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EXTERNAL DEBT AND ECONOMIC GROWTH IN DEVELOPING ECONOMIES: A TIME-SERIES ANALYSIS

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ABSTRACT

This study seeks to address this gap and contribute to the broader discourse on debt management and economic policy in developing countries. It employs a time-series analysis approach, which allows for capturing the dynamic and long-term effects of external debt on economic growth and interactions with other economic variables. This study utilises the Auto-Regressive Distribution lag (ARDL) to analyse the data. The empirical estimate demonstrates that Zimbabwe's external debt and economic growth are negatively associated. Specifically, external debt negatively and significantly affects short-run economic growth, implying that higher external debt reduces economic growth. Therefore, in conclusion, the need for policy makers to prioritize other sources of funding, such as domestic savings and foreign direct investment. Also, there is need to be cautious about taking on new external debt, and to carefully consider the potential impact on economic growth. Thus, there should develop a strategy for managing the existing external debt, such as through debt restructuring or rescheduling and focus more on other factors that can contribute to economic growth.

KEY WORDS

Development, economic growth, public service, analysis, debt.

The economic trajectory of a nation is often a complex interplay of various factors, with external debt and economic growth being two of the most crucial elements. This study aims to delve into the intricate relationship between these two variables within the context of Zimbabwe, a nation with a rich and diverse economic history. Like many other developing countries, Zimbabwe has grappled with the issue of external debt for several decades. External debt can play a pivotal role in the country's economic landscape. On the one hand, it can provide the much-needed capital for investment and development. On the other hand, if not managed properly, it can lead to economic instability (Macrotrends, 2023).

Economic growth, measured typically by the increase in Gross Domestic Product (GDP), indicates a country's economic health (Quantec standardised industry, 2019). For Zimbabwe, this growth has been influenced by various factors over time, including levels of external debt (Agyeman et al., 2022). Despite extensive research on this topic, there remains a gap in understanding the nuanced impacts of external debt on Zimbabwe's economic growth. This study seeks to address this gap and contribute to the broader discourse on debt management and economic policy in developing countries. The objectives of this research are twofold. First, it aims to investigate the impact of external debt on economic growth in Zimbabwe. Second, it seeks to explore the underlying mechanisms that drive this relationship. To achieve these objectives, this study will employ a time-series analysis approach. This involves examining data collected over time to identify trends and patterns. The study hopes to illuminate the complex dynamics between Zimbabwe's external debt and economic growth.

Furthermore, this research is significant for several reasons: It contributes to the existing literature on the relationship between external debt and economic growth, a relevant and important topic for developing countries. It provides a specific and detailed analysis of the case of Zimbabwe, which has a unique and complex economic history and faces several challenges in its debt management and economic development. It employs a time-series analysis approach, which allows for capturing the dynamic and long-term effects of external



debt on economic growth and interactions with other economic variables. It offers valuable insights and implications for policymakers and stakeholders in Zimbabwe and other developing countries, who can use the findings to inform their decisions and strategies regarding external debt and economic growth. In recent years, the country has experienced significant increases in external debt, with the level of external debt as a percentage of GDP rising from 31% in 2010 to 60% in 2019 (World Bank, 2021). This trend raises concerns about the sustainability of the country's external debt levels and their impact on economic growth. The literature on the impact of external debt on economic growth is mixed, with some studies finding a positive relationship (Asravor et al., 2023; Gövdeli, 2019) and others finding negative relationship (Agyeman et al., 2022; Ale et al., 2023; Makun, 2021; Mavhinga, 2015). Most existing studies on this topic have focused on developed countries, with little attention given to developing countries like Zimbabwe. This study aims to fill this gap by using data from Zimbabwe to explore the relationship between external debt and economic growth. It will also seek to identify the factors that influence this relationship, such as the composition of external debt, the use of borrowed funds, and the level of debt servicing. Therefore, the study provides a better understanding of the impact of external debt on economic growth in Zimbabwe.

The contribution of this study to the existing literature on the relationship between external debt and economic growth will be twofold. First, it will add to the limited body of evidence on the impact of external debt on economic growth in developing countries, particularly in sub-Saharan Africa. Second, it will provide insights into the specific factors that influence this relationship in Zimbabwe, which could help policymakers develop more effective policies to manage external debt and promote economic growth. It will also contribute to understanding the country's development challenges and opportunities.

This study will add new knowledge by providing insights into the factors that determine the impact of external debt on economic growth in Zimbabwe. It will identify the types of external debt that have the most positive or negative impact on economic growth, the sectors where borrowed funds have the greatest impact, and the level of debt servicing that is sustainable for the country. This information will help policymakers make more informed decisions about the level of external debt the country can sustain and how to allocate borrowed funds to maximise the economic benefits. It will also help to develop policies to improve the quality and efficiency of debt management and reduce the cost of debt servicing.

According to the Reserve Bank of Zimbabwe, the external debt of Zimbabwe was \$13,325 million as of December 2020. Another source, Macrotrends, reports that the external debt of Zimbabwe was \$13,738,737,024 as of 2021. It is important to note that Zimbabwe's debt crisis has been a major issue recently. The country owes US\$5.6 billion to bilateral creditors and US\$2.7 billion to multilateral creditors. As of 2021, Zimbabwe's external debt was USD\$13,738,737,024, a 7.81% increase from 2020. The external debt in 2020 was USD\$12,743,307,367, a 4.05% increase from 2019 (Macrotrends, 2023). Zimbabwe's economy has been experiencing several challenges. However, there have been some positive developments as well. Here are some key points: The World Bank (2023) revealed that Real GDP growth remained high at 6.5% in 2022 from 8.5% in 2021, driven by a continued growth in agricultural production. However, growth will slow in 2023 due to global headwinds, structural bottlenecks, and price and exchange rate instability. Inflation in Zimbabwe peaked at 280 percent in December 2022, one of the highest rates globally. This led to plummeting living standards in the country, where 7.9 million people, half of the population, fell into extreme poverty between 2011 and 2022. The Zimbabwean dollar also weakened, trading at 930 to the US dollar on the parallel market – a steep decline after two months of relative stability at 700 to \$1.

The fiscal balance was in surplus during the first half of 2023, as the government slowed spending to contain inflation and exchange rate pressures. However, the fiscal balance is projected to turn into a deficit in 2023 on a high wage bill, high-interest payments from quasi-fiscal operations (QFOs), and the resumption of spending after elections. The current account surplus narrowed during the first half of 2023 as the trade deficit's widening outpaced the remittances growth. Zimbabwe's economic development continues to be



hampered by several challenges, such as electricity shortage, inflation, and exchange rate pressures.

LITERATURE REVIEW

The literature suggests that the types of external debt that have the most positive impact on economic growth are those that finance long-term, productive investments, such as infrastructure, human capital development, and technological innovation. These types of investments can lead to increased productivity and competitiveness, which can boost economic growth. In contrast, external debt used for short-term, unproductive purposes, such as consumption or debt servicing, can negatively impact economic growth. It can build unsustainable debt levels and divert resources from productive investments.

Internal debt is the portion of a country's debt incurred within its borders. This debt is usually owed to domestic lenders such as banks, pension funds, and other financial institutions (Borensztein, 1990). On the other hand, external debt refers to the portion of a country's debt borrowed from foreign lenders such as commercial banks, governments, or international financial institutions. External debt can take the form of a tied loan, whereby the borrower must apply any spending of the funds to the country providing the loan (Sachs, 1989). Therefore, it can be problematic if the borrower cannot generate sufficient revenue to repay the loan. If a country cannot repay its external debt, it is said to be in sovereign debt and faces a debt crisis.

External debt can positively and negatively affect a country's economy. Here are some of how external debt can affect the a country's economy. External debt can provide a source of financing for investment in infrastructure, education, health care, and other areas that can promote economic growth (Moh'd AL-Tamimi & Mohammad, 2019). External debt can help finance capital goods and technology imports to increase productivity and competitiveness. However, excessive external debt can lead to a decline in economic growth. This is because the debt burden can lead to reduced investment and a decline in productivity and economic growth. External debt can lead to declining economic growth by reducing credit availability for private investment (World Bank Group, 2023). It relates that it can occur when the government borrows heavily from foreign lenders, leaving little credit available for private borrowers. External debt can also lead to currency depreciation, which can increase the cost of imports and reduce the purchasing power of consumers (Chowdhury, 2001).

According to the debt overhang theory, excessive external debt can lead to declining economic growth. This is because the debt burden can lead to reduced investment and a decline in productivity and economic growth. Debt overhang Deshpande (1997) implies that high debt is a tax on the investment; thus, it discourages investment; there is fear of funds being used to repay debt, so investors are kept in the expropriation of their funds out of the country. Thus, governments expose their people to poverty through using locally generated funds to repay external debt, thus affecting economic growth.

Borensztein (1990) The debt overhang arises when the debtor country benefits little from the return to any additional investment because of debt service obligations. When foreign obligations cannot be fully met with existing resources and actual debt payments are determined by some negotiation process between the debtor country and its creditors, the amount of payments can become linked to the economic performance of the debtor country, with the consequence that at least part of the return to any increase in production would be devoted to debt servicing. Thus, it defines a debt overhang situation as one in which the expected repayment on foreign debt falls short of the contractual value of debt.

Makun (2021) The Debt-overhang situation postulates that if the present debt stock of a country is high, then people would foresee higher future income taxes and would not be willing to save and make an investment (Krugman, 1988; Sachs, 1989). (Faini & Melo, 1990; Fry, 1989) tested the debt-overhang proposition and showed that large external borrowing reduces domestic investment and certainly affects economic growth. Under the liquidity constraint situation, countries with huge external borrowings face high debt service repayment and consequently reduce their resources that could be used for investment



(Hofman & Reisen, 1991). Studies such as (Cohen, 1993; Hansen, 2004) and (Presbitero & Arnone, 2006) also supported the liquidity constraint hypothesis as large debt service requirements crowd out investments and dampen the economic growth process. At the same time, the direct effect of the debt situation is that countries with large external debt may reduce the existing capital productivity, which could reduce economic output.

The crowding-out effect is another theory suggesting that external debt can lead to a decline in economic growth by reducing credit availability for private investment (Deshpande, 1997). It explains that it can occur when the government borrows heavily from foreign lenders, leaving little credit available for private borrowers. Chowdhury (2001) explained that the debt-servicing cost of the public debt can crowd out public investment expenditure, thus reducing total investment directly and indirectly by reducing complementary private expenditure.

Asravor et al. (2023) believe that theory suggests that excessive debt levels can impede economic growth. A country with a high debt burden may divert significant resources towards servicing debt, leaving fewer resources available for productive investments (Krugman., 1988). This can lead to lower economic growth rates. Against this backdrop, the long-term interest rate is the main channel where public debt can affect economic growth.

Agyeman et al. (2022) the indirect linkage theory asserts that the simultaneous rise in external inflow and capital flight are the consequences of track records of the government's destructive policies, mismanagement of the economy, policy inconsistency, corruption scandals, and weak domestic institutional structures, among others. Based on this theory, indirect factors like declining growth regimes, exchange rate overvaluation, fiscal mismanagement by governments, and others drive capital flight and engender genuine acquisition of foreign capital. Similarly, surges in external debt often result in risky or reckless investment decisions and excess borrowing. For example, due to weak state structures and mechanisms for the prudent administrative and regulatory framework, many foreign funds contracted are typically siphoned and deposited abroad by domestic elites and bureaucrats to finance their selfish foreign investments. These foreign investments do not yield revenue to the domestic economy since taxes cannot be imposed. This weakens the debt servicing capacity of the government and, therefore, adversely affects the growth of the domestic economy. Therefore, unfavourable domestic conditions mainly drive high external debt accumulation and capital flight.

Economic growth is typically measured by the increase in Gross Domestic Product (GDP) over time. Gross Domestic Product (GDP) (Chikwira & Rawjee, 2022). This is the total value of all goods and services produced by a country in a given period (Quantec standardised industry, 2019). It is the most commonly used measure of economic growth. GDP per capita: This is the GDP divided by the total population. It gives an idea of the economic output per person and is a better measure of living standards than GDP alone; thus, the current study opted to employ the GDP per capita as the dependent variable. Real GDP: This measures the value of output in constant prices, i.e., prices of a particular year, known as the base year. It allows us to measure economic growth without the effects of inflation. GDP growth rate: This is the annual percentage growth rate of GDP yearly. It allows us to compare economic growth over time. Sectoral contribution to GDP: Looking at which sectors (e.g., agriculture, manufacturing, services) contribute to GDP can give insights into the economy's structure and how these changes over time.

Empirical Literature Review

External debt can potentially lead to economic instability if not managed properly. On the other hand, external debt can also provide the necessary capital for investment and development. The specific impact would depend on various factors, such as the terms of the debt, how the borrowed funds are used, and the overall economic conditions of the country.

The Impact of External Debt on Economic Growth in Zimbabwe (Mavhinga, 2015), through their study investigated the impact of external debt on economic growth in Zimbabwe using time series data covering the period 1980-2013. The study found a significant negative relationship between Zimbabwe's external debt and economic growth. The results indicate



the existence of a debt overhang effect in Zimbabwe. The study indicated an impact of the debt overhang effect in Zimbabwe, and the crowding out Hypothesis could not be confirmed.

Ale et al. (2023) investigated Does External Debt Affect Economic Growth: Evidence from South Asian Countries from 1980 through 2020? Their study created a panel dataset of five South Asian nations and examined the link between external debt and economic growth. The findings of the Cross-sectionally Augmented Panel Unit Root Test by Pesaran (2007) confirm that all variables are integrated in order I (1). The study uses the Cross-Sectional Dependence Autoregressive Distributed Lag (CS-ARDL) technique. They found a significant negative association between external debt and economic growth in South Asia both in the long and short run. Since rising foreign debt is associated with slower economic growth, the study recommends that South Asian nations promote domestic savings and investment to lessen their reliance on external debt. To understand the effect of external debt, they employ population growth, foreign direct investment, gross capital formation, external debt, and economic growth as the variables for analysis.

Agyeman et al. (2022) study the External debt and economic growth in selected sub-Saharan African countries. The study uses a dynamic system generalised method of moments technique with data from 2000 to 2015. The direct impact of capital flight and external debt and their combined effect on economic growth was negative and statistically significant. Additionally, the marginal effects results show that a low level of capital flight has no noticeable effect on the negative impact of external debt on economic growth. In contrast, a high incidence of capital flight exacerbates the negative impact of external debt on economic growth. Based on the findings, we conclude that efforts to promote efficient external debt management should focus on reducing capital flight in sub-Saharan Africa.

Makun (2021) investigated the External debt and economic growth in Pacific Island countries—a linear and nonlinear analysis of the Fiji Islands. The paper studies the relationship between economic growth and external debt in Fiji between 1980 and 2018. Using the neoclassical growth framework and ARDL models, they trace long-run linear and nonlinear associations among the variables. The results show that in the long run, linear measure of external debt has a negative effect on economic growth. A nonlinear analysis reveals an asymmetric outcome of external debt on economic growth.

Asravor et al. (2023) Domestic Debt Sustainability and Economic Growth: Evidence from Ghana Using data from the World Bank and the Ministry of Finance for the period between 1994 and 2018, we estimate an ARDL Model to examine the effect of domestic debt on economic growth and private sector investment. They adopt the cointegration and fully modified regression to examine domestic debt sustainability. The results indicate that increases in Ghana's domestic debt are growth-enhancing while increases in importation are growth-inhibiting. The fully modified regression and Johansen cointegration test model also suggest that the recent path of Ghana's domestic debt is sustainable, though weak.

Gövdeli (2019) External Debt and Economic Growth in Turkey: An Empirical Analysis This study analyzes the impact of external debt stock, openness and the consumer price index on economic growth based on time series data from the World Bank from 1970 to 2016. For this report's purpose, the stability of the series was analyzed. Having identified the series to have first-degree $I(1)$ stability, the ARDL bounds testing approach was applied and a cointegration relationship was established. In light of these findings, it has been observed that external debt has a positive impact on economic growth, while openness and consumer price index have a negative impact. Therefore, this study recommends keeping openness and the consumer price index under control to increase economic growth with the help of external debt.

In Zimbabwe, empirical studies have shown that external debt has had a negative impact on economic growth. A study by Munzara (2015) found that external debt and trade openness had a negative impact on economic growth in Zimbabwe. Another study by Mavhinga (2015) found that excessive external debt constitutes a stumbling block to manageable financial development and poverty reduction. Therefore, the current study seeks to extend the model with new variables to analyse the effect of external debt, that is, the



national income expenditure, foreign direct investment and trade as control variables in the model for the analysis of external debt on economic growth through the following hypothesis.

Research Question: How has the level of external debt in Zimbabwe influenced its economic growth over time?

Hypothesis: Higher levels of external debt have led to decreased economic growth due to the debt servicing burden.

Research Question: What factors have contributed to the relationship between external debt and economic growth in Zimbabwe?

Hypothesis: Factors such as governance, economic policy, and global economic conditions have played a significant role in mediating the impact of external debt on economic growth.

METHODS OF RESEARCH

This research used a time-series analysis approach, using statistical methods analysis to examine the relationship between external debt and economic growth over time. For validation, the data was collected from government sources, the Reserve Bank of Zimbabwe and the Ministry of Finance, and international organizations, the World Bank and the International Monetary Fund. The data was analyzed using STATA statistical software.

The autoregressive distributed lag (ARDL) model was used to examine the short-term and long-term relationships between economic variables. The model includes the following variables: External debt is the independent variable. As measured by real GDP per capita, economic growth is the dependent variable with the control variables, trade, government national expenditure, and foreign direct investment. The model was used to test the Hypothesis that an increase in external debt levels has a negative impact on economic growth in Zimbabwe and to explore the extent of this impact.

This study utilises the Auto-Regressive Distribution lag (ARDL) to analyse the data. ARDL contains the dependent variable's lagged values and regressors' current and lagged values as explanatory variables. The ARDL was used because it provides simultaneous estimates of the short-run and long-run relationship and valid and consistent t-statistics (Makuyana & Odhiambo, 2018). Compared to other approaches, such as the Ordinary Least Squares, the ARDL produces better results in small samples (Chirwa & Odhiambo, 2017). The ARDL can be expressed as follows:

$$\Delta Y_t = \alpha + \beta_1 \sum_{i=1}^l \Delta Y_{t-i} + \sum_{j=0}^l \beta_2 \Delta EXT D_{t-j} + \sum_{m=0}^M \beta_3 \Delta GNE_{t-m} + \sum_{i=0}^l \beta_4 \Delta FDI_{t-i} + \sum_{u=0}^U \beta_5 \Delta TD_{t-u} + \sigma_1 Y_t + \sigma_2 EXT D_t + \sigma_3 GNE_t + \sigma_4 FDI_t + \sigma_5 TD_t + \varepsilon_t \quad (1)$$

Where: Y = GDP per capita as a proxy to measure Economic Growth (dependent variable); EXT D = External Debt; GNE = Gross National Expenditure; FDI = Foreign Direct Investment TD = Trade; α = is a constant; $\beta_1 - \beta_5$ = short-run regression coefficient; Δ = change; $\sigma_1 - \sigma_5$ = long-run regression coefficient; ε_t = Error term; t = time period.

Economic Growth (GDP per Capita): Economic growth is measured by real GDP, nominal GDP, or GDP per capita. This study uses GDP per capita as a proxy to measure economic growth as it captures economic progress and the economic welfare of the citizens. GDP per capita is also included as an explanatory variable because the future position of economic growth is influenced by the initial or current economic growth (Hameed, 2010). This study assumes a positive relationship between the initial GDP per capita and GDP per capita ($\beta_1, \delta_1 \geq 0$).

External Debt (EXTD): External debt is the aggregated sum of the country's foreign borrowing, which it is obliged to repay in future. Total external debt comprises IMF credit, public debt, publicly guaranteed and private non-guaranteed long-term and short-term debt. This study will use the data of total debt outstanding and disbursed, including arrears. External debt is estimated to have a negative impact ($\beta_2, \delta_2 \leq 0$) on economic growth (IMF, 2003).



Gross National Expenditure (GNE): According to Keynes, government expenditure is an exogenous factor to promote economic growth. From the Keynesian point of view, government expenditure has a positive relationship with economic growth; hence, an increase in government spending might likely lead to an increase in profitability, employment, and investment through the multiplier effect on aggregate demand. This study will assume a positive relationship between economic growth and gross national expenditure ($\beta_3, \delta_3 \geq 0$).

Foreign Direct Investment (FDI): Farrell (2008) defined FDI as a collection of technology, capital, entrepreneurship and management that permits a firm to operate in a foreign land. This increases the productivity in an economy, thus leading to economic growth. Therefore, a positive relationship between economic growth and FDI is assumed ($\beta_4, \delta_4 \geq 0$).

Trade (TD): Trade is when a country is open to world business transactions (global market). The sum of imports and exports can measure the a country's openness to trade as a percentage of GDP (Gilal et al., 2010). It is assumed that trade has a positive relationship with economic growth; hence, a country needs to engage in trade. According to Pramanik (2010), trade has a positive influence on economic growth and should be practised effectively to ensure growth ($\beta_5, \delta_5 \geq 0$).

RESULTS AND DISCUSSION

Table 1 summarises the time series unit root test conducted on variables. As shown in Table 1, GDP per capita and external debt (EXTD) have been stationary at $I(1)$ and $I(0)$ through the ADF, which is the 5% significance level. In addition, Table 1 shows other explanatory variables in the first difference.

Table 1 – Unit root test results ADF Test

Variables	Levels	1st Dff	integration order
GDPK	-6.652826***	-2.963972***	1(1)
EXTD	-5.580905***	-3.670170***	1(0)
FDI	-5.534708*	-2.621007*	1(1)
GNE	-5.932690***	-3.670170***	1(0)
TD	-6.998907***	-2.621007***	1(1)

*H0: Unit Root; H1: No Unit Root. *, ** and *** the t-value is significant at 1%, 5% and 10% significant level respectively.*

When variables are stationary at level $I(0)$ and first difference $I(1)$, the Autoregressive Distributed Lag (ARDL) estimation method is the most suitable option. This result established the conditions needed to test the ARDL bounds.

Table 2 – Results of the ARDL Model Regression Analysis

Variables	Coefficients	Std.Error	t-statistic	Prob
GDPK	21.62081	8.887633	2.432686	0.0225
EXTD	-0.309680	0.068015	-4.553126	0.0001
FDI	-0.803491	0.232119	3.461552	0.0019
GNE	-0.506778	0.222007	-2.282713	0.0312
TD	0.229014	0.144010	-1.590269	0.0143
R ²	0.724671			
Adjusted R ²	0.658592			
Durbin-Watson stat	1.42373			

An R² of 72.47% is used to determine how much the model's dependent variable This means that the proportion of economic growth explained by endogenous variables is approximately 72.47%, which is considered good. The remaining 27.53% is explained by other variables not included in the model. Adjusted R² measures goodness of fit, similar to R-squared. Therefore, it can be seen that the fit after adjustment is also more than 50%, which is desirable. The Durbin-Watson statistical test 1.423734 is also a good value between 1 and 2, meaning meaningless regression does not affect the model.



The impacts of debt overhang are clear from the findings, which support the literature's literary predictions and empirical research findings on less developed nations. The variables used in the analysis are measured in logarithmic form; hence, the coefficients represent elasticity estimates. The empirical estimate demonstrates that Zimbabwe's external debt and economic growth are negatively associated. Specifically, external debt negatively and significantly affects short-run economic growth, implying that higher external debt reduces economic growth. In the Table 2 the coefficient of external debt (-0.309680) is negative and statistically significant at 1% level. This outcome is not unexpected as government borrowings are mostly directed to operational expenditures, and a very small share is invested in developing productive capital.

Zimbabwe's economy no longer benefits from the advantages of funds borrowed because they no longer significantly drive growth. Since the economy of Zimbabwe did not see any major development despite a rise in stock debts, debt overhang had already begun to develop in the country as early as 1982. Theoretical theories made by Krugman. (1988) supports the current study's findings by arguing that low-income countries have debt overhang since any gain from economic expansion will be used to pay rising debt servicing duties. Similar findings were made by Clements et al. (2003) research on nations with lower income. They discovered that these nations can achieve stable economic situations by reducing their debt stocks and managing their finances well. Krugman (1988) described the debt Laffer curve as a summary of an economy's external debt situation. The findings indicate a severe debt overhang, which indicates a severe debt overhang, which indicates that debt has crossed over to the debt LaferCurve's wrong side. This is a point at which the external debt coefficient on the growth of an economy function will be negative, as is the case in this study. This negative effect persists both in the short run and the long run across all baseline and extended models with a similar magnitude of effects in South Asian Countries (Ale et al., 2023).

The estimated effect of trade on economic growth is positive and statistically significant in the shortrun, as expected. As Zimbabwe's trade policies are being reformed, particularly concerning bilateral, regional, and multilateral trading systems and tapping into new markets of eastern regions, it has helped to increase exports, which may have benefited the long-run economic growth. Finally, theoretically, one would expect total factor productivity to be significantly positive in the economic growth process. However, the analysis shows that the estimate is empirically significant in the short run with the same findings (Makun, 2021).

Crowding-out occurs when the current external debt reduces domestic investment, while crowding-in occurs when the lagged value of external debt increases domestic investment. This study measures domestic investment as Gross national expenditure, which exhibits a negative relationship. The results indicate the presence of significant crowding-in, while the crowding-out is insignificant, contrary to the findings of (Asravor et al., 2023) in Ghana.

Economic growth is negatively impacted by foreign direct investment and other control variables. The lower the percentage of foreign direct investment in a country's GDP, the slower its economic growth in the short run. The general view that foreign direct investment promotes economic growth may be offset by the possibility that some foreign direct investments may have a negative impact on economic growth. South Asian countries (Chaudhury & Banerjee, 2020) find that the composition of FDI is important in determining whether the impact of FDI is growth-promoting. They estimated that foreign direct investment significantly increases overall economic growth, while foreign direct investment in secondary industries hinders economic growth. Therefore, foreign direct investment needs to attract specific sectors to ensure sufficient domestic investment.

CONCLUSION

The study found a negative relationship between external debt and economic growth using the ARDL model. This implies that if the government increases external debt, they are putting more constraints on domestic investments. Thus, the current study provides insights



into the optimal level and composition of external debt that maximizes economic growth and minimizes debt distress. Also, helps Zimbabwe and other developing countries to design and implement effective debt management strategies that balance the benefits and costs of external borrowing. Furthermore the international community and other creditors should assess the impact of external debt on Zimbabwe's economic development and the need for debt relief or restructuring.

To achieve the above results the study had the following limitations of this research capture the full complexity and diversity of Zimbabwe's economic situation, as it focuses on only one aspect of external debt and economic growth. Also the issue of data quality and availability as Zimbabwe's official statistics are not being reliable, consistent, or comprehensive. Even though the study managed to collect the publicly available data and make use of it to arrive at these finds.

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