DOES ECONOMIC FREEDOM BOLSTER ECONOMIC PERFORMANCE?

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In recent times, endogenous factors such as institutional quality and economic liberty have become prerequisites for economic growth and development. As such, evidence on the association between unconventional growth determinants and national income is crucial for informed policymaking. Against this backdrop, the focus of this study is to explore the bivariate relationship between economic liberty and economic growth in the Southern African Development Community (SADC) region. Given the characteristics of the variables, the study made use of the Panel Estimated Generalized Least Squares technique and Granger causality analysis. The study established the presence of a positive and robust association between components of economic liberty and economic growth. This implies that less government interference in the economic and financial system as well as the absence of tariff and non-tariff barriers, bolster economic growth at least in the SADC region. Furthermore, findings from the Granger causality analysis revealed that economic liberty and economic growth are jointly determined. In light of the above positive findings, there exists a need to deepen regional integration among SADC member states through increased intra-regional trade and financial integration, identifying potential value chains and implementing both hard and soft infrastructure to reduce the cost of doing business.

Keywords: economic freedom, economic growth, SADC, panel EGLS

1.   INTRODUCTION

It has been previously argued that natural resource endowment is a strong determinant of national income. However, several empirical studies (e.g., Sachs and Warner, 2001; Davis and Tilton, 2005) have shown beyond reasonable doubt that countries with natural resource abundance tend to grow more slowly than resource-poor countries. These findings have since stimulated discussions around unconventional determinants of national income, quality institutions being among them. This is largely because everything in the economic system takes place through an institutional framework, whether formalised or not. In fact, quality institutions have become an area of focus in economic literature given their influence in decision making, including decisions about resource allocation and use, trade patterns and property rights.

Economic, political and civil institutions have become a prerequisite for growth as they have the potential to enhance economic growth by affecting incentives, productive effort and the effectiveness of resource use. Higher growth rates imply increased national output which can potentially drive the standard of living and means to sustain social and economic objectives. It is worth noting, however, that scholars have different views with regard to the definition and measurement of economic institutions. For example, Ivana (2020) defines economic liberty as the individual right to engage in taxed economic activities such as labour, trade and ownership of property at ones' disposal. Meanwhile, The Heritage Foundation (2021) defines economic liberty as "the absence of government coercion or constraint on the production, distribution or consumption of goods and services beyond the extent necessary for citizens to protect and maintain liberty itself". It sufficient to note also, that there exist several measures of economic freedom including those computed by The Heritage Foundation, Fraser Institute (Gwartney et al, 1996) and those found in studies by Spindler and Miyake, and Scully and Slottje.

For the purpose of this study, however, the author makes use of the Economic Freedom Index documented by The Heritage Foundation. An added advantage of the economic freedom index documented by The Heritage Foundation is that it captures economic freedom from various aspects, including the freedom to trade, engage in business, investment and labour activities as well as the freedom to acquire property rights. Vu (2010) notes that research on the relationship between economic freedom and economic growth is well documented in economic literature. Although most studies have managed to prove, at least statistically, that economic freedom is positively associated with higher economic

growth rates, the causal relationship between the two variables is not clear cut. The rest of the study will be organised as follows: Section 1 will provide an introduction to the study as well as the objectives and significance of the study. Second 2 will outline the empirical framework in the form of literature review. Section 3 will briefly discuss the methodology adopted in the study while Section 4 will provide a summary of findings and discussion of findings thereof. Lastly, Section 5 will provide a brief conclusion to the study and recommendations in line with findings.

2. LITERATURE REVIEW

Governments often intervene in markets by implementing rules and regulations that restrict the use, allocation and ownership of resources in order to maintain law and order, preserve scarce resources while fulfilling the unlimited needs and wants of society. Different schools of thought however, have differing views with regard to government intervention (Carlsson and Lundstrom, 2002). For example, free market economists argue that government intervention should be strictly limited as government intervention tends to cause an inefficient allocation of resources while others argue that there is a strong case for government intervention in different fields, such as externalities, public goods and monopoly power (Dollar and Kraay, 2003). The key question, however, is to what extent should the government intervene in a particular market, and this is where economic liberty is concerned. The economic freedom index provides a measure of a country's level of business friendliness and degree of openness (Naape, 2021). The economic freedom index is made up of various components including labour freedom, investment freedom, trade freedom, government integrity, fiscal burden, property rights, monetary freedom and government spending.

Some of the studies that have attempted to estimate the influence of economic freedom on economic growth are discussed below. Bergh and Bjørnskov (2019) analysed the distributional consequences of economic freedom on income distribution. Generally, the findings suggest that economic freedom affects income groups equally, and some indications that the growth effects are largest for the poorest and richest quintiles. The study made use of panel data comprising of 145 countries.

Chheng (2005) estimated the joint effects of economic freedom and capital investment on economic growth in a panel of 50 developing and developed countries. The study employed panel data spanning from 1981 to 2000. The study concluded that countries that initiate efforts to improve economic freedom and

capital investment seem to experience growth relatively faster than their counterparts. In addition, the study established that the domestic investment rate and foreign direct investment are positively associated with economic growth, while the initial real per capita GDP is negatively correlated with subsequent growth rate. Meanwhile, a study by Ivana, Nikola and Svetlana (2020) investigated the cross-country effects of economic freedom on economic growth among a panel of 43 European countries. While the findings revealed evidence of a positive association between economic freedom and economic growth, it was established that the EU membership status either had no effect or it curbed the effect of economic freedom on growth. The findings further revealed that the 2008 financial turmoil exhibited a negative impact on economic growth rates in EU member states.

Heckelman (2020) examined the possibility of a causal relationship between economic freedom and economic growth. That is, whether economic freedom causes economic growth or economic growth causes economic freedom or whether the two are jointly determined. By means of the Granger causality analysis, the findings indicated that components of economic freedom precede economic freedom although economic growth was found to precede only government intervention. A more similar study by Erdal (2004) employed bi-variate and multi-variate econometric techniques to scrutinize the influence of economic freedom on economic growth in Italy. The results indicated that economic freedom, through quality institutions, enhances total factor productivity of human capital and consequently, economic growth.

Bengoa and Sanchez-Robles (2002) investigated the nexus between foreign direct investment, economic liberty and economic growth in the Latin America region using panel data spanning from 1970 – 1999. The study found that although economic freedom and foreign direct investment are positively related to economic growth, adequate levels of human capital and liberalized markets are key to long-term sustainable capital inflows. Razmi and Refaei (2013) explored the relationship between trade openness, economic freedom and economic growth in Middle East and East Asian countries using dynamic panel data ranging from 2000 to 2009. The findings revealed that both trade openness and economic freedom are positive and statistically significant in explaining variations in economic growth in the selected region. This supports the hypothesis that open economies experience higher growth rates than closed economies. Also, it is sufficient to note that there exists no studies on relationship between economic liberty and economic growth for the SADC region.

3.   EMPIRICAL METHODS

This section briefly discusses the empirical methods adopted in the study to estimate the effect of economic freedom on economic growth in the SADC region. The study made use of panel data spanning from 2007 to 2018. The selected countries in the SADC region include Angola, Botswana, Madagascar, Lesotho, Mozambique, Mauritius, Malawi, Namibia, Tanzania, South Africa, Zambia and Eswatini. Other countries in the SADC region were excluded due to data limitations. The data for variables that measure economic freedom was collected from The Heritage Foundation while the data for the Gross Domestic Product (GDP) was collected from the World Development Indicators. Dynamic panel data methods were employed given the structure of the data and objective of the study.

Our estimated model can be expressed as:

$$y_{it} = \beta_0 + \beta_x \sum_{i=1}^{n} \delta_{it} + \varepsilon_{it} \qquad (1)$$

where

y_{it} is the dependent variable represented by the log of GDP,

β_0 is the constant term

β_x represents coefficients to be estimated

δ_{it} is a vector of economic freedom variables in log form

ε_{it} is the idiosyncratic error term

The variables were examined for unit root by means of the Levin, Lin, and Chu (2002) (LLC) unit root test. It is sufficient to note however, that unit root analysis is not a prerequisite when using panel data methods (Choi, 2001). Nonetheless, the study made use of the Pearson correlation test to estimate the direction of association between the dependent variable and explanatory variables. Further to this, the study employed the Panel Ordinary Least Squares (POLS) technique to estimate the influence of economic liberty on economic growth. However, given the presence of severe autocorrelation and heteroskedasticity in the model, the POLS technique was replaced by the Panel Estimated Generalized Least Squares (P-EGLS) technique given its ability to overcome autocorrelation and heteroskedasticity. The absence of autocorrelation and heteroskedasticity was confirmed by means of the cross-section dependence test. The last step of analysis involved investigating the bivariate relationship between economic liberty and economic growth. That is, whether economic liberty

granger causes economic growth or economic growth granger causes economic liberty. This relationship was estimated by means of the Granger causality analysis (Granger, 1969). The granger causality estimation can be expressed as:

$$GDPPc_t = c_1 + \sum_{z=1}^{q} \alpha_{1,z} \Delta GDP_{t-z} + \sum_{z}^{q} \beta_{1,z} \Delta EL_{t-z} + \mu_{y,t} \qquad (2)$$
$$EL_t = c_2 + \sum_{z=1}^{q} \alpha_{2,z} \Delta EL_{t-z} + \sum_{z}^{q} \beta_{2,z} \Delta GDP_{t-z} + \mu_{x,t} \qquad (3)$$

Where c represents the constant term, q indicates the number of lagged variables and μ_t is the innovation term. The Granger causality test is useful in determining whether a one time series is useful in forecasting another. The results are provided in the next section.

4. FINDINGS AND DISCUSSIONS

This section provides a brief discussion of the econometric results in line with earlier studies. Table 1 provides a summary of descriptive statistics of the variables. This comprises of the average, standard deviation, skewness, minimum and maximum values. Descriptive analysis provides a clear picture of the individual characteristics of the variables. The findings in Table 1 indicate that the minimum values range between 2.97 and 55 while the maximum values range between 4.36 and 90. Most variables have average values in the range of 40 and 76, the lowest mean value being 3.65 for GDP growth. Also, most variables were found to have relatively higher standard deviation values in the range of 10 and 20. This implies that the data points are spread out. In contrast, GDP growth, trade freedom and the overall economic freedom index were found to have a lower standard deviation values, implying that the data points are closer to the mean. Nevertheless, the total number of observations is 144.

The next step of analysis involved examining the variables for unit root. This was achieved by means of the LLC unit root test. The results are documented in Table 2 below.

Table 1. Descriptive Analysis

	GDP	Property	Trade	Financial	Business	Labor	Overall EFI
Mean	3.65	42.20	75.63	51.04	61.17	59.40	59.17
Median	3.68	40.00	75.05	50.00	63.30	59.20	58.50
Maximum	4.36	75.00	89.00	70.00	83.30	90.90	77.00
Minimum	2.97	15.00	54.40	40.00	35.30	32.90	44.70
Std. Dev.	0.42	14.41	7.39	9.95	11.38	13.08	7.65
Skewness	-0.01	0.43	-0.13	0.73	-0.26	0.14	0.45
Kurtosis	1.47	2.45	3.04	2.55	2.09	2.45	2.87
Jarque-Bera	13.88	6.22	0.47	14.05	6.53	2.26	5.14
Probability	0.00	0.05	0.78	0.00	0.04	0.32	0.08
Observations	144	144	144	144	144	144	144

Source: author's computations

Table 2. Unit root analysis

Variable	LLC		Conclusion
	Intercept	Trend and intercept	
Business freedom	-3.01*	-5.27*	I(0)
Financial freedom	-3.68*	-2.32*	I(0)
GDP per capita	-3.09*	-8.53*	I(0)
Trade Freedom	-20.60*	-11.31*	I(0)
Labour freedom	-4.43*	-7.03*	I(0)
Property rights	0.14	-1.75*	I(0)
D(Property rights)	-6.38*	-7.04*	
Economic freedom index	-2.36*	-3.26*	I(0)

Source: author's computations; asterisk* denotes statistical significance at the 1% level

In general, the findings revealed that all the variables are stationary at level with the exception of property rights which was only found to be stationary at level with the inclusion of trend and intercept. At intercept only, property rights was found to be stationary after first differencing. As regards the statistical significance level, the results were found to be significant at the 1% level. Nonetheless, the unit root analysis was conducted as part of standard econometric procedure although it is not a requirement in dynamic panel data techniques. Table 3 below provides a summary of findings from the correlation analysis. The correlation test estimates the association between the dependent variable and explanatory variables. Generally, the findings reveal that all the economic freedom variables including trade freedom, labour freedom, financial freedom, business freedom, property rights and the overall economic freedom index are positively associated with economic growth. Also, the association between the dependent

variable and explanatory variables was found to be statistically significant at the 1% level. These findings are consistent with earlier studies including Dawson (1998), De Vanssay and Spindler (1994), Spindler and Miyake (1992) and more recently Ivana *et al*., (2020). In sum, we find that the association between economic liberty components and economic growth is positive and robust in the SADC region.

Table 3. Correlation Analysis

Probability	GDP	Trade	Labour	Financial	Business	Property	Overall EFI
GDP	1.00						
Trade	0.41*	1.00					
Labour	0.58*	0.35*	1.00				
Financial	0.41*	0.35*	0.18**	1.00			
Business	0.61*	0.47*	0.47*	0.52*	1.00		
Property	0.49*	0.26*	0.42*	0.71*	0.56*	1.00	
Overall EFI	0.58*	0.63*	0.49*	0.81*	0.72*	0.75*	1.00

Source: author's computations; asterisk* denotes statistical significance at the 1% level

Table 4 provides a summary of findings from the P-EGLS regression analysis. The estimated R-squared value is 99%, implying that the model fits the data well and at least 99% of the variations in the dependent variable are explained by the explanatory variables. The findings in Table 4 indicate that financial freedom, which is a measure of banking efficiency and independence from government control and interference in the financial sector, was found to have a positive and statistically significant impact on economic growth. These findings are in line with earlier studies including Edlund (2017) and Dung (2019), who found that components of economic liberty positively influence economic growth. Similarly, business freedom, which refers to the ability to establish, expand and close a business, was found to have a positive and statistically significant impact on household incomes. This implies that the establishment and expansion of existing businesses results in job creation, increased household and consequently higher levels of growth. Also, labour freedom was found to exhibit a positive and statistically significant effect on economic growth. This implies that the ability of labourers to engage in taxed economic activities such as employment and entrepreneurship without much government interference allows for the free flow of factors of production and improved allocative efficiency. The results in Table 4 further indicate that trade freedom, which is a composite measure of the absence of tariff and non-tariff barriers that affect imports and exports of goods and services, was found to exhibit a positive effect on economic growth. Empirically,

open economies are known to be more prosperous than closed economies given the free flow of goods and services across borders as well as the exchange of technical know-how (see Gundlach 1997).

Table 4. Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
Trade Freedom	0.319005	0.011114	28.70188	0.0000*
Labour Freedom	0.761718	0.016171	47.10350	0.0000*
Financial Freedom	0.336975	0.022457	15.00536	0.0000*
Business Freedom	0.660098	0.017524	37.66915	0.0000*
Property Rights	-0.169908	0.008011	-21.20971	0.0000*
Overall EFI	0.251674	0.032733	7.688742	0.0000*
C	-5.234796	0.087039	-60.14322	0.0000*
Weighted Statistics				
R-squared	0.994752	Mean dependent var		300.1726
Adjusted R-squared	0.994522	S.D. dependent var		574.2366
S.E. of regression	1.002540	Sum squared resid		137.6969
F-statistic	4328.007	Durbin-Watson stat		1.924272
Prob(F-statistic)	0.000000			
Unweighted Statistics				
R-squared	0.485079	Mean dependent var		3.658615
Sum squared resid	13.14131	Durbin-Watson stat		0.064305

Source: author's computations; asterisk* denotes statistical significance at the 1% level

In contrast, property rights, which is the ability of individuals to accumulate private property, secured by clear laws that are fully enforced, was found to exhibit a negative effect on economic growth. This implies that SADC countries do not have laws in place that fully guarantee the acquisition of property rights and the absence of such laws negatively influences economic growth. Nonetheless, the overall economic freedom index which measures the degree of a country's openness and business friendliness, was found to have a positive and statistically significant impact on economic growth. This implies that economic liberty does bolster economic growth in the SADC region.

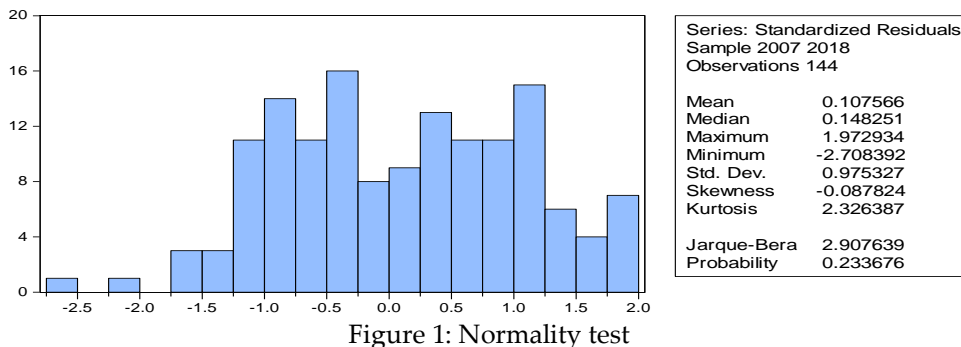|	
Series: Standardized Residuals	
Sample 2007 2018	
Observations 144	
Mean	0.107566
Median	0.148251
Maximum	1.972934
Minimum	-2.708392
Std. Dev.	0.975327
Skewness	-0.087824
Kurtosis	2.326387
Jarque-Bera	2.907639
Probability	0.233676

Figure 1: Normality test

Figure 1 illustrates findings from the normality test. The kurtosis value of 2.3 is slightly above the acceptable level of 2 although by a small margin. Thus, we can safely conclude that the data and model are normally distributed especially considering that the variables were linearised. A further step in assessing the validity of the model was perform the cross-section dependence test and the findings are provided in Table 5 below. Both the Breusch-Pagan LM test and Pesaran CD test confirm that the residuals do not suffer from cross section dependence, and this is confirmed by the probability values which are above the 5% significance level.

Table 5. Cross section dependence test

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	17.58292	66	1.0000
Pesaran scaled LM	-5.258631		0.0000
Pesaran CD	0.657669		0.5108

The last step of analysis involved estimating the bivariate relationship between economic growth and economic liberty. The results are tabled below. In general, the results indicate that economic liberty granger causes economic growth while, in turn, economic growth granger causes economic liberty. This implies that economic liberty and economic growth are jointly determined. As such, the null hypothesis is rejected against the alternative hypothesis of granger causality.

Table 6. Granger causality analysis

Null Hypothesis:	Obs	F-Statistic	Prob.
Overall EFI does not Granger Cause LNGDP	132	2.94648	0.0885***
LNGDP does not Granger Cause Overall EFI		2.88964	0.0916***

Source: author's computations; asterisk*** denotes statistical significance at the 10% level

5. CONCLUSION

The primary goal of this study was to examine the association between economic liberty and economic growth in the SADC region. The study made use of panel data spanning from 2007 to 2018. The economic procedure involved three steps of analysis, including estimating the association between economic freedom components and economic growth, examining the influence of economic freedom components on economic growth and analysing the bivariate relationship between economic freedom and economic growth. The findings revealed that variables that measure economic freedom are positively correlated with economic growth. Also, the association between the dependent variable and explanatory variables was found to be statistically significant. Furthermore, the findings from the P-EGLS technique indicated that all economic freedom components, with the exception of property rights, exhibit a positive and statistically significant effect on economic growth in the SADC region. Lastly, the granger causality analysis established that economic liberty and economic growth are jointly determined. Given these findings, there exist a need to deepen regional integration between SADC member states through increased intra-regional trade and financial integration, identifying potential value chains and implementing both hard and soft infrastructure to reduce the cost of doing business.

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