach to economic development, beyond the realm of financial sector policies. While a robust financial sector is essential, sustainable economic growth hinges on addressing broader structural impediments, such as inequality, unemployment, and institutional weaknesses. By adopting a comprehensive strategy that addresses both financial development and broader socio-economic challenges, policymakers can create an environment conducive to inclusive and resilient growth. The study's insights provide valuable guidance for policymakers navigating the complexities of economic development in South Africa. By understanding the multifaceted nature of economic growth and the intricate interplay between financial development, productivity, and socio-economic factors, policymakers can formulate targeted strategies to promote sustainable and inclusive growth, thereby unlocking the country's full economic potential and improving the well-being of its citizens.
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1. INTRODUCTION

South Africa stands out as a key economic powerhouse not only within Africa but also on the global stage. Its industrial sector is characterized by advanced machinery, technological innovation, and a wide range of industries spanning manufacturing, mining, finance, telecommunications, and more. This diversification contributes to the resilience of South Africa's economy and its ability to weather various economic challenges. Moreover, South Africa's strategic geographic location, well-developed infrastructure, and robust regulatory framework further enhance its attractiveness as a destination for investment and trade. These factors, combined with a skilled workforce and a strong entrepreneurial spirit, have positioned South Africa as a hub for business and innovation within the continent. Despite its strengths, South Africa also faces significant socio-economic challenges, including high unemployment rates, income inequality, and persistent poverty. Addressing these challenges remains a priority for the government and stakeholders, as they seek to ensure inclusive growth and sustainable development for all South Africans. The Industrial Development Corporation (IDC) Economic Overview provides valuable insights into South Africa's economic performance during the period of 2002-2008. With a consistent average growth rate of 4.5% during these years, South Africa outpaced many of its regional counterparts, solidifying its position as one of the leading economies in the African continent. This robust growth trajectory underscores South Africa's resilience and competitiveness on the global stage. It reflects the country's ability to navigate through various economic challenges while capitalizing on its strengths, such as a diversified industrial base, well-developed infrastructure, and strategic geographic location.

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During this period, South Africa likely benefited from favorable global economic conditions, including strong demand for commodities, which are a significant component of its export base. Additionally, domestic reforms and investments may have contributed to the country's economic expansion, fostering entrepreneurship, innovation, and job creation across various sectors. However, it's essential to recognize that economic growth is not without its challenges and complexities. While South Africa experienced notable expansion during 2002-2008, it also faced socio-economic issues such as unemployment, inequality, and poverty, which remained persistent concerns throughout the period. The IDC Economic Overview sheds light on South Africa's economic performance, highlighting both its achievements and the ongoing efforts needed to ensure inclusive and sustainable growth for all its citizens.

The data from the Industrial Development Corporation (IDC) paints a vivid picture of South Africa's economic journey from 1993 to 2013. Over this period, the country's GDP growth rate averaged 3.19% per annum, indicating a relatively steady expansion of its economy. However, this trajectory was not without its peaks and valleys. In March 2009, South Africa reached an all-time high GDP growth rate of 7.60% per annum, reflecting a period of robust economic performance and optimism. This surge in growth was likely influenced by various factors, including favorable global economic conditions, increased domestic investment, and supportive government policies. However, the economic landscape quickly changed, and the growth rate plummeted to a record low of -6.30% per annum. This sharp decline marked a significant economic downturn for South Africa and was attributed to a confluence of factors, including the global financial crisis that rocked economies worldwide. The aftermath of the financial crisis brought about a range of economic challenges for South Africa. These challenges included reduced demand for exports, tightened credit conditions, declining investor confidence, and heightened uncertainty in the global economy. Additionally, domestic factors such as structural weaknesses, policy uncertainty, and socio-political tensions may have exacerbated the economic downturn.

The IDC's analysis underscores the interconnectedness of South Africa's economy with global economic dynamics and the importance of proactive measures to address both external shocks and domestic vulnerabilities. Moving forward, policymakers and stakeholders must focus on implementing sound economic policies, fostering a conducive business environment, and promoting inclusive growth to navigate through future challenges and ensure sustainable development for the country. Dwindling economic growth reflects a broader trend of sluggish expansion, which can have adverse effects on employment, investment, and overall prosperity. Low business confidence is often indicative of uncertainty and risk aversion among investors, which can dampen economic activity and hinder business expansion. Reduced capital spending on machinery and equipment suggests a reluctance among businesses to invest in productive assets, potentially limiting their capacity for growth and innovation. The contraction of mining output, particularly in a resource-rich country like South Africa, can have far-reaching consequences for export revenues, employment, and regional development. Production stoppages due to industrial action highlight the impact of labor disputes on productivity and business continuity. Such disruptions can disrupt supply chains, erode investor confidence, and undermine economic stability. The significant reduction in platinum production, a key contributor to foreign exchange earnings, underscores the vulnerability of South Africa's economy to fluctuations in commodity prices and market demand.

Addressing these challenges requires a multifaceted approach that addresses underlying structural issues, promotes inclusive economic growth, fosters a conducive business environment, and enhances labor relations. Policy measures aimed at promoting investment, diversifying the economy, improving infrastructure, and strengthening governance can help mitigate risks and build resilience against future shocks. Additionally, fostering dialogue and collaboration between government, businesses, labor unions, and civil society is essential for achieving sustainable and inclusive development in South Africa.

The challenges such as tumbling exports, widening trade deficits, and declining output in key sectors like mining and agriculture, underscore the depth of South Africa's economic struggles during the specified period. A large trade deficit can strain foreign exchange reserves and exacerbate currency volatility, making it more difficult to finance imports and service external debt. The reductions in mining output, particularly in gold, iron ore, and platinum production, reflect both cyclical factors and structural challenges facing the mining industry, such as labor disputes, regulatory uncertainty, and infrastructure constraints. These declines not only affect export revenues but also ripple through the economy, impacting employment, investment, and government revenues. High levels of unemployment, widening inequality, poverty, and crime are interconnected social and economic challenges that can further undermine economic stability and social cohesion. Persistent unemployment erodes household incomes, exacerbates poverty, and fuels social discontent, while inequality can hinder social mobility and economic development.

The decline in agricultural output following the financial crisis highlights the vulnerability of the sector to external shocks and weather-related factors. Given the importance of agriculture for food security, rural livelihoods, and export earnings, addressing constraints to agricultural productivity and resilience is essential for sustainable economic development. The widening current account deficit reflects imbalances between domestic savings and investment, as well as reliance on foreign capital inflows to finance consumption and investment. While a current account deficit is not necessarily a cause for concern, persistent and large deficits can signal vulnerabilities in the economy and dependence on external financing. Addressing these challenges requires a comprehensive and coordinated policy response that addresses structural constraints, promotes economic diversification, enhances competitiveness, and fosters inclusive growth. Measures to improve infrastructure, education and skills development, labor market flexibility, and investment climate can help unlock South

Africa's economic potential and create opportunities for all segments of society. Additionally, efforts to strengthen governance, combat corruption, and promote social cohesion are essential for building trust, fostering resilience, and unlocking South Africa's full economic potential. The convergence of household indebtedness, energy shortages, political instability, and external economic shocks paints a challenging picture of South Africa's economic landscape during the specified period. Household indebtedness reaching worrying levels in a low-interest rate environment underscores the risks associated with easy credit access and the need for prudent financial management among households. Rising inflationary pressures further erode purchasing power and strain household budgets, exacerbating financial vulnerabilities.

Severe energy shortages leading to blackouts not only disrupt economic activity but also undermine investor confidence and highlight structural weaknesses in the country's energy infrastructure. Addressing energy security concerns requires investments in power generation capacity, transmission infrastructure, and renewable energy sources to ensure a reliable and sustainable energy supply. The tense political climate and President Mbeki's resignation add another layer of uncertainty and volatility to the economic environment. Political instability can deter investment, undermine business confidence, and hamper policy implementation, hindering efforts to address economic challenges and promote growth. The decline in global demand resulting from the financial crisis further compounds South Africa's export woes, contributing to the stagnation of the export sector and putting pressure on the country's external accounts. The depreciation of the national currency exacerbates these challenges by increasing the cost of imports, fueling inflation, and making it more difficult to service external debt. The serious economic downturn in South Africa's financial sector reflects the broader economic challenges facing the country, including declining growth prospects, deteriorating fiscal positions, and heightened financial risks. Strengthening financial regulation and oversight, enhancing risk management practices, and promoting financial inclusion are critical for restoring stability and resilience in the financial sector. Addressing these multifaceted economic challenges requires a coordinated policy response that addresses structural constraints, promotes macroeconomic stability, and fosters inclusive and sustainable growth. Measures to enhance energy security, restore investor confidence, strengthen governance, and diversify the economy can help mitigate risks and unlock South Africa's economic potential. Additionally, fostering social cohesion and addressing inequalities are essential for building resilience and ensuring that the benefits of economic growth are shared equitably across society.

2. LITERATURE REVIEW

The relationship between financial intermediation and economic growth is a complex and multifaceted one, as highlighted by the burgeoning literature in this field. Modern empirical and theoretical studies have shed light on various aspects of this relationship, revealing the ways in which financial intermediaries and markets contribute to economic development. According to the new growth theory, financial intermediation plays a crucial role in fostering long-term growth by addressing market imperfections and facilitating efficient resource allocation. Financial intermediaries and markets emerge endogenously in response to incomplete markets, providing mechanisms for mobilizing savings, allocating capital to productive investments, and diversifying risks. Scholars such as Jbili et al. (1997) and Greenwood and Jovanovic (1990) have explored these dynamics, highlighting the positive impact of financial development on economic growth. Some authors, including McKinnon (1973), King and Levine (1993a), Levine et al. (2000), and Christopoulos and Tsionas (2004), argue that there is a causal relationship running from financial development to economic growth. They contend that a well-functioning financial system stimulates investment, entrepreneurship, and innovation, thereby fostering higher levels of productivity and economic expansion.

In contrast, other scholars such as Gurley and Shaw (1967), Jung (1986), and Goldsmith (1969) propose an alternative view, suggesting that economic growth leads to financial development. According to this perspective, as economies grow and become more sophisticated, the demand for financial services increases, driving expansion in the financial sector. This growth in financial intermediation further fuels economic development by facilitating access to credit, promoting savings mobilization, and supporting investment activities. The study conducted by Hassan et al. (2011) offers valuable insights into the relationship between financial development and economic growth across a diverse set of countries. By employing panel regressions encompassing 168 nations and utilizing both cross-sectional and time-series approaches, the authors sought to uncover the connections between financial development and economic growth across different income levels. Utilizing various multivariate time-series models, including vector autoregression (VAR) analysis, forecast error variance decompositions, impulse response functions, and Granger causality tests, the researchers aimed to elucidate the direction and nature of the relationship between finance and growth in low-, middle-, and high-income countries, as classified by the World Bank. Through these methodologies, they aimed to document the progress in financial liberalization and explore potential policy implications. The findings of the study revealed several noteworthy insights. Notably, the research highlighted that countries with lower initial GDP per capita levels tended to experience higher growth rates, even after accounting for financial and real sector variables. This suggests that financial development may play a particularly crucial role in fostering growth in economies at earlier stages of development.

Moreover, the study identified strong long-run linkages between financial development and economic growth, underscoring the importance of a well-functioning financial system in supporting sustainable economic expansion. These findings have

significant implications for policymakers, as they underscore the importance of promoting financial development as a means to stimulate economic growth and enhance overall welfare.

Demetriades and Hussein (1996) conducted a comprehensive analysis to investigate the intricate relationship between financial development and economic growth. Utilizing time series data spanning three decades from 1960 to 1990, the authors sought to elucidate the effects of financial development on economic growth across 16 countries. As indicators of financial development, Demetriades and Hussein focused on two key variables: the proportion of bank deposit liabilities to GDP and the proportion of bank lending in the private sector to GDP. By examining these metrics, they aimed to capture the extent of financial intermediation within each country's economy and its potential impact on growth dynamics. One of the notable findings of their study was the diverse nature of the causal relationship between financial development and long-run growth across the surveyed countries. Rather than observing a uniform pattern of causality, the authors discovered that the causal effect between financial development (FD) and long-run growth varied in direction for each country. This nuanced understanding underscores the complexity of the relationship between financial development and economic growth, highlighting the need for context-specific analysis tailored to individual country circumstances. By recognizing the heterogeneity in the causal pathways between financial development and growth, policymakers and researchers can better design targeted interventions and policies to foster sustainable economic development.

Zang and Kim (2007) conducted a comprehensive analysis spanning over three decades, from 1961 to 1995, across 74 countries to explore the relationship between financial development and economic growth. In their investigation, they employed two key indicators to measure financial development: the proportion of liquid liabilities to GDP and the proportion of commercial bank deposits to domestic assets plus central bank domestic assets and credit liabilities issued to productive sectors of the economy. Despite utilizing different measures of financial development, Zang and Kim's findings echoed those of Demetriades and Hussein (1996), revealing a similar pattern wherein economic growth preceded financial development. This outcome underscores a notable empirical regularity observed across diverse countries and time periods. The consistency in findings across studies underscores the complexity of the relationship between financial development and economic growth. While conventional wisdom often posits that financial development spurs economic growth by facilitating capital accumulation and allocation, empirical evidence suggests that the causal direction may not always follow this expected trajectory. Understanding the nuances of this relationship is crucial for policymakers and economists seeking to design effective policies and interventions to promote sustainable economic development. By acknowledging the empirical regularities and exploring the underlying mechanisms driving the observed patterns, researchers can contribute to a more nuanced understanding of the interplay between financial development and economic growth.

Gondo (2009) made a significant contribution to the literature on the relationship between financial development and economic growth by focusing on South Africa from 1970 to 1999. Employing time series data and employing standard instrumental variables methodology with robust standard error, Gondo introduced an additional variable to account for tax, political, and economic polarization. The study's findings revealed several noteworthy insights. Firstly, Gondo observed that credit to institutional entities had a statistically significant positive effect on the overall economic performance of South Africa. This underscores the importance of credit provision in fostering economic growth and development. However, contrary to expectations, Gondo found that liquid liabilities had a negative impact on economic growth. This unexpected result highlights the complexity of the relationship between different aspects of financial development and economic outcomes. Gondo's study emphasized the crucial role of a strong stock market and an efficient banking sector in driving the growth prospects of South Africa. By providing empirical evidence and insights into the dynamics of financial development and economic growth in the South African context, the study offers valuable implications for policymakers and stakeholders seeking to enhance the country's economic performance and stability.

Esso (2009) made a valuable contribution to the understanding of the relationship between financial development and economic growth within the Economic Community of West African States (ECOWAS) countries. By employing an Auto Regressive Distributed Lag (ARDL) model and utilizing data spanning from 1960 to 2005, Esso sought to uncover the causal effects between financial development and growth in this region. The study focused primarily on the proportion of M2 to GDP as the indicator of financial development, ensuring consistency and comparability across the ECOWAS countries under investigation. Esso's findings revealed several important insights. Firstly, he established a statistically significant long-run association between financial development and economic growth in certain ECOWAS countries, including Cote d'Ivoire, Guinea, Niger, and Togo. However, he also noted a negative long-run association in Sierra Leone and Cape Verde. Moreover, the results of the causality test indicated that financial development caused economic growth only in Cote d'Ivoire and Guinea, suggesting that the relationship between these two variables is not universally applicable across all ECOWAS countries. Esso concluded that the nature of the relationship between financial development and economic growth is contingent upon country-specific factors and cannot be generalized across the entire region. Esso's study underscores the importance of considering contextual factors and heterogeneity when examining the relationship between financial development and economic growth. By acknowledging the diverse economic landscapes and policy environments within ECOWAS countries, policymakers and researchers can develop more targeted and effective strategies to foster sustainable economic development in the region.

Acaravci et al. (2009) conducted a comprehensive study on the relationship between financial development and economic growth in selected Sub-Saharan African (SSA) countries. Using panel co-integration and panel generalized method of moments (GMM) techniques, they analyzed data spanning from 1975 to 2005 to explore this association. The findings of their research revealed a negative long-run association between financial development and economic growth in the selected SSA countries. This result underscores the complex dynamics at play within the financial and economic landscape of these nations. Rather than a straightforward positive correlation between financial development and economic growth, the authors identified a more nuanced relationship. In response to these findings, Acaravci et al. delved deeper into investigating the bi-directional causal relationship between the growth of real GDP per capita and domestic credit provided by the banking sector across the panel of SSA countries. This analysis shed light on the potential mechanisms through which these variables interact and influence each other over time. Abdullahi (2010) conducted a comprehensive analysis of the linkages between financial liberalization, financial development, and economic growth using panel data from 15 Sub-Saharan African (SSA) countries spanning from 1976 to 2005. His findings revealed a long-run equilibrium relationship between financial development and economic growth across the region. Further investigation through country-specific time series analysis reaffirmed the direction of causality, indicating that financial development precedes economic growth. In a similar vein, Rachdi (2011) explored the causal relationship between financial development and economic growth in Middle East and North African (MENA) as well as OECD countries. Employing a panel data cointegration and GMM systems approach, Rachdi's study uncovered a positive and robust correlation between financial development and real GDP in both MENA and OECD countries. This suggests a meaningful association between the financial sector and real sector entities within these regions.

Ndambiri et al. (2012) conducted an extensive investigation into the determinants of economic growth in a panel of 19 Sub-Saharan African (SSA) countries spanning from 1982 to 2000. Employing the Generalized Method of Moments (GMM) methodology, the authors aimed to identify the key factors influencing economic growth across the region. Their research uncovered several noteworthy findings regarding the drivers of economic growth in SSA countries. Specifically, Ndambiri et al. identified physical capital formation and human capital formation as the most significant contributors to the region's economic growth prospects. This underscores the importance of investment in infrastructure and education in fostering long-term economic development. However, the study also revealed that certain factors had adverse effects on economic growth. Government expenditure, the nominal discount rate, and foreign aid were found to significantly lead to negative economic growth in the SSA countries. These findings suggest that inefficient government spending, high interest rates, and dependency on foreign aid may hinder rather than facilitate economic progress in the region.

3. THE MODEL

Based on the literature review, the model of the study is structured as follows:

M3 = f(LFCF, LPOP, TRADE, LGDP)

PRIVATE = f(LFCF, LPOP, TRADE, LGDP)

BASSET = f(LFCF, LPOP, TRADE, LGDP)

In this model, the dependent variables are M3 (the ratio of liquid liabilities to nominal GDP), PRIVATE (the ratio of credit issued to the private sector by banks to GDP), and BASSET (the ratio of commercial bank assets to central bank assets). The explanatory variables include GDP per capita (GDP at constant 2000 values), economic growth, fixed capital formation (FCF), trade openness (TRADE), and the population growth rate (POP). By examining the relationships between these variables, the study aims to assess the impact of financial development on various aspects of the economy, such as liquidity, private sector credit, and the structure of commercial bank assets. This approach allows for a comprehensive analysis of how different measures of financial development influence economic outcomes and provides insights into the role of finance in driving economic growth and development.

5. RESULTS AND DISCUSSION

The table 1 summarizes the results of the Augmented Dickey-Fuller (ADF) unit root test for several variables, both at their original level and after being differenced once (first difference). For the variable LGDP, representing the logarithm of GDP, the ADF test statistics are -0.872 at the level, -1.376 with an intercept and trend, and -3.166 after differencing. The test statistic is significant at the 5% level for the first difference, indicating stationarity following differencing. Regarding LFCF, the logarithm of Fixed Capital Formation, the ADF test statistics are -0.426 at the level, -2.067 with an intercept and trend, and -2.967 after differencing. The test statistic is significant at the 1% level both with an intercept and trend and after differencing, suggesting stationarity. However, for LPOP, representing the logarithm of Population, the ADF test statistics are -1.480 at the level, -0.850 with an intercept and trend, and 0.382 after differencing. None of the test statistics are significant, indicating non-stationarity. TRADE, representing trade-related variables, shows ADF test statistics of -1.832 at the level, -2.355 with an intercept and trend, and -5.335 after differencing. The test statistic is significant at the 1% level after differencing, suggesting stationarity. Similarly, for M3 (Money Supply), the ADF test statistics are -2.047 at the level, -3.597 with an intercept and trend, and -4.049 after differencing. The test statistic is significant at the 1% level after differencing, indicating stationarity. PRIVATE, representing private sector-related variables, shows ADF test statistics of

1.097 at the level, -2.810 with an intercept and trend, and -3.523 after differencing. The test statistic is significant at the 1% level after differencing, suggesting stationarity. Finally, BASSET (Broad Money Supply) exhibits ADF test statistics of 2.158 at the level, -2.953 with an intercept and trend, and -5.766 after differencing. The test statistic is significant at the 1% level after differencing, indicating stationarity.

Table-1: ADF Unit Root Test

Variables	At Level		At First Difference
	Intercept	Intercept and trend	Intercept
LGDP	-0.872	-1.376	-3.166**
LFCF	-0.426	-2.067***	-2.967***
LPOP	-1.480*	-0.850	0.382
TRADE	-1.832	-2.355	-5.335***
M3	-2.047**	-3.597***	-4.049***
PRIVATE	1.097	-2.810	-3.523***
BASSET	2.158	-2.953*	-5.766***

The table 2 presents the criteria used for selecting the lag order in a Vector Autoregression (VAR) model. For lag order 0, the log likelihood (LogL) is -21.20435, and other criteria such as the likelihood ratio (LR), Final Prediction Error (FPE), Akaike Information Criterion (AIC), Schwarz Criterion (SC), and Hannan-Quinn Criterion (HQ) are not applicable (NA). At lag order 1, the LogL increases significantly to 148.9562, indicating a better fit. The LR statistic is 269.9099, which suggests strong evidence against the null hypothesis of no serial correlation. The FPE is 1.94e-10, indicating a very small prediction error. However, the AIC, SC, and HQ criteria are negative, with values of -8.203877, -6.789433, and -7.760891, respectively. At lag order 2, the LogL further increases to 196.9655. The LR statistic decreases to 59.59777, but it remains significant. The FPE also decreases to 4.70e-11. The AIC, SC, and HQ criteria continue to decrease as well, with values of -9.790726, -7.197579, and -8.978585, respectively. For lag order 3, the LogL reaches 232.8031, indicating the highest likelihood among the tested lag orders. The LR statistic decreases further to 32.13025 but remains significant. The FPE remains very small at 3.64e-11. Notably, the AIC, SC, and HQ criteria all reach their lowest values at this lag order, with -10.53815, -6.766296, and -9.356850, respectively, suggesting that lag order 3 provides the best balance between goodness of fit and model complexity.

Table 2: VAR model for lag order selection criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-21.20435	NA	4.19e-06	1.807196	2.042937	1.881027
1	148.9562	269.9099	1.94e-10	-8.203877	-6.789433	-7.760891
2	196.9655	59.59777*	4.70e-11	-9.790726	-7.197579	-8.978585
3	232.8031	32.13025	3.64e-11*	-10.53815*	-6.766296*	-9.356850*

Table 3: Results from Bounds Test

Dep. Var.	SIC Lag	F-statistics	Probability	Outcome
F_{GDP}(GDP|POP, TRD, FCF, FD)	3	3.12*	0.045	Cointegration
F_{POP}(POP|GDP, TRD, FCF, FD)	3	2.308	0.104	Inconclusive
F_{TRD}(TRD| GDP, POP, FCF, FD)	3	1.719	0.199	No cointegration
F_{FCF}(FCF| GDP, POP, TRD, FD)	3	2.638	0.074	Inconclusive
F_{FD}(FD| GDP, POP, TRD, FCF)	3	0.506	0.766	No cointegration

The table 3 presents the results from the Bounds Test for cointegration, which assesses the long-run relationship between variables. For the dependent variable FGDP (Gross Domestic Product), the SIC Lag selected is 3. The F-statistic is 3.12, with a probability of 0.045. This result suggests cointegration between FGDP and the independent variables (POP, TRD, FCF, FD). Regarding the dependent variable FPOP (Population), the SIC Lag chosen is also 3. The F-statistic is 2.308, with a probability of 0.104. This outcome is inconclusive regarding cointegration with the independent variables (GDP, TRD, FCF, FD). For the dependent variable FTRD (Trade), the SIC Lag selected is again 3. The F-statistic is 1.719, with a probability of 0.199. This result suggests no cointegration between FTRD and the independent variables (GDP, POP, FCF, FD). For the dependent variable FFCF (Fixed Capital Formation), the SIC Lag is 3. The F-statistic is 2.638, with a probability of 0.074. This result is inconclusive regarding cointegration with the independent variables (GDP, POP, TRD, FD). Lastly, for the dependent variable FFD (Foreign Direct Investment), the SIC Lag is again 3. The F-statistic is 0.506,

with a probability of 0.766. This result suggests no cointegration between FFD and the independent variables (GDP, POP, TRD, FCF).

The table 4 presents the results from the Bounds Test for cointegration, examining the long-run relationship between variables. For the dependent variable FGDP (Gross Domestic Product), the SIC Lag selected is 3. The F-statistic is 4.235, with a probability of 0.022, indicating cointegration with the independent variables (POP, TRD, FCF, M3, PRIVATE, BASSET). Regarding the dependent variable FPOP (Population), the SIC Lag chosen is also 3. The F-statistic is 6.504, with a probability of 0.005, indicating cointegration with the independent variables (GDP, TRD, FCF, M3, PRIVATE, BASSET). For the dependent variable FTRD (Trade), the SIC Lag selected is again 3. The F-statistic is 6.775, with a probability of 0.004, indicating cointegration with the independent variables (GDP, POP, FCF, M3, PRIVATE, BASSET). Regarding the dependent variable FFCF (Fixed Capital Formation), the SIC Lag selected is 3. The F-statistic is 3.227, with a probability of 0.025, indicating cointegration with the independent variables (GDP, POP, TRD, M3, PRIVATE, BASSET). For the dependent variable FM3 (Money Supply), the SIC Lag selected is also 3. The F-statistic is 3.522, with a probability of 0.045, indicating cointegration with the independent variables (GDP, POP, TRD, FCF, PRIVATE, BASSET). Similarly, for the dependent variable FPRIV (Private Sector Investment), the SIC Lag selected is 3. The F-statistic is 3.444, with a probability of 0.041, indicating cointegration with the independent variables (GDP, POP, TRD, FCF, M3, BASSET). However, for the dependent variable FBASS (Asset Prices), the SIC Lag selected is 3, but the F-statistic is 2.381, with a probability of 0.108, indicating no cointegration with the independent variables (GDP, POP, TRD, FCF, M3, PRIVATE).

Table-4: Results from Bounds Test

Dep. Var.	SIC Lag	F-statistic	Probability	Outcome
F_{GDP}(GDP|POP, TRD, FCF, M3, PRIVATE, BASSET)	3	4.235***	0.022	Cointegration
F_{POP}(POP|GDP, TRD, FCF, M3, PRIVATE, BASSET)	3	6.504***	0.005	Cointegration
F_{TRD}(TRD| GDP, POP, FCF, M3, PRIVATE, BASSET)	3	6.775***	0.004	Cointegration
F_{FCF}(FCF| GDP, POP, TRD, M3, PRIVATE, BASSET)	3	3.227**	0.025	Cointegration
F_{M3}(M3| GDP, POP, TRD, FCF, PRIVATE, BASSET)	3	3.522**	0.045	Cointegration
F_{PRIV}(PRIVATE| GDPC, POP, TRD, FCF, M3, BASSET)	3	3.444**	0.041	Cointegration
F_{BASS}(BASSET| GDP, POP, TRD, FCF, M3, PRIVATE)	3	2.381	0.108	No cointegration

Notes: Asymptotic critical value bounds are obtained from Table F in Appendix C,
Case II: intercept and no trend for k=5 (Pesaran and Pesaran, 1997, p. 478).
Lower bound I(0) = 2.39 and upper bound I(1) = 3.38 at the 5% significance level.

The table 5 provides the coefficients, standard errors, T-ratios, and probabilities for the regressors in the long-run analysis. For the regressor TRADE, the coefficient is 0.006, and it has a standard error of 0.004. This results in a T-ratio of 1.311, with a corresponding probability of 0.205. In the case of the regressor LPOP, its coefficient is -0.317, and the standard error associated with it is 0.135. The T-ratio for this regressor is -2.342, with a probability of 0.030. For the regressor FCF, the coefficient is 0.184, and it has a standard error of 0.077. This leads to a T-ratio of 2.386, with a corresponding probability of 0.028. Regarding the regressor FD, it has a coefficient of 0.005, and the standard error is 0.022. The T-ratio for FD is 0.250, with a probability of 0.805. Lastly, the constant term in the model is 9.015, with a standard error of 2.388. This yields a T-ratio of 3.775, and the associated probability is 0.001.

Table 5: Long-Run Analysis

Regressors	Coefficient	Standard Error	T-Ratio[Prob]
TRADE	0.006	0.004	1.3110[0.205]
LPOP	-0.317	0.135	-2.342[0.030]
FCF	0.184	0.077	2.386[0.028]
FD	0.005	0.022	0.250[0.805]
Constant	9.015	2.388	3.775[0.001]

In the long-run analysis presented in Table 6, coefficients, standard errors, T-ratios, and probabilities for various regressors are provided. The regressor TRADE has a coefficient of 0.008, with a standard error of 0.001. This results in a T-ratio of 4.121, indicating statistical significance with a probability of 0.000. For the regressor LPOP, the coefficient is -0.636, and the associated standard error is 0.183. The T-ratio for LPOP is -3.478, with a probability of 0.002, signifying its statistical significance. Regarding the regressor M3, it has a coefficient of -1.180 and a standard error of 0.374. The T-ratio for M3 is -3.174, with a probability of 0.004, suggesting its significance in the model. The regressor BASSET has a coefficient of -0.624 and a standard error of 0.689, resulting in a T-ratio of -0.905. Although the T-ratio is below the conventional threshold for significance, its associated probability is 0.375. PRIVATE, another regressor, has a coefficient of 1.060 and a

standard error of 0.309. This yields a T-ratio of 3.422, indicating statistical significance with a probability of 0.002. Lastly, the constant term in the model is 19.452, with a standard error of 3.199. The T-ratio for the constant is 6.079, with a probability of 0.000, indicating its statistical significance.

Table 6: Long-Run Analysis

Regressors	Coefficient	Standard Error	T-Ratio[Prob]
TRADE	0.008	0.001	4.121[0.000]
LPOP	-0.636	0.183	-3.478[0.002]
M3	-1.180	0.374	-3.174[0.004]
BASSET	-0.624	0.689	-0.905[0.375]
PRIVATE	1.060	0.309	3.422[0.002]
Constant	19.452	3.199	6.079[0.000]

In Table-7, the short-run analysis results are outlined, featuring coefficients, standard errors, T-ratios, and probabilities for different regressors. The regressor dLGDP1 has a coefficient of -0.340, with a standard error of 0.163. The associated T-ratio is -2.075, indicating a marginally significant relationship with a probability of 0.051. For the regressor dTRADE, the coefficient is 0.001, with a standard error of 0.567. This yields a T-ratio of 3.113, indicating statistical significance with a probability of 0.005. Regarding dLPOP, the coefficient is -0.408, and the standard error is 0.565. The T-ratio for dLPOP is -0.722, with a probability of 0.478, suggesting its lack of significance in the model. Similarly, dLPOP1 has a coefficient of -1.197 and a standard error of 0.531, resulting in a T-ratio of -2.253. This indicates statistical significance with a probability of 0.036. The regressor dLFCF has a coefficient of 0.250 and a standard error of 0.052, resulting in a T-ratio of 4.783. It is statistically significant with a probability of 0.000. On the other hand, the coefficient for dFD is -0.001, with a standard error of 0.006. The T-ratio for dFD is -0.194, suggesting a lack of significance with a probability of 0.848. The regressor dC has a coefficient of 2.655 and a standard error of 1.647, resulting in a T-ratio of 1.611. While the T-ratio is above the conventional threshold, its associated probability is 0.123. Finally, the ecm(-1) term, representing the error correction mechanism from the previous period, has a coefficient of -0.299 and a standard error of 0.150. The T-ratio for ecm(-1) is -1.993, suggesting marginal significance with a probability of 0.060.

Table 7: Short Run Analysis

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
dLGDP1	-0.340	0.163	-2.075[0.051]
dTRADE	0.001	0.567	3.113[0.005]
dLPOP	-0.408	0.565	-0.722[0.478]
dLPOP1	-1.197	0.531	-2.253[0.036]
dLFCF	0.250	0.052	4.783[0.000]
dFD	-0.001	0.006	-0.194[0.848]
dC	2.655	1.647	1.611[0.123]
ecm(-1)	-0.299	0.150	-1.993[0.060]
ecm = LGDP -.0058968*TRADE + .42074*LPOP -.26764*LFCF + .0040184*FD -8.86 67*C			

Table 8: Short Run Analysis

Regressor	Coefficient	Standard Error	T-Ratio[Prob]
dTRADE	0.002	0.594	4.166[.000]
dLPOP	-1.018	0.511	-1.991[.058]
dM3	-0.361	0.166	-2.167[.040]
dBASSET	-0.189	0.197	-0.961[.346]
dPRIVATE	0.322	0.125	2.568[.017]
dC	5.911	2.046	2.889[.008]
ecm(-1)	-0.303	0.081	-3.708[.001]
ecm = LGDP -.0081473*TRADE + .63690*LPOP + 1.1896*M3 + .62412*BASSET -1 .0602*PRIVATE -19.4529*C			

Table-8 presents the results of the short-run analysis, detailing coefficients, standard errors, T-ratios, and probabilities for various regressors. The regressor dTRADE has a coefficient of 0.002 and a standard error of 0.594. The associated T-ratio is 4.166, indicating statistical significance with a probability of 0.000. For dLPOP, the coefficient is -1.018, with a standard

error of 0.511. The T-ratio for dLPOP is -1.991, suggesting marginal significance with a probability of 0.058. Regarding dM3, the coefficient is -0.361, and the standard error is 0.166. The T-ratio for dM3 is -2.167, indicating statistical significance with a probability of 0.040. The regressor dBASSET has a coefficient of -0.189 and a standard error of 0.197, resulting in a T-ratio of -0.961. The associated probability is 0.346, suggesting a lack of significance. On the other hand, dPRIVATE has a coefficient of 0.322 and a standard error of 0.125. The T-ratio for dPRIVATE is 2.568, indicating statistical significance with a probability of 0.017. The regressor dC has a coefficient of 5.911 and a standard error of 2.046, resulting in a T-ratio of 2.889. It is statistically significant with a probability of 0.008. Finally, the ecm(-1) term, representing the error correction mechanism from the previous period, has a coefficient of -0.303 and a standard error of 0.081. The T-ratio for ecm(-1) is -3.708, indicating statistical significance with a probability of 0.001.

6. CONCLUSIONS

The paper explores the empirical relationship between financial development and economic growth in South Africa. The findings indicate an abundance of finance in the economy, leading to various consequences such as mounting inflationary pressure. This inflationary pressure contributes to the high fiscal deficit experienced by the country, among other challenges. The study concludes that trade openness and the ratio of credit issued to the private sector by banks to GDP are significant contributors to South Africa's economic growth in both the short and long term. As recommendations, the study suggests substantial investment in vocational training institutions and reducing the cost of entrepreneurial education. Additionally, creating an entrepreneurial-friendly environment that encourages low-cost investment to stimulate productivity is advised. Expanding on these recommendations, it's important to emphasize the role of policy frameworks and regulatory environments in fostering trade openness and facilitating access to credit for the private sector. Governments can promote trade liberalization through the negotiation of bilateral and multilateral trade agreements, as well as by streamlining customs procedures and reducing tariffs and non-tariff barriers to trade. Additionally, creating a competitive and transparent financial sector that encourages lending to small and medium-sized enterprises (SMEs) can stimulate entrepreneurship and innovation. This may involve implementing policies that incentivize banks to extend credit to SMEs, such as credit guarantee schemes or interest rate subsidies. Furthermore, investing in vocational training institutions is essential for equipping the workforce with the skills needed to thrive in a rapidly evolving economy. These institutions should offer training programs tailored to the needs of industries with growth potential, such as technology, renewable energy, and advanced manufacturing. Moreover, reducing the cost of acquiring entrepreneurial knowledge can be achieved through initiatives like subsidized entrepreneurship courses, mentorship programs, and business incubators that provide guidance and support to aspiring entrepreneurs. Creating an entrepreneurial environment conducive to low-cost investment requires addressing regulatory barriers, fostering a culture of innovation and risk-taking, and promoting collaboration between the public and private sectors. Governments can play a critical role in this process by implementing policies that support entrepreneurship, such as simplifying business registration procedures, providing tax incentives for startups, and promoting research and development activities. Additionally, initiatives to promote networking and knowledge sharing among entrepreneurs can facilitate the exchange of ideas and best practices, fostering a vibrant ecosystem for business growth and innovation. Indeed, reshaping monetary policies to foster a more resilient and efficient financial sector is crucial for South Africa's economic development. By aligning monetary policies with broader economic objectives, such as promoting innovation, fostering competition, and supporting entrepreneurship, policymakers can create an environment conducive to sustainable growth. This may involve adopting policies that enhance financial inclusion, promote stability in the banking sector, and facilitate access to financing for businesses of all sizes.

Moreover, efforts to diversify the economy and expand trade linkages are essential for reducing vulnerability to external shocks and ensuring long-term resilience. South Africa can explore opportunities to strengthen economic ties with emerging markets, diversify its export base, and attract foreign direct investment in strategic sectors. By broadening its trade relations beyond traditional partners and tapping into new markets, the country can enhance its economic competitiveness and reduce reliance on any single market or commodity. Furthermore, stimulating internal demand through targeted policies and investments can help drive economic growth and reduce dependence on external demand. This may involve initiatives to boost consumer confidence, increase household purchasing power, and promote domestic consumption through infrastructure development, social welfare programs, and investment in key sectors such as healthcare, education, and housing. Overall, by implementing these recommendations and pursuing a comprehensive approach to economic policy, South Africa can enhance its resilience, foster inclusive growth, and strengthen its position in the global economy. By leveraging its strengths, addressing structural challenges, and embracing innovation and diversification, the country can unlock its full potential and create a more prosperous future for its citizens.

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