



Journal Homepage: -www.journalijar.com

INTERNATIONAL JOURNAL OF ADVANCED RESEARCH (IJAR)

Article DOI:10.21474/IJAR01/11331
DOI URL: <http://dx.doi.org/10.21474/IJAR01/11331>



RESEARCH ARTICLE

GLOBALISATION: BLESSING OR CURSE FOR SUB SAHARAN AFRICA COMPETITIVENESS

Badjo Ngongue Martial Annicet, Tafah Edokat Edward Oki and Njong Mom Aloysius
Faculty of Economics and Management Sciences, The University of Bamenda, Cameroon.

Manuscript Info

Manuscript History

Received: 15 May 2020
Final Accepted: 20 June 2020
Published: July 2020

Key words:-

Globalisation, Competitiveness,
Generalised Method of Moments, Sub
Saharan Africa

Abstract

Macroeconomic competitiveness is crucial for long term development of national economies. The main objective of this paper is to determine the impact of globalisation on country level competitiveness in 27 sub Saharan African countries. Data for the study covers the period 2002 – 2018. The data were collected from multiple sources and analysed using the fixed effects model and Generalised Method of Moments. Results from data analysis revealed that the benefit of globalisation of these countries outweigh the cost as globalisation was found to exert a positive significant impact on macroeconomic competitiveness. Other factors affecting competitiveness include previous value competitiveness and governance captured by democracy, government effectiveness and regulatory quality. Further result indicates that globalisation was significantly more effective in countries out of the Franc CFA zone. Governance was found to amplify the effect of globalisation on competitiveness though the modulating effect was statistically insignificant. Globalisation is a blessing to sub Saharan Africa provided a number of actions are taken to grasp all the opportunities that it offers. It becomes therefore imperative for these countries to implement a sound macroeconomic environment that will permit globalisation to fully play its positive effects on country competitiveness.

Copy Right, IJAR, 2020.. All rights reserved.

Introduction:-

Country competitiveness is crucial to produce and sell sustainably in the international market. Globalisation, intensification of world trade flows, and the emergence of new competitors (especially low-cost competitors such as Chinese manufacturers) are putting the spotlight on the competitiveness of individual economies. Competitiveness is the capacity to face foreign competition. However, its meaning varies according to the level of analysis: firm, industry or country.

There has been an increase in economic competition among countries over decades now with each country trying to play a significant or pivotal role in the international scene either at the global level or to a lesser extent, at the regional level. Each nation strives to take its rightful place at the world economic market in order to prevent the major risks that globalisation entails (Kharlamova and Vertelieva, 2013). Though not clearly perceived by commoners, not only enterprises compete. Gradually, nations have involved into serious competition. As enterprising is only possible under certain state governing environments, thus at the macro level we have the evidence of competition between states – for the resources (like investments, oil), for the environment (“green

Corresponding Author:- Badjo Ngongue Martial Annicet

Address:- Faculty of Economics and Management Sciences, The University of Bamenda, Cameroon.

technologies”), etc. Experience of the world economic crisis has shown that the most vulnerable to external shocks are countries with low levels of national competitiveness. As such, understanding factors that determine a country competitiveness so as to assess the phenomenon and develop enhancing measures is of capital importance for subsequent development.

There is no consensus among scholars on a universal definition of competitiveness at the country level as it is the case at the firm and industry levels. Two reasons can explain this lack of agreement in economic thinking. According to the Ricardian theory of comparative advantages, countries do not compete with one another. Two countries, participating in a common trade, are specialized in two different ranges of products, and hence, are not in competition with each other. In other words, the gains achieved by one country are not achieved at the expense of the other country. The second reason is that economic literature provides two famous critiques to country competitiveness. According to Porter (1990), competitiveness is a polysemic concept, and at country level, only economic prosperity is relevant, while Krugman (1994 & 1996) only productivity should prevail at country level.

Despite the lack of a universal definition of this complex concept, competitiveness has been topical in public debate. Developing nations such as sub Saharan economies in their number are not an exception in the debate. Keeping in mind the two perspectives presented above, we adopt a synthetic definition of country level competitiveness as presented by World Economic Forum (2016). We define competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country. The level of productivity, in turn, sets the level of prosperity that can be reached by an economy. The productivity level also determines the rates of return obtained by investments in an economy, which in turn are the fundamental drivers of its growth rates. In other words, a more competitive economy is one that is likely to grow faster over time. Put like this, competitiveness is a prerequisite for a sustainable growth.

Globalisation on its part can be interpreted as the growing economic interdependence of countries world-wide through the increasing volume and variety of cross-border transactions in goods and services and of international capital flows and also through the more rapid and widespread diffusion of technology. It affects trade patterns, capital flows and location choices of firms at a regional and global level. It could raise economic growth of developing regions substantially, leading to a drastic shift of production activities to these countries. Moreover, increasing linkages between regions could affect the dissemination of new technologies and consumer preferences.

Though globalisation is an on-going trend, recent economic crisis brings back to light the costs and benefits analysis of globalisation to some developing countries. With increasing globalisation and the recurrence of economic crisis, defining and measuring competitiveness have become an obsession for many countries with the ultimate goal being the definition of competitiveness enhancing policies. Many African countries have signed international agreements advocating the importance of a liberalised economy such as the economic partnership agreement. They have also seen an increase in regional trade. However, many African countries still find it difficult to compete with developed and emerging economies right in their domestic market. Globalisation has led to an increase of movement of people, goods and capital from one geographical area to another. This is true as a significant proportion of Chinese investments have invaded African economies. However, these African economies still face a lot of challenges and are quite exposed to external shocks. Are African economies ready to reap the benefits of globalisation or they are just passive actors of this all embarrassing phenomenon? Has globalisation conveyed more negative or positive outcomes on African nations? Despite the increased flow of foreign direct investments in African economies, sub-Saharan Africa still accounts for less than 5% of international trade worldwide.

The global paradigm in many African countries has been an increase in the diversification of the economy which over the years has been based on the export of primary products in order to increase resilience to external shocks. Most of these economies are natural resources based economy with little value added. The rate of transformation of resources into finished products has constantly been insignificant leading to a deterioration of terms of trade. Many sub Saharan countries export what they produce and import what they consume. By exporting primary products mainly, these countries are highly exposed to fluctuation of prices in the international market exposing them by the same occasion to external shocks. This is the case with countries of the CEMAC region which have been facing economic recession for over four years now due to a drastic fall in the price of oil in the international market. This has been the case with nearly all the oil exporting countries with various level of resilience depending on the level economic diversification of these countries.

Despite the increase in national income, some Sub Saharan Africa countries' competitiveness, such as Cameroon, have been reported to be dropping. In fact the 2016 Global Competitiveness Report published by World Economic Forum ranked Cameroon 20th in Africa after dropping 6 positions from the previous report. Still by the same report, Cameroon is now ranked 119th economy in the world as compared to 114th position from the 2015 report. Over the years it practically impossible to find a single sub Saharan African country ranked among the top 50 most competitive countries in the world. The global competitiveness report of 2019 rank the most competitive African economy (Mauritius) 52nd out of the 148 countries ranked. Despite increasing foreign investment inflows in the continent and greater openness of African economies the question to ask is unavoidably what accounts for this decline in competitiveness despite the numerous policies being implemented to improve on national competitiveness in various countries.

The purpose of this paper is to examine the impact of globalisation on macroeconomic competitiveness in Sub Saharan African countries. This paper is of capital importance to policy makers in the sub-Saharan areas. It will go a long way to provide valuable information and policy recommendations on the effect of globalisation on African economies. It therefore throws more light on the pros and cons of globalisation and provides useful policy recommendations on how to mitigate the negative externalities of globalisation on the competitiveness of sub-Saharan African countries.

This paper also provides more insight on the impacts of governance and institutional quality on the competitiveness of sub-Saharan economies. Without sound institutions and quality governance, it is postulated that competitiveness is a utopia. This study therefore provides a deep insight on the extent to which institutions and governance have promoted or discouraged macroeconomic performances of sub-Saharan Africa. In addition, it should be noted that the FCFA debate is gaining more and more ground among Africans as well as foreign countries. This study also provide an answer on whether or not the belonging of some African countries to monetary union has been detrimental to the ability to compete with other countries in a gradually integrated or globalised world economy.

The remainder of this paper is structured as follows. Section 2 reviews the literature in connection with the linkage between globalisation and competitiveness by clarifying some conceptual issues as well as passing in review existing empirical studies. Section 3 is concerned with the data and methods for analysing the data while section 4 presents and discuss the results from data analysis. Section 5 concludes the paper and formulates some policy propositions.

Literature Review:-

Concept measurement and linkages:

Globalisation is a multidimensional and omnipresent concept in all aspect of life today. In a world where everybody seems to have an opinion on globalisation, it may come as a surprise that one clear and commonly accepted definition for it does not exist. While some would say the economic globalisation is the motor behind the whole process, others may counter them by naming the cultural or political aspect as the most important one. Caselli (2006) mentions three „dimensions“ of globalisation mainly accepted in contemporary theory, namely economic, political and cultural, which may be further divided into sub dimensions. A definition of globalisation should reflect this multidimensionality. Also, the fact that globalisation really does enfold the whole globe needs to be stressed, as this is the distinguishing factor between globalisation and other forms of international openness of countries.

Daly (1999) has defined Globalisation “as global economic integration of many formerly national economies into one global economy, mainly by free trade and free capital mobility, but also by easy or uncontrolled migration”. According to Baylis et al. (2008), “globalisation is simply the widening, deepening, and speeding up of worldwide interconnectedness”. There are as many definitions of globalisation as they are scholars who attempted to define the concept. The definition and measurement retained by a researcher depends on the perspective adopted by the study. As such, in this paper we view globalisation as an all-embracing concept and adopt a holistic measurement of the concept by using the KOF index of globalisation to capture the phenomenon. KOF is the abbreviation of the German word Konjunkturforschungsstelle meaning Economic Cycle Research Institute. The Economic Cycle Research Institute is a private Swiss think tank which publishes and ranks more than three quarters of world economies in terms of the globalisation index. The KOF index of globalisation is a synthetic index made up of 3 dimensions namely economic globalisation accounting for 37% of the global index, social globalisation (39%) and political globalization (24%). The authors use 24 variables in the computation of the index addressing issues like actual

wealth flow, FDI, certain restriction just to name a few. The principal components analysis is used to calculate the weight for variables.

The term competitiveness has been intensively dissected in the academic literature ever since it became a focus of policy debate in the late 1980s and early 1990s (Krugman, 1994; Porter 1990). The different views on what competitiveness is and what value it has for policy that emerged at the time were never really reconciled. Given this lack of consensus and the multidimensional capture of the concept, it becomes very difficult to measure it. The plurality of definition has given rise to a plethora of indicators and measurements of country level competitiveness.

There are three levels of analysis of competitiveness namely the firm or industry level, international level and country level. Different indicators have been used to measure country level competitiveness ranging from single variable indicators such as total factor productivity (TFP) to more synthetic indicators such as the global competitiveness index (GCI). In his paper, we are concerned with country level competitiveness and the word macroeconomic competitiveness is used interchangeably to refer to the same reality. By competitiveness we simply refer to the ability of national economies to produce and sell sustainably in the international markets as well as creating welfare among citizens. According to Krugman (2008), only productivity matters for competitiveness at the national level.

For more than two decades now, globalisation has fostered international trade and the difference has even considerably higher in recent years as world trade growth accelerated very strongly (Ratnaik, 2012). Another significant contribution of globalisation to world economy is that it has reduced transport costs significantly as well as tariffs. It also facilitates the quest for information and communication technology which in turn ease the exchange of goods and services at the global level and encourage the emergence of globalised supply chains. The number of tradable goods has been on a rise and more and more domestic companies have engaged in international trade. Therefore domestic economies have increased their share of the world market of their products. However, viewing competitiveness of a country in that perspective according to Porter, et al. (2008) implies that competitiveness is a zero sum game since increased market share of a country can only be achieved at the expense of decreasing market share of other countries.

Empirical Review:

The impact of globalisation on macroeconomic competitiveness has been widely studied using different data sets and different proxies to capture the two concepts, econometric techniques and for different regions of the world. The findings of most of these studies show both consistent and verifiable results and results that are in tandem with economic theory. Other findings have been very controversial and have actually deviated from the predictions of economic reasoning and theory.

A first group of studies found a positive significant impact of globalisation on competitiveness in accordance with mainstream postulate. A study by Santos-Paulino (2002) investigated the impacts of trade liberalisation on export performance in 22 developing countries. Using dynamic panel data models based on fixed effects and generalised method of moments as well as heterogeneous panels with time series and cross section estimation technique, this author found that trade liberalisation has a significant positive impact on export performance but then the impact differs from country to country. This result is also in line with the findings of Baldwin and Gu (2004) who found a significant positive relationship between trade liberalisation and export growth of the Canadian manufacturing sector. They also found that as tariff barriers to trade reduce, more Canadian firms entered the export market. Also, that existing exporters increased their share of exports sold abroad.

Kassim (2013) analysed the impact of trade liberalisation on export growth and import growth in 28 Sub Saharan Africa (SSA) economies. The paper used panel data methodologies for the period between 1981 and 2010. His findings revealed that trade liberalisation has a positive significant effect among other variables on the growth of both exports and imports but the effect on imports was more important. His findings also indicated that trade liberalisation significantly and positively influence the price elasticity of demand for exports and imports.

Lane and Probert (2003) assessed the degree of financial and economic globalisation of British and German pharmaceutical companies during 1990 and 2001 and explores the changing balance between globalisation and national embeddedness. It tries to explain both the much lower degree of globalisation of German as compared to British companies in 1990, as well as their catching up at the beginning of the 21st century. The paper suggests that

the lesser degree of globalisation of German firms during most of the 1990s partly explains their slide in competitiveness during this period. The conclusion examines prospects for the future of firms in both economies. The paper draws on detailed industry data, as well as case studies of the major firms in the two national industries.

Licandro and Ruiz (2010) examined the relationship between trade liberalisation, competitiveness and economic growth. He developed a two-country endogenous growth model, with a specific firm research - development and a continuum of oligopolistic sectors under Cournot competition to provide a theoretical support to this claim. Since countries are assumed to produce the same set of varieties, trade openness makes markets more competitive, reducing prices and increasing quantities. Under Cournot competition, trade is pro-competitive. Since firms undertake cost reducing innovations, the increase in production induced by a more competitive market push firms to innovate more. Consequently, a reduction on trade barriers enhances growth by reducing domestic firms' market power.

Ofei (2016) examined the effects of European Union trade liberalisation on exports competitiveness of ECOWAS countries. Export competitiveness is captured in the paper by imports tariffs of in 15 E.U countries while exports performance was measured by the export value of 15 ECOWAS countries. Using panel data running from 1995 to 2014 and the both fixed and random effects model, results from the analysis indicated that trade liberalisation has a significant positive impact on the export performance of ECOWAS countries. More precisely, the author found that a unit percentage reduction of imports tariffs in the EU market will lead to an increase in ECOWAS member countries export value by about 0.49%.

In a comparative study between China and India, Santra and Bagaria (2014) analysed the relationship between trade openness as a proxy for globalisation and manufacturing sector competitiveness. Globalisation was measured by Foreign Direct Investment and the trade (imports plus exports) to GDP ratio to capture trade openness. With the help of the Ballassa framework and a descriptive approach using trend analysis, they showed that FDI may affect the supply of productive resources including (financial capital, equipment and machinery, technology, management and etc.). FDI creates employment where unemployment and underemployment rate is high and thus increases the income of the workers. As a result an additional savings to the host country is created. FDI also has the backward effect. Through buying locally made materials and intermediate goods it creates a good environment for the locally produced goods. For China, the competitiveness of manufacturing sector and Trade Openness are increasing over the year since 1991. However, the Financial Openness of China is showing mixed result, it increased until mid-1990s and it is showing the declining trend. In case of India, the picture is so complex. The Competitiveness of manufacturing sector and Financial Openness are showing the fluctuating path over the year. No as such trend can be found for these two series for India. Only the Trade Openness is showing increasing trend for India.

Though many of the existing studies' findings on the impact of globalisation or trade liberalisation on competitiveness conform to economic theory, other studies yields contradictory findings. Thus, a second but non marginal strand of literature found a negative or statistically insignificant impact of globalisation on competitiveness. In this vein, a study by Ratnaik (2012) used a panel data approach and a generalized method of moment's methodology for 28 OECD countries for the years ranging from 1980 to 2010 to investigate the impacts of trade liberalisation on export performance. He concluded that trade liberalisation has an insignificant effect on export performance and that domestic competitiveness and world demands are more consistent drivers of export performance.

Agbor and Taiwo (2014) investigated the fundamental determinants of international competitiveness of African countries. Using the trade weighted relative per capita Gross Domestic Product for 40 African countries made up in majority by Franc CFA countries for the period 1980 -2011, the authors analysed the data using the Ordinary Least Squares (OLS), the fixed and random effects panel analysis. Results from analysis indicate that Franc CFA countries were not necessarily less competitive than their sub-Saharan counterparts. In addition, the study revealed that factors that hinder the competitiveness in African countries are lack and poor infrastructure, huge external debt service, high domestic demand and greater trade openness.

Sofilda et al. (2016) examined the effect of global competitiveness and trade openness through the investment, tax and inflation towards economic growth. Using a two-step panel analysis on a 10 years data running from 2004 to 2013 for 6 ASEAN countries, these authors found that trade openness has a negative but insignificant effect on investment while global competitiveness significantly affect investment at 5% level. In the second step of the

analysis, tax revenues, inflation and investment were found to significantly determine economic growth in ASEAN countries.

Atifet al. (2012) analysed the impacts of trade openness measures on the exports performance of Pakistan. These authors used the Auto Regressive Distributed Lag (ARDL) estimation technique on time series data covering the period running from 1972 to 2010. Empirical findings revealed that there is a long-run relationship among real aggregate export, trade openness policies, production capacity and world income. Export duty was found to have statistically significant impact on exports in the short run, however, in the long run the impact is insignificant. World income and production capacity both appear highly elastic in both the short run and in the long run. The relative price is significant in the short run but insignificant in the long run which reflects that any change in relative price due to exchange rate fluctuation will increase export in the short run. The trade openness dummy which reflected the impact of trade openness policies adopted in different time periods proved to be significant in the long run and insignificant in the short run which reflects the fact that exports respond to these policies in the longer time period than the short run period. The short-term dynamic behaviour of Pakistan's export supply has been investigated by estimating an error correction model in which the error correction term has been found to be correctly signed and statistically significant. The results are robust not only in terms of statistical powers, but also in terms of economic instinct.

The literature above reveals that most studies on the impact of trade openness, trade liberalisation and globalisation on competitiveness used panel OLS (random and fixed effects Generalised Least Squares) as estimation procedure. Some studies simply used descriptive analysis using trend analysis to examine the relationship between the two concepts. Though the OLS estimation generates the Best Linear Unbiased Estimator (BLUE), these studies by so doing fail to address issues concerning the properties of the variables (heteroscedasticity and large sample size properties). A good number of studies investigating the impacts of globalisation on competitiveness either focus on the firm level competitiveness. When these studies emphasised macroeconomic competitiveness, they simply captured the impacts of an integrated global economy on export competitiveness. Very few studies adopted a holistic approach to competitiveness using a synthetic index of competitiveness. Furthermore, throughout the empirical literature on the relationship between globalisation and competitiveness, it should be noted that the greater majority of studies also emphasises trade globalisation at the expense of a more comprehensive economic or global index of globalisation. As such, most studies used trade liberalisation or openness or imports tariffs to capture globalisation. In addition, studies on the African context are relatively rare and when they exist they do not account for a wide range of countries representing regional groupings and the belonging to a monetary union. Based on the above arguments, the present study will examine the effect of different dimensions of globalisation on the macroeconomic competitiveness of sub-Saharan African states using the synthetic KOF globalisation index as well as the global competitiveness index of the World Economic Forum.

Data and Methods:-

Data Source:

The paper covers 27 countries in 4 sub-regional groupings in sub-Saharan Africa. The selection of the 27 countries is based on data availability on relevant variables in connection with the study. The 27 countries include 3 member countries of the CEMAC sub region (Cameroon, Gabon and Chad), 10 member countries of ECOWAS (Benin, Burkina, Gambia, Ghana, Guinea, Cote d'Ivoire, Liberia, Mali, Nigeria, Senegal), 9 member countries of Southern African Development Community (Angola, Botswana, Democratic Republic of Congo, Malawi, Mozambique, Namibia, South Africa, Zambia, Zimbabwe) and East African Community (Burundi, Kenya, Rwanda, Tanzania, Uganda). Data for all the countries run from 2002 to 2018 making it a 17 years analysis.

Data for this study are collected from multiple sources. However, it should be noted that the data are all secondary in nature. Data on macroeconomic characteristics of the countries such as inflation, foreign direct investment and GDP per capita are collected from the World Development Indicators while data on institutional quality and governance are collected from the World Governance Indicators (WGI). In addition, we collected data for globalisation from the KOF globalisation index data base while data on countries competitiveness were gotten from World Economic Forum data base.

Model Specification:

In order to investigate the effects of globalisation on competitiveness, we specified macroeconomic competitiveness model where globalisation is the main independent variable while controlling for governance indicators, economic growth, macroeconomic stability and belonging to the Franc CFA monetary union as follows:

$$\text{COMP} = f(\text{GLOB}, \text{VA}, \text{PSTAB}, \text{GEF}, \text{RQ}, \text{RLAW}, \text{COR}, \text{GDPPC}, \text{FCFA}, \text{INF}) \dots \dots \dots (1)$$

Where COMP is the global competitiveness Index constructed by the World Economic Forum, GLOB is globalisation, GOV represents governance and institutional quality indicators, economic development (GDPPC), inflation (INF) and belonging to a Franc CFA (dummy FCFA). More specifically, the competitiveness model is specified in equation 2 below:

$$\text{COMP}_{it} = \alpha_0 + \alpha_1 \text{GLOB}_{it} + \alpha_2 \text{VA}_{it} + \alpha_3 \text{PSTAB}_{it} + \alpha_4 \text{GEF}_{it} + \alpha_5 \text{RQ}_{it} + \alpha_6 \text{RLAW}_{it} + \alpha_7 \text{COR}_{it} + \alpha_8 \text{GDPPC}_{it} + \alpha_9 \text{dummyFCFA}_{it} + \alpha_{10} \text{INF}_{it} + \varepsilon_{it} \dots \dots \dots (2)$$

Later on the study determine the dynamic impact of globalisation on macroeconomic competitiveness by specifying a dynamic GMM model as follows:

$$\text{COMP}_{it} = \beta_0 + \beta_1 \text{COMP}_{it-1} + \beta_2 \text{GLOB}_{it} + \beta_3 \text{VA}_{it} + \beta_4 \text{PSTAB}_{it} + \beta_5 \text{GEF}_{it} + \beta_6 \text{RQ}_{it} + \beta_7 \text{RLAW}_{it} + \beta_8 \text{COR}_{it} + \beta_9 \ln \text{GDPPC}_{it} + \beta_{10} \text{dummyFCFA}_{it} + \beta_{11} \text{INF}_{it} + \mu_{it} \dots \dots \dots (3)$$

Where COMP_{it-1} is the lagged value of competitiveness, VA is voice and accountability, PSTAB is political stability, GEF is government effectiveness, RQ is regulatory quality, RLAW is rule of law and COR is control of corruption are the six indexes of governance published by the World Bank.

In order to capture the moderating effect of governance on globalisation we specified a third model with a step wise interaction between governance indicators and globalisation as follows:

$$\text{COMP}_{it} = \beta_0 + \beta_1 \text{COMP}_{it-1} + \beta_2 \text{GLOB}_{it} + \beta_3 \text{GOV} * \text{GLOB}_{it} + \beta_4 X_{it} + \omega_{it} \dots \dots \dots (4)$$

Where $\text{GOV} * \text{GLOB}$ is a series of stepwise interaction variable between governance indicators and globalisation namely $\text{VA} * \text{GLOB}$, $\text{GEF} * \text{GLOB}$, $\text{PSTAB} * \text{GLOB}$, $\text{RQ} * \text{GLOB}$, $\text{RLAW} * \text{GLOB}$ and $\text{COR} * \text{GLOB}$.

Estimation technique:

This paper first of all carries out a static analysis of the impact of globalisation on competitiveness by conducting a random and fixed effect model. There are two types information in a panel data:

1. A cross sectional information reflected in the differences between subjects
2. A time series information reflected in the differences within subjects

Panel data allows us to control for variables that we cannot observe or measure like cultural factors across countries or variables that change over time but not across entities (national policies, international agreement, etc). This implies that panel data account for individual heterogeneity.

Fixed effects regression is the model to use when we want to control for omitted variables that differ between individual but are constant over time (fcfa for example) whereas, if there is reason to believe that some omitted variables may be constant over time but vary between individuals and other may be fixed between individuals but vary over time, then we can include both types by using the random effects. The Hausman test of specification is later on conducted to determine which model is more efficient.

Generalized Method of Moment (GMM) is adopted as technique of estimation in this paper. This technique of estimation works in cases where the number of restricted moments in the data generating process is more than the number of parameters to be estimated; the GMM permits the parameters to be over-identified which is the case with the equation in this paper. Therefore reasons advanced for the application of the Generalized Method of Moments technique of estimation in this research work may include;

Firstly, Generalized Method of Moments estimators have large sample properties, characterized easily in ways that will make comparison easy. Also a group of these estimators with large sample properties can be studied a priori in ways that make asymptotic efficiency comparison easy. Again, GMM estimation technique provides a natural way to easily construct tests which take account of sampling and estimation errors. The GMM is suitable when the panel has a short time dimension and larger country (subject) dimension ($N = 27$ greater than $T = 17$).

Secondly, the GMM estimators can be constructed without the specification of the full data generating process (DGP), which otherwise would be required for the construction of the maximum likelihood estimator. This peculiarity has been the reason why researchers have been analysing partially specified economic models and studying potentially mis-specified dynamic models which are designed to match target moments (Hansen, 2007).

Thirdly, It is assumed that globalisation is endogenous in this study and time invariant characteristics of countries (fixed effects) contained in the residual term may be correlated with explanatory variables. The GMM accounts for these problems and goes further to take into consideration the presence of the lagged value of competitiveness in equation 3 and 4.

In addition, the GMM estimators are more efficient than common method of moment's estimators like ordinary least squares and two-stage least squares under conditions of heteroskedasticity. The method is therefore generally best under the presence of heteroskedasticity of unknown form (Wooldridge, 2001). The panel OLS technique (GLS) was adopted to examine the consistency of the findings since OLS is the best linear unbiased estimator.

There are two variants of the dynamic GMM notably the difference GMM (Arellano and Bond, 1991) and the system GMM (Arellano and Bover, 1995). If the difference GMM instrument variables at first difference with data at levels, the system GMM goes beyond by also instrumenting levels with differences. Roodman (2009) identifies 3 main reasons for using system GMM rather than difference GMM: (1) system GMM is more efficient as it allows for the use of more instruments by specifying two equations (difference and level equation); (2) it accounts for unbalanced panel which in the case of difference GMM is magnified and (3) the system GMM does not expunge the fixed effects as opposed to difference GMM.

Empirical Findings: Descriptive Analysis:

Results from descriptive analysis show that the average competitiveness index for the 27 selected countries over the period 2002 – 2018 is 3.45 on a scale of 7 indicating that sub Saharan economies are still lagging behind as compared to the most competitive economies such as Singapore (5.94), United States (5.86), Hong Kong (5.82), Netherlands (5.77) and Switzerland (5.76) just to limit it to the top five of the 2019 ranking (WEF, 2019). This result is not surprising when the first African most competitive economy in 2019 is found at the 52th position (Mauritius Island). It should also be noted that the variability of competitiveness index in the overall panel is moderate given that most of these countries are concentrated in the bottom half of the ranking with the variability greatly attributed to the between panels variability than the within variability.

The average globalisation index of the sample is calculated at 49.62 with an overall standard deviation of 7.51 indicating high dispersion of value around the mean with values ranging from 26.59 to 70.64. This outcome simply illustrates that there are huge disparities in terms of globalisation or openness to the world economy across the selected countries and over time.

Further descriptive results indicate that all the mean values of the six indicators of governance and institutional quality are negative indicating poor governance and weak institutions across the countries over time. These results can be justified by the fact that undemocratic mechanisms of accession to power are still very rampant in sub Saharan Africa. The region still suffers a lot of crises. Recent examples include Zimbabwe, Burkina Faso, Mali and Cameroon just to name a few.

On average the GDP per capita of the sample is 1896.407 with a standard deviation of 2357.76 which reveal that there are disparities among sub Saharan economies in terms of level of economic growth and development with countries with a GDP per capita as low as 210.80 and as high as 9869.72. The same observation is made for macroeconomic instability captured by inflation (annual growth rate of consumer price index) as the mean value is calculated at 7.66% with some countries experiencing very high level of inflation attaining 108.90%. Countries included in the sample are therefore very heterogeneous as per many of the variables retained for the analysis.

Comparing the mean values between the FCFA zone and out of the zone countries, the average value of competitiveness index in the Franc CFA sub group is 3.358562 which is lower than the mean value in the non-Franc CFA countries estimated at 3.497026. This result may signify that belonging to the FCFA union may be detrimental to the countries competitiveness. Nevertheless, the results from the regression analysis will provide a plausible

answer to the effects of using the pegged currency on the competitiveness of the countries. Furthermore, the overall globalisation index in the non-Franc CFA user countries sub groups (50.35432) is far greater than the Franc CFA user countries (48.14649).

The Impact of Globalisation on Competitiveness in Sub Sahara Africa:

This section is devoted to the discussion of empirical findings. Results of the fixed effects panel model as prescribed by the Hausman test to be more efficient are presented in table 4.1. Found in the table are the fixed effects (FE) estimators without joint effect of governance and globalisation (equation 1) and FE estimators with moderating effect of governance indicators on globalisation (equations 2 to 7). In other to capture the dynamic effect of globalisation on competitiveness and to control for potential endogeneity of globalisation, the paper conducted a system GMM which results are reported in table 4.2. This later table hosts both the dynamic GMM results without moderating effect of governance (equation 1) and with a stepwise moderating effect of governance and institutional quality indicators (equations 2 to 7).

Table 4.1:- Fixed effects panel results.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
VARIABLES	COMP	COMP	COMP	COMP	COMP	COMP	COMP
GLOB	0.133*** (0.0421)	0.142** (0.0590)	0.179** (0.0706)	0.109* (0.0585)	0.180*** (0.0506)	0.147** (0.0706)	0.128** (0.0633)
LGDPPC	9.114*** (1.081)	9.030*** (1.191)	8.808*** (1.198)	9.186*** (1.109)	8.734*** (1.122)	9.009*** (1.185)	9.153*** (1.209)
INF	-0.0170 (0.0122)	-0.0173 (0.0124)	-0.0187 (0.0128)	-0.0160 (0.0124)	-0.0187 (0.0123)	-0.0179 (0.0133)	-0.0167 (0.0129)
VA	-3.418*** (0.997)	-3.943 (2.633)	-3.335*** (0.972)	-3.456*** (0.990)	-3.398*** (0.997)	-3.409*** (0.982)	-3.424*** (0.990)
GEF	3.024*** (1.037)	3.056*** (1.062)	0.494 (2.817)	3.093*** (1.010)	3.082*** (1.024)	3.013*** (1.026)	3.027*** (1.034)
COR	-0.277 (0.678)	-0.282 (0.679)	-0.420 (0.704)	1.677 (2.994)	-0.529 (0.706)	-0.307 (0.697)	-0.262 (0.687)
PSTAB	1.250*** (0.400)	1.267*** (0.415)	1.264*** (0.403)	1.241*** (0.405)	-1.019 (1.361)	1.258*** (0.409)	1.246*** (0.412)
RQ	-0.411 (1.027)	-0.383 (1.007)	-0.254 (0.967)	-0.472 (0.995)	-0.197 (1.032)	-1.179 (3.566)	-0.433 (0.992)
RLAW	0.490 (0.927)	0.502 (0.934)	0.465 (0.923)	0.467 (0.931)	0.684 (0.926)	0.505 (0.934)	0.758 (2.620)
VA*GLOB		0.0104 (0.0443)					
GEF*GLOB			0.0531 (0.0601)				
COR*GLOB				-0.0378 (0.0545)			
PSTAB*GLOB					0.0489* (0.0289)		
RQ*GLOB						0.0168 (0.0640)	
RLAW*GLOB							-0.00560 (0.0516)
Constant	-20.18*** (6.429)	-20.01*** (6.569)	-20.31*** (6.407)	-19.40*** (6.431)	-19.74*** (6.336)	-20.12*** (6.442)	-20.22*** (6.530)
Observations	459	459	459	459	459	459	459
R-squared	0.895	0.895	0.895	0.895	0.895	0.895	0.895

Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Source: Computed by the authors.

Table 4.2:- System GMM results.

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	COMP	COMP	COMP	COMP	COMP	COMP	COMP
L.COMP	0.789*** (0.155)	0.777*** (0.137)	0.765*** (0.116)	0.764*** (0.118)	0.780*** (0.145)	0.770*** (0.130)	0.776*** (0.130)
GLOB	0.163* (0.0935)	0.176 (0.116)	0.177 (0.127)	0.174 (0.125)	0.213 (0.134)	0.225 (0.151)	0.184 (0.138)
LGDPPC	-0.660 (0.512)	-0.665 (0.555)	-0.609 (0.508)	-0.594 (0.542)	-0.795 (0.626)	-0.757 (0.562)	-0.670 (0.600)
INF	0.0771 (0.117)	0.0672 (0.125)	0.0538 (0.120)	0.0511 (0.118)	0.0754 (0.128)	0.0683 (0.120)	0.0626 (0.124)
VA	-1.702*** (0.545)	-3.066 (3.288)	-1.702** (0.652)	-1.673** (0.624)	-1.783*** (0.628)	-1.893*** (0.679)	-1.704** (0.630)
GEF	5.142*** (1.753)	4.935** (1.943)	3.723 (4.352)	5.016*** (1.773)	5.395** (1.979)	4.521** (2.030)	5.162*** (1.717)
PSTAB	-0.0952 (0.323)	-0.0217 (0.371)	-0.0425 (0.334)	-0.0745 (0.326)	-1.887 (1.883)	0.0686 (0.395)	-0.0315 (0.360)
RQ	-2.310* (1.251)	-2.223* (1.132)	-2.166* (1.095)	-2.124* (1.104)	-2.359* (1.248)	-5.923 (5.194)	-2.240* (1.195)
RLAW	0.0960 (0.880)	0.212 (1.053)	0.152 (0.956)	0.177 (0.846)	0.0523 (0.855)	0.409 (1.042)	-1.466 (3.219)
COR	0.190 (1.111)	0.113 (1.047)	0.0491 (0.974)	-1.342 (3.104)	-0.0961 (1.040)	0.172 (1.052)	0.00317 (0.923)
FCFA	2.691 (2.980)	2.463 (3.284)	2.067 (3.136)	2.056 (3.035)	2.662 (3.128)	2.586 (2.996)	2.290 (3.233)
VA*GLOB		0.0272 (0.0586)					
GEF*GLOB			0.0270 (0.0652)				
COR*GLOB				0.0279 (0.0628)			
PSTAB*GLOB					0.0387 (0.0406)		
RQ*GLOB						0.0765 (0.0900)	
RLAW*GLOB							0.0323 (0.0748)
Constant	7.278 (6.655)	7.213 (6.973)	7.633 (6.392)	7.765 (6.369)	6.025 (7.109)	5.558 (7.494)	7.013 (7.417)
Prob> F	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Prob AR(1)	0.064	0.049	0.037	0.039	0.058	0.047	0.047
Prob AR(2)	0.753	0.749	0.747	0.742	0.781	0.705	0.772
ProbSargan	0.114	0.095	0.087	0.080	0.107	0.100	0.093
Prob Hansen	0.327	0.285	0.278	0.315	0.391	0.319	0.275
Observations	432	432	432	432	432	432	432
Number of country	27	27	27	27	27	27	27

Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Source: Computed by the authors

Results from data analysis indicate that the coefficient of globalisation is positive across all the specifications (FE-

GLS with and without moderating effect of governance as well as GMM with and without moderating effect of governance) which means that globalisation has a robustly positive impact on the competitiveness of the selected sub Saharan economies. Said otherwise, an increase in globalisation process measured by the globalisation index will result in an increase in competitiveness. It should also be noted that this result is significant though at different levels across all the FE specifications. Going by the joint effect of governance and globalisation on competitiveness, results from data analysis reveal that governance consistently improved the positive impact of globalisation on macroeconomic competitiveness across all GMM specifications while control corruption and regulatory quality were found to dilute and compromise the positive effect of globalisation on Sub Saharan economies. Since the results are not univocal across all specifications, it becomes difficult to have a conclusive position on the moderating effect of governance on competitiveness. Nevertheless, it is important to note that only the joint effect of political stability and globalisation was found to be statistically significant. Moreover, results from data analysis also reveal that the marginal effect of globalisation increases from the static analysis (FE panel analysis) to the dynamic analysis (dynamic GMM).

This result is in conformity with our a priori expectation and confirms the position of advocates of a more global economy with little or no barriers. It also confirms the postulates of the World Trade Organisation (WTO) who advocates the benefits of a more liberalised trade. This result simply reveals that the benefits from globalisation to these countries outweigh the costs. In effect, globalisation provides small open economies like most SSA countries with opportunities such as larger markets for local industries, more job employment opportunities and huge technological transfers. Globalisation may also accentuate regional integration and regional trade which is very beneficial to macroeconomic competitiveness. This outcome is in line with the findings of Santra and Bagaria (2014) who claimed that globalisation increases competitiveness in China and Indian Manufacturing sectors. This outcome also corroborates the finding of Santos-Paulino (2002) who found that increasing trade liberalisation positively impacts export performance. However, this finding contradicts the result of Agbor and Taiwo (2014) who found that greater trade openness was detrimental to the competitiveness of 40 African countries. Globalisation creates employment where unemployment and underemployment are rampant. It generates or increases income to workers. Globalisation also eases technological transfer especially in technologically backward countries.

As expected, further results revealed that the lagged value of competitiveness has a significant positive effect on the current value of competitiveness which implies that competitiveness level in the previous period positively and significantly determines the current period level of competitiveness. Furthermore and in line with theoretical expectation, economic growth measured by GDP per capita stimulates macroeconomic competitiveness as the coefficient was found to be positive and statistically significant across all the FE estimators. An increase in the level of economic growth of the selected sub-Saharan countries will bring about a significant increase in their level of competitiveness. In contrast, the coefficient of log GDP per capita across all the dynamic GMM specifications is negative suggesting that there is a negative impact of economic growth on macroeconomic competitiveness. However, the later results are statistically insignificant. These results simply demonstrate the fact that, in spite of continuous increase in GDP of most sub-Saharan African countries, their global competitiveness has not experienced significant improvement.

Furthermore, indicators of governance and institutional quality show mixed findings. More precisely, results show that voice and accountability (proxy for democracy) and regulatory quality compromise competitiveness as the coefficients of the variables are negative and significant in both the fixed effect model and the dynamic GMM. On the contrary, government effectiveness has a positive and significant impact on macroeconomic competitiveness. In addition, though the coefficient of political stability was found to be positive and significant in the FE model, no significant relationship could be established between the variable and competitiveness in the dynamic model. Though not consistent along all the specifications, no significant effect of control of corruption and rule of law was discovered on sub-Saharan Africa competitiveness. Similarly, no significant effect of macroeconomic instability (inflation) on the competitiveness of the selected countries could be established. If the results of government effectiveness are in accordance with a priori expectation, results from voice and accountability contradict the theoretical expectations. Most countries in the sample have been exposed to political and social upheavals due to poor governance, poor electoral procedures characterised by post electoral crisis. Failure to renew leadership, long lasting regimes and political leaders who lack initiative and rather than working towards improving the living standard of their citizens are concerned with their maintenance in power and silencing of all forms of opposition may justify the negative effects of democracy on competitiveness.

Belonging to the Franc CFA zone has no significant effect on macroeconomic competitiveness of the selected

economies. This result revamps the debate around the pros and cons of belonging to this monetary union. Recently, protest against the CFA as currency for some African countries has gained ground. If it is a consensus that there is monetary stability and insurance of convertibility of belonging to this union, there are also reasons to doubt the independence of the two central banks (BEAC and BCEAO) and their ability to carry out autonomous monetary policy that will spur their level of macroeconomic competitiveness. This inability to use the monetary arm of the economic policy leaves the governments with only the fiscal instruments which sometimes are inadequate or insufficient to address economic problems. This is not the case with countries such as Nigeria and Ghana just to take these two examples which can use the monetary adjustment each time the economy experiences hardship.

More than 89% of variation of competitiveness in the selected area of study is explained by joint variation in all the regressors used for the study. All the models are globally significant at 1% as the probability value of the Fischer statistics are all far below 0.01. it is not such a problem if the AR(1) test is not satisfactory (p-value below 0.1) but result from the AR(2) test reveals that the results are robust.

Table 4.3 provides a comparative analysis of the impact of globalisation on competitiveness in Franc CFA zone and in non-Franc CFA zone.

Table 4.3:- FCFA versus non FCFA results.

VARIABLES	(FE)	(FE)	(GMM)	(GMM)
	FCFA	NON-FCFA	FCFA	NON-FCFA
L.comp			0.507 (0.300)	0.766*** (0.116)
Glob	0.248*** (0.0720)	0.124** (0.0516)	0.148 (0.160)	0.181* (0.0943)
Lgdppc	3.702* (1.954)	9.500*** (1.214)	1.141 (0.647)	-0.834* (0.446)
Inf	0.123*** (0.0385)	-0.0198 (0.0142)	-0.00235 (0.0828)	0.0364 (0.0640)
Va	-4.906*** (1.534)	-3.972*** (1.271)	0.232 (0.579)	-1.489** (0.540)
Gef	-2.899 (1.778)	4.466*** (1.185)	1.259 (2.158)	5.597** (2.299)
Pstab	-0.112 (0.448)	2.186*** (0.575)	0.409 (0.640)	-0.114 (0.335)
Rq	4.859*** (1.416)	-1.486 (1.224)	-0.228 (1.431)	-2.103 (1.265)
Rlaw	5.212*** (1.589)	-0.472 (1.030)	-0.749 (0.960)	-0.490 (0.978)
Cor	3.036** (1.288)	-1.235 (0.809)	0.521 (2.108)	0.0864 (1.091)
Constant	14.03 (12.13)	-22.59*** (7.121)	9.912* (5.176)	9.490* (5.258)
Observations	136	323	128	304
R-squared	0.879	0.909		
Number of country			8	19

Note: Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Source: Computed by the authors

Results from table 5 reveal that globalisation has a positive and significant impact on macroeconomic competitiveness in both Franc CFA and out of Franc CFA zones. An increase of aggregate globalisation index by one unit will bring about an increase in global competitiveness index in the Franc CFA zone by about 0.15 point and 0.18 point for countries non users of Franc CFA. As such, it can be seen that the positive impact globalisation on competitiveness is more important in non-Franc CFA countries than in the franc CFA zone. However, it should be

noted that only the result from the non FCFA sub sample is significant. This result simply confirms the need for reforms in the FCFA zone in order to permits member countries to reap all the benefits brought about by increasing globalisation.

Similarly, results from the GMM indicate that though competitiveness of the previous year has positive effect on current level of competitiveness in both sub samples, the coefficient in the non FCFA sample is higher and significant whereas that of the FCFA zone is insignificant. In other words, a significant regressive effect of competitiveness is observed in countries which are not users of the FCFA.

Concluding Remarks and Policy Implications:

It is obvious today that not only business units compete. Countries do compete as well. Competitiveness is unquestionably one of the most topical issues in economic debate in recent years. Despite the complexity of the concepts of globalisation and competitiveness, this study was designed to provide an analysis of the linkages between globalisation and competitiveness. Results from data analyses that globalisation is beneficial for sub Saharan economies competitiveness at it increases significantly the global competitiveness index of these countries. Further results reveal that other determinants of competitiveness in sub Saharan Africa include competitiveness level of the previous year, democracy, government effectiveness, and regulatory quality. In addition, findings reveal that non FCFA user economies are significantly more competitive than member countries of the FCFA zone.

Based on the above findings there is need for the selected countries governments to implement sound policies and improved on their competitiveness. Such policies include providing at conducive environment for foreign investors as well as domestic investment which in turn will render the national industries more competitive and able to compete at the international level. No sustainable competitiveness can be achieved without strong and sound institutions and governance. It is high time, sub Saharan governments should put in place vibrant policies against corruption in order to stimulate competitiveness by allowing globalisation arose all it potentials.

References:-

1. Agbor, J. A. and Taiwo, O. (2014), "The Fundamental Determinants of Competitiveness in African Countries", Working Papers No 463, Economic Research Southern Africa.
2. Arellano, M. and Bond, S. (1991). "Some tests of specification for panel data: Monte Carlo evidence and an application to employment equations". *The Review of Economic Studies*, 58. pp. 277 – 297.
3. Arellano, M. and Bover, O. (1995). "Another look at the instrumental variable estimation of error components models". *Journal of Econometrics*, 68. pp. 29 – 51.
4. Atif, R. M., Shah, I. A. and Zaman, K. (2012), "Aggregate Exports Response to Trade Openness: Bounds Testing Approach for Pakistan", *World Applied Science Journal* 17(1): 91-100.
5. Baldwin, J. R. and Gu, W. (2004). "Trade Liberalisation: Export – Market Participation, Productivity Growth, and Innovation", *Oxford Review of Economic Policy*, Vol. 20, Issue 3, pp. 372-392.
6. Baylis, J., Smith, S. and Owens, P. (2008) *The Globalisation of World Politics: An Introduction to International Relation*, 4th edition. Oxford University Press.
7. Caselli, M. (2006). "On the Nature of Globalisation and its Measurement. Some Notes on the A.T. Kearney/Foreign Policy Magazine Globalisation Index and the CSGR Globalisation Index". UNU-CRIS Occasional Papers. Università Cattolica del Sacro Cuore, Milano.
8. Daly, E. H. (1999). "Globalisation versus internationalization - some implications". *Ecological Economics*, pp.31-37
9. Kassim, L. (2013), "The Impact of Trade Liberalisation on Export Growth and Import Growth in Sub-Saharan Africa", School of Economics, University of Kent.
10. Kharlamova, G., and Vertelieva, O. (2013), "The International Competitiveness of Countries: Economic-Mathematical Approach", *Economics & Sociology*, Vol. 6, No 2, 2013, pp. 39-52.
11. Krugman P., (1996). "International Economics: Theory and Policy". Boston: Addison Wesley.
12. Krugman P., (2008). "The return of Depression Economics and the Crisis of 2008", London: Penguin.
13. Krugman, P. (1994), "Competitiveness: A Dangerous Obsession", *Foreign Affairs*, Vol, 73, No. 2 (March/April), pp. 28 – 44.
14. Lane, C. and Probert, J. (2003), "Globalisation and its impact on Competitiveness: the case of British and German Pharmaceutical Industry", ESRC. Center for Business Research, Working Paper No 262, University of Cambridge.

15. Licandro, O. and Ruiz, A. N. (2010), "Trade Liberalization, Competition and Growth", Barcelona Economics Working Paper Series, Working Paper N° 436.
16. Ofei, E. O. (2016), "Trade Liberalization and Export Competitiveness: Evidence from the EU-ECOWAS Trade", MPRA Paper, University Library of Munich, Germany.
17. Porter, E. M. (1990), "The Competitive Advantage of Nations", Free Press: New York.
18. Porter, M. E., Ketels, C. and Delgado, M. (2008), "The Microeconomic Foundations of Prosperity: Findings from the Business Competitiveness Index", The Global Competitiveness Report 2007-2008.
19. Ratnaike, Y. C. (2012), "Is there an empirical link between trade liberalisation and export performance?", Economics Letters, 117, (1), 375-378.
20. Roodman, D. (2006), "How to do xtabond2: An introduction to Difference and System GMM in STATA, The Stata Journal, 9(1), pp. 86-136.
21. Santos-Paulino, A. (2002), "Trade Liberalisation and Export Performance in Selected Developing Countries", Journal of Development Studies, 39, (1), 140-164.
22. Santra, S. and Bagaria, N. (2014), "Labour Productivity in Coal Mining Sector in India: With Special to Major Coal Mining States". Research Journal of Human Resource, Vol. 2, No. 1 ISSN 2347-825X.
23. Sofilda, E., Hariyanti, D., and Ismawaty, T. (2016), "The Effect of Global Competitiveness and Trade Openness through the Investment, Tax, and Inflation Towards Economic Growth". International Journal of Sustainable Development, Vol. 09, No. 02, pp. 71-88
24. World Economic Forum - WEF, (2019), "Globalization: Shaping a Global Architecture in the Age of the Fourth Industrial Revolution".
25. World Economic Forum (2016). "World Economic Forum Annual Meeting, Mastering the Fourth Industrial Revolution". Davos-Klosters, Switzerland 20-23 January.
26. World Economic Forum, (2005), "Global Competitiveness Report 2005 – 2006: Policies Underpinning Rising Prosperity", Palgrave MacMillan, Gordonsville, USA.

Appendices:-

Appendix 1:- Summary of descriptive statistics.

Variable		Mean	Std. Dev.	Min	Max	Observations
comp	overall	3.450871	.4269508	2.43	4.47	N = 459
	between		.3931492	2.818824	4.373529	n = 27
	within		.1819902	3.00793	4.246754	T = 17
glob	overall	49.61838	7.506397	26.59346	70.63972	N = 459
	between		6.809751	35.99683	68.15293	n = 27
	within		3.404892	37.33274	58.33887	T = 17
va	overall	-0.48823	.651554	-1.808093	.7358699	N = 459
	between		.6325619	-1.426369	.6311902	n = 27
	within		.1958741	-1.527839	.1795331	T = 17
gef	overall	-0.680014	.5385078	-1.745683	.7258958	N = 459
	between		.5277509	-1.610328	.5177154	n = 27
	within		.1456009	-1.399829	-.1349592	T = 17
cor	overall	-0.644455	.5905989	-1.525243	1.216737	N = 459
	between		.5749254	-1.38386	.9429326	n = 27
	within		.1726702	-1.453065	-.0726257	T = 17
pstab	overall	-0.554769	.8760489	-2.523785	1.200234	N = 459
	between		.8067297	-2.164288	1.020571	n = 27
	within		.3733425	-2.143396	.5913934	T = 17
rq	overall	-0.572849	.5597442	-2.236245	.8042418	N = 459
	between		.5436819	-1.923412	.5567043	n = 27
	within		.167481	-1.271563	-.0498665	T = 17
rlaw	overall	-0.658625	.5930434	-1.852296	.7305223	N = 459
	between		.5757862	-1.635542	.6233247	n = 27
	within		.1781925	-1.389248	-.0191566	T = 17
	between		2381.767	228.4725	9307.703	n = 27
	within		290.5108	525.946	3215.04	T = 17
inf	overall	7.661797	9.303146	-8.97474	108.8974	N = 459

	between		6.065753	1.529013	27.89448	n = 27
	within		7.144266	-12.95229	88.66476	T = 17

Source: Computed by the authors.

Appendix 2:- FCFA versus non FCFA summary of descriptive statistics

Variable		FCFA countries		Non FCFA countries	
		Mean	Std. Dev.	Mean	Std. Dev.
comp	overall	3.358562	0.3448787	3.497026	0.4561162
	between		0.3284215		0.4229312
	within		0.1497813		0.1963531
glob	overall	48.14649	6.356398	50.35432	7.927518
	between		5.803196		7.304418
	within		3.204946		3.505702
va	overall	-0.559543	0.5938319	-0.452574	0.6766929
	between		0.5870965		0.667629
	within		0.2103246		0.1885927
gef	overall	-0.821356	0.3328168	-0.609343	0.6043403
	between		0.3150853		0.6028179
	within		0.1481169		0.1445712
cor	overall	-0.766539	0.4042511	-0.583413	0.6566016
	between		0.3877765		0.6503322
	within		0.1699318		0.1742994
pstab	overall	-0.615412	0.7991787	-0.524448	0.9118044
	between		0.6755844		0.8818488
	within		0.4799123		0.3074494
rq	overall	-0.627237	0.3247839	-0.545655	0.6447394
	between		0.3094507		0.6361339
	within		0.1407297		0.1795853
rlaw	overall	-.7839636	.4548207	-.5959559	0.6428176
	between		.4385908		.6356468
	within		.1864099		.1742515
gdppc	overall	1870.185	2657.172	1909.518	2197.371
	between		2804.623		2230.228
	within		150.478		339.7771
inf	overall	3.866989	6.596297	9.559201	9.871403
	between		5.332865		5.608313
	within		4.250331		8.224441

Source: Computed by the authors.

Appendix 3:- Scatter diagram between competitiveness and globalisation.

