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# Foreign Capital Inflows and Economic growth in Sub-Saharan Africa: A Study of Selected Countries

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**Abstract**
The impact of foreign capital inflows on the economic growth of SSA, with emphasis on Nigeria, Ghana and South Africa was studied using multiple regression technique. Outcome of the study revealed that there is no significant long run relationship between foreign capital inflows and the level of economic growth in Nigeria and South Africa. It was only the lagged value of GDP (In the immediate past year), taken as an independent variable that was found to be positively significant. Other Inflow indicators that were hitherto significant in the short run, turned out to be insignificant in the long. The scenario was almost the same for Ghana except for FDI and the lagged value of GDP (In the immediate past year), taken as independent variable that were positively significant in the long run. It was also revealed that, there exist causality relationships between capital inflow indicators and economic growth in the aforementioned countries. Conclusively, it was ascertained that most of the investment inflows into SSA were based on speculations, targeted at the non priority sectors of the economies and channeled into businesses with short gestation periods. Their impacts are only felt in the immediate periods and given that the funds are quickly repatriated after profits are made, they do not make the desired impact in the long run. The study therefore, recommends a conscious effort on the concerned economies to enact some investor friendly policies that will encourage/ attract more capital inflows and to provide a conducive and enabling environment. Basic infrastructures like good roads, electricity supply and security must be seen to be adequate. Again, there is need to play down on speculative businesses and to invest in the real sectors of the economy .To reduce the level of capital flight, inflows should be tied to specific, relevant and purposeful projects. This will help to create employment opportunities in the long run. Lastly, there is equally the need for prudence and accountability in the management of accruals from official capital inflows and transfers. Such monies are expected to be channeled into productive ventures by the governments in power and not for profligacy.
**Keywords:** Foreign capital inflow, foreign Direct Investment, foreign Portfolio investment, Overseas Development Assistance, Economic Migrant's Remittance, Trade Openness, Economic Growth

## 1.0 Background of the study

In Sub-Saharan Africa, domestic private investment has proven to be insufficient in giving the sub region the desired level of economic growth. This is borne out of the mismatch between her level of saving capacities and capital requirements. Since nature abhors vacuum, foreign capital inflow seems to be the logical and reasonable alternative source of savings to stimulate growth. This is expected to augment the domestic resources of the sub region, fast track her developmental strides and thus, raise the standard of living of her people. (Diao and Breisinger: 2010).

Laudable as that may sound, but there has been lots of controversies in recent times over the desirability or otherwise of foreign capital inflows. According to Nyong (2002), different schools of thought have defined the relationships between foreign capital inflow and economic growth. They are the complementary hypothesis school; the substitution hypothesis school and a third school of thought, who contends that the impact of foreign capital inflow is a function of the enabling environment and conditions obtainable in the host economy.

The complementary hypothesis school of thought postulates that foreign capital inflow is beneficial to economic growth and development of less developed countries (LDC's). It does this by complementing the low savings of these countries, increasing the pool of financial resources available for productive investments and promoting a rapid transfer of technology to the less developed countries. .

The second school of thought, perhaps far more radical, contradicts those of the first group. The results of the second group indicate that foreign capital inflows act to relax the savings efforts of developing countries and render them susceptible to perpetual domination and subjugation by the economically advanced economies of the north mainly the United States of America, Britain, France and Germany

The third school of thought contends that the impact of foreign capital inflow is a function of host country's conditions which could allow or mar its efforts aimed at exploiting the full benefits of capital inflows. This school of thought argued that foreign capital inflow has both benefits and costs and that its impact is determined by the country specific conditions in general and the policy environment in particular in terms of the ability to diversify and the level of absorption capacity. Findings of this school of thought are that capital inflow is necessary but not a sufficient condition for economic growth or emergence from poverty (Adams: 2009).

In view of the divergent schools of thought and the policy implications, this study is set out to revisit the issue of linkages between foreign capital inflows and economic growth in SSA using Nigeria, Ghana and South Africa as case studies.

### 1.1) Statement of Research Problem

According to the Economic Commission for Africa (2010), African countries have continued to face a perennial shortage of resources to finance public and private investments. This phenomenon has limited the ability of governments to undertake public expenditure in infrastructure and social services needed to boost domestic demand, encourage private sector activity and sustain high level of growth for economic transformation. The chronic resource gaps arise from imbalances between exports and imports, between resource inflows and debt payments and between domestic savings and domestic investments. The need for external financing is nowhere more pressing than in sub-Saharan Africa, where income levels are too low to generate adequate domestic resources for the attainment of even modest rates of investment and growth. This phenomenon has impacted negatively on the economic growth of the sub region, which has been characterized by periods of low and volatile growths and periods of economic stagnation. A fall out of the erratic and slow growth pattern in the sub region is that their economies cannot permit an increase in the living condition of her people. However, since the introduction of economic reforms in the mid 1980's several of the sub-Saharan economies have recorded some form of stunted growths. This is amply evidenced in percentage Real GDP growth in Sub Saharan Africa for the period 2004 to 2010 as highlighted in table 1 below.

**Table 1: Real GDP Growth in Sub Saharan Africa (percent change)**

| **Country Group** | **2004- 2008** | **2009** | **2010** |
|---|---|---|---|
| Oil exporters | 8.6 | 5.2 | 6.6 |
| Middle Income | 5.0 | -0.6 | 3.8 |
| Low Income | 7.3 | 5.5 | 6.3 |
| Fragile Economies | 3.1 | 2.9 | 3.8 |
| **Total for sub- Saharan Africa** | 6.5 | 2.8 | 5.3 |

Source: IMF; Regional economic outlook, sub Saharan Africa, 2012

The above single digit but fluctuating growth statistics are quite disturbing. It is far from being satisfactory and obviously points towards ailing economies. To reverse the trend and to re-launch the sub- region on the path of sustainable economic recovery and growth; resource mobilization has become very imperative.

Against this backdrop, SSA has embarked on extensive reforms and liberalization of their economies, in order to be the choice destination of capital inflows. It is gratifying to note that their efforts are gradually paying off. According to the IMF (2011), external sources of funding for investments and growth in the Sub-region have undergone a noteworthy transformation in the last two decades Despite the increased flow in absolute terms of capital and investments to Sub Saharan Africa, they are still characterized by low per-capita income, high unemployment rates, dwindling economies and low and falling growth rates of GDP; problems which foreign capital inflows and investments are theoretically supposed to solve. This scenario could be attributed to the fact that some of the investments were based on speculations and on short run basis. As soon as the profits are made, the funds are repatriated. According to the governor of the Central Bank of Nigeria- Sanusi Lamido Sanusi, well over $20 billion left the Nigerian economy via capital flight between year 2008 and 2009.There is no doubt that, capital flight has a damaging consequence on the growth of any economy. Again, it has been noted that capital inflows into the sub Saharan economies especially Nigeria, were not targeted at priority sectors such as agriculture and the manufacturing industries; Instead they were invested in service oriented industries like the banking sector. In absolute terms, so much money has been pumped into the economies of SSA overtime and yet there is still paucity of funds. It is against this background that this study will seek to analyze how much of these inflows were actually attracted to the sub-region, the usage to which the inflows were put and the direction and significance of the impact of foreign capital inflows on economic growth.

### 1.2) Objectives of the Study

Centrally, the study is intended to ascertain the impact of foreign capital inflows on economic growth in Sub-Saharan Africa. It will investigate the mismatch between financial accruals from foreign capital inflows and an abysmal low economic performance amongst the sub Saharan countries

### 1.3) Research Questions

Having stated the above objectives, the following research questions are therefore considered relevant to the study.

- What is the nature of relationship between foreign capital inflows and the level of economic growth in Nigeria, Ghana and South Africa?

- To what extent has foreign direct investments, foreign portfolio investments and overseas development assistance affected the level of economic growth in Nigeria, Ghana and South Africa?
- To what extent has Economic Migrant's remittances and degree of trade openness assistance affected the level of economic growth in Nigeria, Ghana and South Africa?

The present study would search for answers to the above questions:

**1.4) Hypotheses of the study:** The following hypotheses shall be tested in this study:
**$Ho_1$**: There is no significant long run relationship between foreign capital inflow indicators and the level of economic growth in Nigeria, Ghana and South Africa.
**$Ho_2$**: Foreign capital inflow indicators individually do not have any significant impact on the level of economic growth in Nigeria, Ghana and South Africa.
**$Ho_3$**: There is no causality relationship between foreign capital inflows and economic growth in Nigeria, Ghana and South Africa.

**1.5) Scope of the Study**
Foreign capital inflows and its impact on economic growth in a sub region is actually a very broad topic. This study will be limited to only three (3) Sub-Saharan countries namely Nigeria, Ghana and South Africa. Secondly the period of investigation is also delineated, from 1980- 2010; a period of 31 (thirty one) years.

## 2.0 Literature Review

### 2.1 Theoretical frame work

Foreign capital inflows could be defined as the influx of usable funds that comes from a source or sources outside the country. It specifically refers to monies received from foreign countries. In most cases, the capital comes from developed countries and is invested in emerging or "third-world" countries. Basically, there are two broad classifications of capital inflows. They are the official and private capital inflows. For purpose of this research, we are going to consider four different modes of foreign capital inflows. They are:

- Foreign Direct Investments (FDI)
- Foreign Portfolio Investments (FPI)
- Overseas Development Assistance (ODA) and
- Economic Migrants Remittance (EMR).

For a thorough grasp of subject matter, we will briefly review the theoretical framework surrounding each of the aforementioned inflow types.
**Foreign Direct Investments:** There are four major theories on FDI. These are briefly discussed below:
**Market imperfections theories:** Hymer (1976) developed the market imperfections theories which aim at explaining behavior of firms in non-perfect competitive environments. For firms to undertake FDI they need some unique advantage such as technology to compete abroad with local firms who already have location specific advantages. Market power theories focus on structural imperfections i.e. deviations from purely market determined prices brought about by the existence of monopolistic or oligopolistic market characteristics
**The Internalization theory o**f Buckley and Casson (1976) supports the idea that there is a tendency in the economic system to generate sophisticated information and to transfer this information internationally in the form of FDI. The internalization of markets across the boundaries of national markets creates MNCs. Knowledge and expertise is the important factors in imperfect markets.
**Product life-cycle hypothesis** postulate that firms engage in FDI at a particular stage in the life-cycle of products that they initially produced as innovations. .Other countries are served initially through exports and as a customer base are established, then production would follow. The maturity stage takes place when production methods are standardized and markets are saturated in emerging and less developed countries.
**Eclectic theory** attempts to answer the question of why a firm would want to produce in a foreign location instead of exporting or entering into a licensing arrangement with a local firm. According to Dunning (1988) three conditions must be satisfied for a firm to engage in FDI and these are ownership, firm specific assets or internalization and locational advantages which subsequently came to be known as the eclectic theory or OLI paradigm.
**Foreign Portfolio Investments**
**Capital Asset Pricing Model** (CAPM) has been developed with respect to major capital markets in the world. The transfer of its logic to a global perspective has led to the formation of an International Capital Asset Pricing Model (ICAPM), which can be formally stated as: $[R_i] = R_F + B^W RP^W + \sum \Psi_{ik} RP_K$ Where $RP^w$ and $RP_k$ are the risk premia on the world market portfolio and the relevant currencies, respectively, and RF is the risk-free interest rate. This scenario rests on the assumption that investors make investment decisions based on risk and return in their home currency

**Overseas Development Assistance:**
Three basic theories have evolved in explaining the concepts of Overseas Development Assistance .They are:
**Donor oriented theory:** The main thrust of the donor-oriented theory stipulates that donors have other objectives besides the promotion of economic development in the developing countries. While the developing countries might be interested in long-term development and political stability with the hope of getting integrated into the world economy, on the principles of comparative advantage, the developed countries do not perceive their own interests in these terms. Initially, foreign aid was generally directed at import substitution rather than export promotion.
**Supplemental theories** maintain that as the economy grows and incomes grow, a country can afford to set aside an increasing proportion of its income in the form of savings. Eventually, the economy will reach the point at which savings are sufficient to finance the volume of investment needed to maintain the desired state of economic growth without further requirements for foreign aid. .
**Theory of sustainable Development: T**he idea of sustainable development emerged in 1972 out of the deep concern of the threat to the natural environment posed by economic growth and industrial pollution.
**Economic Migrants Remittances:**
**T**he theories on economic migrant's remittances are briefly discussed below:
**The Classical theory** states that large scale capital transfer and industrialization to poor countries would move their economies towards rapid economic development and modernization.
**Neoclassical Theory** postulates that unconstrained labor migration would lead to scarcity of labor, resulting in a higher marginal productivity of labor and increasing wage levels in migrants sending societies
**Dependency theories** are of the opinion that migration would result in dependency on the global political economic systems dominated by the powerful (Western) states.
**Neo-Marxist theory** states that migration and remittances produce and reinforce the capitalist system based on inequalities
**New Economics of labor Migration and livelihood Approaches has** modeled migration as the risk-sharing behavior of households. Individuals and households seem able to diversify resources such as labor in order to minimize income risks.

**2.2 A Critique of related empirical works and consequent research gaps**
The relationship between foreign capital inflow and economic growth in developing countries has attracted a plethora of studies. The outcomes of some of the empirical studies are as revealing as they are contradictory. We intend to review but a few here.
**Akinlo(2004)** investigated the impact of FDI on economic growth in Nigeria for the period (1970 -2001). His research output indicated that that both private capital and lagged foreign capital have no satisfactory significant effect on economic growth in Nigeria. This position was corroborated in a similar study by Ajide and Adeniyi (2010). However, Ilomona (2010) in his study, found a positive relationship between FDI and economic growth in Nigeria, though not satisfactorily significant. In contrast, a similar study by Badeji and Abayomi (2011), revealed a negative relationship between FDI inflow and economic growth in Nigeria!
**Okon et al (2012**) investigated the relationship between FDI and economic growth in Nigeria for the period (1970-2008). Results obtained therein showed that FDI and economic growth are jointly determined and that there is a positive feedback mechanism between the two i.e. from FDI to growth and from growth back to FDI; but Ogunmuyiwa and Ogunteye(2010) , obtained a different result from a similar study carried out within the same time frame of 1970 to2008. Result of their research revealed a long run relationship between FDI and variables of economic growth and a unidirectional causality between FDI and growth.
**Prasand et al (2007)** writing on international portfolio investments noted that a reduced reliance on foreign capital inflow by non industrial economies is associated with higher growth. They supported this position with the fact that successful developing countries have limited absorptive capacity for foreign resources, either because their financial markets are underdeveloped or because their economies are prone to over valuation caused by rapid capital inflows.
Contrary to the above assertion, **Sethi and Patnaik (2005**) opined that portfolio investments have a huge positive contribution to Influence the economic behavior of the countries where they are present.
Empirical studies on foreign aid and economic growth have again generated mixed results. For example, Papanek (1973), Dowling and Hiemenz (1982), Gupta and Islam (1983), Hansen and Tarp (2000), Burnside and Dollar (2000), Gomanee, *et al.* (2003), Dalgaard *et al.* (2004), and Karras (2006), find evidence for positive impact of foreign aid on growth;Burnside and Dollar (2000) , Brautigam and Knack (2004) , Mallik(2008) , Bakare( 2010) and Eregha et al find evidence for negative impact of foreign aid and growth, while Mosley (1980), Mosley, *et al.* (1987), Boone (1996), and Jensen and Paldam (2003) find evidence to suggest that aid has no impact on growth.
While **Gulliemo et al (2004)** has noted that recession in some industrial countries accounted for the resurgence

of international capital inflows to many developing countries in recent times. Ajit Ghose (2004) opined that capital inflows are largely exogenous and is not really attracted by developing countries as conventionally supposed.

Since most of the previous studies are cross sectional in nature, there is need for more country specific case studies; that is bound to yield more robust conclusions as opposed to cross country regression analysis. That is a research gap that this present study intends to cover! .The conclusion is therefore trite that existing state of research shows some conceptual and statistical weaknesses providing further impetus for this study.

## 3.0 Research Methodology

**3.1 Research Design:** To ascertain the impact of foreign capital inflows on the economic growth of Sub-Saharan Africa, with emphasis on Nigeria, Ghana and South Africa, a least square regression analysis will be carried out on a time series data. The essence will be to test the relationship between the variables whether positive or negative and if significant or not (Elbadwi, 1992).

**3.2 Specification of models:** Real Gross domestic product figures for the period 1980-2010, herein represented by the symbol $\mathbf{RGDP_t}$, are regressed on components of foreign capital inflows for the corresponding period**.** The components of foreign capital inflows are hereby represented as follows:

$\mathbf{FDI_t}$ = Foreign direct investment inflows into a country in year, t.

$\mathbf{FPI_t}$ = Foreign Portfolio investment inflows into a country in year, t.

$\mathbf{ODA_t}$=Overseas Development Assistance / inflows to a country in year, t.

$\mathbf{EMR_t}$= Economic Migrants remittances into a country in year, t and

$\mathbf{OPN_t}$ =Degree of Trade openness to the outside world in year, t.

Also included are the components of control variables. They are:

$\mathbf{EXCHr_t}$ = Prevailing exchange rate in a country in year, t

$\mathbf{INFL_t}$ =Level of inflation in a country in year, t

$\mathbf{LBF_t}$ = Labor force, this consists of population ages 15-64 (As percentage of total population) of a country in year, t

**t** = Time and = The error term assumed to be normally and independently distributed with zero mean and constant variance, which captures all other explanatory variables which influence economic growth but are not captured in the model

### 3.2.1) Justification of the chosen variables

**Real Gross Domestic Product ($\mathbf{RGDP_t}$)**: This study will use Real GDP to measure economic growth. This is due to the fact that real gross domestic product determines whether or not an increased aggregate expenditure is matched by an increase in real output overtime ,which entails deflating the nominal value of output by an appropriate price index to obtain the corresponding magnitude

**Foreign direct investment ($\mathbf{FDI_t}$), foreign portfolio investment ($\mathbf{FPI_t}$), overseas development assistance ($\mathbf{ODA_t}$), Economic migrant's remittances ($\mathbf{EMR_t}$) and Openness to foreign trade ($\mathbf{OPN_t}$):** These are adjudged as some of the macro –economic determinants of economic growth in any nation. Their inputs usually impact positively on the economic growth of any nation. Therefore, their respective coefficients $\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$ and $\beta_5$ are expected to be positive i.e. $\beta_1$, $\beta_2$, $\beta_3$, $\beta_4$, and $\beta_5 > 0$

**Labor Force ($\mathbf{LBF_t}$)**: According to the classical growth theorists, an increase in labor force ($LBF_t$) is expected to lead to an increase in economic growth. All other things being equal, the higher the labor force, the higher the supply of labor. Thus, the coefficient of labor is expected to be positive.ie ($\beta 6 > 0$).

**Exchange Rate (EXCHr):** Firms may have to devote more resources to dealing with the effects of exchange rate fluctuation. Therefore, the coefficient of exchange rate is expected to be negative ($\beta_7 < 0$)

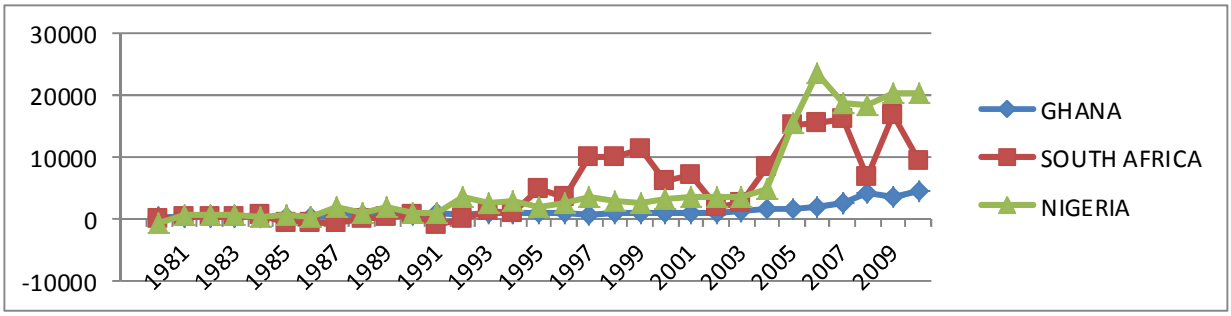
**Inflation ($\mathbf{INFL_t}$):** Again, **f**irms may have to devote more resources to dealing with the effects of inflation. Therefore, the coefficient of inflation rate is expected to be negative ($\beta_8 < 0$).

**4.0 Data Presentation and Analysis:** As a prime objective, this section focuses on the presentation and analysis of data for the study. Also, it aims to interpret the results obtained therein, so that policy implications can be drawn. Two (2) hypotheses of this study were individually tested using a multiple regression model to ascertain the relationship between foreign capital inflows economic growth in Nigeria, Ghana and South Africa, while the third will be subjected to a granger causality test.

**4.1 Data Presentation:** Data for our estimation was generated from the websites of the World Bank, UNCTAD, Economy Watch and various publications from the Central Bank of Nigeria, Bank of Ghana and the Reserved Bank of South Africa for the period 1980-2010. These are aptly captured in the chart below:

**Aggregated Components of Foreign Capital Inflow to SSA: Evidence from Nigeria, Ghana and South Africa (1980-2010)**




Source: Graph plotted from data obtained from World Development Indicators (TheWORLD Bank)

**Data Analysis**

**Unit Root Tests:** This is carried out using Elliot –Rothenberg stock optimal test and also the Phillips–Perron test to determine whether the data set is stationary or not and the order of integration. From tables 4.4, 4.5 and 4.6 below, we observed a mixed bag scenario. While some variables became stationary at '' level'', others were at '' first difference''; and yet a third group at ''second difference''.

**Table 4.4: UNIT ROOT TEST FOR NIGERIA**

| **Elliot Rothenberg Stock Point –Optimal unit Root Test** | | | | | **Phillips –Perron Unit Root Test** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Variables** | T-Stat. | Critical Value | Order of Integration | Sig. | **Variable** | T-tat. | Critical Value | Order of Integration | Sig. |
| NFDI | 7.97 | 2.97 | 2nd Diff | ** | NFDI | -5.38 | -2.97 | 1st Diff | ** |
| NFPI | 45.30 | 2.97 | 1st Diff | ** | NFPI | -9.40 | -2.97 | 1st Diff | ** |
| NODA | 159.7 | 2.97 | 2nd Diff | ** | NODA | -2.09 | -2.97 | 1st Diff | ** |
| NEMR | 15.42 | 2.97 | Level | ** | NEMR | -7.72 | -2.97 | 2nd Diff | ** |
| NOPN | 2.31 | 1.87 | 1st Diff | * | NOPN | -9.79 | -2.97 | 1st Diff | ** |
| NEXCHR | 46.42 | 2.97 | Level | ** | NEXCHR | -9.68 | -2.97 | 2nd Diff | ** |
| NLBF | 14.22 | 2.97 | Level | ** | NLBF | -6.36 | -2.97 | 2nd Diff | ** |
| NINFL | 72.94 | 2.97 | 2nd Diff | ** | NINFL | -15.80 | -2.97 | 2nd Diff | ** |
| NRGDP | 16.07 | 2.97 | 1st Diff | ** | NRGDP | -9.04 | -2.97 | 2nd Diff | ** |

Source: E-Views version 7 statistical package. Note: Significant at 5% = ** ; Significant at 1%= *

**UNIT ROOTS TEST FOR GHANA:** In table 4.5 below; one of the inflow indicators to Ghana - Foreign Portfolio Investment (GFPI) was observed to be non–stationary, even at second difference. The data set was consequently thrown out. This situation is justified by the fact that, the Ghanaian capital market is ill developed and has not been able to attract the necessary level of foreign portfolio inflows that could impact on her economic growth.

**UNIT ROOTS TEST FOR GHANA**

| **Elliot Rothenberg Stock Point –Optimal unit Root Test** | | | | | **Phillips –Perron Unit Root Test** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Variables** | T-Stat. | Critical Value | Order of Integration | Sig. | **Variables** | T-Stat. | Critical Value | Order of Integration | Sig. |
| GFDI | 9447.92 | 2.97 | Level | ** | GFDI | -7.21 | -2.97 | 1st Diff | ** |
| GFPI | 57.98 | 2.97 | Level | ** | GFPI | -2.41 | -2.97 | stationary | NA |
| NODA | 24.45 | 2.97 | Level | ** | GODA | -6.91 | -2.97 | 1st Diff | ** |
| GEMR | 15268.4 | 2.97 | Level | ** | GEMR | -11.31 | -2.97 | 2nd Diff | ** |
| GOPN | 9.19 | 2.97 | Level | ** | GOPN | -17.96 | -2.97 | 2nd Diff | ** |
| GEXCHR | 3.87 | 2.97 | Level | ** | GEXCHR | -26.57 | -2.97 | 2nd Diff | ** |
| GLBF | 724.85 | 2.97 | Level | ** | GLBF | -14.84 | -2.97 | 1st Diff | ** |
| GINFL | 8.07 | 2.97 | First Diff | ** | GINFL | -16.26 | -2.97 | 1st Diff | ** |
| GRGDP | 5.87 | 2.97 | 2nd Diff | ** | GRGDP | -9.13 | -2.97 | 2nd Diff | ** |

Source: E-Views version 7 statistical package. Note: Significant at 5% = ** ; Significant at 1%= *

**Table 4.6: UNIT ROOT TEST FOR SOUTH AFRICA**

| **Elliot Rothenberg Stock Point –Optimal unit Root Test** | | | | | **Phillips –Perron Unit Root Test** | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Variables** | T-Stat. | Critical Value | Order of Integration | Sig. | **Variables** | T-Stat. | Critical Value | Order of Integration | Sig. |
| SFDI | 159.20 | 2.97 | 1st diff | ** | SFDI | -21.00 | -2.97 | 1st diff | ** |
| SFPI | 23.04 | 2.97 | 1st diff | ** | SFPI | -14.53 | -2.97 | 1s t diff | ** |
| SODA | 44.09 | 2.97 | Level | ** | SODA | -5.39 | -2.97 | 1st t diff | ** |
| SEMR | 4.08 | 2.97 | 1st diff | ** | SEMR | -6.72 | -2.97 | 2nd diff | ** |
| SOPN | 53.93 | 2.97 | 1st diff | ** | SOPN | -5.90 | -2.97 | 1st diff | ** |
| SEXCHR | 30.88 | 2.97 | Level | ** | SEXCHR | -13.51 | -2.97 | 2nd diff | ** |
| SLBF | 179.60 | 2.97 | Level | ** | SLBF | -7.69 | -2.97 | 1st t diff | ** |
| SINFL | 7.88 | 2.97 | Level. | ** | SINFL | -8.26 | -2.97 | 1st diff | ** |
| SRGDP | 4.93 | 2.97 | 2nd diff | ** | SRGDP | -11.99 | -2.97 | 2nd diff | ** |

Source: E-Views version 7 statistical package. Note: Significant at 5% = ** ; Significant at 1%= *

### 4.3 HYPOTHESIS TESTING:

**Test of Hypothesis 1:** There is no significant long run relationship between foreign capital inflow indicators and the level of economic growth in Nigeria, Ghana and South Africa

**Table 4.15: Summary of the global statistics (Ordinary least Square (OLS) and Vector Autoregressive (VAR) Models for Nigeria, Ghana and South Africa (1980 – 2010).**

| | **Nigeria** | | **Ghana** | | **South Africa** | |
|---|---|---|---|---|---|---|
| **Test Statistics** | **Model 1 OLS** | **Model2 VAR** | **Model1 OLS** | **Model 2 VAR** | **Model1 OLS** | **Model2 VAR** |
| R-Square | 0.969081 | 0.995714 | 0.988146 | 0.998985 | 0.988233 | 0.994219 |
| Adjusted R-Square | 0.957837 | 0.993333 | 0.984538 | 0.998504 | 0.983751 | 0.990818 |
| S.E of Regression | 3464.642 | 1386.074 | 230.5256 | 71.43906 | 3889.961 | 2689.861 |
| Sum of Squared Residual | 2.64E+08 | 34581624 | 1222267 | 96967.23 | 2.71E +08 | 1.23E+08 |
| Log Likelihood | -291.3328 | -244.0265 | -208.0117 | -158.8143 | -282.8011 | -253.8673 |
| Durbin Watson Statistics | 1.176647 | 2.095717 | 2.107967 | 1.505974 | 1.301297 | 1.701305 |
| Mean Dependence Var. | 44110.65 | 45126.03 | 4479.387 | 4609.448 | 126406.8 | 128431.4 |
| SD Dependence Var. | 16873.06 | 16975.86 | 1853.890 | 1846.804 | 28168.54 | 28071.20 |
| Schwarz Criterion | 19.79263 | 18.10666 | 14.30630 | 12.11385 | 19.87376 | 19.44246 |
| F-Statistics | 86.19099 | 418.1994 | 273.8884 | 2077.039 | 220.4647 | 292.3532 |
| Prob- (F-Statistics) | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.00000 |

Source: E-view statistical package, version 7.0.

**4.3.2. Test of Model Significance:** In order to confirm the specification status of our model, we employ the analysis of variance or ANOVA, for short.

**4.3.3 Decision rule in the short run for Nigeria, Ghana and South Africa :** Employing the E-views software, since F-ratio calculated (86.19, 273.89 and 220.47) respectively for Nigeria, Ghana and South Africa are greater than F-ratio critical (2.81, 2.07), at both 1% and 5% levels of significance respectively. We conclude thus; that foreign capital inflows have a significant relationship with the level of economic growth in Nigeria, Ghana and South Africa in the short run.

**4.3.4. Decision rule in the long run for Nigeria, Ghana and South Africa**

Employing the E-views software, since F-ratio calculated (418.19, 2077.04 and 292.35) respectively for Nigeria, Ghana and South Africa are greater than F-ratio critical (2.81, 2.07), at both 1% and 5% levels of significance

respectively. Thus, we reject **$H0_1$** and conclude that foreign capital inflows have a significant long run relationship with the level of economic growth in Nigeria, Ghana and South Africa.

**4.3.5. TEST OF HYPOTHESIS 2**

**$Ho_2$:** Foreign capital inflow indicators individually do not have any significant impact on the level of economic growth in Nigeria, Ghana South Africa.

Having tested the significance of the model, we go a step further to test the significance of the foreign capital inflow indicators in contributing to the total variation in the level of economic growth in Nigeria. This is achieved through the student t-test. We refer to the regression result in table 4.9 below:

**Table 4.9: T-Statistics Table- For Nigeria in the short run**

| Variable | NFDI | NFPI | NODA | NEMR | NOPN | NEXCHr | NLBF | NINFL |
|---|---|---|---|---|---|---|---|---|
| Coefficient of the Variable | **0.756691** | **1.074583** | **0.093769** | **2.387942** | **123.2595** | **132.2209** | **580.2078** | **43.46578** |
| Standard Error | **1.214721** | **1.312087** | **0.400536** | **0.833139** | **64.12389** | **36.17840** | **1942.130** | **42.77001** |
| T-Statistics Calculated | **0.622934 N.S** | **0.818988 N.S** | **0.234109 N.S** | **2.866199 Significant** | **1.922209 N.S** | **3.654691 Significant** | **0.298748 N.S** | **1.016268 N.S** |
| T-Statistics Tabulated@1% | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** |
| T-Statistics Tabulated@5% | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** |
| Significance | **0.5397** | **0.4216** | **0.8171** | **0.0090** | **0.0676** | **0.0014** | **0.7679** | **0.3205** |

**Source**: E-view statistical package, version 7.0.

From table 4.9 above, only economic migrant's remittance and exchange rates proved to be a significant contributor to the economic growth of Nigeria at both 1% and 5% levels of significance in the short run. The other variables had no significant impact on the economic growth of Nigeria.

**Note**: F-ratio tabulated DF= (8, 23); 1% = 2.81, 5% =2.07, T-ratio DF (23) and N.S ="Not Significant". The resulting estimated model for Nigeria in the short run is given as:

$$NRGDP = -10388.47 + 0.76NFDI_t + 1.075NFPI_t + 0.094NODA_t + 2.39NEMR_t + 123.26NOPN_t + 132.22NEXCHR_t + 580.21NLBF_t + 43.47NINFL_t \quad \text{.....Equation 4.1}$$

Next, is to ascertain the impact of foreign capital inflows on the economic growth of Nigeria in the long run.

**Table 4.10: T-Statistics Table- For Nigeria in the Long Run**

| | NFDI | NFPI | NODA | NEMR | NOPN | NEXCHR | NLBF | NINFL | $NRGDP_{(t-1)}$ | $NRGDP_{(t-2)}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| Coefficient of the Variable | **-0.430477** | **-0.53909** | **0.040139** | **0.219354** | **-13.7007** | **34.80619** | **-1751.98** | **9.186371** | **1.24751** | **-0.16725** |
| Standard Error | **0.526373** | **0.567597** | **0.162201** | **0.422458** | **29.92128** | **19.09353** | **1035.601** | **17.50281** | **0.181708** | **0.212479** |
| T-Statistics Calculated | **-0.817817 N.S** | **-0.94979 N.S** | **0.247468 N.S** | **0.519232 N.S** | **-0.45789 N.S** | **1.822931 N.S** | **-1.69175 N.S.** | **0.524851 N.S** | **6.865495 Significant** | **-0.78716 N.S.** |
| T-Statistics Tabulated@1% | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** |
| T-Statistics Tabulated@5% | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** |
| Significance | **0.4242** | **0.3548** | **0.8073** | **0.6099** | **0.6525** | **0.0850** | **0.1079** | **0.6061** | **0.0000** | **0.4414** |

Source: E-view statistical package, version 7

From the above table, only the lagged value of GDP (In the immediate past year), taken as an independent variable was found to be positively significant in the long run. Inflow indicators that were hitherto significant in the short run, turned out to be insignificant in the long run. The resulting estimated model for Nigeria in the long run is thus: $$NRGDP = 90508.88 - 0.43NFDI_t - 0.54NFPI_t + 0.04NODA_t + 0.22NEMR_t - 13.7NOPN_t + 34.81NEXCHR_t + 9.19INFL_t - 1751.98\ NLBF_t + 1.25NRGDP_{(t-1)} - 0.17NRGDP_{(t-2)} \ldots\ldots\ldots\ldots$$ Equation.4.2

**4.3.5.2. GHANA:** Having tested the significance of the model, we go a step further to test the significance of the foreign capital inflow indicators in contributing to the total variation in the level of economic growth in Ghana. This is achieved through the student t-test. We refer to the regression result in table 4.11 below:

**Table 4.11: T-Statistics Table - For Ghana in the Short Run**

| | GFDI | GODA | GEMR | GOPN | GEXCHr | GLBF | GINFL |
|---|---|---|---|---|---|---|---|
| Coefficient of the variable | **0.528280** | **0.979196** | **11.89400** | **7.343795** | **-0.718274** | **248.8497** | **-0.124216** |
| Standard Error | **0.119701** | **0.319125** | **3.911623** | **3.603807** | **0.586908** | **84.56032** | **1.975381** |
| T-Statistics Calculated | **4.413341 Significant** | **3.068379 Significant** | **3.040681 Significant** | **2.037788 N.S** | **-1.223827 N.S** | **2.942866 Significant** | **0.062882 N.S** |
| T-Statistics Tabulated@1% | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** |
| T-Statistics Tabulated@5% | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** |
| Significance | **0.0002** | **0.0054** | **0.0058** | **0.0532** | **0.2334** | **0.0073** | **0.9504** |

Source: E-view statistical package, version 7

From table 4.11 above, Foreign Direct investments, Overseas Development Assistance, Economic Migrant's Remittances, and labor force proved to be significant contributors to the economic growth of Ghana in the short run at both 1% and 5% levels of significance. While the degree of trade openness has a positive relationship with economic growth, Exchange rate (GEXCHR) and inflationary trend (GINFL) had negative influences on the economic growth of Ghana, though they were not statistically significant. The resulting estimated model for Ghana in the short run is given below:

$$\mathbf{GRGDP = -10780.45 + 0.528GFDI_t + 0.98GODA_t + 11.89GEMR_t + 7.34GOPN_t - 0.72\ GEXCHR_t + 248.84\ GLBF_t - 0.12GINFL_t} \quad \text{.....Equation 4.3}$$

Next, is to ascertain the impact of foreign capital inflows on the economic growth of Ghana in the long run.

**Table 4.12: T-Statistics Table- For Ghana in the Long Run**

| | GFDI | GODA | GEMR | GOPN | GEXCHR | GLBF | GINFL | GRGDP (t-1) | GRGDP (t-2) |
|---|---|---|---|---|---|---|---|---|---|
| Coefficient of the variable | 0.149033 | 0.154785 | 1.696578 | -0.20116 | 0.022039 | 95.49263 | -0.83446 | 1.027925 | -0.19382 |
| Standard Error | 0.047793 | 0.113634 | 1.479187 | 1.579642 | 0.193298 | 48.45471 | 0.810353 | 0.183716 | 0.209134 |
| T-Statistics Calculated | 3.118334 **Significant** | 1.362135 **N.S** | 1.146966 **N.S** | -0.12734 **N.S** | 0.114014 **N.S** | 1.970760 **N.S.** | -1.02975 **N.S** | 5.595192 **Significant** | -0.92679 **N.S** |
| T-Statistics Tabulated@1% | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** |
| T-Statistics Tabulated@5% | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** |
| Significance | 0.0057 | 0.1891 | 0.2656 | 0.9000 | 0.0635 | 0.9104 | 0.3161 | 0.0000 | 0.3657 |

Source: E-view statistical package, version 7

From table 4.12 above, it was found that only FDI and the lagged value of GDP (In the immediate past year), taken as independent variable were positively significant in the long run. Other Inflow indicators for Ghana that were hitherto significant in the short run, turned out to be insignificant in the long run. The resulting estimated model for Ghana in the long run is stated thus:

$$\mathbf{GRGDP = -4505.39 + 0.15GFDI_t + 0.15GODA_t + 1.69GEMR_t - 0.20GOPN_t + 0.02GEXCHR_t + 95.49\ GLBF_t - 0.83GINFL_t + 1.03GRGDP_{(t-1)} - 0.19GRGDP_{(t-2)}} \quad \text{.....Equation. 4.4}$$

**4.3.5.3. SOUTH AFRICA:** Having tested the significance of the model, we go a step further to test the significance of the foreign capital inflow indicators in contributing to the total variation in the level of economic growth in South Africa. This is achieved through the student t-test. We refer to the regression result in table 4.13 below:

**Table 4.13: T-Statistics Table- For South Africa in the short run**

| | SFDI | SFPI | SODA | SEMR | SOPN | SEXCHr | SLBF | SINFL |
|---|---|---|---|---|---|---|---|---|
| Coefficient of the Variable | **0.711972** | **-0.304526** | **5.884652** | **62.19654** | **-42.04500** | **999.7089** | **1906.822** | **366.9078** |
| Standard Error | **0.416701** | **0.275394** | **8.115412** | **5.991452** | **124.7032** | **773.8566** | **1068.141** | **324.8561** |
| T-Statistics Calculated | **1.708591 N.S** | **-1.10578 N.S** | **0.725121 N.S** | **10.38088 Significant** | **-0.337161 N.S** | **1.291853 N.S** | **1.785178 N.S** | **1.129447 N.S** |
| T-Statistics Tabulated@1% | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** | **2.81** |
| T-Statistics Tabulated@5% | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** | **2.07** |
| Significance | **0.1023** | **0.2813** | **0.4764** | **0.0000** | **0.7393** | **0.2104** | **0.0887** | **0.2714** |

Source: E-view statistical package, version 7

From table 4.13 above, only economic migrant's remittance proved to be a significant contributor to the economic growth of South Africa at both 1% and 5% Alpha levels in the short run.

While foreign direct investments, overseas development assistance, exchange rate, labor force and inflationary trend had positive relationships with economic growth, none the less they were not statistically significant.

Foreign Portfolio Investments and degree of trade openness had negative influence on economic growth in South Africa, though not statistically significant. The resulting estimated model for South Africa in the short run is given as:

**$SRGDP = -14482.25 + 0.71SFDI_t - 0.30SFPI_t + 5.88SODA_t + 62.2SEMR_t - 42.05SOPN_t + 999.71SEXCHR_t + 1906.82SLBF_t + 366.91SINFL_t$** ……Equation 4.5

Next, is to ascertain the impact of foreign capital inflows on the economic growth of South Africa in the long run.

**Table 4.14: T-Statistics Table- For South Africa in the Long Run**

| | SFDI | SFPI | SODA | SEMR | SOPN | SEXCHR | SLBF | SINFL | SRGDP (t-1) | SRGDP (t-2) |
|---|---|---|---|---|---|---|---|---|---|---|
| Coefficient of the Variable | 0.03899 | -0.291788 | -2.563232 | 18.65956 | 130.1281 | -234.8099 | 855.0986 | -341.930 | 0.972068 | -0.2393 |
| Standard Error | 0.356170 | 0.234593 | 7.037476 | 17.74648 | 178.6638 | 774.0941 | 844.6489 | 302.5410 | 0.268939 | 0.34544 |
| T-Statistics Calculated | 0.10948 N.S | -1.243806 N.S | -0.364226 N.S | 1.051452 N.S | 0.728340 N.S | -0.303335 N.S | 1.012372 N.S | -1.13019 N.S | 3.614458 Significant | -0.7153 N.S |
| T-Statistics Tabulated@1% | 2.81 | 2.81 | 2.81 | 2.81 | 2.81 | 2.81 | 2.81 | 2.81 | 2.81 | 2.81 |
| T-Statistics Tabulated@5% | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 |
| Significance | 0.9141 | 0.2304 | 0.7202 | 0.3078 | 0.4763 | 0.7653 | 0.3256 | 0.2741 | 0.0021 | 0.4841 |

Source: E-view statistical package, version 7

From table 4.14 above, only the lagged value of GDP (In the immediate past year), taken as an independent variable was found to be positively significant in the long run. Inflow indicator that was hitherto significant in the short run, turned out to be insignificant in the long run. The resulting estimated model for South Africa in the long run is given thus:

**$SRGDP = -21959.72 + 0.04SFDI_t - 0.29\ SFPI_t - 2.56SODA_t + 18.66SEMR_t + 130.13SOPN_t - 234.81SEXCHR_t + 855.1\ SLBF_t - 341.93\ SINFL_t + 0.97SRGDP_{(t-1)} - 0.24SRGDP_{(t-2)}$**.....Equation. 4.6

**CO- INTEGRATION TESTS**

The tests below strongly reject the null hypothesis of no co integration .i.e. no long run relationship between the dependent and the independent variables in favor of at least four (4), three (3) and four (4) co-integrating vectors respectively in the estimation for Nigeria, Ghana and South Africa.

**Table 4.16 - Johansen Co-integration Test- Nigeria**

| Trace test | | | | | Max Eigen value test | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Hypothesized No. of CEs** | **Eigen value** | **Trace Stats** | **0.05 Critical value** | **Prob**** | **Hypothesized No. of CEs** | **Eigen value** | **Max-Eigen Stats** | **0.05 Critical value** | **Prob**** |
| None * | 0.992633 | 471.5381 | 197.3709 | 0.0001 | None * | 0.992633 | 142.4118 | 58.43354 | 0.0000 |
| At most 1 * | 0.985931 | 329.1263 | 159.5297 | 0.0000 | At most 1 * | 0.985931 | 123.6488 | 52.36261 | 0.0000 |
| At most 2 * | 0.948875 | 205.4776 | 125.6154 | 0.0000 | At most 2 * | 0.948875 | 86.23087 | 46.23142 | 0.0000 |
| At most 3 * | 0.800663 | 119.2467 | 95.75366 | 0.0005 | At most 3 * | 0.800663 | 46.77005 | 40.07757 | 0.0076 |
| At most 4 * | 0.663006 | 72.47664 | 69.81889 | 0.0302 | At most 4 | 0.663006 | 31.54300 | 33.87687 | 0.0926 |
| Trace test indicates 5 co-integrating equations at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level | | | | | Max-eigenvalue test indicates 4 co-integrating equations at the 0.05 level. * denotes rejection of the hypothesis at the 0.05 level | | | | |

Source: E-view statistical package- version 7

**Table 4.17 - Johansen Co-integration Test- Ghana**

| Trace test | | | | | Max Eigen value test | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Hypothesized No. of CEs** | **Eigen value** | **Trace Stats** | **0.05 Critical value** | **Prob**** | **Hypothesized No. of CEs** | **Eigen value** | **Max-Eigen Stats** | **0.05 Critical value** | **Prob**** |
| None * | 0.953312 | 309.4340 | 159.5297 | 0.0000 | None * | 0.953312 | 88.86348 | 52.36261 | 0.0000 |
| At most 1 * | 0.927789 | 220.5705 | 125.6154 | 0.0000 | At most 1 * | 0.927789 | 76.21667 | 46.23142 | 0.0000 |
| At most 2 * | 0.866021 | 144.3538 | 95.75366 | 0.0000 | At most 2 * | 0.866021 | 58.29211 | 40.07757 | 0.0002 |
| At most 3 * | 0.682104 | 86.06172 | 69.81889 | 0.0015 | At most 3 | 0.682104 | 33.23487 | 33.87687 | 0.0595 |
| At most 4 * | 0.636217 | 52.82685 | 47.85613 | 0.0159 | At most 4 * | 0.636217 | 29.32474 | 27.58434 | 0.0296 |
| At most 7 * | 0.159410 | 5.035892 | 3.841466 | 0.0248 | At most 7 * | 0.159410 | 5.035892 | 3.841466 | 0.0248 |
| Trace test indicates 5 co integrating equations at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level | | | | | Max-eigenvalue test indicates 3 co-integrating equations at the 0.05 level.* denotes rejection of the hypothesis at the 0.05 level | | | | |

Source: E-view statistical package- version 7

**Table 4.18 - Johansen Co-integration Test- South Africa**

| Trace test | | | | | Max Eigen value test | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Hypothesized No. of CEs** | **Eigen value** | **Trace Stats** | **0.05 Critical value** | **Prob**** | **Hypothesized No. of CEs** | **Eigen value** | **Max-Eigen Stats** | **0.05 Critical value** | **Prob**** |
| None * | 0.962797 | 392.5007 | 197.3709 | 0.0000 | None * | 0.962797 | 95.44943 | 58.43354 | 0.0000 |
| At most 1 * | 0.935945 | 297.0513 | 159.5297 | 0.0000 | At most 1 * | 0.935945 | 79.69240 | 52.36261 | 0.0000 |
| At most 2 * | 0.907071 | 217.3589 | 125.6154 | 0.0000 | At most 2 * | 0.907071 | 68.90169 | 46.23142 | 0.0001 |
| At most 3 * | 0.884566 | 148.4572 | 95.75366 | 0.0000 | At most 3 * | 0.884566 | 62.61259 | 40.07757 | 0.0000 |
| At most 4 * | 0.663893 | 85.84461 | 69.81889 | 0.0016 | | | | | |
| At most 5 * | 0.603058 | 54.22513 | 47.85613 | 0.0112 | | | | | |
| Trace test indicates 6 co-integrating equations at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level | | | | | Max-eigenvalue test indicates 4 co-integrating equations at the 0.05 level.* denotes rejection of the hypothesis at the 0.05 level | | | | |

Source: E-view statistical package- version 7

**4.3.7 Test of hypothesis 3:** There is no causality relationship between foreign capital inflows and economic growth in Nigeria, Ghana and South Africa

**Result of Granger Causality Tests:** For Nigeria, while the degree of trade openness granger causes economic growth (RGDP), Real GDP was seen to granger cause Economic migrant's remittances, Foreign Direct investment, foreign portfolio investments and overseas development assistance.

In the case of Ghana, a two way causality relationship exists between Economic growth and foreign direct investments. While Real GDP granger causes foreign direct investments, FDI was equally seen to granger cause economic growth. Again Real GDP was seen to granger cause Economic migrant's remittances, inflation, labor force and overseas development assistance.

In South Africa, there exists a bi-directional causality relationship between economic growth and foreign direct investments, foreign portfolio investments, inflation, overseas development assistance and the degree of trade openness. Again, labor force was seen to granger cause RGDP, while economic growth granger causes economic migrants remittances into South Africa.

**4.4 Discussion of Results:** A comparative analysis of the global statistics shows that the Ghana model parades better statistics than that of Nigeria and South Africa, (both in the short and long runs) and hence has a stronger predictive power. (See table 4.15

Finally, this study also ascertained the causality relationship between foreign capital inflow indicators and economic growth in Nigeria, Ghana and South Africa. While a bidirectional relationship exists between some capital inflow indicators in South Africa, it was more of a unidirectional relationship between economic growth and the inflow indicators for Nigeria and Ghana.

**4.5 Application of Research Findings and Contribution to Knowledge.**

Ordinarily, foreign capital inflows are expected to exert wide and significant influence on economic growth. Hence, its application rests mainly on the contributions of the various findings of the study to economic formulation and implementation of same as statutory policies. The impact of such policies will be appreciated from the standpoint of how rapidly and effectively it fosters, innovates or modernizes local enterprises in the respective economies. Thus, this research produced some growth prediction models, both in the short and long runs respectively for the aforementioned sub Saharan economies. These are as contained in equations 4.1 to 4.6. One of the major contributions of the present study, therefore, is that it is possible from these set of models to predict the level of economic growth in Nigeria, Ghana and South Africa (both in the short and long runs), given that the levels of capital inflows are known.

**5.0 Findings, Conclusion and Recommendations**

- The level of economic growth in Sub Saharan Africa bears a significant relationship with foreign capital inflows in the short run and so desires a closer watch for improved economic performance.
- Results of the unit root test indicate a mixed bag scenario. While some variables turned stationary at '' level'', others were at ''first difference''; and yet a third group at second difference.
- In Ghana, foreign Portfolio Investment (GFPI) was observed to be non – stationary, even at second difference. The data set was consequently thrown out. This situation is justified by the fact that, the Ghanaian capital market is ill developed and has not been able to attract the necessary level of foreign portfolio inflows that could impact on her economic growth
- **Ordinary least Square model** helped to establish a short run relationship between capital inflows and economic growth in Nigeria, Ghana and South Africa. These are highlighted below:
- Economic migrant's remittance and Exchange rates proved to be the significant contributors to economic growth of Nigeria in the short run at both 1% and 5% Alpha levels.

- Foreign Direct investments, Overseas Development Assistance, Economic Migrant's Remittances, and labor force proved to be significant contributors to the economic growth of Ghana in the short run at both 1% and 5% levels of significance
- Economic migrant's remittance proved to be the only significant contributor to economic growth of South Africa in the short run at both 1% and 5% Alpha levels.
- **Vector Auto Regression (VAR) model** helped to establish a long run relationship between capital inflows and economic growth in Nigeria, Ghana and South Africa. These are highlighted below:
- For Nigeria and South Africa, only the lagged value of GDP (In the immediate past year), taken as an independent variable was found to be positively significant in the long run. In other words, there is no significant long run relationship between foreign capital inflows and the level of economic growth in Nigeria and South Africa. Other Inflow indicators that were hitherto significant in the short run, turned out to be insignificant in the long run
- For Ghana, FDI and the lagged value of GDP (In the immediate past year), taken as independent variable were positively significant in the long run. In other words, there is a significant long run relationship between foreign direct investments and the level of economic growth in Ghana. Other Inflow indicators that were hitherto significant in the short run, turned out to be insignificant in the long run.
- **The Co-integration tests** strongly reject the null hypothesis of no co integration .i.e. no long run relationship between the dependent and the independent variables in favor of at least four (4), three (3) and four (4) co-integrating vectors respectively in the estimation for Nigeria, Ghana and South Africa.
- Lastly, it was also ascertained that there exists a causality relationship between foreign capital inflow indicators and economic growth in Nigeria, Ghana and South Africa. While a bidirectional relationship exists between some capital inflow indicators in South Africa, it was more of a unidirectional relationship between economic growth and inflow indicators for Nigeria and Ghana. The casualty runs on the reverse, indicating high possibility of capital flight in Nigeria and Ghana

On the basis our findings, the study therefore concludes that:

1. Capital inflows into Sub Saharan Africa are targeted at speculative businesses with short gestation periods. They were not for long term investments. Thus, their impact is only felt in the immediate period, and given that the funds are not allowed to stay, they do not create the desired impact in the long run. Succinctly put, foreign capital inflows seem to be adequate in the short run, but not much of it were retained in the long run for the respective economies to thrive with.
2. Capital inflows into the sub Saharan economies especially Nigeria, were not targeted at priority sectors of the economy such as the agricultural and manufacturing industries; Instead they were invested in service oriented industries like the banking sector, at the expense of the real sectors of the economy!
3. In absolute terms, so much money has been pumped into the economies of SSA overtime and yet there is paucity of funds beleaguering the sub region!
4. Although the sub-Saharan economies are beginning to attract foreign capital inflows and are undergoing a noteworthy transformation as found out by the IMF (2011), there is still room for improvement.
5. Lastly, in both the short and long runs, the three models were quite robust but the model for Ghana is strongest of the three as it possesses a stronger predictive power than that of South Africa and Nigeria.

### 5.2 Recommendations

Based on the above findings and conclusions, the following policy options are recommended.

Firstly, government and policy formulators in Nigeria, Ghana and South Africa need to enact some investor friendly policies that will encourage, promote and attract more capital inflows(Be it official or private inflows) and to provide a conducive and enabling environment. Basic infrastructures like good roads, electricity supply and security must be seen to be adequate. Secondly, there is equally the need to play down on speculative businesses and to invest into the real sectors of the economy. Thirdly, there is also the need to reduce the level of capital flight out of the sub region. Inflows should be tied to specific, relevant and purposeful projects. This will help to create employment opportunities in the long run. Lastly, prudence and proper accountability should be the watchword in the management of accruals from official capital inflows and transfers. Such monies are expected to be channeled into productive ventures by the governments in power and not for profligacy. Governments within the sub region especially that of Nigeria needs to work on her odious transparency initiatives and ranking!

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