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Foreign Capital Inflow and Economic Growth: Comparative Evidence from Africa Anglophone and Francophone Countries

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Foreign Capital Inflow and Economic Growth: Comparative Evidence from Africa Anglophone and Francophone Countries

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Abstract
This study ascertained the influence of foreign capital inflow on Anglophone and Francophone country's economic growth in Africa. Foreign capital components of Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), Foreign Debt Stock (FDS), Personal Remittance (PRT) and Official Development Assistance (ODA) were used as explanatory variables and economic growth proxy by changes in RGDP. Ten (10) African countries were selected from 1981 to 2022. Initial tests were carried out, and the panel random effect estimation as selected by the Hausman test was used. The findings show specifically that: FDI and FPI have a negative influence on economic growth in both blocks in Africa. However, only the effect of FDI in Francophone countries was significant. Thus, concluded that other foreign capital components of FDS, PRT and ODA contributed more to economic growth in countries in both blocks in Africa during the period under consideration.

Keywords: *Foreign capital, Economic growth, Anglophone, Francophone, Hausman test, Panel regression*

Introduction

The governments of emerging economies like Nigeria and Tunisia have executed various policy reforms to achieve aggregate output increase objectives. Salient among these reforms is financial market development promotion and foreign capital inflow policies stimulation into their respective economies. The 1980s and early 1990s marked the early time of monetary policy reform in Africa where the framework was shifted to an indirect pattern of using more market forces to regulate credit flow and cost (Nnanna, Englama, & Odoko, 2004). In the development of emerging economies like Nigeria, foreign capital through the stock market plays a pivotal role. By serving as the conduit via which surplus funds are converted into long or medium-term investments and transmitted to the economy deficit sector (Adenuga, 2010).

Furthermore, if the economy of a nation is open, channels and opportunities to diversify investment portfolios are provided to investors in the country's stock market to reduce the risk inherent in asset investments. Apart from internal factors like domestic investment, that affect economic growth; external factors like Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), external debt and foreign

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remittance also affect the development of the stock market and economic growth in the long run (Aigheyisi & Ovuefeyen, 2013). Foreign capital, stock market and economic growth are interrelated entities that are interdependent for survival. Foreign capital (especially foreign direct investment) verifies the country's economic condition afterward passing capital into the economy and the degree of investment available capital impacts economic growth. The neo-classical growth economic philosophy suggests that resource inflow starts from advanced to emerging economies. Foreign capital inflow has tremendously increased in recent years and this increase has been attributed to technological advancement, economic integration and liberalization of the financial market (Nwinee & Olulu-Briggs, 2016). Hence, countries in Africa can achieve steady growth in the capital market by depending on foreign capital which will influence economic growth in the long run in the face of the visual poverty circle.

Research Problem

Nwakeze (2021) explained encouragingly how the sun and moon become enmeshed in a give-and-take relationship, and how the latter eventually gives way to the former to shine supreme in the sky at crepuscule. This is the type of association that this research identified between foreign capital and Economic Growth (EG). The ' sun' of foreign capital must increase in brightness for the ' moon' of EG to shine brighter in its own time. In the modern-day economy, the importance of foreign capital flow in economic growth cannot be over-emphasized. The fragility of emerging economies' capital markets and lack of infrastructural facilities endemic in these economies constitutes a serious setback to foreign capital flow and the inability of the market to spur growth of the economy and development. Foreign capital inflows can be divided into direct and foreign portfolio investments, foreign debt, Personal remittances received, aid received and development official assistance.

Researchers have used some of these components of foreign capital inflow to examine economic growth and stock market performance both in developed and emerging economies. Prominent among these studies are Nyang'oro (2013), Aigheyisi and Ovuefeyen (2013), Uwubanmwen and Ogiemudia (2014), Nwinee and Olulu-Briggs (2016), Gupta and Singh (2016), Aswathappa (2015), Ikechukwu, Amaka and Sabina (2017), Adebisi and Arikpo (2017), Aguda and Oladoja (2017), Yusha and Gandu (2017), Ali and Jameel (2021), Nwakeze, Orajekwe, NmaSylvanus, Onyebiuwanso and Oshiole (2023). Some of these studies focused on the nexus between FDI and economic growth, others focused on FPI and economic growth or both FDI, FPI and economic growth, thereby neglecting other foreign capital components of foreign debt,

Personal Remittances Received (PRR) Official Development Assistance (ODA) and Aid Received (AR). Also, the findings of these studies were mixed, leaving the subject matter unresolved. It is imperative to point out here that recent comparative cross countries studies that considered the influence of foreign capital inflow of FDI, FPI, foreign debt, PPR, ODA and AR on economic growth within the Francophone and Anglophone countries of Africa, is scanty or none existent in literature to the best of my knowledge, thereby leaving a gap to be filled in the literature motivated this study. Thus, this study examines the comparative influence of foreign capital inflow on economic growth within the Anglophone and Francophone (A&F) region of Africa.

Research Objectives

The macro objective of this study is to examine the influence of Foreign Capital Inflow (FCI) on stock market performance in the A&F region of Africa. The specific objectives of the study are to:

(a) Examine the influence of FDI on economic growth in Anglophone and Francophone countries of Africa.
(b) Investigate the effect of FPI on economic growth in Anglophone and Francophone countries of Africa.
(c) Determine the effect of foreign debt on economic growth in Anglophone and Francophone countries of Africa.
(d) Examine the influence of personal remittances on economic growth in Anglophone and Francophone countries of Africa.
(e) Investigate the influence of official development assistance on economic growth in Anglophone and Francophone countries of Africa.

Scope of the Study

This study is restricted to foreign capital flow in Anglophone and Francophone economies from 1981 to 2022. The choice of this period is informed because it captures all the various significant economic reforms and policies in the sample Anglophone and Francophone countries and the period is long enough to carter for degree of freedom.

Significance of the Study

This study is one of the foremost comparative studies that used a long and recent data set of foreign capital flow of FDI, FPI, foreign debt, personal remittances and official development assistance as determinants of economic growth in selected Anglophone and Francophone countries in Africa to the best of my knowledge,

thereby filling the gap in extant literature up to date. The study will also be of immense benefit to government and policymakers, regulatory bodies, investors, researchers, finance students and another related disciplines.

It will guide the **government and policymakers** in making the appropriate investment policies that will increase the flow of foreign capital. Also, it will help **regulatory bodies and institutions** of selected countries to formulate effective and efficient monetary and fiscal policies favorable to foreign capital inflow. Furthermore, it will enable **investors** to have a clear understanding of how components of foreign capital affect the stock performance of the host country. Finally, the study will also benefit **researchers/students** who wish to undertake further studies aimed at determining the influence of foreign capital on economic growth in Africa.

Literature Review

Theoretical Framework

Solow Growth Theory

FDI and economic growth nexus remain a controversial issue in developmental economics literature. Solo (1956) suggests in its growth model that investment is higher than domestic savings, which is achieved in host countries with FDI. Furthermore, the gains from FDI are potentially restricted in the short run. The recipient country could return to a stable growth rate in the long run if FDI never took place because its permanent influence on economic growth is not noticed given physical capital diminishing marginal returns (De Mello, 1997).

The Endogenous Growth Theory

This theory stresses and emphasizes the importance of technology and its determinant as a formidable element in promoting economic growth rather than considering technology as an endogenous factor. It further suggests technological progress as a core determinant of economic growth, which economic institution's ability to effectively utilize its productive resources over time. Abundant of this ability is from innovation in the operation of production facilities more efficiently and learning to adapt to the dynamics in the production structure (Verbeck, 2000).

Haller's Theory of Economic Growth

The theory positioned that growth in the economy is limited in sense inasmuch that it is analyzed in quantitative terms, emphasizing the functional association between endogenous variables (Haller, 2012). In a broader sense, it is considered a national wealth increase via an increase in Gross Domestic Product (GDP), Gross National Product (GNP) and National Income (NI) which also contains the capacity to produce indicated in both real and absolute size of per capita and structural economy modification (Haller, 2012).

Empirical Review

Hadiji (1995), Ekpo (1995), Mamun and Nath (2005), Balasubramanyam, (1996), Borenztein (1998), Zhang (2001), Ayanwale and Bamire (2001), Hanson (2001), Obwona (2001), Hayami, (2001), Wang (2002), Liu, Burridge, and Sinclair (2002), Campos and Kinoshita (2002), De Gregorio (2003), Akinlo (2004), Adams (2004), Dauda (2007), Ayanwale (2007) Dutse (2008), Umar, Ismail and Sulong (2015) studied the influence of FDI on Economic Growth (EG) in developed and emerging economies, using the OLS and panel regression techniques in the country-specific and cross country study respectively. Their findings show that FDI has a direct influence on EG. On the contrary, the study of Durham (2004), Oyinlola (1995), Nunnenkamp and Spatz (2003), Adelegan (2000), and Kentor and Boswell (2003) revealed a negative relationship between FDI and EG. Furthermore, Adegbite and Ayadi, (2010) applied a multivariate OLS estimation to explore the association between FDI flows and EG in Nigeria. FDI's beneficial role in growth was discovered, which could however be restricted by human capital.

Arshad & Shujaat (2011) cited Hermes and Lensink (2003) in their study, Kareem, Kari, Alam, Chukwu and David (2012), and Saqib, Masnoon and Rafique (2013) show that FDI exerts a significant negative effect on the EG of the host country as indicated by their various OLS regression techniques. Uwubamwen and Ajao (2012) reported a co-integrating association between FDI and EG, but FDI does not significantly influence EG and development in Nigeria as shown by the VECM result. Aigheyisi and Ovuefeyen (2013) used a multiple linear regression approach and time series data spanning (1988 to 2011, and 1991 to 2011) to explore the impact of foreign capital on EG growth of Nigeria and Ghana respectively. In Nigeria, findings reveal that foreign capital significantly influenced economic growth, while in Ghana foreign capital was considered to have an inversely significant impact on Ghana's EG during the studied period (except for official development assistance and aid that was positive and significant). Syed, Syed and Sahar (2013) and

Chauhan (2013) applied the OLS, Autoregressive and Distributed Lag (ARDL) bound test techniques to study the foreign capital influence on EG via stock market development. Syed, et al, (2013) found that FDI and workers' remittances significantly influence stock market capitalization and EG. FDI had the highest impact on Bonbay and National Stock Exchange and economic growth, and FPI had a high impact on the Bonbay stock market development with a very low influence on the National Stock Exchange. Foreign Institutional Investment (FII) has the least impact on both markets (Chauhan, 2013).

Tahir, Khan and Shah (2015) studied the correlation between imports, Foreign Remittances (FR), FDI, and EG, using time series data spanning 1977 to 2013 and OLS regression techniques. Findings point out that FR and FDI have a significantly direct role in the Pakistan economic growth process. Uwubanmwen and Ogiemudia (2016) explored the influence of FDI on Nigeria's EG, using annual time series data spanning 1979 to 2013. The ARDL Model was applied and the findings revealed that FDI has both immediate and time lag effects on Nigeria's economy in the short run. However, the non-significant inverse influence of FDI on the Nigeria EG was confirmed in the long run.

Adebisi and Arikpo (2017) studied the nexus between EG and FPI in Nigeria from 1984 to 2015. The ARDL technique was applied. The result shows that the financial market and EG have no long-run causal relationship with FPI in Nigeria. Ali and Hussain (2017) and Tsaurai (2017) ascertained the impact of FDI on EG in Pakistan. Correlation, multiple regression and system generalised methods of moments (GMM) techniques were applied. The positive influence of FDI on EG and emerging markets was confirmed in their findings. The Vector Auto-Regressive (VAR) technique was applied by Akimbobola, Razaq and Odusanya (2017) to investigate the link between FPI, democracy and economic growth in Nigeria ranging from 1986 to 2013. Findings show that FPI has a significant direct nexus with EG during the studied scope. Khun (2018) examined the Impact of FDI on EG in Cambodia from 1998 to 2010. The analysis covered the period between 1998 and 2010 and the regression result revealed that a direct relationship exists between EG (GDP) and FDI. He concluded that the direct impact of FDI is caused by "technological diffusion" emanating from companies using foreign capital and spreading to related firms as technical support. Dinh, Vo, Vo, and Nguyen (2019) ascertained the FDI and EG nexus of developing countries from 2000 – 2014. The Vector ECM and Fully Modified OLS methodology were adopted. Findings show that FDI stimulates economic growth with the help of macroeconomic variables of domestic investment, M2, and credit to the private sector among others.

Muhia (2019) looked at the influence of FDI on EG in Kenya's economy's major sectors from 2000 to 2017. Quantitative data and estimation methods were adopted. Findings revealed that FDI in the infrastructural sector significantly affect EG while that of the agricultural and manufacturing sector have no significant effect on EG. Opeyemi (2020) X-ray FDI and inflation rate impact on economic growth in selected African countries from 1996 to 2018. The study adopted the OLS regression techniques and findings revealed that FDI positively influenced growth in all sample countries except for Egypt. In four out of five countries, inflation hurts economic growth. Ali and Jameel (2021) used the Co-integration of the Johansen Test to determine that there is no long-term link between FDI and GDP in Iraq from 2006 to 2015. This study also discovered that FDI Granger-Causes GDP only in the short run, and that the causal link between FDI and GDP is only in the short term. Nwakeze et al. (2023) used an Ex-Post Facto study design and regression estimation techniques to investigate the relationship between FDI and economic growth in ten nations. The study discovered a statistically significant and positive long-term association in all ten countries selected as cases.

Statement of Research Gap

From prior literature reviewed, Some of these studies focused on the effects of FDI and EG, others focused on FPI and EG or both FDI and FPI on growth and stock market, thereby neglecting other aforementioned components (Foreign Debt Stock (FDS), PR received, ODA and aid received) of foreign capital and these studies have mixed findings. Thereby, leaving the subject matter unresolved. It becomes clear that recent studies that considered the effect of FCI (Foreign Capital Inflow) of FDI, FPI, FDS, PR received, ODA and aid received on EG in Anglophone and Francophone countries as comparative analysis is very scarce in literature to the best of my knowledge, which is the gap in knowledge to be filled. Hence, this study ascertained the influence of FCI on EG in Anglophone and Francophone countries of Africa.

Conceptual Framework

Foreign investments are external capital aids owned by private investors. It could take the form of FPI or FDI. UNCTAD (2008) defines FDI as an extensive investment association, reproducing a lengthy durable benefit and control by the host unit in an economy (parent enterprise) resident in another economy different from that of the affiliate enterprise. International Monetary Fund (1993) defines FPI as stock (equity) and leverage issuances including foreign investors' direct purchases < 10% control, depository receipts and country's funds. Put explicitly, FPI is an international investment in stocks with less interest in management

control and more interest in profit-making (*Akinbobola, Razaq & Odusanya,* 2017). The foreign (external) loan is an unpaid debt or series of debts a country owes to foreign creditors or institutions. The absolute debt could be short and long-term liabilities combination. That is, it is a loan owed by a country to an external institution or creditor. The development of the country's stock market can be influenced by foreign debt resources via the corporate borrowing costs mechanism specifically in frontier and emerging markets (Aigheyisi & Ovuefeyen, 2013).

Personal Remittance (PR) and Official Development Assistant (ODA) are the total employee compensation (EC) and personal transfers. EC is the seasonal, border income and sundry of short-term employees, employed in their non-resident economy by non-resident entities. ODA is government *aid* aimed to specifically spur economic *development* and welfare of emerging economies. Personal remittances and foreign aid could have a direct influence on stock market development (Aigheyisi & Edore, 2013). The sustainable impact of PR is not guaranteed, while that of ODA is a function of how investors perceive the market, alternative investment returns and equity investment returns among others. More PR is attracted to the stock market for economic growth and development when returns from the stock market are higher than that of the money market and other instruments from alternative investment, thereby indicating a favourable market perception (Aigheyisi & Ovuefeyen, 2013).

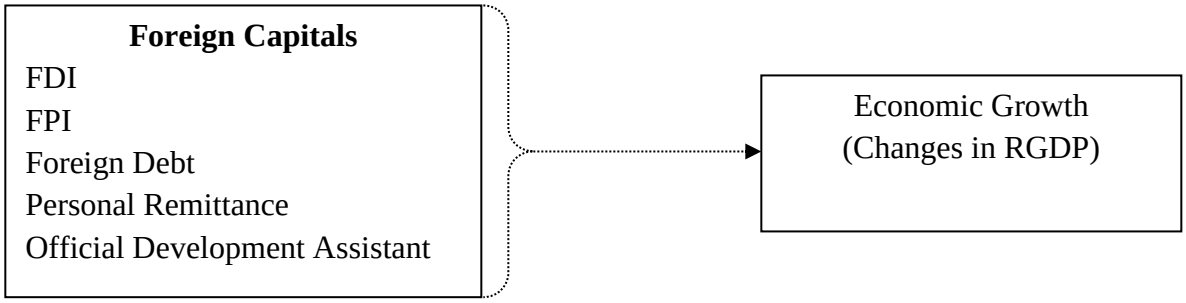

Fig 2.1 Theoretical Diagram

Methodology

The longitudinal research design is applied in this study, given that the variables under consideration have already manifested and cannot be manipulated. The study uses secondary data that was sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin 2019 and World Bank Development Index data. The variables considered include; EG, FDI, FPI, FDS, PR and ODA. The study covers a period of 42 years (1981 to 2022). All Anglophone (English-speaking) and francophone (French-speaking) countries in Africa continent constitute the population of this study. However, this study adopted a purposive sampling

technique to select five (5) Anglophone and francophone countries that sum up to ten (10) countries as the sample of this study. These countries are Nigeria, Ghana, South Africa, Zimbabwe, Kenya, Senegal, Tunisia, Togo, Cameroon and Benin Republic. These countries were selected because they are the most popular English and French-speaking countries in Africa and have FDI and FPI data that span above twenty-five (25) years.

The preliminary tests adopted are descriptive statistics used to summarize the value of variables and present them in a more convenient form. Thereafter, the stationarity test was carried out using the panel Im, Pesaran, and Shin tests to determine whether the variables are stationary and in what order they are integrated. This method was taken because it allows for individual unit root processes so that P_i may vary across cross-sections. The test is characterized by the combining of individual unit root tests to derive a panel-specific result. This was determined as:

$$\Delta Y_t = \alpha + \beta t + \delta Y_{t-1} + \gamma \sum_{i=1}^{m} \Delta Y_{t-i} + \varepsilon_t \dots\dots\dots\dots\dots\dots (3.1)$$

Where; $\boldsymbol{m}$ equals the lag length, $\boldsymbol{\alpha}$ the drift, t is the trend deterministic and ε_t is the perturb term.

The study combines both statistical and econometric techniques to analyze the data collected. The variables under consideration were subjected to correlation and regression analysis, Pearson correlation is used to ascertain the strength and direction of association between the variables. The Panel Least Square (PLS) regression approach is used to determine the effect of explanatory variables on the dependent variable. First, the Pool data analysis was carried out followed by Fixed Effect Estimation (FEE) and Random Effect Estimation (REE), thereafter the Hausman test was carried out on the random effect estimation to determine what to choose between FEE and REE. Finally, the Durbin-Watson post-regression statistics are used to authenticate the absence of serial correlation in the model.

Theoretical Framework

This Solow's (1957) model is the base of this study. This framework is informed because we can estimate the model by breaking down the factors like labour, technology, foreign capital and the addition of other variables (foreign debt, personal remittances and official development assistance among others) that contribute to the output growth rate. We derived the growth accounting method as follows:

$P = \partial\infty\ (C, L, \omega) \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (3.2)$

where P, C, L, and $\partial\infty$ are output, capital, labour, and production efficiency, respectively; and ω equals vector of control variables. Taking Cobb-Douglas form for instance, and the logarithms and time derivatives of equation (3.2) result in:

$S_P = S_\partial + \delta_{1,SC} + \delta_{2,SL} + \delta_{3,S\omega}$ ……(3.3)

Where:

S_P = rate of growth of $\partial CL\omega$ (the subscripts are defined in per capita terms).

δ_1 *to* δ_3 = output elasticities with regards to physical capital, labour and the ancillary variables respectively.

This study follows the Cobb-Douglas production function as applied by Aigheyisi and Ovuefeyen (2013).

Model Specification

This study adapted the model of Aigheyisi and Ovuefeyen (2013) an amended version of Eq (3.3) with FPI and FDI included as one of the factor inputs and foreign debt stock, personal remittance and official development assistance as ancillary variables. Putting these variables into equation (3.3) the model's functional version is:

$\Delta RGDP_t = \boldsymbol{f}$(LFDI, LFPI, LFDS, LPR, LODA)……(3.4)

The estimated version is stated as:

$\Delta RGDP_t = \alpha_0 + \beta_1 Lfdi_{it} + \beta_2 Lfpi_{it} + \beta_3 Lfds_{it} + \beta_4 Lpr_{it} + \beta_5 Loda_{it} + \mu_t$ ……....(3.5)

Where;

RGDP = Real Gross Domestic Product

LFDI = Log of FDI

LFPI = Log of foreign portfolio investment

LFDS = Log of foreign debt stock

LPR = Log of personal remittance

LODA = Log of official development assistance

α_0 = GDP autonomous coefficient holding other variables constant

$\beta1, \beta2, \beta3, \beta4,$ and $\beta5$ = Unknown Coefficients

μ_t = Error term

i,t = respective ith variables at time t

A priori expectations as derived from the empirical literature are expressed as:

$\alpha_0 > 0$; $\beta1$ to $\beta5 > 0$

Operationalisation of Variables

The model consists of six variables, with RGDP specified as the regressed variable. FDI, FPI, FDS, PR and ODA are the core explanatory variables that significantly determine RGDP in Francophone and Anglophone countries in Africa.

Economic Growth (EG)

It is proxy by changes in RGDP, which is the sustainable increase in output of a country within a period usually one year. It is computed as;

$$\Delta RGDP = \frac{Current\ year\ RGDP - Previous\ year\ RGDP}{Previous\ Year\ RGDP} * \frac{100}{1}$$

Foreign Direct Investment

It is proxy by the ratio of FDI inflows to GDP. A positive coefficient with economic growth is anticipated.

$$FDI = \frac{Foreign\ Direct\ Investment}{Gross\ Domestic\ Product} * \frac{100}{1}$$

Foreign Portfolio Investment

Foreign portfolio investment is measured as the ratio of foreign portfolio investment to GDP. It is expected to have a positive effect on economic growth.

$$FPI = \frac{Foreign\ Portfolio\ Investment}{Gross\ Domestic\ Product} * \frac{100}{1}$$

Foreign Debt Stock

Proxy by the ratio of foreign debt to GDP, It is expected to have a positive effect on economic growth.

$$FDS = \frac{External\ Debt\ Stock}{Gross\ Domestic\ Product} * \frac{100}{1}$$

Personal Remittance

This variable is measured as PR received as a ratio of the GDP. A positive relationship is anticipated.

$$PR = \frac{Personal\ Remittance\ Investment}{Gross\ Domestic\ Product} * \frac{100}{1}$$

Official Development Assistant

It is calculated as ODA and aid received as a ratio of the GDP. A positive relationship is anticipated.

$$ODA = \frac{Official\ Development\ Assitance}{Gross\ Domestic\ Product} * \frac{100}{1}$$

Findings and Discussions

Table 4.1 Summary Statistics

Anglophone Countries						
	RGDP	FDI	FPI	FDS	PRT	ODA
Mean	8.92E+10	4.73E+08	-1.71E+09	1.57E+10	2.30E+09	9.68E+08
Median	2.85E+10	26675410	-11013872	4.88E+09	4.25E+08	6.50E+08
Maximum	5.68E+11	7.69E+09	1.43E+10	1.46E+11	2.11E+10	1.14E+10
Minimum	4.98E+09	-3.51E+09	-1.96E+10	0.000000	349842.1	31710000
Std. Dev.	1.30E+11	1.31E+09	4.37E+09	3.12E+10	5.43E+09	1.23E+09
Skewness	1.858929	2.983060	-1.543875	3.129752	2.813316	5.435534
Kurtosis	5.484661	15.84424	7.906734	12.07906	9.211782	42.92897
Jarque-Bera	110.8112	1111.486	186.2567	673.9262	389.2756	9490.120
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Francophone Countries						
	RGDP	FDI	FPI	FDS	PRT	ODA
Mean	1.15E+10	-35684155	3605535.	5.59E+09	4.36E+08	4.45E+08
Median	8.41E+09	-6113092.	184005.2	3.22E+09	1.76E+08	3.93E+08
Maximum	4.76E+10	5.36E+08	3.17E+08	2.79E+10	2.35E+09	1.94E+09
Minimum	60058663	-1.02E+09	-7.04E+08	6.22E+08	6077687.	46090000
Std. Dev.	1.19E+10	2.39E+08	80279247	6.21E+09	5.95E+08	3.04E+08
Skewness	1.424605	-1.537596	-3.439573	1.918570	1.768568	1.490264
Kurtosis	4.420995	7.690569	39.72608	6.154020	4.948497	6.901477
Jarque-Bera	69.69344	216.2755	9598.377	169.6164	112.1173	165.7224
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

Table 4.1 shows that the ratio between the mean and median for all variables is approximately one (except for FDI and RGDP) in Anglophone countries and (except for RGDP and PRT) in Francophone countries. There is a meaningful difference between minimum and maximum values ranging from 0.00 to 7.69 for all variables in Anglophone countries and -1.02 to 5.36 in Francophone countries. The variables also exhibit minor deviation from their corresponding mean in both regions as indicated by their corresponding standard deviation value (except for FPI) in Francophone countries. All variables have a long tail to the right (except for FPI which has a long tail to the left) in Anglophone countries and FDI and FPI in Francophone countries, as indicated by their positive and negative skewness value respectively. Also, all the variables show peak distribution properties that are relative to normal distribution, as indicated by their corresponding Kurtosis values that are greater than 3.0 in both Anglophone and Francophone countries. Finally, the Jarque-Bera statistic values and their corresponding significant probability values show that all the variables are not

normally distributed in both Anglophone and Francophone countries respectively. Hence, the need for a unit root test becomes imperative.

Correlation Analysis

Table 4.2 Correlation Matrix

Correlation t-Statistic ( ) Probability [ ]	Anglophone RGDP	Francophone RGDP
RGDP	1.000000 ----- -----	1.000000 ----- -----
FDI	0.548291* (7.503973) [0.0000]	-0.356567* (-4.872617) [0.0000]
FPI	-0.527078* (-7.098795) [0.0000]	-0.133631* (-1.721532) [0.0871]
FDS	0.611883* (8.854323) [0.0000]	0.857704* (21.29842) [0.0000]
PRT	0.631690* (9.326398) [0.0000]	0.720978* (13.28338) [0.0000]
ODA	0.292035* (3.494847) [0.0006]	0.420036* (5.909223) [0.0000]

** =1% Significance Level*

The correlation matrix in Table 4.2 shows the power and direction of association between the predicted variable and all explanatory variables in both Anglophone and Francophone countries. FDI has a significant strong direct association with economic growth (RGDP) in Anglophone countries and a significant negative relationship with economic growth (RGDP) in Francophone countries with the correlation coefficient of r = 0.55 and r = -0.36 respectively. FPI has a significantly strong negative relationship with RGDP in Anglophone and a very weak significant negative relationship with RGDP in Francophone countries, with the correlation coefficient of r = -0.53 and r = -0.13 respectively.

FDS and PRT have a very strong significant positive relationship with RGDP in both Anglophone and Francophone countries, with the correlation coefficient value of r = 0.61 and 0.86 for FDS, r = 0.63 and

0.72 for PRT respectively. ODA has a significantly weak positive relationship with RGDP in both Anglophone and Francophone countries, as shown by the correlation coefficient of r = 0.29 and r = 0.42 respectively. From Table 4.2 it is clear that FDI inflow has increased economic growth significantly in the Anglophone countries, but has significantly decreased economic growth in Francophone countries during the studied period. Also, the increase in FPI inflow has significantly decreased RGDP both in Anglophone and Francophone countries respectively. Finally, an increase in FDS, PRT and ODA inflow increased RGDP significantly in Anglophone and Francophone countries during the period under review.

Unit Root Test

Table 4.3 Stationarity Test

	Anglophone Countries			**Francophone Countries**		
Variables	**Im, Pesaran, Shin Statistic**	**Order**	**Remark**	**Im, Pesaran, Shin Statistic**	**Order**	**Remark**
ΔRGDP	2.75612*	1(1)	Stationary	-3.27282	1(1)	Stationary
FDI	-9.16845*	1(1)	Stationary	-8.99421	1(1)	Stationary
FPI	-3.55233*	1(0)	Stationary	-7.82117	1(1)	Stationary
FDS	-3.56887*	1(1)	Stationary	-4.57506	1(1)	Stationary
PRT	-6.10584*	1(1)	Stationary	-4.87727	1(1)	Stationary
ODA	-5.16096*	1(1)	Stationary	-6.46714	1(1)	Stationary
, = 1% ** = 5% and * = 10% level of significance respectively*						

Table 4.3 shows that only the FPI variable in Anglophone countries is stationary at levels I(0) as indicated by the Im, Pesaran and Shin statistics. However, after taking the first difference of the non-stationary variables, the Im, Pesaran and Shin statistic indicates that all variables became stationary at the first difference and integrated of I(1).

The panel regression estimate of fixed and random effects is carried out in both Anglophone and Francophone countries in Table 4.4. The Hausman test is usually used in terms of selecting the more appropriate model between the random and fixed effects in both countries. Since probability values of 1.0000 and 0.45 are> 0.05 in both Hausman tests. Thus, the random effect model is more appropriate in both Anglophone and Francophone countries. The results of the random effect model are discussed below. The result in Table 4.4 shows that the value of determination stood at 83% and 74% (as indicated by R-squared values of 0.829 and 0.736) in both Anglophone and Francophone countries (AFCs), and when adjusted for the degree of freedom the determination coefficient still stood at 82% and 73% (as shown by

the adjusted R-squared coefficient of 0.822 and 0.728) this suggests that about 82% and 73% variations in EG (ΔRGDP) are explained by the model.

Panel Regression Analysis

Table 4.4 Fixed Effects (FE) and Random Effect (RE) Estimation

Anglophone Countries				**Francophone Countries**	
	Fixed Effect Estimates	Random Effect Estimate		Fixed Effect Estimates	Random Effect Estimate
Variables	**Coefficients**	**Coefficients**	**Variables**	**Coefficients**	**Coefficients**
C	3.36E+1	3.21E+10*	C	8.81E+10	2.41E+09
t-statistics	6.450314	3.353000	t-statistics	0.334661	1.592826
Prob. value	0.0000	0.0011	Prob. value	0.7384	0.1132
FDI(-1)	**-4.248645**	**-4.315575**	FDI(-1)	**1.564758***	**-10.91202***
t-statistics	-1.105941	-0.745441	t-statistics	2.605475	-5.698792
Prob. value	0.2710	0.4574	Prob.value	0.0102	0.0000
FPI	**-2.249288****	**-2.280359**	FPI(-1)	**-0.725262**	**-1.408710**
t-statistics	-2.125170	-1.224285	t-statistics	-0.538782	-0.287599
Prob. value	0.0356	0.2232	Prob.value	0.5909	0.7740
FDS(-1)	**1.736128***	**1.956674***	FDS(-1)	**0.120138**	**0.594129***
t-statistics	7.243822	5.449919	t-statistics	0.798404	4.482021
Prob.value	0.0000	0.0000	Prob.value	0.4260	0.0000
PRT(-1)	**19.04748***	**18.96448***	PRT(-1)	**2.581681*****	**8.970982***
t-statistics	18.46418	7.586652	t-statistics	1.857838	6.715571
Prob.value	0.0000	0.0000	Prob. value	0.0653	0.0000
ODS(-1)	**-12.32327***	**-12.67605****	ODS(-1)	**0.649051**	**4.368532****
t-statistics	-3.298693	-2.401887	t-statistics	1.208564	2.397097
Prob.value	0.0013	0.0178	Prob.value	0.2288	0.0177
R^2	0.909333	0.829306	**R-Square**	0.989722	0.736494
$Adj\ R^2$	0.902476	0.822367	**Adj R-Square**	0.988998	0.727939
F-Stat	132.6103	119.5177	**F-Stat**	1367.429	86.08536
Prob	0.000000	0.000000	**Prob**	0.000000	0.000000
DW Stat	1.957817	1.871932	**DW Stat**	2.040190	2.352034
Hausman Test			**Hausman Test**		
Chi-Sqr Stat	Chi-Sq Df	Prob	Chi-Sqr Stat	Chi-Sq Df	Prob
5.010000	5	1.0000	7.301000	5	0.4500
, = 1% ** = 5% and * = 10% level of significance respectively*					

This could lead us to suggest that there are some other factors (about 18% and 27%) which are responsible for variations in EG in Anglophone and Francophone countries which are outside the scope of the model, hence captured by the random perturb term. The F-statistic values of 119.52 and 86.09 had p-values (0.0000) and (0.0000) for both Anglophone and Francophone countries respectively which indicates that a significant linear association exists between the regressand and regressor variables. The Durbin-Watson

values of 1.87 and 2.35 which can be approximated to 2 suggest that the presence of autocorrelation is unlikely.

Discussion of Findings and Policy Implication

An evaluation of the slope coefficients of the explanatory variables indicates that foreign direct investment (FDI) in Anglophone countries negatively affects economic growth (ΔRGDP). A unit increase in FDI will result in a 4.32 decrease in growth (ΔRGDP). FDI is also a non-significant variable as it can be observed in the value of the t-statistics of 0.745441 (0.4574 p-values) which is not significant at a 5% confidence level. On the other hand, FDI in Francophone countries affects economic growth (ΔRGDP) negatively. An increase in FDI units resulted in 10.91 significant decreases in growth (ΔRGDP). FDI is also a significant variable as can be observed in the value of the t-statistics of 5.698792 (p-value of 0.0000) which is significant at 1%. This contradicted the *A priori* expectation and may be due to lack of infrastructural facilities and political instability in these countries which subsequently influence the EG of the sampled countries negatively. This finding is in line with that of Uwubamwen and Ajao (2012), Salami, Fatimah, Gazi and Makua (2012), and Uwubanmwen and Ogiemudia (2016) but contrary to the findings of Syed, Syed and Sahar (2013) and Chauhan (2013), Ali and Hussain (2017), Tsaurai (2017) in the literature.

Foreign portfolio investment (FPI) was negatively related to EG (ΔRGDP) in both AFCs. A unit increase in FPI will bring about -2.80359 and -1.408710 non-significant decreases in ΔRGDP. Based on significance, FPI had a non-significant relationship with ΔRGDP with its t-statistic values of 1.224285 and 0.287599 (prob-value 0.2232 and 0.7740 > 0.05) in both results. This negative and non-significant relationship between FPI and ΔRGDP implies that the capital market in the sampled countries has not been able to use foreign portfolio investment in securities to achieve the desired objective of having a significant positive effect on economic growth in Anglophone and Francophone countries. This finding corroborated that of Nyang'oro (2013), Chauhan (2013), Adebisi and Arikpo (2017) but contrary to the findings of Akimbobola (2017) in the literature.

Foreign Debt Stock (FDS) was directly and significantly related to EG (ΔRGDP) in both AFCs. It is significant for growth because the t-statistics values of 5.449919 and 0.594129 (p-value of 0000 and 0.0000) are significant at a 1% confidence level. A unit increase in FDS will result in 1.956674 and 0.594129 significant increases in ΔRGDP of both Anglophone and Francophone countries. This variable conforms to

A priori expectation and the finding agrees with that of Aigheyisi and Edore (2013) in the literature. Personal Remittance (PRT) had a direct association with EG and was also significant in terms of probability value in both Anglophone and Francophone countries. A unit increase in personal remittance will bring about 1896448 and 8.970982 significant increases in economic growth. This direct and significant relationship at the 1% level complies with *A priori* expectation and it implies that personal remittance is properly invested and managed hence has a significant positive effect on economic growth subsequently. This finding corroborated that of Syed, Syed and Sahar (2013), and Tahir, Khan and Shah (2015) in the literature.

Official Development Assistant (ODA) was negatively related to ΔRGDP and also significant at a 5% level with t-statistics and p-values of 2.401887 and 0.0178 respectively in Anglophone countries. A unit change in ODA will decrease EG by -12.67605. This is contrary to *A priori* expectation, as expected that official development stock should have a positive and significant relationship with growth. However, the inverse relationship could be attributed to corruption of diverting and embezzlement of development funds for personal use. In Francophone countries, ODA has a significant positive influence on EG at a 1% confidence level. As shown by the t-statistic and probability values of 2.397097 and 0.0177 respectively. A unit change in ODA will increase EG by 4.368532, and this conforms to *A priori* expectations and the findings of Aigheyisi and Edore (2013) in the literature.

Conclusions and Recommendations

This study examines the influence of foreign capital flow on Economic Growth (EG) in Anglophone and Francophone countries (AFCs) in Africa. Foreign capital factors of FDI, FPI, Foreign Debt Stock (FDS), Personal Remittance (PRT) and Official Development Assistance (ODA) were used as explanatory variables and economic growth proxy by changes in RGDP. Sample data of ten (10) (5 Anglophone and 5 Francophone) countries were selected from 1981 to 2016. The primary test of summary statistics, correlation analysis, and unit root test were carried out. The panel least square techniques of random effect estimation as selected by the Hausman test were analyzed. The findings show specifically that: FDI and FPI have a negative influence on EG in both AFCs in Africa. However, only the influence of FDI in Francophone countries was significant. However, FDS, PRT and ODA have a significant positive effect on EG in both AFCs in Africa. From the foregoing analysis, this study concludes that AFCs in Africa have not been able to attract and direct a significant magnitude of FDI and FPI that will have the desired effect on

their EG during the sample period. Hence, other foreign capital components of foreign debt stock, personal remittance and official development assistance contributed more to EG in both AFCs in Africa during the period under consideration. These findings informed the following recommendations;

1. More FDI should be directed to the economy productive for the production of capital goods to boost domestic capital formation.
2. Policymakers should be conscious of using more foreign direct investment to promote short-run EG, as its excessive use will have a significant negative effect on EG especially in francophone countries. Caution must be taken for indigenous industrial development not to be crowded out by FDI in Anglophone and Francophone countries.
3. Foreign portfolio investment should not be relied upon excessively in the short run by Anglophone and Francophone countries to promote economic growth, since its effect on growth is negative in the short run.
4. Policy efforts towards foreign debt stock, personal remittance and official development assistance are in the right direction, hence FDS, PRT and ODA should be adopted in the short run as catalysts to promote economic growth.
5. Policy consistencies, investment and political stability are also pertinent in inviting and retaining FDI and FPI. Thus policies and political stability, corruption-free economy, and favourable investment climate must be pursued with utmost concern in these countries. Provisions for investment incentives are imperative for maximizing the payback from foreign capital.
6. Anglophone and Francophone countries in Africa should increase investment and public expenditure on crucial infrastructures, such as education, power, health, telecommunication, security and transportation as an opportunity to entice more foreign capital into AFCs in Africa.

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