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INSTITUTIONS, FOREIGN DIRECT INVESTMENT (FDI) AND ECONOMIC GROWTH: DOES THE EXISTENCE OF STRATEGIC NATURAL RESOURCES MATTER?

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Abstract

The paper analysed the interlinkages among institutions, FDI and economic growth. The paper analysed whether institutions play a role in determining the effect of FDI on economic growth and whether the existence of strategic natural resources matter. Dynamic Panel General Method of Moments Technique (GMM) model with Weidmeijer corrected errors and orthogonal deviations is applied for the period 1996 to 2016. The results show that the effect of FDI on economic growth is both negative and positive across the estimated models indicating the heterogeneity in terms of the initial host country conditions. The thesis found that institutions as a whole are weak for SADC countries hence a negative relationship between institutions and economic growth for the SADC countries. What is however key is that FDI on its own without institutional indicators can lead to an increase in economic growth for the SADC countries. The effect of institutions on FDI and hence economic growth was not significant in the full sample. However, after taking out countries endowed with strategic natural resources, good institutional indicators leads to an increase in economic growth eliminating the natural resource endowment bias.

Keywords: FDI, Institutions, Economic growth, SADC, MNCs, GMM
JEL Codes: E, E02

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1. Introduction

This study examines the relationship among institutions, Foreign Direct Investment (FDI) and economic growth and estimates the effects of FDI and institutions on the economic growth of Southern African Developing Countries (SADC) for the period covering 1996-2016. The role of the existence of strategic natural resources in the host countries is also explored. Institutional quality also determines the absorptive capacity of the host country and, in the process, the effect of FDI on economic growth. Previous studies, such as those by Carkovic and Levine (2005) and Alfaro (2003), ignored the role of institutions in host countries in determining the impact of FDI on economic growth. How FDI influences economic growth via institutions is a fundamental academic question with significant policy implications. This will provide the basis for appropriate policies to attract FDI and reform certain institutional variables with the aim of improving the FDI-growth nexus in the SADC region.

There are perceived economic benefits from the inflow of FDI and thus both developed and developing countries implement policies that encourage the inflow of FDI, such as the removal of capital barriers and the reduction of regulatory burden. A primary reason for this is FDI being regarded as a solution to boost economic growth (Jude & Levieuge, 2017). Generally, economists such as Malikane and Chitambara (2017), Iamsiraroj and Ulubasoglu (2015), Li and Liu (2004), Baltabaev (2014), and Batten and Vo (2009) agree that FDI inflows can lead to an increase in economic growth. However, over the years, there have been numerous theoretical and empirical arguments regarding the impact of FDI on the host country's economy.

Several variables and methodologies to determine the effect of FDI on economic growth all yielded different results. These arguments make it quite difficult for policymakers to determine whether advocating for FDI inflows into their countries will be an appropriate policy decision. Busse and Groizard (2008) argued that FDI might provide new capital into the host country's economy. In addition, De Mello (1999) concluded that FDI is expected to drive long-run economic growth through technological upgrading and knowledge spillovers. The fact that these respectable researchers are not writing with certainty shows that the effect of FDI on the host country's economy is not a given. As countries aim to increase FDI inflows, they should concentrate not only on the quantity or volume of FDI inflows; thought should also be given to the quality of FDI inflows into the host country and the quality of institutions. Greenfield FDI is preferred to brownfield FDI. Furthermore, FDI in the primary sector of the economy is regarded as poor quality FDI compared to the secondary sector of the economy.

FDI is an important source of growth for developing countries especially those with low savings rate and hence a financing gap (Ntembe & Sengupta, 2016). FDI has increased its role as a source of capital for emerging countries, particularly in SSA countries (Adeleke, 2014). A point supported by Wijeweera et al., (2010) who concluded that increased foreign capital is essential in reducing the savings gap. Because most SSA countries do not have access to international capital markets, they have to rely on FDI and loans from multilateral organisations as a source of capital (Adeleke, 2014). This can be interpreted to mean that FDI has become an important source of capital for development finance.

FDI compliments domestic savings and investments, leads to the creation of employment, encourages technology transfer and in the process raises the country's economic

performance (Karim et al., 2016). FDI can supplement the host country's domestic capital and hence stimulate economic growth (Iamsiraroj, 2016). Furthermore, higher growth rates attracts FDI as it is regarded as a signal that firms can maximise their profits by doing business in that economy. Beugelsdijk et al., (2008), Suliman and Elian (2014), Parezanin et al., (2016) as well as SU and Liu (2016) argued that FDI has a positive and significant impact on economic growth for developing countries. It is in this regard, that policy makers in most countries with SADC included are always creating incentives and implementing reforms in a bid to attract FDI inflows (Beugelsdijk et al., 2008).

FDI influences the host country's economic growth through different channels, which include the market structure, the degree and level of competition, employment effects and knowledge spillovers (Beugelsdijk et al., 2008). To further complicate the debate surrounding the impact of FDI on economic growth, researchers such as Ahmed, (2010), Hermes and Lensink (2010) argued that the impact of FDI on economic growth strongly depends on the host country's initial conditions. For example, a host country must reach a minimum level of economic development threshold for FDI to have a positive and significant impact on economic growth (Ahmed, 2010). Thus, the impact of FDI on economic growth depends on the absorptive capacity of the host country. However, this is still a subject of debate.

The study contends that the conflicting results on the interlinkages between institutions, FDI and economic growth could be due to inconsistency in the estimation methods. Due to the possibility of bi-directional causality between FDI and economic growth, the association is most likely to be dynamic. This could mean that there is a possibility of endogeneity and simultaneity that was missed by previous studies. Most studies concentrated on examining the role of institutions in attracting FDI inflows, and very few studies examined how institutions can aid the effect of FDI on the host country's economy. As a contribution to the academic debate, this study created an additional interactive variable which seeks to examine how the interaction of FDI and institutions can impact on the host country's economic growth.

This study applied the dynamic panel GMM technique to deal with the endogeneity problem. Moreover, the three-way linkages among institutions, FDI and economic growth for all the SADC countries were examined. To the best of the researchers' knowledge, no empirical studies have focused on the examination of the three-way linkages among institutions, FDI and economic growth using a dynamic panel GMM-equation model, applying the growth model framework. The model makes it possible to examine how institutions, FDI and economic growth are interrelated and the respective impacts thereof. This means that the methodology applied in this study goes beyond previous studies that analysed only the impact or effect of FDI on economic growth or vice versa; for example, Nair-Reichert and Weinhold (2001) and Durham (2004). Thus, the methodology allows us to examine the indirect effects of FDI for the SADC countries in terms of economic growth, or the other way around. Furthermore, unlike other studies, this study also analyse the impact of FDI on economic growth for a sub-sample of countries, which are not endowed with strategic natural resources.

The next section discuss the theoretical framework, followed by a discussion of a simplified model of institutions, FDI and economic growth. A brief empirical and

theoretical literature review then follows before the discussion of the methodology, results of the estimated models as well as conclusion and policy recommendations.

2. Theoretical Framework: Endogenous Growth Model by Romer (1990)

Stemming from the neoclassical and endogenous growth models, there are contrasting views in the theoretical literature on the effects of FDI on economic growth. The neoclassical growth model postulates that long-run economic growth can only come about because of technological progress, the labour force or a combination of both factors. These factors are considered exogenous. However, due to diminishing returns to capital inputs, economies will eventually converge to their steady state; thereby, FDI will only affect economic growth in the short-run, thus leaving the long-run growth rate unchanged (De Mello, 1997).

This shortcoming of the neoclassical model led to the development of the endogenous growth model that has been accepted by many researchers – including Iamsiraroj and Ulubasoglu (2015) and De Mello (1997) – in explaining the effect of FDI on economic growth, emphasising the role of technology. Paul Romer, Robert Lucas and Robert Barro first developed the endogenous growth theory in the 1980s. FDI is deemed to promote economic growth by augmenting domestic capital accumulation, in the process facilitating technological transfer to the local firms (Edwards, Romero & Sajadi, 2016).

Technological diffusion could play a key role in promoting economic growth. Unlike the traditional growth theories where the technological effect is treated as residual and unexplained, recent literature on economic growth emphasises the existing domestic technology compared to that of the rest of the world. The endogenous growth model requires that long-run growth be determined within the model rather than by exogenous factors alone.

De Mello (1997) boldly declares that the only channel for growth to happen through FDI is through permanent technological shocks to the host country's economic system. Due to the availability of FDI, aggregate production in the host country will increase because of the combination of labour and physical capital (De Mello, 1999). The endogenous growth model states that the long-term growth of the economy is achieved through the accumulation of knowledge. Thus, FDI can provide mechanisms of knowledge accumulation and become the engine of growth in the host country's economy.

2.1. Endogenous Growth Model Variables

The endogenous growth model also emphasises the accumulation of human capital and R&D. If FDI can increase productivity, generate positive externalities and spillover effects, it can be argued that it stimulates economic growth endogenously. There are two types of endogenous growth models, namely:

i. Endogenous growth models of AK nature – these emphasise the role of production factors in determining growth. These models focus on the accumulation of knowledge through on-the-job training.

ii. Endogenous growth models in which technological change is based on the level of investments as well as R&D.

The study adopted the endogenous growth model with R&D as developed by Romer (1990). Technical progress is endoginised in the model by firms seeking to maximise profit through innovation introducing research on new ideas. The model has two components, which are:

i. The production function equation

ii. All equations that show how the inputs evolve over time

The aggregate production function is as follows:

$$Y = K^{\alpha}(AL_Y)^{1-\alpha} \quad (2.1)$$

Where α is a constant parameter $0<\alpha<1$

Production factors: K – Capital; L_Y – Labour, A – Knowledge

The labour and capital factors experience constant returns to scale, while technology has increasing returns to scale that will result from the non-rival use of ideas. The equation of labour and capital accumulation is similar to the Solow model and represented as follows:

$$K = skY - \delta K \quad (2.2)$$

Where: skY is the income savings rate

δK is the rate of capital depreciation

The equation for technological progress evolution:

$$A = rL_A \quad (2.3)$$

Where: A is the number of ideas invented every moment and it depends on:

L_A - the number of people putting time aside for research

r - The rate of new ideas achievement

It is through the endogenous growth model that there has been much interest in the transmission mechanism of FDI to economic growth (Omri & Kahouli, 2014). In the model, growth is sustained if the number of innovations created in each period continues to increase. It is also assumed that firms operate in a competitive environment with the aim of maximising profit, and the engine for growth is innovation. It is then expected that FDI will have a positive effect on economic growth by providing technology to the host country and encouraging local production, as well as the diffusion of new knowledge and innovation (Mehic, Silajdzic & Hodovic, 2016).

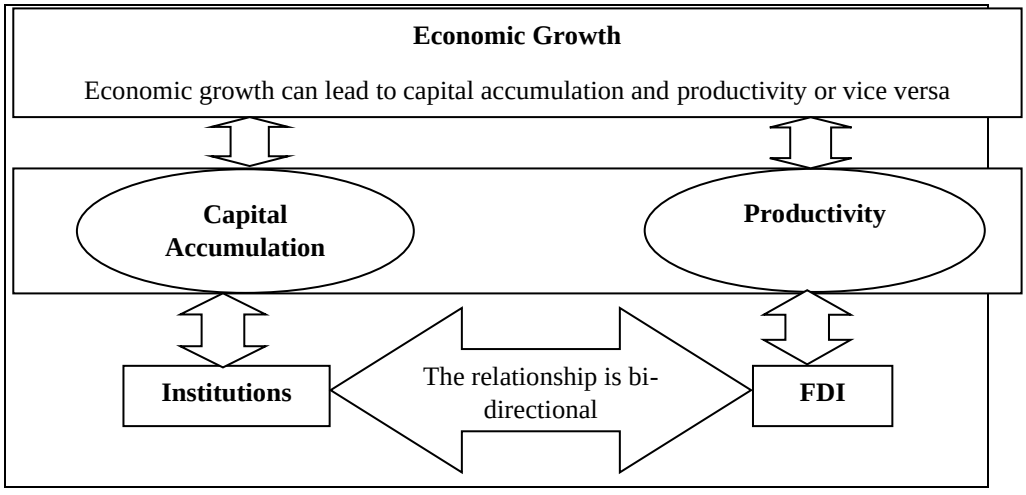
2.2. Institutions, FDI And Economic Growth Interlinkages

Stemming from the preceding section that established the endogenous growth model, the study applied a simple model adopted from Rodrik (2000) to show and examine the interlinkages of FDI, institutions and economic growth. The model allows for interactions, as well as feedback, with other variables (including institutions) to demonstrate the complex nature of the subject. This model, however, simplifies the relationship and allows us to examine the impact of FDI on economic growth, the impact of institutions on economic growth, and the impact of the interaction of FDI and institutions on economic growth.

In the model, there are deep and proximate determinants of economic growth. Deep determinants include the integration into the world economy, institutions and geographical location. Proximate determinants are factors such as the accumulation of human capital, level of productivity and technological improvements. The model allows feedback effects whereby economic growth is not only affected by the said factors but can also affect the mentioned factors. This framework makes it possible to answer questions on how institutions, FDI and economic growth interact. For the purposes of this study, the model assisted in examining the role of FDI in economic growth – directly and indirectly – through interaction with institutions. Figure 2.1 shows the modified version of Rodrik's (2000) model.

The first panel of Figure 2.1 shows the proximate determinants of economic growth. In this case, economic growth is determined by the accumulation of physical and human capital[1] as well productivity and technological progress. This is the traditional way of understanding the factors that determine economic growth. However, it does not include other significant factors such as the role of institutions in determining FDI flows and economic growth. Including these factors can assist in understanding the factors that affect capital accumulation, productivity and technological progress. Above all, it can assist in understanding why capital moves in certain directions. The assumption is that there will be technological diffusion from the advanced countries to the inferior countries in terms of technology. The second panel answers these questions by allowing the interaction of institutions and FDI.[2] Based on the above discussions, this chapter therefore applies the endogenous growth theory and the institutional theory as the basis for the study.

Figure 1: Institutions, FDI and Economic Growth Interlinkages



Source: Adopted from Rodrik (2000)

[1] This can also be referred to capital deepening.
[2] In this developed model, institutions and FDI are the deeper determinants of economic growth.

2.2.1. Reviewed Literature on Institutions, FDI and Economic Growth

It should be emphasised that the relationship between FDI and economic growth differs depending on the host country's institutions, hence the need to understand the role of institutions in aiding economic growth (Mehic et al., 2016). The effect of FDI on economic growth varies across countries partially due to the heterogeneity of institutions. Therefore the orthodox assumption of a homogenous marginal return to FDI may be misleading. If heterogeneity exists, host country policies, which are supposed to promote the effect of FDI on economic growth, should not be homogenous across countries. This notion is supported by McCloud and Kumbhakar (2012), who argued that institutional qualities[3] are the main reason why different countries have different absorptive capabilities, hence a heterogeneous FDI-growth relationship.

A country with poor institutions is most likely to experience economic challenges such as low levels of investment, low productivity growth and slow output growth (Jude & Levieuge, 2017). For example, firms are willing to be continuously innovative if they expect to profit from innovations. However, intellectual property rights (IPRs) should protect these innovations. Thus, a host country whose economic growth depends on innovations is likely to be boosted by the existence of IPRs. On the other hand, quality institutions will most likely ensure that there is factor allocation efficiency, investment in higher return activities, a reduction in business uncertainty, and a well-coordinated economic system (Jude & Levieuge, 2017). This will promote economic growth.

In a study on FDI, democracy and economic growth for eight Southern African countries, Malikane and Chitambara (2017) concluded that democratic institutions are a strong driver of economic growth. Thus, the impact of FDI on the host country's economic growth depends significantly on the country's level of democracy. This could mean that countries with strong democratic institutions absorb the positive spillover effects of FDI compared to countries with weak democratic institutions. However, the role of democracy in the FDI-growth nexus is still a subject of debate. Furthermore, Malikane and Chitambara (2017) used only one institutional indicator to determine the interlinkages among institutions, FDI and economic growth, and this study employed all 12 institutional indicators.

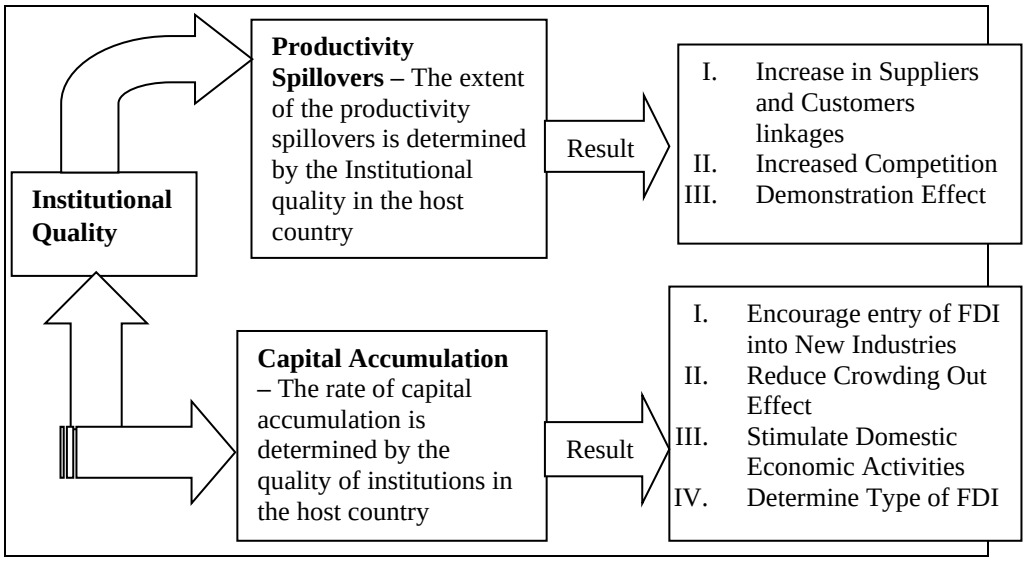
According to Jude and Levieuge (2017), institutional quality determines the effect of FDI on economic growth for developing countries. It is my argument that, just like there is a need to have a minimum level of human capital for the impact of FDI to be maximised, there is also a need to have a minimum threshold level of institutional quality in the host country. Therefore, a minimum institutional quality is required to trigger a growth-enhancing effect. Figure 2.2 illustrates the channels through which institutional quality can aid FDI in promoting economic growth.

From Figure 2.2, the assumption is that FDI influences economic growth through productivity spillovers from foreign firms to domestic firms. This could be because of the linkages between suppliers and customers, through the demonstration effect and increased competition. It is in this regard that the quality of institutions will influence the relationship

[3] The quality of institutions can determine the extent to which the host country can capitalise on the productive spillover effects from the foreign firms.

between domestic and foreign firms and the type of FDI, thereby affecting the extent of the spillovers and economic growth.

Figure 2: Channels of Institutional Quality to Economic Growth



Source: Author's own configuration

The quality of institutions also influences capital accumulation. If the institutions are poor, the host country is likely to attract low technology and resource-based FDI with limited growth effect. Similarly, the demonstration effect is stronger for a country with quality institutions than one with poor institutions. Quality institutions can deal with the crowding-out problem by encouraging foreign firms to enter new industries, thereby reducing competition with domestic firms. As the new foreign firms enter the new markets, there will be a multiplier effect. For example, demand for inputs that local firms can supply will increase, thus stimulating domestic economic activity.

A study by Adhikary (2011) on Asian countries, concluded that a combination of FDI and good institutional variables such as the rule of law, property rights, political stability and absence of violence lead to economic growth. Furthermore, fundamental institutional variables such as political stability, civil rights, property rights and socio-economic variables play an important role in determining the effect of FDI on the economic growth of host countries (Ntwembe & Sengupta, 2016). Elkomy et al. (2016) share these sentiments, and argue that the level of institutional development and the quality of policy-making in the host country determines the magnitude of the impact of FDI on economic growth. It should be acknowledged that these institutional variables aid the effect of FDI on economic growth at different rates. Therefore, priority should be given to those institutional variables that can have an incremental effect on economic growth.

The FDI-growth nexus is highly sensitive to country-specific factors, which include the kind of institutions in those countries (De Mello, 1999). For FDI to have a significant impact on the host country's economic growth, host governments must first ensure that

their institutions are functioning well (Busse & Groizard, 2008). For example, host countries with more regulations will be less able to benefit from the presence of MNCs in their economies compared to less regulated economies. Technology and knowledge transfer to the host country heavily depends on the kind of existing institutions in that host country (De Mello, 1999), which is further evidence that initial conditions in the host country determine the impact of FDI on economic growth.

Williams (2017) argued that political instability affects FDI inflows and growth differently. Saini et al. (2010) indirectly supported this notion by arguing that host countries with better property rights should ideally benefit more from FDI inflows compared to those with poor property rights. Therefore, when we consider the host country's initial conditions, the institutional variables should take centre stage in how FDI influences economic growth. Institutions such as commercial banks and credit agencies play a significant role in ensuring that savings are not spent on consumption but rather fund investment expenditure, leading to economic growth (Jayaraman, 2017). The effect of FDI on the host economy is thus enhanced when there is institutional stability (Edwards et al., 2016).

Furthermore, in host countries with higher levels of institutional capabilities, as measured by the degree of property rights protection, the effect of FDI is stronger (Stancheva-Gigov, 2016). These were similar to the findings of a study of 32 developed and developing countries. Panel data results indicated that FDI has a positive impact on economic growth if the host country has relatively high human capital and high-quality institutions (Mehic et al., 2016). However, other studies such as that by De Mello (1999) found weak evidence that FDI leads to economic growth and that the quality of institutions for the host country matters (Mehic et al., 2016).

Elkomy et al. (2016) pointed out that a more democratic political system is likely to amplify the positive effect of FDI on the host country's economic growth. This is because there is a high chance of the redistribution of the income and gains from FDI towards further investments in human capital development, thereby promoting economic growth. Furthermore, democratic political systems are most likely to promote international trade and integration into the global economy. Therefore, these countries can attract internationally competitive export-oriented FDI and promote economic growth. The opposite is expected to be true for countries with autocratic political systems. These countries are expected to have poor policies and closed economies. These conditions, in turn, attract FDI that is less technologically advanced, resulting in limited spillover effects.

Another institutional variable that is important in aiding the effect of FDI on the host country's economic growth is corruption. A country that is less corrupt compared to its peers is likely to experience an increase in economic growth due to FDI inflows (Wijeweera et al., 2010). This, however, is not a straightforward relationship. Existing literature is inconclusive on the effect of corruption on FDI inflows and economic growth. Corruption can act as additional tax to foreign firms, heightening insecurity and uncertainty for would-be foreign direct investors. It is in this regard that the effect of corruption on the host country's economic growth is indirect.

An additional institutional variable which can determine the impact of FDI on economic growth is governance. A study by Adeleke (2014), on the FDI-growth nexus in Africa, indicated that most African countries have weak governance structures and this inhibits

growth. Thus, the assumption is that a good governance structure attracts more FDI and hence, growth. This is further evidence that FDI leads to economic growth. The next section discusses the methodology which is applied in this study.

3. Methodology

3.1.The model, data and variable definitions

This section discusses the empirical model used to establish the role of institutions and FDI in determining economic growth for the SADC region. The research design, population, sample and data, as well as model specification and estimation technique, are also discussed. In addition, the section gives a brief description of the data used and the *a priori* expectations. Further to this, the section develops an argument for the support of the model as a significant tool in the development of policies that would help address international economic policy.

3.2. Research design

The study applied quantitative data techniques. Thus, specifically, the study estimated a dynamic panel data model for the period 1996 to 2016. Given the interactions among FDI, institutions and economic growth for all the SADC countries, the development of a panel model that allows these interactions to happen is justified. Furthermore, panel data models capture the heterogeneity of institutions across countries, which is imperative for an empirical examination of the impact of FDI and institutions on the economic growth of host countries. In the developed model, the impact of FDI on economic growth is decomposed into the direct impact and the indirect impact that should work via institutions. Thus, the model assists in understanding how institutions aid the effect of FDI on the economic growth of the host country. The quality of institutions determines how FDI affects the host country's economic growth. High-quality institutional variables, such as the rule of law, military not being involved in politics, and the existence of property rights, among other institutional variables, are expected to positively affect the impact of FDI on the host country's economic growth. Likewise, poor-quality institutional variables, such as high levels of corruption, bureaucracy, and military involvement in politics, are expected to be associated with low levels of economic growth in the host countries.

Endogeneity is a problem which requires attention in examining the relationship among institutions, FDI and economic growth. The potential endogenous relationship between FDI and economic growth may lead to an over-estimation of the impact of FDI on economic growth. Since FDI can be correlated with the country-specific error term, it could lead to a wrong and biased estimation of the coefficients. It can be argued that the more income a country has, the better the institutions are compared to those of a developing country. Thus, economic growth could be as a result of an improvement in the quality of institutions.

3.3. Population, Sample and Data

This is a regional-based study that empirically examined the roles of institutions and FDI in promoting economic growth for all the SADC countries using secondary data for the period 1996 to 2016. All the data were taken from the World Development Indicators, PRS, country-specific reserve banks, and statistical agencies/departments.

Furthermore, the study divided the SADC countries into two samples: one with all the countries, which is the full sample, and the other sample where countries endowed with strategic natural resources were removed from the full sample. Using this process l was able to estimate how the interrelationship among institutions, FDI and economic growth could vary according to the different environments in terms of the existence of strategic natural resources.[4] This allowed me to remove outliers from the sample and examine whether there were any dynamic changes. Outliers refer to countries that are endowed with strategic natural resources which may make foreign direct investors overlook negative institutional variables such as corruption, military involvement in politics, and bureaucracy, among others. Thus, foreign direct investors will invest in these countries regardless of the negative institutional variables. Angola and the Democratic Republic of Congo are two examples of countries endowed with strategic natural resources, but poor quality institutional variables; yet they still receive large FDI inflows. The removed countries in the sub-sample are shown in Table 1.

Table 1: Natural Resource-Endowed Countries

Country	Available Natural Resource (s)
Angola	Oil and minerals
Democratic Republic of Congo	Minerals
Republic of South Africa	Minerals
Mozambique	Gas and Minerals
Zambia	Minerals

Source: Author's own configuration

3.4. Definition of Variables, Proxies and A Priori Expectations

Table 2 shows the institutional variables, definitions and expected sign of the coefficient.

Table 2: Definition of Variables, Proxies and a Priori Expectations

Variable	**Proxies and Definitions**	**Proxies by**	**Expected Sign of Coefficient**
Economic Growth	The current growth rate of the gross domestic product.	Jude and Leviuge (2017)	Positive
Economic Growth of Previous Period	The previous period growth rate of the gross domestic product.	Liu (2016)	Positive
Foreign Direct Investment	FDI expressed as a percentage of GDP.	Jude and Leviuge (2017)	Positive

[4] This encompasses oil, natural gas, coal, forestry and other minerals.

Variable	Proxies and Definitions	Proxies by	Expected Sign of Coefficient
Institutions	All the country's institutions, i.e. government and private. It is proxied by 12 different measures of institutional and political factors.	Cleeve (2012)	Negative/Positive depending on the quality of institutions
FDI/Institutions	The interaction of FDI and all the institutional indictors. This is to capture the interactive effect between FDI and institutions on economic growth. This further shows the conditional role of FDI on economic growth.	Agbloyor, Gyeke-Dako, Kuipo and Abor, (2016), Jude and Leviuge (2017)	Negative/Positive depending on the quality of institutions
GDP per Capita	The initial level of GDP per capita. This is necessary to take care of the effects of convergence.	Adams and Opoku (2015), Jude and Leviuge (2017)	Positive
Population	Population annual growth rate to capture the market capacity.	Jude and Leviuge (2017)	Positive
Domestic Investment	The growth rate of domestic investment. Measured by the gross capital formation as a percentage of GDP.	Adams and Opoku (2015), Malikane and Chitambara (2017)	Positive
Trade Openness	This is the policy variable that measures the openness of the country to trade and investment. It is measured by the mean of the tariff rate to capture the effect of trade policy on FDI flows.	Jude and Leviuge (2017)	Positive

Variable	Proxies and Definitions	Proxies by	Expected Sign of Coefficient
Inflation	Annual inflation rate. This is a proxy for macro-economic and fiscal stability.	Jude and Leviuge (2017)	Negative

3.5. Model Specification

The study followed the endogenous growth model. Since literature on the relationship between FDI and economic growth is inconclusive, even after including control variables such as the initial GDP, domestic investments, degree of openness and human capital, the study applied panel data techniques and treated endogeneity with caution. Furthermore, most studies conducted on the subject did not have enough data, hence there are constraints in the use of relevant and appropriate estimation methods. In this regard, the study examined the impact of FDI on economic growth for SADC countries based on the endogenous growth theory.

The panel model estimation is as follows:

$y_{it} = \beta_1 y_{it-1} + \beta_2 FDI_{it} + \beta_3 Institutions_{it} + \beta_4 (FDI*Institutions_{it}) + \sum_{J=0}^{N} \beta_j X_{it-1} + \varepsilon_{it} \ldots$ (3.1)

y_{it} is the change in GDP (economic growth).

FDI_{it} is the FDI for country *i* at time *t for* $i = 1 \ldots\ldots, N$ *and* $t = 1 \ldots\ldots, T$ and it is expressed as a percentage of GDP.

y_{it-1} is the first lag of y_{it} and β_1 is the coefficient of the lag of economic growth.

β_3 is the coefficient of the institutional variables.

All the data for the institutional variables were sourced from the PRS.

The average of the 12 sub-indicators of political risk is used as an aggregate measure of institutional quality. Furthermore, the 12 subcomponents of institutional variables are sequentially included in the regressions. This therefore means that l estimated 30 different regression equations. β_4 captures the interactive effect between FDI and institutional variables. Furthermore, FDI and the various institutional variables are included in the model to enable the capturing of the interactive effect between FDI and institutions. ε_{it} is the random error term, which breaks down into $\mu_{it} + \nu_{it}$. μ_i represents the time-invariant country-specific effect, while vit represents the remainder of the disturbance in the estimated regressions.

The set of control variables is captured by X_{it-1}. Existing literature has widely used these control variables, which include:

- Economic growth for the previous period
- Initial level of GDP per capita to take care of the effects of convergence

- The population annual growth rate
- Domestic investment
- Trade openness
- The annual inflation rate

3.6. Estimation Technique

Existing empirical literature used various techniques, for instance, instrument variables such as the 2SLS, to deal with the potential endogeneity bias. However, the concern over the 2SLS estimator is that it is not efficient when heteroscedasticity is present. Jude and Leviuege (2017) proved that nonlinear modelling, such as the use of the Panel Smooth Transition Regression Model could assist in mitigating the challenge of endogeneity and reverse causality problems.

This study applied the GMM estimator. The GMM technique makes it possible to treat economic growth as a dynamic process, thus accounting explicitly for the possibility that the current growth rate can be influenced by the previous growth. Furthermore, the use of GMM techniques makes it possible to deal with the potential problem of endogeneity and the autocorrelation of the independent variables. GMM techniques also remove the country-specific effects and therefore affect the element of heterogeneity. The GMM makes it possible to have a clear understanding of the short-run (dynamic) effect within the model, and to exploit the group variations in the data. Consequently, a dynamic relationship is structured in the model to include the dependent lagged variable (See equation 3.1).

The study therefore estimated the dynamic GMM with Windmeijer's (2005) corrected standard errors, and the 2SLS instrument weighting matrix orthogonal deviations. The orthogonal deviations are used to maximise the sample size because there are gaps in the panel data. The study estimated a total of 30 models. First, the base model with the traditional known factors in economic literature that affect economic growth is estimated. Institutional indicators are then added to the base model, one at a time, so that their effect on economic growth can be quantified.

3.7. Empirical Results and Discussion

This sub-section presents and examines the results of the empirical analysis. First, there is a presentation of the descriptive statistics to understand the data on which the research is based. A correlation matrix is then discussed to aid the empirical specification. Thereafter, the empirical analysis on institutions, FDI and economic growth is presented for the full sample and the sub-sample, which excludes countries endowed with natural resources. Descriptive statistics results are presented in Table 3.3.

The average economic growth rate for all the SADC countries is 4.5 percent, and the average initial GDP per capita is USD2 700. The GDP and GDP per capita figures show that the average income per capita in SADC is relatively high compared to SSA. These could mean a potential market for the foreign direct investor. Maximum GDP recorded is 26.8, while the minimum is negative 17.7. This shows the heterogeneity which exist in the SADC region and that there is an outlier in terms of GDP figures.

FDI as a percentage of GDP averaged 5.7 percent over the period 1996 to 2016. Thus, the researcher infers that FDI has been an important source of development finance for SADC countries. The maximum number for FDI is 66.7, which is significantly different from the median, minimum, mean and standard deviation. This demonstrates that there is an outlier in the data, thereby confirming heterogeneity[5] which exists within the SADC region. The institutional average, which proxies the quality of institutions in the SADC region, is 60.5 percent; the maximum being 80.8 percent and the minimum 27 percent. These results can be interpreted to mean that institutions, as a whole, are not poor in SADC countries.

The average government stability in the SADC region is 3.8 out of a maximum of six. The median is 3.9, which indicates the scoring for most of the SADC countries. The most stable government in the SADC region has a scoring of 5.5 out of six. The data also indicate that in terms of government stability, there are no indicated outliers within the SADC countries.

Internal conflict recorded a maximum score of six and a minimum of 0.07 for all SADC countries. The average score in terms of internal conflict is 4.2 out of six, with a median of 4.4. This mirrors the general government stability that exists in the SADC region. Furthermore, the data show that there are few incidents of internal conflicts in the SADC region.

Moreover, investment promotion averages 3.5 out of six for the SADC region. The maximum score for investment promotion is 5.7 out of six, with a minimum of 0.77. This shows that not all SADC countries are taking deliberate efforts to promote foreign investment inflows. The pairwise correlation matrix is presented in Table 3.4.

Economic growth is negatively correlated with most of the institutional variables, for example, bureaucratic quality, corruption, democratic accountability and external conflict. Although there is a positive correlation between economic growth and the institutional average, descriptive statistics analysis seems to suggest that there are generally good institutions in SADC countries.

However, the correlation between economic growth and the interaction term of FDI and institutions is positive, proving the theory that FDIs' impact on economic growth depends on initial host-country conditions such as the quality of institutions. For example, Saini et al. (2010), in a study of 85 developed and developing countries, concluded that FDI on its own does not have an impact on economic growth. Instead, the impact of FDI on economic growth depends on the host country's initial conditions, such as the quality of institutions. Also, as mentioned earlier, Jude and Leviuege (2017) concluded that FDI alone has no significant impact on economic growth.

In line with the *a priori* expectations supported by the findings of Stancheva-Gigov (2016), there is a positive correlation between economic growth and FDI. There is also a positive correlation between economic growth and the initial level of GDP per capita and the rate of population growth. However, there is a negative correlation between trade openness and economic growth. This is not in line with *a priori* expectations. It should, however, be appreciated that correlation does not mean causation. Therefore, rigorous

[5] SADC countries experienced political independence and hence institutional transformation at different periods. Furthermore, the countries are at different stages of economic development (Country Watch 2017).

empirical examination of the interlinkages among institutions, FDI and economic growth is required, which is therefore the focus of the next sub-section.

3.8. An Analysis of the Regression Results

Under this sub-section, the empirical results from cross-section regressions are discussed. A total of 30 models were estimated for the full sample and the sub-sample, taking cognisance of natural resource endowments for particular SADC countries. In both the full sample and the sub-sample, the first model examines the control variables, and the subsequent models introduce the various institutional variables into the estimated models.

Table 3: Descriptive Statistics

	BURQUA_	CORRUP	DEMAC_	ETHTEN	EXCON	FDI	GDP	GDP_PC	GOVSTA_	INCON	INFL	INST_AV_	INVPRO	LAWOR_	MILPOL	RELTEN	SOCIO_	TARIFF	TAX	TELE
Mean	2.513	2.745	4.257	4.116	5.396	5.679	4.5	2671	3.853	4.183	1.40	60.584	3.450	3.615	3.520	2.520	1.715	9.037	37	5.781
Median	2.558	2.500	4.500	4.340	5.192	3.572	4.6	1018	3.869	4.385	7.404	62.667	3.353	3.577	3.500	2.119	1.266	8.150	35	1.901
Maximum	5.300	5.300	6.000	6.000	9.500	66.869	26.8	15687	5.462	6.000	2.310	80.875	5.731	5.462	6.000	5.000	5.192	39.010	89	31.50
Minimum	0.400	0.400	0.000	1.131	1.154	-2.943	-17.7	102	0.077	0.256	-9.616	27.333	0.077	0.077	0.000	-0.192	-0.192	0.500	11	0.000
Std. Dev.	0.929	1.269	1.518	0.863	1.573	7.287	4.7	3206	1.064	0.939	1.830	12.069	1.163	1.198	1.366	1.686	1.339	7.430	15	8.515
Skewness	-0.476	0.208	-1.387	-0.434	0.739	3.646	-0.3	1	-0.830	-0.627	12.430	-0.477	-0.777	-0.922	-0.225	0.115	1.090	1.465	0.9	1.810
Kurtosis	3.033	2.404	4.679	2.787	4.600	22.875	8.6	5	3.632	3.910	15.600	2.355	4.187	3.944	2.299	1.523	3.416	5.230	4	5.015
Jarque-Bera	11.911	6.929	138.061	10.502	62.257	58826.08	419.5	258	41.419	31.499	313375	17.378	50.164	56.287	9.108	29.332	64.671	177.921	54	225.3
Probability	0.003	0.031	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.011	0.000	0.000	0.000	0.000	0.000
Observations	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315	315

Source: Author's own calculation based using Eviews

Table 4: Pairwise Correlation Matrix

	LBURQUAL	LCORRUPT	LDEMACC	LDOMESTIC_INVESTMENT	LETHTEN	LEXCON	LFDI	LFDI_INST	LGDP_GROWTH_RATE	LGDP_PC	LGOVSTAB	LINCON	LINST_AVER	LINVPRO	LLAWORD	LMILPOL	LPOP_GROWTH_RATE	LRELTEN	LSOCIO_ECON	LTRADE_OPENNESS
LBURQUAL	1.000																			
LCORRUPT	0.950	1.000																		
LDEMACC	0.121	0.178	1.000																	
LDOMESTIC_INVESTMENT	0.737	0.811	0.056	1.000																
LETHTEN	0.338	0.385	0.611	0.360	1.000															
LEXCON	0.309	0.384	0.437	0.353	0.587	1.000														
LFDI	-0.087	-0.182	-0.155	-0.087	0.077	0.073	1.000													
LFDI_INST	-0.016	-0.104	-0.100	-0.010	0.172	0.153	0.993	1.000												
LGDP_GROWTH_RATE	-0.003	-0.114	-0.055	-0.042	0.075	-0.046	0.741	0.734	1.000											
LGDP_PC	0.573	0.628	-0.150	0.863	0.315	0.374	0.223	0.287	0.198	1.000										
LGOVSTAB	-0.047	-0.002	0.185	-0.015	0.384	0.523	0.216	0.265	0.260	0.072	1.000									
LINCON	0.300	0.296	0.370	0.319	0.745	0.532	0.081	0.165	0.106	0.335	0.290	1.000								
LINST_AVER	0.578	0.631	0.438	0.632	0.803	0.682	0.057	0.176	0.027	0.563	0.435	0.716	1.000							
LINVPRO	0.236	0.236	0.175	0.268	0.311	0.267	0.157	0.227	0.065	0.286	0.112	0.386	0.600	1.000						
LLAWORD	0.244	0.289	0.202	0.333	0.261	0.244	0.058	0.122	-0.099	0.301	0.003	0.228	0.545	0.930	1.000					
LMILPOL	-0.009	0.021	0.432	0.029	0.546	0.467	0.028	0.085	0.198	0.071	0.703	0.404	0.473	0.157	-0.004	1.000				
LPOP_GROWTH_RATE	-0.357	-0.497	0.025	-0.666	-0.029	0.016	0.246	0.215	0.148	-0.547	0.210	-0.034	-0.231	-0.114	-0.232	0.169	1.000			
LRELTEN	0.540	0.552	-0.156	0.609	0.199	0.205	0.033	0.103	-0.148	0.566	-0.080	0.243	0.586	0.594	0.655	-0.228	-0.380	1.000		
LSOCIO_ECON	0.579	0.655	0.238	0.674	0.530	0.497	-0.030	0.068	-0.136	0.592	0.121	0.440	0.817	0.630	0.674	0.147	-0.389	0.838	1.000	
LTRADE_OPENNESS	-0.301	-0.266	-0.022	-0.312	-0.334	0.000	-0.168	-0.216	-0.229	-0.388	-0.182	-0.315	-0.417	-0.306	-0.185	-0.298	0.212	-0.289	-0.283	1.000

Source: Author's own calculations using E-views

3.9. Full Sample with Countries Endowed with Strategic Natural Resources Included

3.9.1. Previous economic growth rate and economic growth

The results of the estimated panel dynamic GMM models are shown in Table 3.5 across all the estimated models. The results indicate that there is a positive relationship between the previous year's economic growth rate (LGDP_Growth_Rate (-1)[6]) and economic growth of the host country. The results are further justification for the use of the dynamic panel GMM estimation technique. This is in line with the findings of Alfaro and Johnson (2013), who concluded that FDIs' impact on economic growth depends on initial host-country conditions such as the previous year's economic growth.

3.9.2. FDI and economic growth

The effect of FDI on economic growth is both negative and positive across the estimated models. Gui-Diby (2014) had similar findings and concluded that FDI has a mixed impact on the host country's economic growth, depending on the period under study. Similarly, Edwards et al. (2016) and Zilinske (2010) claim that there are positive and negative effects of FDI on the host country's economic growth.

Another study by Alfaro et al. (2006) failed to confirm that FDI has a positive influence on the host country's economic growth. Instead, the results were mixed and consistently found either no effect of FDI on host countries' firms' productivity and/or aggregate growth or negative effects. This is contrary to popular belief by policymakers that FDI generates positive productivity externalities for host countries.

[6] The relationship is statistically significant at the 10 percent level of significance.

However, the effect of FDI on economic growth varies across countries partially due to the heterogeneity of institutions. This view is supported by McCloud and Kumbhakar (2012), who agree that institutional qualities are the main reason why different countries have different absorptive capabilities, hence a heterogeneous FDI-growth relationship.

Table 5: Full Sample Institutions, FDI and Economic Growth

GMM Estimated Models full Sample															
Variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12	Model 13	Model 14	Model 15
LGDP_GROWTH_RATE(-1)	2.15	1.99	1.99	2.09	1.97	2.02	1.81	2.27	1.95	1.92	1.92	1.98	1.72	1.81	1.92
	**(0.08)	**(0.09)	**(0.09)	(0.12)	(0.16)	(0.11)	**(0.05)	(0.15)	(0.10)	(0.1)	**(0.09)	(0.10)	**(0.06)	**(0.05)	**(0.07)
LGDP_PC	-1.69	-1.48	-1.48	-1.60	-1.54	-1.54	-1.25	-1.85	-1.42	-1.40	-1.41	-1.47	-1.16	-1.25	-1.37
	(0.29)	(0.34)	(0.34)	(0.37)	(0.34)	(0.42)	(0.32)	(0.38)	(0.36)	(0.35)	(0.34)	(0.35)	(0.34)	(0.32)	(0.33)
LDOMESTIC_INVESTMENT	0.06	0.05	0.05	0.06	0.06	0.05	0.04	0.05	0.05	0.05	0.05	0.05	0.03	0.04	0.05
	(0.63)	(0.66)	(0.66)	(0.65)	(0.63)	(0.70)	**(0.10)	(0.71)	(0.66)	(0.66)	(0.68)	(0.66)	(0.72)	**(0.10)	(0.64)
LFDI	0.06	0.06	0.19	0.16	-0.19	0.26	-0.27	-0.69	0.20	0.06	0.36	0.20	0.57	-0.27	-0.27
	(0.38)	(0.34)	(0.66)	(0.73)	(0.77)	(0.69)	(0.63)	(0.53)	(0.64)	(0.89)	(0.52)	(0.75)	(0.30)	(0.63)	(0.68)
LTRADE_OPENNESS	0.13	0.12	0.12	0.12	0.13	0.12	0.11	0.17	0.12	0.11	0.10	0.12	0.09	0.11	0.12
	(0.36)	(0.34	(0.35)	(0.38)	(0.44)	(0.37)	(0.32)	(0.34)	(0.35)	(0.39)	(0.41)	(0.36)	(0.38)	(0.32)	(0.33)
LPOP_GROWTH_RATE	-0.43	-0.39	-0.39	-0.41	-0.46	-0.41	-0.35	-0.53	-0.38	-0.36	-0.36	-0.39	-0.34	-0.35	-0.37
	(0.27)	(0.30)	(0.30)	(0.32)	(0.37)	(0.31)	(0.26)	(0.33)	(0.31)	(0.34)	(0.32)	(0.31)	(0.26)	(0.26)	(0.28)
LINST_AVER		-0.13													
		(0.76)													
LFDI_INST			-0.13	-0.10	0.27	-0.20	0.35	0.79	-0.14	0.00	-0.30	-0.14	-0.51	0.35	0.33
			(0.76)	(0.82)	(0.67)	(0.73)	(0.53)	(0.48)	(0.74)	(0.99)	(0.59)	(0.81)	(0.35)	(0.53)	(0.60)
LBURQUAL				-0.07											
				(0.75)											
LDEMACC					-0.96										
					(0.21)										
LMILPOL						0.06									
						(0.88)									
LRELTEN							-0.16								
							(0.17)								
LSOCIO_ECON								-0.23							
								(0.31)							
LCORRUPT									0.03						
									(0.89)						
LETHTEN										-0.24					
										(0.6)					
LEXCON											0.15				
											(0.65)				
LGOVSTAB												0.01			
												(0.98)			
LINCON													0.26		
													(0.39)		
LLAWORD														0.16	
														(0.17)	
LINVPRO															-0.12
															(0.29)
Observations	276.00	276.00	276.00	276.00	257.00	257.00	276.00	270.00	276.00	276.00	276.00	276.00	276.00	276.00	276.00
R- Squared	58.53	49.67	49.67	54.93	52.37	52.05	38.62	64.30	47.58	46.66	46.04	49.43	36.50	51.00	43.81
** denotes significance at 10%															

Source: Author's own calculations using E-views

3.9.3. GDP per capita and economic growth

The results indicate that there is a negative relationship across all the estimated models between the initial levels of GDP per capita and economic growth in the SADC host countries. This could be interpreted to mean that countries that start from a rich base tend to grow at a slower pace than those starting from a poor base. This result is not in line with *a priori* expectation and the market size and output hypothesis. GDP per capita is an indicator of the size of the market and hence the expectation is that a higher GDP per capita should promote more FDI inflows, which will then translate to economic growth for the host country. However, most of the FDI into the SADC countries is resource-based, thus, the motive for FDI into the SADC countries is mainly resource extraction and not market seeking (Asiedu & Lien, 2011).

3.9.4. Trade openness and economic growth

There is a positive relationship between trade openness and the economic growth of the host countries across all estimated models. Therefore, an increase in trade openness leads to an increase in the host country's economic growth. Open trade makes it possible for countries to import and export goods and services, in the process promoting economic activities and economic growth. These are similar to the findings by Stancheva-Gigov (2016), El-Wassal (2012), and Batten and Vo (2009), who all concluded that the effect of

FDI on the host countries' economic growth is positive and significant when the countries are open to trade. Furthermore, trade openness increases economic growth through efficiency gains.

3.9.5. Domestic investment and economic growth

The level of domestic investment is positively associated with the economic growth of the host countries across all estimated models. This is in line with *a priori* expectations. Domestic investment adds to foreign capital and economic growth. The findings are supported by the conclusion of De Mello (1999), who argued that the extent to which FDI impacts on economic growth depends on the degree of complementarity and substitution between FDI and domestic investment. Sengupta and Ntembe (2015) also concluded that domestic capital influences economic growth in SSA rather than USA FDI. Thus, the SADC region can promote economic growth by mobilising domestic resources which will compliment FDI.

3.9.6. Population growth rate and economic growth

Although the population growth rate should be one of the key drivers of economic growth in classical economics, the case is different for SSA and SADC countries, in particular. The population growth rate is negatively associated with economic growth across all estimated models for the SADC countries. This could be because SSA and SADC countries still lag behind in terms of investment in physical capital, hence the increase in population will translate into a decrease in the capital-labour ratio. This means a decrease in TFP and a decrease in economic growth.

3.9.7. Institutions and economic growth

As expected, the results indicated that there is a negative relationship between institutions and economic growth for the SADC countries, because the quality of institutions for this group of countries is weak. A country with poor institutions is likely to experience economic challenges such as low levels of investment, low productivity growth, and slow output growth. The quality of institutions also influences capital accumulation. If the institutions are poor, the host country is likely to attract low technology and resource-based FDI with limited growth effect.

This is in line with the findings of Adeleke (2014), who determined that many African countries have weak governance structures that are a constraint to economic growth. To further prove that the average quality of institutions is poor for SADC countries, the interaction term of FDI and institutions yielded a negative relationship with economic growth. Jude and Leviuege (2017) also concluded that institutional quality affects the effect of FDI on the host country's economic growth.

3.9.8. Democracy and economic growth

The empirical results showed that there is a negative effect between democratic accountability and economic growth for the SADC countries. This is not in line with *a priori* expectations, as an increase in democratic accountability is expected to be associated with an increase in economic growth. This point is supported by Malikane and Chitambara (2017), who concluded that countries with strong democratic institutions benefit more from the presence of FDI in terms of economic growth. However, the results confirm the arguments of Cao (2009), who claimed that democractic institutions have a

conflicting impact on FDI inflows, and ultimately, the economic growth of the host country.

3.9.9. Investment promotion and economic growth

The coefficient of investment promotion is negative. Thus, an increase in investment promotion leads to a decrease in economic growth for the host countries' economies. The results are, however, not statistically significant. This could be because of the poor institutions in SADC countries. This point is supported by the findings of Adeleke (2014), who concluded that African countries must improve their governance structures if they want to increase economic growth. The same sentiments are shared by Batten and Vo (2009), who stated that countries that intend to attract more FDI should ensure the institutional variables are improved in order for FDI to have a maximum impact on the host countries' economic growth.

3.9.10. Corruption and economic growth

Ideally, corruption should lead to lower investor confidence and, in the process, discourage future foreign investments. However, in 1964 Nathaniel Leff claimed that embracing corruption could help with government inefficiencies, and an increase in corruption leads to an increase in economic growth for the host country. This is not in line with *a priori* expectations. It should be acknowledged that the link between corruption and economic growth is not direct, but through FDI inflows into the host country.

One logical explanation for this anomaly could be the existence of strategic natural resources in the selected SADC countries, which will mean that MNCs will ignore all the negative institutional variables and invest in corrupt countries. The usual effects of FDI on the host country's economy will then kick in, and economic growth will thus be experienced. A country with vast mineral deposits is often claimed to have positive effects which may outweigh the impact of institutional factors. A case in point is Nigeria, Angola and Zimbabwe, where there is corruption, but the high returns from the extractive industries seem to compensate for the negative factors such as corruption, institutional quality, and political instability in attracting FDI inflows (Cleeve, 2012).

Some countries which are deemed to be corrupt, for example, Sudan and Nigeria (as measured by the corruption index) received a larger share of FDI inflows compared to countries which were deemed less corrupt, such as South Africa, Mauritius and Botswana. Ali and MacDonald's (2010) study also concluded that institutions do not matter in determining FDI flows in the primary sector. This leads to the discussion in the next sub-section, where countries that are endowed with strategic natural resources are removed from the sample.

3.9.11. Law and order, government stability, religious and ethnic tensions and economic growth

Other institutional variables, such as the increase in law and order, government stability and a decrease in religious and ethnical tensions all show the right signs in terms of their impact on the host country's economic growth. This is in line with *a priori* expectations and the findings of other studies. A study by Adhikary (2011), on Asian countries, concluded that a combination of FDI and good institutional variables, such as the rule of law, property rights, political stability and the absence of violence lead to economic

growth. De Mello (1999) also found that the FDI-growth nexus is highly sensitive to country-specific factors, which include the kind of institutions in those countries.

3.10. Sub-sample that Excludes Natural Resource-endowed Countries

This section presents the results for the sub-sample that excludes countries endowed with strategic natural resources. These countries lie above the mean of the indicator of natural resource endowment. In terms of control variables, the empirical results are almost the same as those of the preceding section, except that under the sub-sample, the results are statistically significant. The models' results are presented in Table 6.

Table 6: Institutions, FDI and Economic Growth- Sub-sample without Resource-Endowed Countries

GMM Estimated Models Sub Sample Without Resource Endowed Countries															
Variables	Model 16	Model 17	Model 18	Model 19	Model 20	Model 21	Model 22	Model 23	Model 24	Model 25	Model 26	Model 27	Model 28	Model 29	Model 30
LGDP_GROWTH_RATE(-1)	1.41	1.29	1.29	1.22	1.04	1.25	1.27	1.28	1.39	1.25	1.06	1.38	1.28	1.25	1.26
	*(0.00)	*(0.00)	*(0.00	*(0.00	*(0.01)	*(0.00)	*(0.00)	*	*(0.01)	*(0.00)	*(0.00)	*(0.01)	*(0.00)	*(0.00)	*(0.00)
LGDP_PC	-0.76	-0.61	-0.61	-0.50	-0.38	-0.52	-0.52	-0.59	-0.72	-0.59	-0.33	-0.71	-0.59	-0.52	-0.54
	(0.21)	(0.32)	(0.32)	(0.38)	(0.48)	(0.35)	(0.35)	(0.32)	(0.32)	(0.33)	(0.43)	(0.33)	(0.35)	(0.34)	(0.33)
LDOMESTIC_INVESTMENT	0.06	0.04	0.04	0.04	0.01	0.05	0.03	0.02	0.04	0.05	0.03	0.05	0.04	0.03	0.03
	(0.43)	(0.52)	(0.52)	(0.58)	(0.85)	(0.49)	(0.60)	(0.74)	(0.61)	(0.50)	(0.54)	(0.52)	(0.55)	(0.60)	(0.59)
LFDI	0.09	0.09	0.22	0.27	0.68	0.08	-0.25	-0.37	0.16	0.09	0.71	-0.03	0.25	-0.01	-0.02
	**(0.05)	***(0.03)	(0.45)	(0.33	***(0.03)	(0.83)	(0.58)	(0.45)	(0.63)	(0.79)	*(0.01)	(0.96)	(0.54)	(0.96)	(0.96)
LTRADE_OPENNESS	0.08	0.08	0.08	0.07	0.05	0.07	0.10	0.10	0.09	0.07	0.03	0.09	0.08	0.08	0.08
	(0.24)	(0.24)	(0.24)	(0.23)	(0.46)	(0.30)	(0.14)	(0.16)	(0.25)	(0.32)	(0.32)	(0.25)	(0.25)	(0.21)	(0.21)
LPOP_GROWTH_RATE	-0.24	-0.22	-0.22	-0.19	-0.15	-0.21	-0.25	-0.26	-0.24	-0.18	-0.12	-0.26	-0.21	-0.21	-0.21
	(0.16)	(0.19)	(0.19)	(0.20)	(0.38)	(0.18)	(0.12)	(0.13)	(0.20)	(0.31)	(0.32)	(0.21)	(0.18)	(0.17)	(0.17)
LINST_AVER		-0.13													
		(0.66)													
LFDI_INST			-0.13	-0.18	-0.57	-0.01	0.33	0.47	-0.07	0.02	-0.62	0.11	-0.16	0.09	0.10
			(0.66)	(0.51)	**(0.07)	(0.98)	(0.45)	(0.33)	(0.83)	(0.96)	***(0.03)	(0.83)	(0.71)	(0.79)	(0.78)
LBURQUAL				-0.21											
				(0.33)											
LDEMACC					0.36										
					(0.18)										
LMILPOL						-0.15									
						(0.59)									
LRELTEN							-0.11								
							0.15)								
LSOCIO_ECON								-0.14							
								**(0.09)							
LCORRUPT									-0.32						
									(0.36)						
LETHTEN										-0.23					
										(0.48)					
LEXCON											0.40				
											***(0.02)				
LGOVSTAB												-0.11			
												(0.60)			
LINCON													0.02		
													(0.93)		
LLAWORD														-0.07	
														(0.22)	
LINVPRO															-0.07
															(0.24)
Observations	185.00	185.00	185.00	185.00	166.00	185.00	179.00	179.00	185.00	185.00	185.00	185.00	185.00	185.00	185.00
R- Squared	10.98	9.26	9.26	7.91	6.04	8.10	7.95	8.49	10.60	9.04	5.78	10.79	8.95	8.19	8.38

** denotes significance at 10%, *** denotes significance at 5 percent and *denotes significance at 1 percent. Numbers in parethensis represents the p-value

Source: Author's own calculations using E-views

3.10.1. Previous rate of economic growth, domestic investment, trade openness and economic growth

The previous rate of economic growth, the level of domestic investment, and trade openness all positively impacted the host countries' economic growth. The previous year's economic growth proved to be an especially important determinant of the current economic growth rate by being significant at one percent level of significance for all 15 estimated models. This is in line with the empirical findings of Alfaro and Johnson (2013), who determined that the effect of FDI on economic growth depends on the host country's initial conditions, including the previous rate of economic growth.

3.10.2. FDI and economic growth

The effect of FDI on the host countries' economic growth is proven to be both negative and positive and significant at five and 10 percent levels of significance, depending on the institutional variable with which it interacted. This shows that FDI and institutions on their

own, without the existence of strategic natural resources, can contribute to economic growth for SADC countries. Similarly, Gui-Diby (2014) and Edwards et al's. (2016) studies reported that FDI has a mixed impact on the host country's economic growth, depending on institutional quality.

Significantly, FDI on its own, without institutional variables, can lead to an increase in economic growth for the SADC countries. This is contrary to the findings of many researchers such as Jude and Leviuge (2017) and Saini et al. (2010), who concluded that, on its own, FDI does not have an impact on the host country's economic growth. Countries with higher levels of FDI inflows experience high productivity in the export sector compared to those with low levels of FDI. Furthermore, FDI is significant in improving factor productivity and makes it possible for domestic firms to be linked with foreign firms, hence it creates linkages that will aid in economic growth. FDI is associated with globalisation, and it is this association that has increased the spread of technology across borders. Thus, through FDI and globalisation, host countries can gain access to foreign knowledge. The increasing use of available foreign knowledge and technology boosts the innovation capacity and labour productivity for domestic firms; according to Coady et al. (2019), knowledge flows from global technology leaders between 2004 and 2014 were estimated to have increased labour productivity by 0.7 percent for developing countries.

3.10.3. FDI/institutions and economic growth

The results show that the interaction of FDI and institutions has both a negative and positive effect on the host country's economic growth. The results are statistically significant at the five and 10 percent level of significance. This is in line with the findings of other researchers such as Jude and Leviuge (2017), who concluded that institutional quality affects the effect of FDI on the host country's economic growth. Saini et al. (2010) also claim that FDI on its own does not have an impact on the host country's economic growth; instead, institutional quality plays a role.

3.10.4. Democracy and economic growth

Under the full sample, an increase in democratic accountability was negatively associated with economic growth. This could have been due to the presence of strategic natural resources where dictatorship is favoured by MNCs. However, after removing countries endowed with strategic natural resources, an increase in democratic accountability leads to an increase in economic growth. The results are in line with the findings of Malikane and Chitambara (2017), who concluded that countries with democratic institutions benefit more from the presence of FDI. This shows the importance of institutions in amplifying the effect of FDI on economic growth without the natural resource bias to impact on MNCs' decision making. However, it is not statistically significant.

3.10.5. Corruption and economic growth

Likewise, an increase in corruption is associated with a decrease in economic growth. This result is contrary to the findings of the full sample, which included resource-endowed countries, indicating the resource bias element where MNCs overlook poor institutional indicators if the host country is endowed with strategic natural resources. This is in line with *a priori* expectations and the findings of Wiljeweera et al. (2010), who concluded that corruption has a negative impact on economic growth.

3.10.6. Military in politics and economic growth

Under the full sample, an increase in military involvement in politics led to an increase in economic growth. This is not in line with *a priori* expectations, perhaps due to the existence of strategic natural resources. However, under the sub-sample, which excludes countries with strategic natural resources, a military increase in politics is associated with a decrease in economic growth. This is in line with *a priori* expectations, and further highlights the importance of good institutions aiding economic growth.

3.10.7. Investment promotion and economic growth

The results show a negative effect of investment promotion on economic growth, the same finding as that under the full sample. This can be interpreted to mean that other institutional indicators are more important compared to the investment promotion institutional indicator. This is supported by the findings of Batten and Vo (2009), who concluded that countries that intend to attract more FDI inflows should first ensure that the other institutional indicators are of good quality. However, the results are not statistically significant, meaning that SADC countries can still take deliberate action to promote investment in their respective economies. This view is supported by Egan (2015), who argued that host countries have to deliberately establish and promote investment-promoting agencies and efficient institutions in a bid to attract FDI inflows.

3.10.8. Institutions and economic growth

Overall, the results show that through FDI, institutions can have an indirect role in influencing economic growth. Thus, government stability, a reduction in corruption, less military involvement in politics, democratic accountability and enhanced regulatory quality and governance structures can lead to better economic growth outcomes for SADC countries. The results of the estimated models for the sub-sample without resource-endowed countries are presented in Table 3.6.

4. Conclusion and Policy Recommendations

The chapter examined the interrelationships among institutions, FDI and economic growth for SADC countries. The study examined how FDI interacts with institutions to promote economic growth in various country environments, with the exclusion of countries endowed with strategic natural resources. A panel dynamic GMM technique with Windmeijer corrected standard errors and orthogonal deviations was used to empirically examine the interrelationship among institutions, FDI, and economic growth for SADC countries.

The interrelationship among institutions, FDI, and economic growth differs, depending on country characteristics, including initial host-country conditions. The reviewed literature highlighted that initial host-country conditions and their absorptive capacities determine FDI's effect on economic growth. There is a need to increase the absorption capacity of the host country to ensure FDI's maximum impact on economic growth. These absorptive capacities include human capital, trade openness, institutions, macro-economic stability and the initial levels of GDP per capita. There is heterogeneity in terms of absorptive capacities due to the differences in the quality of institutions. This therefore means SADC countries require a targeted approach to FDI.

The results of the study showed that SADC countries have relatively weak institutions, which, in turn, affect FDI's impact on economic growth. The study clearly showed that the quality of institutions determines the effect of FDI on economic growth. As the institutional variables improve, so does the impact of FDI on economic growth. This is more evident in the sub-sample without resource-endowed countries. For example, there is a negative correlation between corruption and economic growth, indicating that a reduction in the level of corruption is associated with an increase in economic growth, while an increase in corruption is associated with a decrease in economic growth.

Thus, institutions indirectly affect economic growth for the SADC countries through the interaction with FDI. However, the institutions' interactions and FDI effect on economic growth is both negative and positive, regardless of whether or not the countries are endowed with strategic natural resources.

The results also show that for countries that are not endowed with strategic natural resources, FDI and institutions on their own can promote economic growth. Thus, as a policy recommendation, SADC governments, especially those without strategic natural resources, should aim to implement policies that improve the quality of their institutions and FDI promotion. Thus, non-resource FDI has a direct and significant effect on the host country's economy, as it tends to create more jobs. Furthermore, there is a higher level of technology transfer and an increased supply of domestic inputs to the MNC as it relies on host countries for inputs.

Significantly, the results of the study show that FDI on its own can actually increase the level of economic growth for SADC countries. Therefore, SADC countries should implement measures that promote FDI inflows as a major determinant of economic growth in the region. This could include tax incentives, a reduction in the interest rate, a reduction of red tape and the provision of other incentives. However, the undertaking of rigorous investment promotion activities in the respective economies should be done simultaneously with an improvement in governance structures.

Furthermore, reforms should target improving the socio-economic dimensions, political stability, and law and order; reduce corruption; improve the levels of democratic accountability; and reduce the involvement of the military in politics. Governments in SADC countries should ensure fully developed financial sectors to derive the maximum benefits from FDI inflows. Furthermore, SADC countries should put together policies to boost human capital as a way of building up their absorptive capacities.

The level of domestic capital investment is of paramount importance in boosting the domestic country's economic growth. Thus, there is a complementary relationship between the host country's economic growth and the level of domestic capital investment. It is therefore vital that as a policy recommendation, SADC countries should increase domestic capital investment to promote economic growth.

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