

# Foreign Direct Investment in West Africa: A Case of Anglophone versus Francophone Countries

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## ABSTRACT

*This research was aimed at investigating the effect of foreign direct investment (FDI) on economic growth in thirteen (13) West African Anglophone and Francophone countries in the short and long term by using annual data from 1990 to 2021. From the auto-regressive distributed lag (ARDL) results, it was deduced that FDI has a long-run positive significant relationship with economic growth in the Anglophone region, but was not found statistically significant in the Francophone region. In addition, both regions exhibited an inverse relationship between FDI and GDP growth in the short run. From the findings, other variables such as gross fixed capital formation, exchange rates, and trade openness were statistically significant in driving GDP growth in the Anglophone region but not in the Francophone region, except for the exchange rate. Overall, it was concluded that FDI benefits the Anglophone region of West Africa more than the Francophone region. These findings suggested that lingual structures may play a dominant role in the attraction of FDI and other macroeconomic variables in these economies. Thus, there should be strong regulatory frameworks to improve FDI inflows through human capital development, political stability, a friendly business environment, and infrastructural development, as well as ensuring proper galvanisation and effective utilisation of investment funds in the regions.*

**KEYWORDS:** *economic growth, foreign direct investment, Panel ARDL, trade openness, West Africa.*

**JEL CLASSIFICATION:** *C33, F21, F43, O55.*

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## 1. INTRODUCTION

Initially, developing countries viewed foreign direct investment (FDI) with distrust and alleged the fears that multinational corporations (MNCs) would weaken domestic production, harm social welfare, and threaten national sovereignty. However, over time, FDI has proven to be a source of reliable funds for countries (especially developing economies) seeking investment opportunities. Consequently, FDI helps these economies to shore up external debt profiles while improving technological transfers and innovations. As such, FDI is considered a key component of an open, productive, and competitive global economy with the potential that guarantee economic development (Organisation for Economic Co-operation and Development-OECD, 2002). Aromasodun (2022) observed that FDI is the central engine for economic growth in West Africa, foreign direct investment is crucial for these countries to attract investment capital and new technology, improve managerial skills and employment, and accelerate economic growth and development (De Mello, 1997). Anyanwu and Yameogo (2015) found that trade openness; economic development, domestic investment, natural

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resources endowment and exports, previous FDI inflow, and monetary integration significantly influence FDI inflows into the West African sub-region. Korsah, Amanamah and Gyimah (2022) noted that FDI in the West African economies is mainly driven by market size or gross domestic product (GDP), natural resources availability, and trade openness, among others. However, most countries in West Africa (W/A) have weak institutional frameworks and human capacity, making it challenging to minimise the effects of political instability, terrorism, violence, civil unrest, and organised crime on domestic investment and economic growth (Ijirshar & Andohol, 2022).

The West Africa region comprises sixteen independent countries. In Africa, the lingua franca countries can be traced to the official languages of their former colonial masters, hence, the classification of countries into Portuguese, Anglophone, Spanish, and Francophone language cohorts (Korsah, et al., 2022). West Africa, a sub-region of Sub-Saharan Africa (SSA) in the African continent consists of five Anglophone (Nigeria, Ghana, Gambia, Sierra-Leone, and Liberia), nine Francophone (Benin, Burkina Faso, Cote D'Ivoire, Guinea, Togo, Mali, Senegal, Niger, and Mauritania), one Portuguese-speaking (Guinea-Bissau), and one Spanish-speaking (Cape-Verde) countries. However, Liberia is the only English-speaking country in W/A that was not colonised. Arias and Girod (2011) and Khan (2017) suggested that different lingua structures could influence political, economic, organisational, and institutional development. Hence, it is important to determine whether the Anglophone and Francophone language cohorts affect FDI inflows into the West African region.

Although many FDI-growth nexus studies have been carried out in Africa and Sub-Saharan Africa (SSA), however, the West African sub-region has been hugely understudied. For instance, Nwude, Ugwuegbe and Adegbayibi (2023) examined language cohorts such as Anglophone and Francophone linkages to FDI or foreign aids in Sub-Saharan Africa, while Pacific, Ramadhan and Kyissima (2015) and Akisik, Gal and Mangaliso (2020) researched on Africa countries. Despite these, there is a dearth of the FDI-economic growth relationship in Anglophone and Francophone West African countries to be covered.

This study aims to empirically seek evidence of foreign direct investment on the economic growth of Anglophone and Francophone West African countries using annual data from 1990 to 2021 sourced from the World Development Indicators of the World Bank (2023). Thus, the objective of the study is to determine if foreign direct investment significantly impacts the economic growth of Anglophone and Francophone West African countries in both the short and long run. The other part of this paper is segmented into sections. Section two reviews the related literature, section three addresses methodology and model specification, section four is data analysis, and section comprises the recommendations and conclusions.

## **2. REVIEW OF RELATED LITERATURE**

### **2.1 Foreign Direct Investment (FDI) versus Economic Growth**

There is no doubt that many countries especially the developing economies have witnessed tremendous expansion in the areas of foreign direct investment by multinational corporations (MNCs) since the ninety-eighties (Mallampally & Sauvant, 1999). This development may have been characterised by factors such as changes in technologies, improvements in trade liberalisation and investment regimes, deregulation as well as privatisation. Foreign direct investment simply means an investment involving the contribution of foreign funds into a business operating in another country other than the investors' to create a lasting stake (OECD, 2008). FDI brings about economic growth; hence, it is a conveyance for achieving

speedy economic development for developing countries. It provides an opportunity for the transfer of technology and innovation, increases labour standards and skills, improves trade balance, enhances optimal utilisation of natural resources and technical know-how, and enables firms to be internationally competitive and access global managerial skills and practices.

Findlay (1978) asserted that FDI raises the level of technological development in many developing economies via a contagion effect as a result of the technology and business practices chosen by MNCs. Foreign direct investment can become an engine of economic growth in a host economy when such investments sustain and improve economic development in that economy (Ngowi, 2001). According to OECD (2002), FDI has the potential to stimulate growth by increasing the total factor productivity as well as the efficiency of utilisation of resources in the recipient countries. Borensztein, De Gregorio, and Lee (1998) posited that countries with sufficiently educated workforces can enjoy full benefits from FDI.

Despite the attendant gains of FDI, especially in third-world economies, some researchers have asserted that these countries should be mindful of being over-dependent on FDI as a means of attaining economic growth and development (Hausmann & Fernández-Arias, 2000; Loungani & Razin, 2001). It is posited that FDI may not solely contribute to overall economic growth, as often the MNCs restrain reinvestment of income in host countries. Also, the benefits that accrue from FDI can only be enjoyed by host economies when there are initial favourable conditions on the ground as at the time of investment (OECD, 2002). De Mello (1997, 1999) opined that FDI has prominent effects on the performance of only economies where domestic and foreign capital complement each other. Mencinger (2003) noted that FDI affects the balance of payments negatively, as it has a higher impact on imports than exports, thereby affecting economic growth adversely. Vissak and Roolaht (2005) asserted that FDI could negatively affect economic growth, since the host country can become dependent on technologies introduced by multinationals as well as fail to achieve improvement of the balance of payments through the initial financial flows in the long run.

Comparatively, Africa attracted about \$39 billion and \$83 billion in foreign direct investment inflows in 2020 and 2022 respectively while Anglophone and Francophone economies attracted about US \$163 billion and US \$64 billion net FDI inflows respectively between 1990 and 2021 (UNCTAD, 2022; World Bank, 2023). It is noticeable that the French-speaking economies got almost twice the amount of the English-speaking ones. So, one may be prompted to ask if the gap in the FDI inflows as observed could also reflect in their GDP growth.

## 2.2 Empirical Review

Ndambendia and Njoupouognigni (2010) carried out a study on the long-run relationship among foreign aid, FDI, and economic growth in thirty-six Sub-Saharan African economies using data spanning from 1980 to 2007. Their results revealed that foreign aid and FDI have positive and long-run effects on economic growth in the countries examined. Behname (2012) examined the influence of foreign direct investment on economic growth in Southern Asia from 1977 to 2009. The findings showed that FDI and other indices positively and significantly affect economic growth while technological gap, population, and inflation negatively affect economic growth. Uwubanmwun and Ajao (2012) empirically investigated the determinants and impact of FDI on economic development in Nigeria from 1970 to 2009, employing the Vector Error Correction Model (VECM) and Granger-causality methodology. They found that trade openness, exchange rate, interest rate and inflation rate are major

contributors to FDI inflow into the country while GDP and size of government did not significantly influence FDI. Although their findings also showed a long-run equilibrium relation between FDI and GDP, but FDI did not exhibit a significant effect on the growth and development of the economy during the period. Similarly, Adeniran, Yusuf, and Adeyemi (2014) analysed the connection between exchange rate and economic growth in Nigeria by employing the ordinary least squares (OLS) regression technique on annual time series data from 1986 to 2013. They found that exchange rate has a positive but non-significant effect on Nigeria's economic growth.

In determining the effect of FDI on the economic growth of China, Agya, and Wunuji (2014), employed the Granger causality test on secondary data from 1995 to 2010. They found that FDI did not result in economic growth in the primary industries, but affected the secondary ones. On the other hand, economic growth affected inflows of FDI both in the secondary and tertiary industries. Fetahi-Vehapi, Sadiku, and Petkovski (2015) examined the effect of trade openness on Southeast European economies from 1996 to 2012. By using the Generalised Method of Moments (GMM), the study showed that trade openness has a conditional positive influence on economic growth arising from the influence of earlier income per capita, as well as other independent variables. They also found trade openness to be more beneficial, especially in countries with greater levels of foreign direct investments, and higher previous income per capita, as well as gross fixed capital formation. Again, Habibi and Karimi (2017) examined the effects of FDI on the growth of Iran and the GCC (Gulf Cooperation Council) economies from 1980 to 2014. By applying the ARDL technique, they found that FDI is a key driver of economic growth in Iran and the GCC countries. Specifically, the Granger-causality test showed a two-way relationship between FDI and economic growth in UAE, Qatar, and Saudi Arabia, a one-way relationship in Bahrain and Iran, and no causality in Oman and Kuwait. Overall, trade openness, gross capital formation, and the labour force reflected positive effects on economic growth in all the countries examined, except Bahrain and Qatar. Mamingi and Martin (2018) investigated the relationship between FDI and economic growth in thirty-four (34) economies including six (6) Organisations of Eastern Caribbean States (OECS). By employing the GMM technique, their results indicated that FDI has a minimal positive impact on growth when examined in isolation. It was also established that FDI has a strong positive interaction with infrastructural development in improving economic growth, but exhibited a crowding-out effect on domestic investments.

Furthermore, Olofin, Aiyegbusi, and Adebayo (2019) while examining the determinants of foreign direct investments inflow into Nigeria by applying the fully modified ordinary least square (FMOLS) technique, found that the locations of countries did not necessarily play an important role in attracting FDI into the nation. They also found that FDI, financial development, manufacturing sector as well as health expenditure showed significant beneficial relationships with income growth while net trade, tax revenue, and human capital exhibited non-significant positive relationships with income growth. Muzekenyi, Zuwarimwe, Kilonzo, and Nheta (2019), analysed the relationship between real exchange rate and economic growth in South Africa using VECM. Their findings showed that in both the short and long run, real exchange rates negatively and significantly affect the country's economic growth. Jalil and Bibi (2020) re-examined the relationship between the openness of trade and economic growth of eighty-two (82) countries from 1960 to 2017 by employing various panel methodologies such as the pooled ordinary least squares (POLS), among others. Their findings revealed that trade openness promotes economic growth in the countries examined. Giwa, George, Okodua, and Adediran (2020), investigated the effects of FDI inflows on the Nigerian economy and the attendant gains on the growth rate of real gross domestic product

(RGDP) and the possible ways of attaining sustainable development goal seventeen. By using the generalised method of moments GMM technique, they observed that labour quality has a significant beneficial impact but capital intensity has a significant adverse impact on RGDP in the country's economy.

Ijirshar and Andohol (2022) while investigating the investment and growth connection in fourteen (14) West African economies from 1986 to 2018, by utilising the Granger non-causality test, found that FDI, fragility and domestic investment, Granger cause economic growth. Also, their Pooled Mean Group (PMG) estimator results revealed that while fragility impacts significantly but negatively on economic growth and domestic investment, it showed, however, the very opposite effect in the long run on foreign direct investment. Wehncke, Marozva, and Makoni (2022) employed the ARDL and ECM in determining the relationship among FDI, official development assistance (ODA) as well as economic growth of twenty (20) African countries from 2000 to 2018. Their findings revealed that FDI has non-significant negative long-run effects and non-significant positive short-run effects on economic growth. Hao (2023) analysed the relationships among FDI, trade openness, capital formation, and industrial economic growth in China from 1990 to 2021, using the ARDL technique. The findings revealed a long-run cointegration among all the variables, while FDI and industrial economic growth have bidirectional positive effects on each other. It was also found that in the long run, FDI, inflation, and labour have significant positive effects while capital formation and trade openness both have a non-significant adverse effect on industrial growth. Similarly, in the short run, FDI, trade openness, and capital formation all have significant beneficial effects on industrial growth, while inflation, technological innovation, and labour have a negative significant effect on industrial growth. Adegboye and Okorie (2023) examined the effects of determinants of FDI on economic development in thirty (30) Sub-Saharan African (SSA) economies from 2001 to 2020. By using Random Effect (RE), Pooled Regression, Fixed Effect (FE), Panel Two-Stage Least Square, and Differenced (DGMM), they found that FDI inflow significantly and positively influenced economic development, while FDI outflow and political stability harmed economic development in the SSA region.

### 2.3 Theoretical Review

The neoclassical growth theory developed by Solow and Swan (1956) initially asserted that the long-run economic growth rate is determined by capital and labour. Later, technology change was incorporated by Solow in 1957. This theory assumes that FDI can act as a 'lifeblood' by conveying the needed capital to the productive sectors of an economy that is capital deficient (Solow, 1957). Thus, it helps to accelerate the economic growth rate as the marginal productivity of capital increases. This school of thought noted that growth rates will return to the speed of technological progress that is exogenously determined, that is, independent of economic forces. Thus, the production function of the neoclassical growth theory is expressed as:

$$Y = AF(K, L) \quad (1)$$

As a result of the relationship between labour and technology, this function is rewritten as:

$$Y = F(K, AL) \quad (2)$$

Where Y represents the economy's gross domestic product (GDP), K denotes its share of capital, L represents the amount of unskilled labour and A is a determinant level of technology.

On the other hand, Romer (1986) relaunched the endogenous growth theory that states that the long-run growth of any country is influenced both by the volume of physical investment and the efficiency of managing such investment. Hence, the model incorporates technical and human skills, organisational, innovation, and technological and managerial progress, as well as the accumulation of knowledge endogenously in the growth theories (Lucas, 1988; Pugel, 2007). The long-run economic growth is dependent on the level of technological development accruing from technology transfers and knowledge spillovers (Grossman and Helpman, 1991; Romer, 1994). Here, research and development and technological spillovers play a vital role in innovation and long-run economic growth. There is no constant return to scale and diminishing return of individual functions; hence, economic growth has no bounds, and convergence around economies cannot be predicted. Since foreign direct investment translates into economic growth through positive externalities from technological advancements and imitation, the endogenous growth theory is an appropriate theoretical foundation for this study.

### 3. METHODOLOGY

To achieve the objective of the study, the longitudinal research design was employed to study the trend of the variables concerned. The relevant data include GDP growth rate, foreign direct investment, gross fixed capital formation, trade openness, and exchange rate obtained from the World Bank World Development Indicators from 1990 to 2021. A total of thirteen (13) West African countries were examined. These include four Anglophone (Nigeria, Ghana, Sierra Leone, and Gambia) and nine Francophone (Burkina Faso, Mali, Cote D'Ivoire, Benin, Guinea, Niger, Senegal, Mauritania, and Togo). The choice of countries selected by the researchers was based on the availability of data.

#### 3.1 Model Specification

The structural form of the auto-regressive distributed lag (ARDL) model used in this study is modified based on Joo and Shawl (2023).

$$GDPGR = f(FDI, TROPN, GFCF, EXCR) \quad (3)$$

Where, GDPGR is gross domestic product growth rate (dependent variable) and is the proxy for economic growth, FDI is foreign direct investment, TROPN is trade openness, GFCF is gross fixed capital formation and EXCR is exchange rate (explanatory variables).

The econometric form of the model is given as:

$$\ln GDPGR_{i,t} = \delta_{i,t} + \phi_{i,t} \ln FDI_{i,t} + \gamma_{i,t} \ln TROPN_{i,t} + \omega_{i,t} \ln GFCF_{i,t} + \vartheta_{i,t} \ln EXCR_{i,t} + u_{i,t} \quad (4)$$

Where,  $i=1\dots N$ , represents the countries in the panel,  $t=1\dots T$ , represents the period,  $\ln$  denotes natural logarithm and  $u_{i,t}$  means stochastic term.

The panel ARDL model for both Anglophone and Francophone samples is specified as:

$$\ln\Delta\ln\text{GDPGR}_{i,t} = \delta_0(\phi_{1i}\ln\text{GDPGR}_{i,t-1} - \phi_{2i}\ln\text{FDI}_{i,t} - \phi_{3i}\ln\text{TROPN}_{i,t} - \phi_{4i}\ln\text{GFCF}_{i,t} - \phi_{5i}\ln\text{EXCR}_{i,t}) + \sum_{k=1}^{m_1} \beta_{1i}\ln\Delta\text{GDPGR}_{i,t-k} + \sum_{k=0}^{m_2} \beta_{2i}\Delta\ln\text{FDI}_{i,t-k} + \sum_{k=0}^{m_3} \beta_{3i}\Delta\ln\text{TROPN}_{i,t-k} + \sum_{k=0}^{m_4} \beta_{4i}\Delta\ln\text{GFCF}_{i,t-k} + \sum_{k=0}^{m_5} \beta_{5i}\Delta\ln\text{EXCR}_{i,t-k} + \sigma_i + u_{i,t} \quad (5)$$

Where,  $\Delta$  is first difference operator,  $m_{1-5}$  represents maximum lags,  $\delta_0$  is the speed of adjustment to the long run status,  $\beta_{1i} - \beta_{5i}$  means short-run coefficients estimated,  $\phi_1 - \phi_5$  represents long-run coefficients estimated,  $\sigma_i$  means country-specific fixed effect and  $u_{i,t}$  is the error correction term.

**Table 1. Summary of Variables**

Variable	Definition and Used By	Measurement
Gross Domestic Product Growth Rate (% of annual GDP) GDPGR	It is the yearly rate of per capita real GDP (Barro, 1991; Borensztein, et al.,1998)	Log of GDP growth rate
Foreign Direct Investment (FDI)	Foreign long-term funds that are injected by investors into another country’s economy and represented here as foreign direct investment inflows (Olofin, Aiyegbusi & Adebayo, 2019; Wehncke, Marozva & Makoni, 2022; Adegboye & Okorie, 2023)	Log of FDI
Gross Fixed Capital Formation (GFCF)	It is an investment in fixed capital (Behname, 2012; Mamingi & Martin, 2018)	Log of GFCF
Exchange Rate (EXCR)	The rate at which the local currencies of each country are exchanged for the US dollar (Uwubanmwun & Ajao, 2012; Habibi & Karimi, 2017)	Log of EXCR
Trade Openness (TROPN)	It is proxied by trade to GDP ratio, which reflects the impact of international versus domestic trade on economic welfare (Fetahi-Vehapi, et al., 2015; Jalil & Bibi, 2020; Hao, 2023)	Log of TROPN

Source: authors’ compilation

#### 4. DISCUSSION OF RESULTS

From Table 2, two of the variables (GDPGR, and EXCR) of the Anglophone are stationary at 5% levels while FDI, GFCF, and TROPN only became stationary after the first difference.

**Table 2. Panel Unit Root test for Variables**

Variables	Levin, Lin & Chu test for Anglophone			Levin, Lin & Chu test for Francophone		
	Statistic	Prob.	Order of integration	Statistic	Prob.	Order of integration
LNGDPGR	-2.61742	0.0044	I(0)	-5.78754	0.0000	I(0)
LNFDI	-5.63815	0.0000	I(1)	-3.23441	0.0006	I(0)
LNGFCF	-6.21273	0.0000	I(1)	-7.03606	0.0000	I(1)
LNEXCR	-2.75372	0.0029	I(0)	-4.03909	0.0000	I(0)
LNTROPN	-5.19934	0.0000	I(1)	-9.43163	0.0000	I(1)

Source: authors’ computation

Similarly, for the Francophone, GDPGR, FDI, and EXCR are stationary at 5% levels while GFCF and TROPN became stationary after being differenced.

**Table 3. Pedroni Residual Cointegration test**

Anglophone			Francophone		
Alternative hypothesis: common AR coefficients. (within-dimension)			Alternative hypothesis: common AR coefficients. (within-dimension)		
	Statistics	Prob.		Statistics	Prob.
Panel v-Statistic	-1.398403	0.9190	Panel v-Statistic	1.441340	0.0747
Panel rho-Statistic	-2.741222	0.0031*	Panel rho-Statistic	-2.683934	0.0036*
Panel PP-Statistic	-5.983611	0.0000*	Panel PP-Statistic	-12.44023	0.0000*
Panel ADF-Statistic	-2.299632	0.0107*	Panel ADF-Statistic	-4.833376	0.0000*
Alternative hypothesis: individual AR coefficients (between-dimension)			Alternative hypothesis: individual AR coefficients (between-dimension)		
	Statistics	Prob.		Statistics	Prob.
Group rho-Statistic	-0.909712	0.1815	Group rho-Statistic	-2.234338	0.0127*
Group PP-Statistic	-9.113821	0.0000*	Group PP-Statistic	-16.40646	0.0000*
Group ADF-Statistic	-2.318833	0.0102*	Group ADF-Statistic	-5.330346	0.0000*

Source: authors' computation

From Table 3, five of the Anglophone statistics are significant at 1% and 5% levels for both the within-dimension and between-dimension cases. The result showed that the majority of the statistics examined are significant, thus, implying that there exists a co-integration and long-run relationship among the variables. Similarly, six of the Francophone statistics were found to be statistically significant at 1% and 5% levels. Again, the result showed that the majority of the statistics examined are significant, which implied that there exists a co-integration and long-run relationship among the variables.

**Table 4. VAR Lag Order Selection Criteria**

Anglophone						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1121.191	NA	97.56036	18.76985	18.88600	18.81702
1	-494.8586	1190.032	0.004334	8.747643	9.444516*	9.030646*
2	-465.8182	52.75670*	0.004060*	8.680303*	9.957904	9.199143
Francophone						
0	-1999.392	NA	3.221800	15.35933	15.42761	15.38677
1	-696.4745	2545.931	0.000180*	5.566855*	5.976570*	5.731547*
2	-674.8363	41.45251	0.000185	5.592616	6.343760	5.894551
3	-651.2609	44.26031*	0.000187	5.603532	6.696105	6.042711

Source: authors' computation via E-Views 10

The results of the lag length selection criteria using the Akaike information criterion (AIC) in Tables 4 proved that two and one are the appropriate lag structure for the models of the Anglophone and Francophone respectively.

#### Dumitrescu-Hurlin Panel Causality test

From the result (Appendix 1), the Anglophone's FDI, trade openness, and exchange rate all have no causal relationships with GDPGR while there is a one-way causal link from GDPGR to gross fixed capital formation. In the same vein, the Francophone FDI, TROPN, EXCR, and



GFCF did not have any causal relationship with GDPGR. The implication of this is that FDI and GDPGR did not granger cause each other.

**Table 5. Panel ARDL Results**

Variable	Anglophone Countries ARDL (1,2,2,2) Model	Variable	Francophone Countries ARDL (1,1,1,1) Model
LONG-RUN EQUATIONS			
LNFDI	2.188477* (0.0000)	LNFDI	-0.028848 (0.8493)
LNGFCF	-2.346830* (0.0010)	LNGFCF	0.358914 (0.2735)
LNEXCR	-0.892744** (0.0490)	LNEXCR	0.983956*** (0.0608)
LNTROPN	2.594499** (0.0335)	LNTROPN	1.403805 (0.1808)
SHORT-RUN EQUATIONS			
COINTEQ01	-0.780524* (0.0000)	COINTEQ01	-0.822167* (0.0000)
D(LNFDI)	-1.265641** (0.0149)	D(LNFDI)	-0.033493 (0.8683)
D(LNFDI(-1))	-1.125416* (0.0000)	D(LNGFCF)	3.063874 (0.1576)
D(LNGFCF)	3.062918* (0.0049)	D(LNEXCR)	0.976310 (0.4104)
D(LNGFCF(-1))	1.542795** (0.0439)	D(LNTROPN)	-0.793367 (0.7028)
D(LNEXCR)	1.458305 (0.81117)	C	-11.62891 (0.0000)
D(LNEXCR(-1))	-4.165028 (0.1560)		
D(LNTROPN)	0.053734 (0.9688)		
D(LNTROPN(-1))	2.180054*** (0.0775)		
C	5.157691 (0.0013)		
<b>Wald Test</b>	<b>F-Statistics</b> 9.941717, P-value(0.0000)	<b>Wald Test</b>	<b>F-Statistics</b> 4.573813, P-value(0.0014)
Breusch-Pagan LM	Statistics 7.760863 p-value: 0.2562	Breusch-Pagan LM	Statistics 47.59201 p-value: 0.0936

Source: Authors' Computation 2023, \*, \*\*, and \*\*\* represent 1%, 5% and 10% level of significance and Probability Values are in parenthesis

From Table 5, FDI showed a 1% level of significance for the Anglophone countries. This means that FDI has a significant positive long run relationship with the economic growth of the selected Anglophone countries. The implication of this is that *ceteris paribus*, a 1% rise in FDI will lead to an increase in GDPGR by 2.18%. Again, gross fixed capital formation (LNGFCF) and exchange rate (LNEXCR) showed 1% and 5% levels of significance respectively. This means that there is a long-run significant inverse relationship with GDPGR. Trade openness (LNTOPN) is significant at a 5% level. Thus, showing a positive coefficient

of 2.59 and a probability value of 0.033 and implying that it is a vehicle in driving GDP growth in the region.

From the short-run result of the Anglophones, the current level and one-year lag values of FDI are found to be statistically significant in driving economic growth in the region. However, the inverse relationships for these lag periods suggested a lack of acceptability of foreign investments, as the well as channelling of FDI into unproductive sectors of the economy. Meanwhile, the level of significance improved from 5% in the current period, to 1% in the first lag period though with some signs of delayed response. The current period of GFCF as captured by  $D(\text{GFCF})$  and that of one-year lag,  $D(\text{GFCF}-1)$  periods are found to be positively related to GDPGR and are both significant at 1% and 5%, respectively. Their coefficient and probability values of 3.06 (0.004) and 1.54(0.043), respectively, showed that holding other variables constant, a percentage rise in GFCF in the current period will lead to a 3.06% rise in GDPGR while for the first year lag, a 1% rise in GFCF will result to a 1.54% rise in GDPGR. The exchange rate  $D(\text{LNEXCR})$  in the current period showed a positive relationship with GDPGR with a coefficient of 1.54 and an inverse relationship in its one-year lag- $D(\text{LNEXCR}-1)$  with a coefficient value of -4.16. By implication, contrary to the long-run result, the exchange rate in the short run did not significantly drive GDPGR in the region. In the long run, trade openness appeared to have a positive relationship with GDPGR in the Anglophone countries for the current and one-year lag periods. TROPN was found to be statistically significant in the one-year lag at a 10% level. This also connotes a delay in response and threshold value.

It is noteworthy to mention that the results of the Anglophones were found to be similar in terms of statistical significance for all the variables examined except for the exchange rate, both in the long-run and short-run. The coefficient of the error correction term (COINTEQ) was found to be -0.78 while the ECM was at a 1% level of significance. These results revealed that about 78% of the previous year's shocks in the GDPGR can be offset every twelve months. In other words, the short-run fluctuations will converge at the long-run estimates at an expected speed of about 78% annually. Again, the F-statistic (9.941717) from the Wald Test result (Appendix 2) and its corresponding probability value of 0.0000 showed that the model was significant and has a good fit. The normality test of the variables by the J-B test showed that almost all the variables examined were normally distributed.

Furthermore, the regression results of the Francophone as presented in Table 4.5 showed that FDI was not statistically significant in driving economic growth. The negative sign exhibited by the FDI suggested that it did not contribute to the economic growth in the region. Also, GFCF and TROPN showed a direct relationship with GDPGR but were not statistically significant irrespective of their positive signs. The implication of this is that GFCF and TROPN in the long run, did not significantly influence economic growth in the region. On the contrary, the log value of the exchange rate was positive and statistically significant at a 10% level. This means that an increase in the exchange rate by 1% would lead to a corresponding increase in the GDPGR by 0.98%. The log of foreign direct investment- $D(\text{LNFDI})$  and Trade openness- $D(\text{LNTOPN})$  are negative and non-statistically significant. This means that in the short-run they have no effect on economic growth in the region. Similarly, GFCF and EXCR are inversely related to GDPGR and are also not significant.

The results of the French appeared to be similar as all the variables are statistically non-significant both in the short and long run, except for the exchange rate that was significant only in the long run. The coefficient of the error correction term (COINTEQ01) was -0.82

and the ECM was significant at a 1% level. This implied that about 82% of the previous year's shocks in the GDPGR can be offset yearly. In other words, the short-run fluctuations will converge at the long-run estimates at an expected speed of about 82% annually. The F-statistic (4.573813) with probability (0.0014) showed that the model was significant and had a good fit. The normality test of the variables using the J-B test showed that some of the variables examined were normally distributed.

From the study, FDI was found to have a long-run positive and significant effect on economic growth in the Anglophone countries. Conversely, FDI was found to have a long-run negative and non-significant effect on GDPGR in the Francophone countries.

Again, the study found that FDI had a short-run negative and non-significant effect on economic growth both in the Anglophone and Francophone countries. The study equally confirmed that FDI had both short- and long-run negative and non-significant effects on GDPGR in the Francophone region. Overall, it implied that FDI inflows in the Anglophone countries are more profitable and growth-inclined than the Francophone counterparts. Other variables such as gross fixed capital formation, exchange rate, and trade openness were also found to have positive and significant effects on GDP growth in the Anglophone but not in the Francophone region, except for the exchange rate.

## 5. CONCLUSIONS AND RECOMMENDATIONS

From the ARDL results, it was established that FDI has a long-run positive significant relationship with economic growth in the Anglophone region but it was not found to be statistically significant in the Francophone region. Based on the empirical investigation in this study, it was concluded that FDI inflows influenced the direction of economic growth in the Anglophones but not in the Francophone countries. The study, thus, showed enough evidence suggesting that FDI inflows matter for the region and could serve as a special purpose vehicle for economic prosperity.

Therefore, there is a need for governments in their respective countries to encourage and improve the ease of doing business to attract external investments into productive sectors of their economies. There should be a strong regulatory framework to improve FDI inflows through human capital development and a friendly business environment. There is also a strong need for market participants, stakeholders, and regulators to ensure that FDI inflows become a major target. Finally, political stability, infrastructural development, proper channelling, and effective utilisation of investment funds should be earnestly pursued.

## 6. LIMITATIONS

The study on Anglophone and Francophone economies only, may limit generalising the findings of lingua franca in West Africa. Though, the goal of the study was to find out which of the two categories of the studied lingua franca in West Africa improves the economic performance in their respective countries. However, further studies may include other methods of analysis such as the pooled ordinary least squares (POLS) technique, and also incorporate the Portuguese and Spanish-speaking economies to see if the results would be harmonised.

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## APPENDICES

**Appendix 1: Granger Causality Test****A. Anglophone Sample**

Pairwise Dumitrescu Hurlin Panel Causality Tests

Date: 06/20/23 Time: 21:43

Sample: 1990 2021

Lags: 2

Null Hypothesis:	W-Stat.	Zbar-Stat.	Prob.
FDI does not homogeneously cause GDPGR	1.58704	-0.49485	0.6207
GDPGR does not homogeneously cause FDI	1.28579	-0.74886	0.4539
TROPN does not homogeneously cause GDPGR	1.26550	-0.76597	0.4437
GDPGR does not homogeneously cause TOPN	2.32388	0.12645	0.8994
GFCF does not homogeneously cause GDPGR	1.00561	-0.98511	0.3246
GDPGR does not homogeneously cause GFCF	7.03683	4.10038	4.E-05
EXCR does not homogeneously cause GDPGR	2.07799	-0.08239	0.9343
GDPGR does not homogeneously cause EXCR	2.17198	-0.00329	0.9974
TROPN does not homogeneously cause FDI	1.63611	-0.45347	0.6502
FDI does not homogeneously cause TOPN	2.88861	0.60263	0.5468
GFCF does not homogeneously cause FDI	19.1874	14.3457	0.0000
FDI does not homogeneously cause GFCF	5.00975	2.39116	0.0168
EXCR does not homogeneously cause FDI	3.78051	1.35042	0.1769
FDI does not homogeneously cause EXCR	3.69229	1.27617	0.2019
GFCF does not homogeneously cause TOPN	7.07673	4.13402	4.E-05
TROPN does not homogeneously cause GFCF	1.26762	-0.76418	0.4448
EXCR does not homogeneously cause TOPN	2.47953	0.25554	0.7983
TROPN does not homogeneously cause EXCR	4.86506	2.26316	0.0236
EXCR does not homogeneously cause GFCF	8.23087	5.09576	3.E-07
GFCF does not homogeneously cause EXCR	14.7838	10.6105	0.0000

## **B. Francophone Sample**

Pairwise Dumitrescu Hurlin Panel Causality Tests

Date: 06/28/23 Time: 21:35

Sample: 1990 2021

Lags: 2

Null Hypothesis:	W-Stat.	Zbar-Stat.	Prob.
FDI does not homogeneously cause GDPGR	1.90280	-0.34290	0.7317
GDPGR does not homogeneously cause FDI	1.89559	-0.35202	0.7248
GFCF does not homogeneously cause GDPGR	2.31830	0.18262	0.8551
GDPGR does not homogeneously cause GFCF	1.64230	-0.67238	0.5013
EXCR does not homogeneously cause GDPGR	3.81329	2.07346	0.0381
GDPGR does not homogeneously cause EXCR	2.77027	0.75427	0.4507
TROPN does not homogeneously cause GDPGR	3.31032	1.43731	0.1506
GDPGR does not homogeneously cause TROPN	2.18273	0.01115	0.9911
GFCF does not homogeneously cause FDI	6.77527	5.81975	6.E-09
FDI does not homogeneously cause GFCF	2.17197	-0.00246	0.9980
EXCR does not homogeneously cause FDI	2.19708	0.02930	0.9766
FDI does not homogeneously cause EXCR	0.44652	-2.18479	0.0289
TROPN does not homogeneously cause FDI	3.28061	1.39974	0.1616
FDI does not homogeneously cause TROPN	2.72821	0.70106	0.4833
EXCR does not homogeneously cause GFCF	2.36263	0.23869	0.8113
GFCF does not homogeneously cause EXCR	0.57070	-2.02773	0.0426
TROPN does not homogeneously cause GFCF	3.55339	1.74475	0.0810
GFCF does not homogeneously cause TROPN	4.60049	3.06912	0.0021
TROPN does not homogeneously cause EXCR	3.33700	1.47107	0.1413
EXCR does not homogeneously cause TROPN	5.23540	3.87214	0.0001



**Appendix 2: Wald Tests**

**A. Anglophone Sample**

Wald Test:

Equation: Untitled

Test Statistic	Value	df	Probability
F-statistic	9.941717	(4, 84)	0.0000
Chi-square	39.76687	4	0.0000

Null Hypothesis: C(1)=0, C(2)=0, C(3)=0, C(4)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(1)	0.399710	0.079427
C(2)	-0.469416	0.135784
C(3)	-0.198608	0.078547
C(4)	0.731694	0.214722

Restrictions are linear in coefficients.

**B. Francophone Sample**

Wald Test:

Equation: Untitled

Test Statistic	Value	df	Probability
F-statistic	4.573813	(4, 230)	0.0014
Chi-square	18.29525	4	0.0011

Null Hypothesis: C(1)=C(2)=C(3)=C(4)=0

Null Hypothesis Summary:

Normalized Restriction (= 0)	Value	Std. Err.
C(1)	-0.028848	0.151685
C(2)	0.358914	0.326959
C(3)	0.983956	0.522168
C(4)	1.403805	1.045696

Restrictions are linear in coefficients.