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## AN EMPIRICAL INVESTIGATION INTO THE BENEFITS OF REGIONAL INTEGRATION FROM COMESA FOR ZAMBIA

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### Abstract

**Purpose:** The world at large in the last three to four decades has shown greater impetus for regionalism, from Europe's EU, South America's MERCOSUR, Southeast Asia's ASEAN, North America's NAFTA and Africa's numerous RECs among which eight are recognized as building blocks for the now AfCFTA among others. While for other parts of the world, the driving force to regionalism may be different, for Africa, Pan Africanism and African Renaissance have been the push forces behind regionalism. This study therefore took interest to look at the benefits of belonging to a REC, with the ultimate objective of empirically investigating the benefits of COMESA's integration for Zambia's growth for the period 1975-2017.

**Methodology:** Using a variable that represented the presence of integration and time series data, the ordinary least squares (OLS) technique was estimated to establish significance and relevance of integration on growth.

**Findings:** The findings among others revealed that the variable representing integration had no significant effect on long-run GDP growth, FDI and trade. However, it did have significant effect on investment. On the other hand, the findings of the analysis of COMESA programmes being implemented in Zambia revealed that Zambia largely benefits from COMESA, citing among others the infrastructure development of four of the five border posts shared by Zambia and its neighbours.

**Contributions to theory, policy and practice:** The study recommends that Zambia and indeed all COMESA Member States refrain from the use of Non-Tariff Barriers (NTBs) and Technical Barriers to Trade (TBTs). Additionally, Safeguard Measures must be sought for countries seeking to protect their infant domestic industries and adherence to the NTBs and TBTs resolution framework under COMESA. These if unchecked have a potential of undermining the benefits Member States can obtain from COMESA integration.

**Keywords:** *Regional Economic Integration, Economic Growth, Foreign Direct Investment.*

### 1.0 INTRODUCTION

Regional integration efforts in Africa dates far back as early as in the 1960s with strong political motives. Pan-Africanism, as an expression of continental identity and coherence (McCathy, 1995) with early efforts aimed at ensuring the independence of the continent from colonial powers as a

starting point for the continent to move ahead into other aspects of life. Regional integration has become one of the major issues in international relations (Haas, 1971). Seen as a solution to achieving development, regional integration has come to be known and thought of as one of the ways in which economic development and growth can be stimulated. Additionally, it is believed to alleviate extreme poverty among people of different localities and nationalities in developing countries.

Regional Integration is thought to have the potential of unlocking economic challenges in developing countries especially in Africa as it provides a platform for exchanges of ideas, goods and services. In this light, the Economic Commission for Africa (UNECA) identified regional integration as a key strategy for development and has been working to shape Africa's transformation and growth prospects by promoting prosperity at regional and sub-regional levels. The focus is to promote policies and programs that strengthen the process of economic cooperation and integration (Abdalla, 2016).

Elsewhere in the world, the European Union set the scene for regionalism since 1951. And since then, regionalism began to take shape like the North America Free Trade Area (NAFTA) in 1994, the Association of Southeast Asian Nations (ASEAN) in 1967 and the Southern Common Market (MERCOSUR) in 1991. Africa has not been left out in this race and a number of regional integration agreements have been witnessed on the continent. For example, Southern Africa Development Community (SADC) in 1992, East African Community was revived in 2001, Economic Community of West African States (ECOWAS) in 1975, Central Africa Economic and Monetary Community (CEMAC) in 1994 and Common Market for Eastern and Southern Africa in 1994 to name but a few.

The establishment of Common Market for Eastern and Southern Africa (COMESA) as a regional bloc can be said to date as far back as the mid-1960s way before the Lagos Plan of Action (LPA). This is because, the Eastern and Southern African Co-operation arrangement (ESAC) had already been envisaged by some countries of the said region. In October, 1965, the Economic Commission for Africa convened a ministerial meeting of the then independent states of eastern and southern Africa for the establishment of the sub-regional economic integration in the meeting held in Lusaka Zambia. In May 1996 in Addis Ababa the Terms of Association to govern an interim arrangements before the treaty was adopted and signed by Burundi, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Rwanda, Somalia, and Zambia were developed.

A number of meetings were held to facilitate the formation of COMESA. The first meeting was held in 1967 called Interim Economic Committee of official. The second was the First Extraordinary meeting of Ministers of Trade, Finance and Planning in Lusaka in 1978 which recommended the establishment of sub-regional economic community beginning with a subregional trade area which would be gradually upgraded to a common market in a decade's time (COMESA Treaty, 2009). The membership of COMESA include; countries from North Africa, Horn of Africa, Indian Ocean, African Great Lakes, Central and Southern Africa. These countries include; Burundi, Comoros, Democratic Republic of Congo, Djibouti, Egypt, Eritrea, eSwatini, Ethiopia, Kenya, Libya, Madagascar, Malawi, Mauritius, Rwanda, Seychelles, Somalia, Sudan, Tunisia, Uganda, Zambia and Zimbabwe. A number of 21 members making it one of the largest

economic bloc in Africa. Somalia and Tunisia are the latest members to have joined COMESA in 2018, this presents yet the perceived benefits that members can obtain from the REC and its potential for growth.

After the series of preparatory works, a meeting of Heads of States and Governments convened in Lusaka on December 21, 1981 at which a Treaty establishing the Preferential Trade Area (PTA) was signed which came into force in September 30, 1982 after been ratified by more than seven signatories. The PTA aimed to promote the “collective self-reliance” of the newly independent states of Southern and East Africa through an integrated regional market (Hall, 1987). As the treaty establishing the PTA envisaged the transformation into a Common Market, the COMESA establishing Treaty was signed 5 November, 1993 in Kampala, Uganda and ratified in Malawi in 1994 (COMESA, 2009).

The motivation for integration in Eastern and Southern Africa became inevitable following three major developments; first, the collapse of the federations in Eastern and Central Africa reduced political cooperation among States of the region and thus needed to be addressed. Second, the destabilization of the economies of Southern African States by apartheid South Africa made it urgency to create a sub-regional economic organization which would be an economic counterweight to South Africa. Third, the recognition by these countries that there was no better way to reduce their economic dependency on the industrialized countries of the North and as a result, saw it necessary for the adoption of self-sustaining measures in all sectors (COMESA Treaty, 2009).

Following the urgency of cooperation, the treaty establishing COMESA binds together independent states which agreed to co-operate in exploiting their natural and human resources for the common good of all their people. COMESA’s priority has been to promote increased trade and economic integration in Eastern and Southern Africa (Woolfrey, 2017). Given the earlier initiatives that explicitly focused on promoting regional integration through the removal of trade barriers and trade led market integration, COMESA recognizes that peace, security and stability are basic in providing investment, development, trade and regional integration among the 21 member states (ibid).

In pursuant of its objectives, COMESA agreed to adhere to some principles including (1) equality and interdependence among member States (2) solidarity and collective reliance among member States (3) inter-State co-operation, harmonization of policies and integration of programs among member States (4) non-aggression between member States (5) recognition, protection and promotion of Human and People’s rights in accordance with the provisions of the African Union on Human and People’s Rights (6) accountability, economic justice and popular participation in development (7) the recognition and observance of the rule of law (8) promotion and sustenance of democratic system of governance in each member state (9) the maintenance of regional peace and stability through the promotion and strengthening of good neighborliness and (10) the peaceful settlement of disputes among member States, the active co-operation between neighboring countries and the promotion of peaceful environment as a pre-requisite for their economic development (COMESA).

Given the developments around the world in as much as regional integration is concerned. These developments include United Kingdom's (UK) 23 June, 2016 referendum vote that sought to get the views of people of voting age on whether UK should leave or remain in EU. The leave camp won by 51.9% which triggered Article 50 of the Lisbon treaty and hence modalities commenced for the divorce to be affected and by 29 March, 2019 at 11pm UK time, UK was to depart the EU (BBC, 2018) if divorce bill agreed by both parties. In North America, one of Donald Trump's talking points immediately he came into power was the issue of United States leaving NAFTA. Currently NAFTA has been replaced by the US-Mexico trade deal and negotiations are still ongoing with Canada to join this new trade deal. The above description of the events as they have been unfolding in as far as regionalism is concerned gives the prompt to undertake a study into the topic.

The increasingly desire for regional integration among States in different geographical spheres forms the basis for critical analysis of the role these schemes play in achieving economic growth and poverty reduction. Since the creation of the Organization of African Unity in 1963, efforts to a beneficial regional body have been made with minimal success and greater challenges witnessed in that the benefits have not significantly been realized (McCathy, 1995).

The earliest work on regional integration theoretically can be traced as presented by Viner (1950) in his seminal work "The Customs Union Issue" in 1950. It was traditionally believed that any kind of preferential trade encourages specialization of production in least cost countries and thus beneficial to partner States and international trade. In this line of thought, the publication by the Hungarian Chamber of Commerce and Industry on the benefits of European Union Membership to Hungary highlights that Hungary's membership has had positive impact on the Hungary economy and provided several competitive advantages for companies setting up permanent presence in that country. This, was argued would stimulate Hungary's existing capacities, create jobs, economic growth, higher wages, growing internal market and domestic demand, free movement of labour, goods and capital and will enable Hungary free access to 450 million consumers (Hungary Chamber of Commerce and Industry, 2015).

Empirically, Tongzon (2005) showed that there are economic opportunities for ASEAN through the establishment of a FTA with China as China imports a significant portion of input such as raw material, industrial components and agriculture products from ASEAN. Mexico's trade with its NAFTA Partners was found to have significant impact on total factor productivity (TFP). Simulation of the impact of NAFTA reveals permanent increase in TFP in Mexico's manufacturing sector of between 5.5% and 7.5% and to some convergence to the economies of US and Canada as a result of technology diffusion (Schiff and Wang, 2004).

The negative benefits of regional integration occur when low-cost firms are replaced by high-cost partner firms and thereby making consumers have access to less goods at higher prices and this is called Trade Diversion (Viner, 1950). Studies have been conducted on EU member states to determine how they benefit from European integration and one outlier was Greece in which per capita income became lower after joining the EU and for UK it was found that her benefits begun to decline over time. The study aimed to establish what would be the per capita level of income and labour productivity if countries had not joined the EU (Royal Economic Society, 2014).

Regional integration as indicated above has been shown through research that it has possible benefits to the growth of the member states. It has also been shown that regional integration has no benefits to the growth of a member as indicated by Greece's lower per capita GDP after joining the EU and UK's lowered benefits in EU. Given the overlap in the conclusion of the benefits of regional integration to growth, it is the purpose of this research to investigate what benefit regional integration will be to the growth of Zambia.

On the basis of the aforementioned background and scene setting, the main objective of this study is to empirically investigate the benefits of regional integration for Zambia from COMESA. In a bid to achieve the major objective, this study specifically attempt:

- To scrutinize the effect of belonging to COMESA on GDP growth in Zambia.
- To investigate the effect of belonging to COMESA on trade in Zambia.
- To assess the effect of COMESA's community on investment in Zambia.
- To elucidate the effect of COMESA's community on the growth of FDI in Zambia.

Following the major objective of this study, the major research question that arises is: What is the effect of COMESA's regional integration on Zambia's growth?

Specific Research questions included the following:

- What is the effect of COMESA's integration on Zambia's GDP growth rate?
- What is the effect of COMESA's integration on Zambia's trade?
- What contribution does COMESA's integration make to investment in Zambia?
- What is the effect of COMESA's integration to the promotion of FDI in Zambia?

In other to ascertain the above objectives, four alternative hypotheses are constructed, all things being equal:

- Belonging to COMESA's integration will lead to an increase in the GDP growth of Zambia.
- COMESA's integration will lead to increases in trade for Zambia.
- Zambia's investment has increased as a result of COMESA's integration. □ COMESA's integration will lead to an increase in FDI in Zambia.

Regional integration has been on the rise in the last three decades in the disguise of new regionalism of which most countries belong to at least one Regional Integration Agreement (RIA). These developments as a result have attracted academic attention in which a large literature that seeks to explain the welfare properties of RIAs and their effect on trade are generated (Berthelon, 2004). Even though there has been great recognition that the dynamic effects of regional integration are greater than static ones (Walz, 1999), relatively less attention at theoretical and empirical levels have been devoted to the growth effects of Regional integration. Carrying out an empirical research in studying about the effects of regional integration on growth in a developing country with a focus on Zambia, this study, in doing so will build on a number of notable contributions. These notable contributions include Baldwin & Venables (1995), Schiff & Winters (2003), De Grauwe (2007), De Melo & Panagariya (1993), Kohl (2012) and Brucher (2016).

Stronger regional integration has been a policy priority in Africa's development for many decades. All Africans, not just policy makers and decision makers, have a role to play in making integration a reality for the continent. Regional integration matters in Africa because it affects; First, what people can buy and the variety of what is on offer on the local market. Second, how easily citizens move between countries including where people travel for leisure or for work. Third, how costly it is to keep in touch, where people choose to study or look for a job, how easy it is to transfer money to family and the ease with which startup capital can be gotten for a business. However, in light of the empirical researches conducted in the EU concerning its benefits to members and in which results have been mixed, it is important to investigate the growth effect of regional integration in Africa.

This study focuses on Zambia which is a developing country and this is so for two reasons. First, developing countries have turned to regionalism as a tool for development, therefore it is important to assess its effectiveness. Second, regionalism is part of global economic environment and affects developing countries and understanding its implications can help them better cope with regionalism.

While the first part of the study has set the scene for the commencement of the study, the rest of the paper is organized as follows: the next section begins by giving the conceptual definitions of the terms that will be used in the study, then proceeds to reviewing the literature on growth and regional integration. Section three provides the methodology and section four presents the findings. Section five presents the policy implications of the findings and six concludes the study.

## 2.0 LITERATURE REVIEW Conceptual Issues

**Economic Growth:** From the meaning of the two separate terms on the above terminology, *economic growth* can literally mean the increase in the management of domestic economy. It is defined as the increase in the inflation-adjusted market value of goods and services produced by an economy over a period of time usually one year. It is conventionally measured as the percent rate of increase in real gross domestic product (GDP). GDP is the total market value of goods and services produced by a country in a certain time period (IMF, 2012). The economic state of countries in the world is evaluated using GDP and so it implies that the higher the GDP of a country, the better is its economic state. In this study the terms GDP growth and economic growth will be used interchangeably to basically mean the same thing. This is because as illustrated above, economic growth is measured in terms of real GDP (GDP adjusted for inflation) and since it has also been made clear that the type of growth here is economic.

**Foreign Direct Investment:** The Organization for Economic Co-operation and Development (OECD) defines *foreign direct investment* as an investment involving a long-term relationship that reflects a lasting interest and control by a resident entity in one economy in an enterprise resident in another economy other than that of the foreign direct investor (OECD, 1996 cited in UNCTAD, 2007). It implies that the investor exercises a significant degree of influence on the management of the enterprise resident in another economy. Such transactions involve initial and subsequent transaction between entities as well as foreign affiliates that can be incorporated or unincorporated. FDI can be undertaken by individuals as well as business entities (IMF, 1993 cited in UNCTAD,

2007). Put differently, FDI is an investment made by a firm or individual in one country into business interest located in another country and occur when foreign business operations are established by an investor or the acquisition of foreign business assets, including ownership or control of interest in a foreign company (Chen, 2019).

**Regional Integration:** The definition of *regional integration* required the breakdown of the two words ‘*region*’ and ‘*integration*’. This enabled me arrive at the much-desired meaning of the concept as well as the context in which it was being referred to in this study.

The concept of region derives from the Latin word ‘*regio*’ which means ‘a district, portion of a country, territory, district and equally means; a ‘direction’ (Jönsson et al., 2000: 15). It is derived from yet another Latin word *regere* which means to ‘rule, direct’. Over time, the concept of region evolved primarily as a space, area or part of the state. These are referred to as *micro-regions* and there are also *macro-regions* (part of the world) which are larger territorial units or sub-systems, between the state level and the global system level. Nye (1971: vii) added to the then debate in regionalism of the meaning of the concept *region* and stated that the minimum classical definition of *macro-region* is ‘a limited number of states linked together by a geographical relationship and by a degree of mutual interdependence’.

In comparative regionalism, most scholars engaged in contemporary debate agree that there are no natural or scientific regions and stress that the definition of a region in as much as this school of thought is concerned vary according to the particular problem or question under investigation (Söderbaum, 2016). Jessop (2003:183) adds that, ‘rather than seek an elusive objective ... criterion for defining a region, one should treat regions as emergent socially constituted phenomena’. From this, it can be deduced that all regions are socially constructed and politically contested (Söderbaum, 2016).

The Cambridge Online Dictionary defines the term *integrate* as ‘to end separation of people by sex, race, national origin etc in an organization or society’. Further, it means to combine two or more things to make something more effective (Cambridge University Press, 2019). Integration is therefore an act or process of becoming part of the group or the process of ending separation among people or nations.

From the above breakdown of the terms, *regional integration* can therefore be defined as the process of nations, cultures, races etc in a given section or part of the world coming together to make something more effective. This something can be in economic, political, social and cultural form. Several definitions of regional integration have been given by a number of scholars from various fields including economics and international relations.

Deutsch (1989) defines regional integration as the attainment of a sense of community, of institutions, practices strong enough and widespread enough within a territory to assure for a long time change among its population. It is defined as tendency towards the voluntary creation of larger political units, each of which consciously avoids (morally and practically) the use of force in relations between the participating units and groups (Haas, 1961). Integration infringes on the sovereignty of integrating states (Ogbeidi, 2003). For Nye (1971:26), regional integration refers to a deeper process, whereby the previously autonomous units are merged into a whole and that there is need to distinguish between political integration (the formation of a transnational political



system), economic integration (the formation of transnational economy) and social integration (the formation of transnational society). In this study, the term integration and regional integration will be used interchangeably.

### **Theoretical Framework The Solow Growth Model/Neoclassical Growth Model**

The Solow growth model is therefore a starting point to answering this question. The MIT economist, Solow developed the growth model which addressed the limitations in the Harrod-Domer model. He replaced the fixed coefficient production function with the neoclassical production function. Allowing for flexibility in the combination of capital and labour, output can be increased by; firstly, increase in the equal and fixed portions of capital and labour. Secondly, increase in labour and thirdly, increase in capital. The model assumes diminishing returns where each addition in capital per worker results in less output (Solow, 1956:16). At any point in time, the economy has capital, labour and knowledge or the effectiveness of labour which are combined to produce output. The amount of labour and capital produces output and there is technological progress if the amount of knowledge increases (Romer, 1990)

The assumption of diminishing return to capital means that under constant depreciation there is a capital-labor ratio which the economy will reach in the long run. Per capita long run growth dynamics are determined solely by exogenous rate of technological change (Mann, 2015). Solow believed that this is exogenous of the model in two forms; First, mechanical referring to improved machinery, computers etc and second, human capital referring to improved education, health, workers' skills etc (Solow, 1956). To Solow the key determinant of growth in the long run is population growth and technical change and over time poor and rich countries will converge.

The Solow growth model used to see if regional integration has an effect on growth results in concluding that integration cannot affect the growth of any economy in the long run. In the same line of thought, Badinger (2001:5) added that economic integration and other aspects of institutional or economic policy measures have no effect on the steady-state growth rate, which is solely determined by the exogenous rate of technological progress. However, if in the production process integration leads to a more efficient factor (capital and labour) employment, it will alter the economy's equilibrium capital-labour ratio and generate temporarily higher growth rates until a new steady state is reached (Mann, 2015). Additionally, institutional changes have temporal effects on short run growth and both static and dynamic effects occur. Static effects arise from lower trade costs, increased competition and enhanced factor mobility. This increase in efficiency leads to more output from the given amount of inputs. The dynamic effect occurs due to higher investment and increased capital stock resulting from increased output and for given investment ratio, this in turn increases output in a second round (Badinger, 2001).

Despite the insights that the neoclassical growth model provides, it depends on a number of simplified assumptions. There is only one commodity, the role of the government is ignored, fluctuations in employment ignored, only three inputs are considered (capital, labour and technology). Additionally, the rates of depreciation, population growth, saving and technological progress are constant which is not the case in the real world (Romer, 2006).

### **The Endogenous Growth model**

In contrast to Solow growth model, the endogenous growth model states that, rather than the exogenous rate of technology as a determinant of long run growth rate of output per worker and this is determined from within the model (Romer, 1990). This model argues against the assumption of diminishing return to capital and hence there are increasing returns to capital. In Romer's introduction of the endogenous model, the population growth constitute a major source of knowledge. This idea/knowledge is a non-rival good and it can be used by anyone and anywhere. Therefore, one can conclude that the "more the population, the more people there are to make new discoveries" (Romer, 1990). The generation of knowledge to Romer leads to more generation of the stock of knowledge and that growth will depend on the scale of returns to knowledge in knowledge production. There are constant returns to knowledge in goods production and increasing returns in knowledge production. As a result of the increasing return to knowledge in knowledge production, the economy embarks on an ever-increasing growth path.

This model of economic growth can explain the effect of regional integration on growth in a number of ways. First, regional integration will have long-term effects on growth determined by the broadly accumulation of capital. Second, regional integration arrangement provides the opportunity for countries to access larger technological base which in turn produces constantly higher growth rates. Lastly, regional integration will lead to technology transfer within the region and thus increasing growth (Wals, 1997 in Kamau, 2010; Mann, 2015).

### **Empirical Literature Review**

A number of empirical studies that have been conducted unearth and identify several factors that determine growth. These factors include investment, human capital development, government consumption, openness, financial development, political environment, population growth and domestic policies. For Africa however, other factors have been identified as causes of poor economic growth like poor domestic policies, colonial legacy, geography, weak institutions, small size of individual economies and external factors (Collier & O'Connell, 2004; Burnside and Dollar, 2000 in Kamau, 2010). Within the sphere of regional integration and growth, there has been remarkably increasing interest by researchers to establish the effects of regional integration arrangements (RIA) on growth. This has been so due to unprecedented rise in regionalism and for Africa and the world at large regionalism is seen as development tool which can help raise the economies of developing countries. It is therefore of relevance to turn to such research and see what has been the conclusion concerning the subject matter.

Henrekson, Torstensson and Torstensson (1995) studied the effects of European integration on economic growth for the period 1976-1985. They used a number of variables to affect growth in order to isolate the effect of European integration. In their specifications, the dummy variable for European Community (EC) and the European Free Area (EFTA) was positive and statistically significant at 5% level of significance. The size of the coefficient indicated that EC/EFTA membership would affect 1% of growth rate. However, they cautioned that the results seemed sensitive and the coefficient capturing integration was only significant when combined with certain control variables and not with others.

Due to the absence of a clear-cut theoretical guidance as to which variable should be included in the econometric model, they warn that it is difficult to conclusively determine whether EC/EFTA integration affect long run growth (Henrekson, Torstensson & Torstensson, 1995). Two channels were empirically identified using indirect analysis by Torstensson (1999) linking economic integration to growth through investment and knowledge transfer. He did this by conducting a data panel of 20 OECD countries and covered three time periods between 1976 and 1990 (Torstensson, 1999).

Puga and Venables (1998) and Venables (2003) found unilateral liberalization beneficial and argue that the gains from regional integration are likely to be larger in the case of North-South relative to South-South RIAs. This is so because of international contacts and trade that will effectively transfer knowledge from North to South. Additionally, wealthy countries are knowledge rich and more likely to provide far more access to technology than poorer trading partners (Schiff and Winter, 2003). This technology will therefore be the source of growth for developing countries.

In the study of Vamvakidis (1999), he showed that economies grew faster both in the short-run and long-run after broad liberalization but slower when participation in RTA. This was done by studying regionalism versus broad liberalization in the context of member countries growth. Badinger (2001) found that regional integration had no permanent increase in growth rates within the European Union. Using panel data of 23 OECD countries, Vanhoudt (1999) finds no positive or negative growth effects for the European Community members in comparison to non-members OECD states.

Within Africa, Kamau (2010) used dynamic panel data formulation for COMESA, EAC and SADC to determine the impact these regional bodies have on economic growth and found that the economic integration index was positive and statistically significant impact for the countries of Eastern and Southern Africa.

From both the theoretical and empirical analysis of the benefits of regional integration, it is evident that three branches emanate from these analyses. Viner (1951) first indicated that integration can have both positive benefits through trade creation and negative effects through trade diversion. Badinger (2001) making his contribution on the effect of regional integration on growth argued that the steady state growth was determined by technological progress which is exogenous and so integration would not affect growth. Other studies find neither positive nor negative growth effects of European Integration (Vanhoudt, 1999). This conclusively indicates that the growth effect of integration can be diverse depending on the circumstance. As such it is important to investigate the effect of regional integration at COMESA on the growth of Zambia.

### **Benefits of Regional Integration**

From the review of literature both theoretical and empirical in relation to role of regional integration and the benefits thereof, it is propelling to highlight the benefits of regional integration. The starting point theoretically is the elaboration in the customs issue of Viner (1951) about the outcomes of regional integration. He points out that trade creation is beneficial for integrating countries as high cost firms are replaced by low cost firm from partner states. This has welfare effects on consumers as it facilitates easy access to quality and affordable goods. This increases

consumers' choices on what brand they can afford according to their preferences and budget constraints.

For firms, regional integration provides a larger market for goods and services they offer. Due to elimination of tariffs, this reduces the costs of transportation and thereby overall costs. For example, a company that might only be producing in Zambia only has a market size of 17.6 million, but under COMESA it access the market size of 555 million which provides the impetus to increase production and enjoy economies of scale. On the other hand, UNCTAD (2013) adds that regional trading blocs have a potential through providing domestic firms with access to larger market to yield dynamic or growth effects. This makes it possible to overcome the limitations of small size of national economies and further exploiting the economies of scale.

With the great intensification of integration, there is free movement of capital, labour, goods and services that allow firms to set up new firms in other countries, in turn providing competition to domestic producers. With competition come high quality and affordable goods. In addition, new firms create employment in the host country which leads to improved living standards of the people.

There are three main ways according to Dunning (1993) through which regional integration increase FDI inflows in the region: first, the increased size of the market leads to replacement of exports with FDI; Second, MNCs reorganizes their investments in the region due to new configuration of location advantages and; third, new investment opportunities arising from the restructuring of activities between countries, sectors and firms triggered by economic integration. It is therefore evident through these ways that regional integration according to economic theory will increase the flow of FDI in the region and integrating countries at large.

In the context of international relations, regional integration presents an opportunity for countries to negotiate as a unity and hence becomes a force to reckon with in international foras. Being able to speak with one voice, least developed countries can negotiate better deal at foras like the WTO, UN assembly and many others.

### **3.0 METHODOLOGY**

This study will employ the case study approach in finding out how economic integration benefits developing countries and COMESA will be used as a case. The use of secondary data will be employed in this study and sources of this data will be obtained from the World Bank publications, the International Monetary Fund, World Development indicators and the Central Statistics Office of Zambia. Depending on availability and reliability, some additional sources of data will be used. Kamau (2010) used panel data and applied Generalized Method of Moments (GMM) to study the relationship between economic integration and economic growth on three regional blocs which are EAC, COMESA and SADC. This study used time series data in the analysis of the impact of integration in COMESA. Unit root test was run to test for stationarity of variables in order to have an effective model specification. ARDL test was conducted to determine short and long run relationship among variables. The period of the study was from 1975 to 2017.

The variables that this study will use will include those variables that have been traditionally recognized as influencing growth by both theoretical and empirical literature. Growth will be used as a dependent variable measured by the growth rate of real GDP per capita. The endogenous growth model postulates that capital accumulation, skilled labour and knowledge transmission and accumulation as important drivers of growth (Romer, 1990). To capture skilled labour, many studies (i.e. Berthelon, 2004; Henrekson, Torstensson and Torstensson, 1995; Mann, 2015 etc) have used human capital measured as the average secondary and tertiary years of schooling in total population (Barro, 1991). While Kamau (2010) used gross secondary school enrolment to measure the role of education on growth, this study used the proxy proposed by Barro and Lee due to its popularity and several researchers find it appropriate.

There are several variables that have been proposed as measures of knowledge transmission despite knowledge transmission being controversial (Berthelon, 2004). Like Berthelon, following Wacziarg (2001) in this study FDI will be used which will be measured as net inflows as a percentage of GDP. The variable gross fixed capital formation as a percentage of GDP was used in this study to capture the role of investment in the growth process.

Initial income was also used as a control variable given as a log of GDP per capita and included because it is among the conventional new growth theory variables (Fischer, 1991). A number of many other variables that have dominated the African growth literature have been identified and these included; Government consumption as a ratio of GDP, intra regional trade intensity index that captures openness, political instability, landlocked variable and the economic integration index (Kamau, 2010). In this study, government consumption which is measured as a ratio of GDP and used as a proxy for fiscal policy will be used.

Trade will also be used and measured as total exports and imports as a ratio of GDP. Trade is included based on the fact that as countries integrate, tariffs are eliminated and so there is expected increase in trade which can have potential effect on growth. Regional integration will enter into the equation as a dummy variable in which 0 and 1 values are used to represent no integration and integration respectively. For reasons explained above and due to lack of information on some important variables that can affect growth, it would be hopeful to isolate the effect of one variable from the other by including all such variables in the model (Yamano, 2005). Investment in this study will be measuring physical capital measured as mentioned above.

In the real world, the shape of the production function determines economic growth and as a starting point the neoclassical production function will be considered (Barro & Sala-i-Martin, 2004). The production function is the neoclassical function if conditions of constant returns, labor and technology is given and diminishing marginal product of capital are fulfilled.

$$Y(t) = F [K (t),L (t),T (t).....(1)$$

Where Y(t) is the amount of output produced at time t.

K (t), L (t) and T (t) is capital, labour and technology respectively. The empirical model estimation that will be used is based on Barro’s growth equation. The equation has been used by Arellano and Bond (1991), Beck et al (1999), Kamau (2010), Ekobena in Elhiraika (2015) among others.

$$y_{i,t} - y_{i,t-1} = (\alpha - 1) y_{i,t-1} + B' X_{i,t} + v_i + \varepsilon_{it} \dots \dots \dots (2)$$

Where y is the logarithm of GDP’s growth rate, X is the set of explanatory variables, v is the unobserved individual effects and ε is the error term.

Rearranging equation 2, it can be rewritten as:

$$y_{i,t} = \alpha y_{i,t-1} + B' X_{i,t} + v_i + \varepsilon_{it} \dots \dots \dots (3)$$

Eliminating the individual-specific effect will require differencing the above equation. Hence: y

$$y_{i,t} - y_{i,t-1} = \alpha (y_{i,t-1} - y_{i,t-2}) + B' (X_{i,t} - X_{i,t-1}) + (\varepsilon_{it} - \varepsilon_{i,t-1}) \dots \dots \dots (4)$$

The moment conditions of the dynamic panel estimator are:

$$E[y_{i,t-z} \cdot (\varepsilon_{it} - \varepsilon_{i,t-1})] = 0 \text{ for } z \geq 2; t = 3, \dots, T \dots \dots \dots (5)$$

$$E[X_{i,t-z} \cdot (\varepsilon_{it} - \varepsilon_{i,t-1})] = 0 \text{ for } z \geq 2; t = 3, \dots, T \dots \dots \dots (6)$$

Given the explanation above for the justification of the inclusion of variables in the model, the OLS estimation equation is formulated as follows;

$$Growth_t = \alpha + \beta_1 \log Y_{0,t} + \beta_2 FDI_t + \beta_3 INV_t + \beta_4 SCH_t + \beta_5 TRA_t + \beta_6 GOV_t + \beta_7 D_{1t} + \varepsilon_t \dots \dots \dots (7)$$

Where; Growth is the growth rate per capita, log Y<sub>0</sub> is the initial growth rate, FDI is foreign direct investment, INV is investment, SCH is the human capital proxy, TRA is the trade variable, GOV is government expenditure, D<sub>1t</sub> is the integration variable and ε<sub>t</sub> is the error term capturing the influence of other variables that have potential influence on growth. α is the constant term, β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub>, β<sub>4</sub>, β<sub>5</sub>, β<sub>6</sub> and β<sub>7</sub> are coefficients of the explanatory variables in order of their arrangement in equation 7. The constant term and the coefficients are assumed to be greater than zero. The data was analysed using Eviews 10 Software.

#### 4.0 FINDINGS

##### Descriptive Statistics.

Descriptive statistics are given in table 4.1. During the period 1975 to 2017, on average the economy of Zambia grew by 0.02% annually. In the same period, the highest growth rate recorded was 7.16% and the lowest at -10.96 in 2010 and 1994 in that order. GDP per capita was averaged at \$1210.97 with the lowest and highest recorded amounts being \$903.9 in 1994 and \$1646.14 in 2017 respectively. FDI averaged 3.87% with the highest recorded values of 9.61% and the lowest value of -0.99. Investment averaged 19.51%, the lowest record of 6.5% and the highest record of 38.45%. The average years of schooling of the adult population averaged 5.91 years with the minimum of 2.95 years and the maximum of 7 years. Trade averaged 1.79% with a minimum of 12.1% and a maximum of 18.78%. In the same period under review, government expenditure

averaged at 16.03% of GDP, with the minimum and maximum at 5.2% in 2000 and 32% in 1991 respectively. Other statistics presented in the table are; the standard deviation, Skewness, Kurtosis, Jacque-Bera and its probabilities.

**Table 1: Summary of Descriptive Statistics**

Variable/Statistics	Growth	GDP	FDI	INV	SCH	TRA	GOV	INT
Mean	0.02	1210.97	3.87	19.51	5.91	1.79	16.03	0.53
Median	0.89	1131.46	3.38	17.65	6.1	0.97	14.5	1
Maximum	7.16	1646.14	9.61	38.45	7	18.78	32	1
Minimum	-10.96	903.9	-0.99	6.5	2.95	-12.1	5.2	0
Std. Dev.	4.15	240.39	2.61	8.16	1.02	6.57	7.87	0.5
Skewness	-0.48	0.46	0.42	0.55	-1.49	0.2	0.4	-0.14
Kurtosis	2.63	1.87	2.36	2.57	4.68	2.84	1.72	1.02
Jacque-Bera	1.91	3.77	2.02	2.41	14.62	0.33	3.88	7.17
Probability	0.38536 9	0.15211 1	0.3642 74	0.3001 85	0.000 67	0.8489 66	0.1437 52	0.0277 73
Observations	43	43	43	41	30	43	41	43

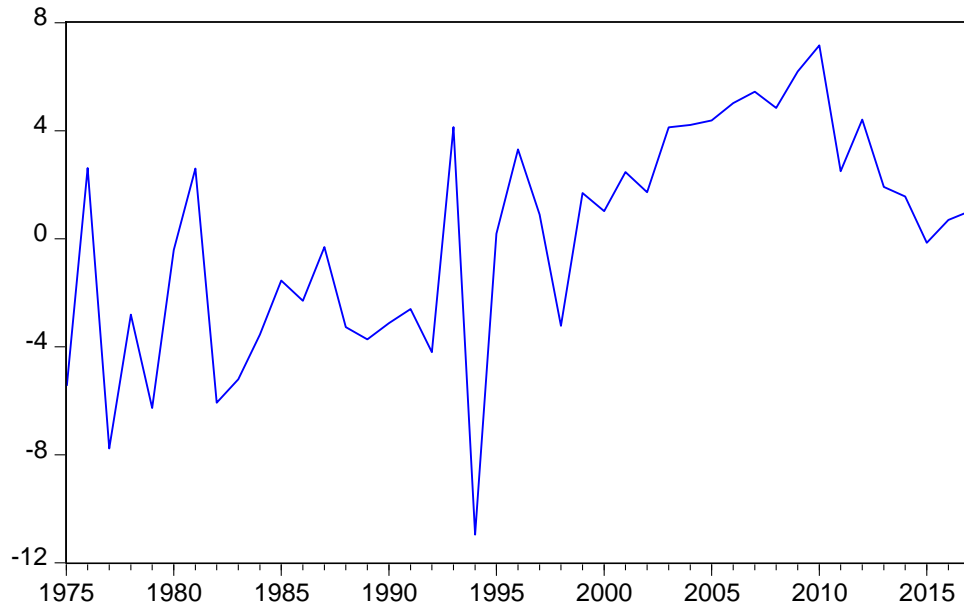
Source: Commutated by authors, Using Eviews 10.

### GDP Growth Trend for Zambia from 1975 to 2017

The figure 4.1 indicates growth trend in Zambia from 1975 to 2017. In 2010, Zambia recorded the highest growth rate in her history of 7.2% while the lowest value was recorded right during broader liberalization of the economy in 1994 at -10.96%. The overall trend has been characterized by up and down turns for the entire period recording some steady growth over the period of five years from 2002 to 2007. From 2012 to 2017, Zambia's GDP growth has been less than the average growth rate in COMESA.

**Figure 1: Zambia's GDP Growth Trend from 1975-2017**

GROWTH

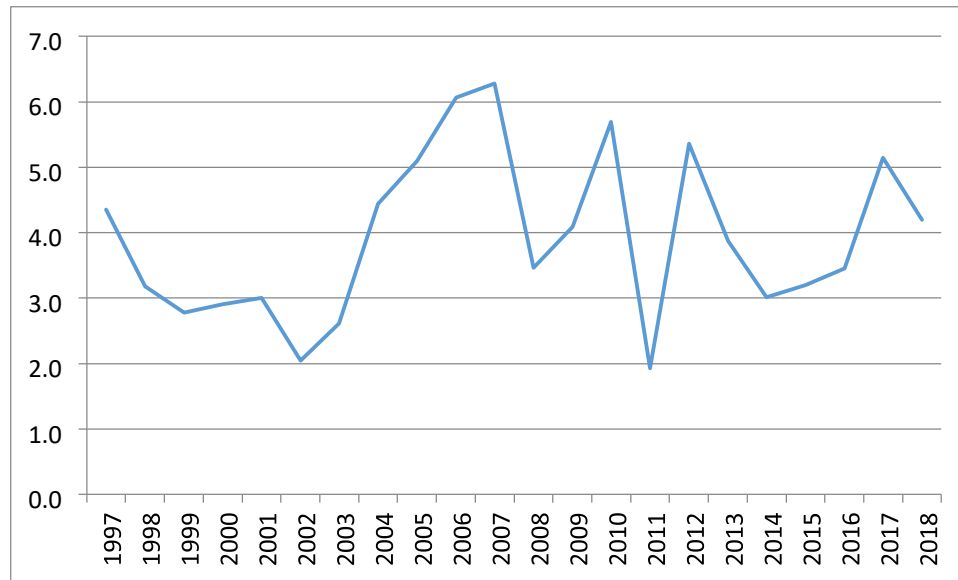


Source: Generated by the Authors Using Eviews 10.

**Average COMESA GDP Growth Rate from 1997 to 2018**

The figure 2 indicate average growth rate for COMESA from 1997 to 2018 which has been rising steadily from 2002 to 2007. This follows the trend for Zambia as well which can infer that there were some form of favorable conditions within both COMESA and Zambia that propelled GDP growth to rise steadily. COMESA on average recorded the growth rate of 5.7% in 2010 and as the lowest value of 1.9% in 2011.

**Figure 2: COMESA's Growth trend from 1997 to 2018**



Source: Generated by the Authors, Using Excel.



### Diagnostic Tests Test for Normality

The data was tested for normality under the hypothesis:  $H_0$ ; P-Value  $< 0.5$  (non-normal distribution) and the alternate hypothesis:  $H_1$ ; P-Value  $> 0.5$  (normal distribution). At 5% level of significance using the Jarque-Bera test for normality, Growth, GDP, FDI, investment and trade are normally distributed as indicated in table 2. While three variables school which measures average years of education in the adult population, government expenditure and integration dummy were not normally distributed.

**Table 2: Jacque-Bera Test for Normality**

Variable	Growth	GDP	FDI	INV	SCH	TRA	GOV	INT
JarqueBera	1.36517 2	3.08312 2	0.80840 5	7.41268 4	13.4368 2	1.15052 2	9.26896 8	1.1505 2
Probability	0.50530 9	0.21404 7	0.66750 9	0.43187 9	0.00120 8	0.56255 8	0.00971 1	0.02457

Source: Generated by the Authors, Using Eviews 10.

### Unit Root Test

All the variables were tested for stationarity using the Augmented Dickey-Fuller Test, first in levels in which the null hypothesis( $H_0$ ); the series has unit root and the alternate hypothesis:  $H_1$ ; the series has no unit root. In levels, FDI and trade variables had the null hypotheses rejected implying the series had no unit root and thereby were stationary at 1%, 5% and 10% levels of significance respectively ( $I(0)$ ). All other variables were non-stationary in levels and became stationary at first difference, ( $I(1)$ ) order of integration. This prompted the performance of yet again unit root tests in first difference. Given therefore, the results in levels, we failed to reject the hypothesis that the series has unit root at one percent, five percent and ten percent respectively except for FDI and trade variables. However, all variables were found to be integrated of the first order. This means that all the variables were found to be stationary at first difference. A look at the p-values of the variables confirms this conclusion. Hence all the series had no unit root at order of integration 1 i.e ( $I(1)$ ). Table 3 shows the results of the ADF test.

**Table 3: ADF-test Results**

Variable	LL	Level form		1 st Difference form		Order of integration.
		t-statistic	p-value	t-statistics	p-value	
GDP Growth	1	-2.135	0.233	-7.862***	0.000	1
GDP	1	-0.739	0.825	-2.581*	0.105	1
FDI	1	-4.019***	0.003	-10.354***	0.000	0
Trade	1	-4.021***	0.003	-8.938***	0.000	0
SCH	1	-1.734	0.403	-2.997**	0.049	1
Inv.	1	-1.506	0.662	-5.046***	0.000	1

Gov.	1	-2.079	0.254	-8.038***	0.000	1
Dummy	0	-1.103	0.706	-6.403***	0.000	1

(\*\*\*) implies significance at all the conventional levels of significance, 1%, 5% and 10%. (\*\*\*) implies significance at only 5% and 10 %.(\*) implies significance at only 10%. LL denotes the lag length.

### Results Estimation and Interpretation Regional Integration and GDP Growth

The table in Table 4 Column I gives OLS results for the model estimated on raw data. All variables have expected signs except for investment and government expenditure. When investment is used to proxy physical capital, the convergence and Solow model implications do not hold for my data. This contrasts Mann (2015). This is because physical capital which includes mainly infrastructure is not correctly captured under investment. And other studies use domestic savings as proxy for investment. Government expenditure however indicated a negative relationship with growth in the data. This is not surprising because government expenditure can crowd out private investment and this can negatively affect growth.

The endogenous growth model postulates that capital accumulation, skilled labor and knowledge transmission and accumulation are important drivers of growth (Barro, 1990). The variables capturing skilled labour (school) and knowledge transmission (FDI) have positive signs as expected by theory. Under *Ceteris Paribus*, a unit change in FDI will cause a 0.445% change in growth. A unit change in human capital will cause a change of 0.27% in growth. A unit change in the trade variable will cause a change of 0.038% in growth. The coefficient of government expenditure is negative, this does not surprise because government expenditures in many cases have proven to be negatively related to growth although somewhat sensitive to changes in the set of control variables (Barro, 1991; Levine & Renelt, 1992).

An integration dummy indicates a positive sign on its coefficient. The size of the coefficient of COMESA membership indicated that it would affect growth by 2.43% but not statistically significant at either 5% or 10%. This result is consistent with Vamvakidis (1999) who used a dummy variable to determine whether belonging to a Regional Integration Arrangement (RIA) had an impact on economic growth. According to Vamvakidis (1999) and other empirical literature, the integration dummy should be expected to be insignificant implying that becoming a member of a RIA does not have any significant effect on growth. He showed that broad liberalization lead to faster growth of economies both in the short-run and long-run. Other studies by De Melo et al. (1992) and Landau (1995) included a dummy for EU membership in their growth regressions. They find that there is no significant effect of European integration. In addition, this result also conform with the findings of Badinger (2001) who showed that regional integration had no permanent increase in growth rates within the European Union.

This result contrasts the findings of Henrekson, Torstensson and Torstensson (1995) when they studied the effects of European integration on economic growth for the period 1976-1985. They used a number of variables to affect growth in order to isolate the effect of European integration. In their specifications, the dummy variable for European Community (EC) and the European Free Trade Area (EFTA) was positive and statistically significant at 5% level of significance. The size

of the coefficient indicated that EC/EFTA membership would affect 1% of growth rate. However, they cautioned that the results seemed sensitive and the coefficient capturing integration was only significant when combined with certain control variables and not with others. Due to the absence of a clear-cut theoretical guidance as to which variable should be included in the econometric model, they warn that it is difficult to conclusively determine whether EC/EFTA integration affect long run growth (Henrekson, Torstensson & Torstensson, 1995).

These results however may risk being spurious given they are run on non-stationary series. On the contrary, the symptom of spurious regression was absent (i.e. R-squared is greater than the Durbin Watson statistics). In addition, the series were normally distributed. Meaning the variables are cointegrated and have a long-run relationship. Therefore, the coefficients of this regression can still be interpreted and are unbiased except for the t-Statistics and the probability values. However, in order to obtain a perfect fit model for the series, the Autoregressive Distributed Lags (ARDL) was employed given the presence of the unit root in some of the series and thus integrated of  $I(0)$  and  $I(1)$  orders. Given this scenario, the model was regressed in first difference in which all variables were stationary. The F-statistic was significant at five percent level and quite high value of RSquared (0.57) which makes the model fairly good. The coefficients of GDP, FDI, TRA GOV and SCH had the expected positive signs but statistically insignificant.

However, when the model was estimated in first difference, a lag of one introduced and the SCH variable dropped on grounds of suspected collinear with integration dummy, the coefficient of GDP (initial income) became statistically significant at all levels (i.e 1 percent, 5 percent and 10 percent). The coefficients of investment and integration dummy were negative. The integration dummy was statistically significant at 5 percent and 10 percent. Meaning, signing an integration agreement does not lead to GDP growth for Zambia. This result may be due to the fact that integration dummy may have sensitive results depending on the variables combined with it to explain economic growth. Combined with certain variables, it becomes significant and not with others (Henrekson, Torstensson & Torstensson, 1995).

The overall understanding is that OLS regression results are very sensitive to exact specification of the estimation equation and may become significant in different instances when in real life they are not (Levine & Renelt, 1992). The scope of this study was not to make trial testing of which variables will yield which results when combined with integration dummy. However, in both scenarios analysed in this study, regional integration had no positive and statistically significant influence on growth for Zambia during the period under review.

The model was tested for long-run relationship (co-integration) using the bounds test proposed by Pesaran, Shin and Smith (2001) and the variables; growth, GDP, FDI, trade, proxy for government expenditure (GOV), investment and human capital (SCH) had a long-run relationship.

The Error Correction Model was estimated as the appropriate model for our study. Because the variables were  $I(0)$  and  $I(1)$  orders and there was a long-run cointegration or relationship among the series. The ECM equation below was estimated;

**D(GROWTH) C D(GROWTH(-1)) D(log(GDP(-1))) D(FDI(-1)) D(TRA(-1)) D(SCH(-1))  
D(GOV(-1)) D(INT) D(INV(-1)) ECT(-1)**

The results obtained by running the ECM equation are in Table 4 Column III. The optimal number of lags in the model was determined using the Akaike info Criterion. ECT is the error correction term and the sign D in front of each variable indicate that the variables are stationary at first difference. Before interpreting the model, diagnostic tests were conducted to determine whether the model was a perfect model. The Breusch-Godfrey Serial Correlation LM Test was conducted on the residual and the null hypothesis of no serial correlation could not be rejected. The model was also tested for stability and the Cusum stability test was used in this study. The model was stable as it lied within the 5% boundary. The Breusch-Pagan-Godfrey Test was used to test for heteroskedasticity of the error term and the null hypothesis of homoscedasticity was accepted.

The long-run coefficient of the error term has the expected negative sign (-0.28) suggesting that all the variables in this model will adjust to their long-run equilibrium levels at the speed of 28%. However, this coefficient is not statistically significant. This contradicts Bannerjee et al. (1998), who argue that a highly significant coefficient of the error term confirms the presence of a stable long-run relationship. In this model, therefore, there is no stable long-run relationship among the variables. Alternatively, the long-run relationship among these variables is weak.

### **Regional Integration and Trade**

The study also aimed to establish the role of integration on trade. It was established that the integration dummy had a negative sign and statistically insignificant at 1%, 5% and 10% levels. The results of this regression are in Table 4 Column IV. This may be explained by the fact that Zambia's trade with non-COMESA members like South Africa and other copper importing countries are large compared to COMESA trade. In 2017, Zambia's total exports amounted to US\$8.2 billion of which coppers exports accounted for US\$6.2 billion (COMSTAT, 2018). The country's most manufactured imports are from South Africa and China. On the other hand, Musengele et al. (2015) analyzed that Zambia had trade potential of US\$7.7 billion in COMESA if it largely traded with COMESA in products like molasses, unmanufactured tobacco, pebbles and gravel among others. This potential has not been harnessed by Zambia and makes it seem integration has not contributed so much to trade.

In the recent study by Lakuma, Munu and Shinyekwa (2018), they were studying the effect of COMESA membership on market integration using a dummy variable for COMESA integration. Their results indicated that unilateral COMESA membership is significant at 1%, confirming that COMESA Member States trade heavily with non-members. There was however some recorded increases in intra-COMESA trade from the inception of the COMESA FTA on 31 October 2000. Intra-COMESA exports increased from US\$1.5 billion to US\$10.1 billion in 2014 (an increase of 573%).

This growth remained low compared to region's trade with the rest of the world in terms of imports and exports. Exports to the rest of the world grew by 276% (from US\$28.3 billion to US\$106.4 billion) between 2000 and 2014 (COMSTAT, 2015). The average intra-COMESA exports for the same period accounted for 6.4% of the region's total exports in comparison to about 20% for EAC and 62% for EU (UNCTADSTAT, 2015). In 2017, Zambia's intra-COMESA export value was

US\$921.32 million compared to US\$8,157.7 million global exports representing only about 11.3% of Zambia's exports. Zambia's intra-COMESA trade as a percentage of global trade was 18.3% (COMSTAT, 2018).

The other contributing factors to less intra-COMESA trade are Non-Tariff Barriers (NTBs) and Technical Barriers to Trade (TBTs). Despite tariff liberalization under COMESA FTA, there exist a number of impediments to trade in the region. For example, non-implementation of COMESA trade rules, unnecessary road blocks, lack of information on members' productive capacity, limited connectivity of railway infrastructure network and inefficiency of its services within the region, substandard goods from China and Eastern Asia and high cost of freight from the Island Member States to inland markets due to trans-shipment (Musengele et al., 2016). In terms of NTBs and TBTs, eight of the eleven outstanding involve Zambia according to the audit report on NTBs by Kibiru and Musengele (2018). These if unresolved undermine the spirit of regional integration which is aimed at increasing trade among partner states.

### **Regional Integration and Foreign Direct Investment**

Another test was conducted to determine whether integration would influence FDI in Zambia. The sign and the p-value of the integration dummy indicated the absence of a positive relationship between COMESA membership and FDI. GDP growth and GDP had expected signs on FDI and these results were consistent with Mwale (2014). The results of this study consistently indicate that other factors are responsible for determining the flow of FDI than integration. To support this view, Mwale (2014) in her study to establish the determinants of FDI in Zambia discovered the following factors; GDP growth, real effective exchange rate, infrastructure development, resource availability, market size, and trade openness as determinants of FDI. Additionally, it has been observed that countries in COMESA to which Zambia belongs are exploiting less than a maximum of 22% of their inward FDI potential (COMESA Investment Report, 2012). The results of the OLS estimation are in Table 4 Column V.

Economic theory suggests that economic integration increase FDI inflows in the region in three main ways: (i) increases in the size of the market leading to the replacement of exports with FDI; (ii) MNCs reorganize their investments in the region due to new configuration of location advantages and; (iii) new investment opportunities arising from the restructuring of activities between countries, sectors and firms triggered by economic integration (Dunning, 1993). This looks theoretically simple and correct but practically difficulty and challenging. This can be easily achieved with the attainment of higher level of integration like the Common Market (CM), Economic Community and Political federation.

These stages of integration allow for free movement of capital, labor, goods and services among participating countries with additional adoption of common monetary and economic policies as well as legal and institutional policies. The Common Market for Eastern and Southern Africa has not yet achieved a Common Market and so these expected benefits of integration such as FDI could not be achieved and realized for Zambia. Hence, mostly Zambia attracts FDI based on its policy environment attractiveness to FDI and macroeconomic variables' stability.

The EAC has however achieved a Common Market in 2010. However, there still exist challenges for the region to attract FDI. These includes: restrictions on the free movement of capital, services and goods which inhibit and make FDI entry into markets unduly expensive, legal restrictions on FDI, the existence of NTBs and discriminatory measures towards foreign investors, nonharmonized FDI and trade laws and regulations among EAC members (Penev and Marušić, 2014). Penev and Marušić (2014) further state that a fully functional EAC Common Market in capital, services and goods is only one of the preconditions for improvements of its attractiveness to FDI. This analysis heightens the point that achieving a common market only does not translate to harvesting the perceived results thereof.

**Regional Integration and Investment Table 4: OLS Estimation Results**

	Column I	Column II	Column III	Column IV	Column V	Column VI
Dependent Variable	Growth	D(GROWTH)	D(GROWTH)	D(TRA)	D(FDI)	INV
C	-38.347 (-0.9978)					-202.2119 (-8.1451)***
Log(GDP)	5.3907 (-0.8706)					32.0675 (7.8094)***
FDI	0.4452 (-1.7118)					0.1268 (-0.3558)
TRA	0.0389 (-0.3462)					-0.422 (-3.7610)***
SCH	0.2708 (-0.2648)					-1.8319 (-1.4580)
GOV	-0.0971 (-0.5404)					0.044 (-0.1889)
INV	-0.1203 (-0.7178)					
INT	2.431 (-0.7197)					9.1388 (2.3290)**
C		0.1121 (-0.2411)	-0.1723 (-0.1990)	-2.9006 (-1.2239)	0.6051 (-0.5709)	
D(GROWTH(-1))			-0.2107 (-0.8860)	-0.5584 (-0.8218)	0.0882 (-0.2762)	
D(Log(GDP(-1)))		-42.0412 (-3.2851)***	-7.8246 (-0.3353)	64.4955 (-1.2096)	-10.5259 (-0.4200)	
D(FDI(-1))		-2.2319 (-1.0088)	-0.45 (-1.8508)*	-0.5699 (-1.0135)	-0.4972 (-1.9108)*	
D(TRA(-1))		-0.1143 (-1.6083)	0.018257 (-0.212636)		0.087 (-0.7379)	

D(SCH(-1))		7.78226	10.0177	0.8499
		(-1.295043)	(-0.6187)	-0.113
D(GOV(-1))	-2.6606	-0.4299	-0.4292	-0.3743
	(-2.1861)**	(-3.4105)***	(-1.4060)	(-2.6021)**
D(INV(-1))	0.309	0.1131	0.0177	-0.1281
	(1.8143)*	(-0.6727)	-0.0353	(-0.0549)
D(INT)	-11.0882	-9.5525	16.4041	-4.6067
	(-3.1381)***	(-2.8101)**	(-1.6897)	(-1.0289)
ECT(-1))		-0.2814		
		(-0.7958)		

(\*\*\*) implies significance at all the conventional levels of significance, 1%, 5% and 10%. (\*\*) implies significance at only 5% and 10%. (\*) implies significance at only 10%. The coefficients are indicated and in parentheses () are t-statistics.

The study sought to equally establish the role of regional integration on investment. The OLS estimation model was employed; the sign of the coefficient of the integration dummy was positive and statistically significant at 5 percent and 10 percent. This result indicates that using a dummy to proxy integration yield a positive relationship with investment in the case of Zambia and COMESA.

The integration dummy in Table 4 Column VI indicates that investment has increased by 9.1% upon signing the COMESA agreement for Zambia under *ceteris Paribus*. Other variables like GDP also had a positive influence on investment and statistically significant at all levels. FDI had a positive relationship with investment but not statistically significant at all levels. Trade on the other hand had a negative impact on investment and this was significant at all levels. The intercept of the model was also statistically significant at all levels.

The section below seeks to analyze the benefits of COMESA integration for Zambia through the programmes COMESA undertakes among its members. This is in order to alleviate the normative obtained from empirical research that integration using a dummy does not yield any benefits for Zambia in terms of GDP growth, FDI and trade.

### **Benefits of COMESA Integration Programmes for Zambia**

Disputing the benefits that Zambia gets from its membership to COMESA on the ground of the empirical findings using an integration dummy would render a more unfair judgement to COMESA integration and its benefits to Zambia. First, because the integration dummy has faced a number of criticisms to be used as a perfect measure of integration which assumes that the expected effects would come simply by signing the agreements and thereby disregarding various types of integration (Berthelon, 2015). Second, theory does not provide a perfect variable that captures regional integration. As such assuming that once a country signs the agreement on integration will lead to increased growth, FDI, trade and investment would be absurd, which the integration dummy in this study did. Therefore, a more balanced approach with appropriate index that measures integration is called for. As a result, this section seeks to present the benefits that Zambia has enjoyed from COMESA integration programmes.

COMESA presents Zambia with greater opportunities and benefits. This comes in terms of market size if US\$ 761 billion and a population of 554.56 million people. In the international arena, COMESA presents a force to reckon of 21 Member States speaking with one voice of which Zambia is included. The strength in numbers can help pursue programmes that benefit Zambia. Within the aspect of COMESA, the Tripartite Free Trade Area was established which yet brings together 29 countries from EAC, COMESA and SADC. This further increases the size of the market and population which the country can harness in order to achieve development.

In the history of Africa, Zambia and Zimbabwe became the first countries to implement a OneStop-Border-Post (OSBP) in 2009 at the Chirundu border under the COMESA trade facilitation programmes. Prior to the establishment of OSBP in 2009, it took on average a minimum of 39 hours and a maximum of 49 hours to cross the border in 2008 (Chibbabbuka, 2008). In 2012, border crossing time had reduced to an average of 26 hours. Time reduction stimulated Zimbabwe's exports to Zambia ranging from US\$2.2 million to US\$3.1 million (Willie and Chikabwi, 2018). Border delays affect intra-regional trade, lead to higher transport costs which are passed on to traders in the form of high transport prices (Teravaninthorn & Raballand, 2009). On the other hand, this leads to consumers facing high prices of the commodities which adversely affect both supply chain and their welfare. The easy of crossing Chirundu border now allows for quick delivery of goods, less spoilage of consumable goods, reduced transportation costs for both importers and exporters, further lowering business costs and hence lower consumer prices.

Zambia benefits from COMESA in terms of infrastructure development. The improving and upgrading of the Chirundu Border infrastructure was funded under the COMESA programmes. In addition, the delivery strategy for result 5 of the EDF 11 of the COMESA Small Scale Cross Border Trade Initiative which seeks to provide gender sensitive basic infrastructure. Under this programme, five target borders are identified and of these five, four are borders shared by Zambia with its neighbors. The identified borders are Chirundu (Zambia/Zimbabwe), Kasumbalesa (DRC/Zambia), Mwami/Mchiji (Zambia/Malawi), Nakonde/Tunduma (Zambia/Tanzania) and Moyale (Kenya/Ethiopia). When this project is completed, there will be upgraded infrastructure related to safe movements of people, shelters and storage facilities, increased clearance of goods by the use of advanced cargo clearance systems, trade centers, border markets for selling and buying of goods, sanitation, basic medical services including counseling and the provision of epayment facilities for cross border traders (COMESA, 2018). All these benefits will largely be due to Zambia given most borders that are currently served under these programmes are Zambian on one side. These initiatives increases trade and this in turn improves the living standards of the people thereby arresting poverty levels in the country and significantly contribute to the achievement of the Sustainable Development Goals in Zambia.

In terms of infrastructure development, the funding that comes through COMESA to finance Zambia's infrastructure gaps at the border posts cannot be overstated. Given the fact that the country is undergoing economic hardships, these programmes help ease the pressure on government to provide for public goods at border posts. The funds can therefore be utilized in other development activities like education and health.



Being the largest FTA on the continent, COMESA has institutions that are successful and have made indelible imprint on the continent through their pioneering nature. The most successful institutions of COMESA include, the Clearing House which has established an international payment system called the Regional Payment and Settlement System; the leather institute; Alliance for Commodity Trade in Eastern and Southern Africa; the COMESA Business Council; the COMESA Investment Agency and the COMESA Monetary Institute. Some of COMESA's financial institutions have grown into continental ones and enjoy excellent global rankings namely, the PTA Bank, the Re-Insurance Agency and the African Trade Insurance Agency (COMESA Annual Report, 2015). The COMESA court of Justice also stands out for the jurisdiction it has and the access given to individuals, companies, Secretary General, COMESA Institutions and the Governments of Member States (Mangeni, 2014). These institutions serve Zambia and its citizens to facilitate trade by easing the payment, clearing and dispute management processes within the region.

The trade facilitation instruments in COMESA includes the collapsed and simplified total of 27 documents into one the COMESA Customs Document, the Simplified Trade Regime for Small Scale Cross-border traders, Yellow Card (a regional third party motor vehicle insurance scheme), the Regional Customs Transit Guarantee Scheme (allowing transiting through all COMESA countries with only one transit guarantee/Bond in place of multiple transits Bonds for each country transited), Advanced Cargo Information System, Harmonized Road Transit Charges, Regional Carriers License, Transit Plates, Harmonized Axle Loading and Maximum Vehicle Dimension, Common Statistical Rules, ASYCUDA (Automated System for Customs Data and Management), simple and flexible rules of origin and a protocol on the rules of origin, online and standing mechanism for reporting and resolving NTBs, One-Stop-Border-Post, the Fifth Freedom for regional air travel (to liberalize the skies), COMESA regulations on Sanitary and phyto-sanitary Measures, program on formulation of Regional Technical Standards and e-governance programs (COMESA Key Issues, 2014).

There other trade facilitation programs COMESA undertakes in Member States is the Simplified Trade Regime (STR) aimed at facilitating trade for Small Scale Cross Border Traders to enable them benefit from tariff preference on goods on the common list between two neighboring countries. This has four documents namely, the simplified customs document, the simplified certificate of Origin, common list of products and the threshold for the value of consignment. This programme is taking place at Kasumbalesa Border Post shared between DRC and Zambia. This allows Zambian small scale trader to trade at reduced costs as they no longer have to pay duties as well as other additional business costs resulting from overly tedious clearing procedures which have been simplified. This benefits families as they are fend, children taken to school, living standards improved and nutrition improved.

### **Policy Implications of the Findings**

The integration of Zambia into COMESA was the subject of the study in this research with the aim of establishing the benefits accrued to Zambia. In the study, it has been established that just signing an agreement does not lead to economic growth, FDI and trade. These findings are consistent with De Melo et al (1992), Landau (1995) and Vamvakidis (1999). The implication of this finding is

that regional integration benefits do not come by just signing the agreements. However, the harmonization of programs and cooperation towards the implementation among member states are key to realizing the benefits of integration. It was established that signing the agreement led to increased investment in Zambia of 9.1% since the agreement came into force.

The analyses of the programmes that are being implemented under the COMESA FTA are a testimony that Zambia stand benefiting more. The outstanding example is the establishment of the first OSBP at Chirundu which became the first on the continent. Additionally, under the infrastructure projects of COMESA are five border posts identified for development and four of which are shared by Zambia and its neighbors. Other programmes like the harmonized regional payment system, the yellow card, collapsed 27 documents for clearance of goods easy the conduct of business for traders in Zambia. The implication of this finding is that there should be increased cooperation in the harmonization and implementation of COMESA integration programmes among Member States.

## **5.0 CONCLUSION AND RECOMMENDATION**

In general, the signing of regional integration arrangements alone have been empirically shown that they do not have any significant effect on growth. It has been found in this study also that implementation of programmes of harmonization within COMESA which facilitate the flow of trade, FDI and thereby affecting growth have far reaching benefits. For Zambia, evidence in the aspect of infrastructure is indicative of such benefits given four of five border posts to receive infrastructure development are shared with Zambia and its neighbors.

From this study, it has been found that there are aspects that need to be addressed within COMESA in order to enable integration become effective and beneficial not only to Zambia but the region at large. To this, the study makes the following recommendations:

Zambia and other Member States should adhere to the NTB resolution time frames set out in the COMESA Regulations on Elimination of NTBs to ensure timely resolution of NTBs and enhance intra-regional trade.

Zambia and other member states should desist from using NTBs and TBTs as barriers to trade by restricting entry and exit of goods and services from and to other member states. Instead they should apply for safeguards measures if their intent is to protect domestic industries.

Zambia and other member states should show strong political and economic commitment in the implementation of integration programmes if the benefits of integration are to be realized.

The Customs Union (CU) and Common Market (CM) for COMESA should be fast tracked to ensure the free movement of capital, labour, goods and services among member states which will lead to increased FDI within the region. The transfer of knowledge through FDI will be instrumental to the realization of increased levels of GDP growth in Zambia and COMESA as a whole.

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