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FDI AND ECONOMIC GROWTH IN WEST AFRICA

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ABSTRACT

The Study Examined the Effect of Foreign Private Capital Inflow on Economic Growth in West Africa, Using Panel Data Spanning From 2007 To 2023. The Measures of Foreign Private Capital Inflow used in the Study are Foreign Direct Investment (FDI), Foreign Portfolio Investment (FPI), Exchange Rate, and Interest Rate (INTR). Data used were collected from World Bank Economic Indicators, 2023. The study adopted Fully Modified Ordinary Least Square (FMOLS) for the analysis of the data. The study found that Foreign investment inflows foster positive and significant effect on economic growth in the long run in West Africa for the period covered in the study. Though exchange rate is positively related to economic growth in the long run, it is not significant in explaining economic growth within the subregion during the period under review. This suggests that persistent depreciation of the currencies of countries in the West Africa does not have the ability to impact economic growth. Based on the findings, the study recommended that countries in West Africa should pursue rigorous economic reforms and restructuring policies in the various sectors of the economy to encourage the inflow of foreign capital and portfolio investment to promote rapid growth and development in the region. The governments of West Africa should embark on sound control of inflation and exchange rate as this will strengthen the inflow of foreign capital and generate positive effect on the economies. There is need for occasional government intervention in the foreign exchange market to influence the exchange rate to achieve desirable levels of output.

Keywords: FDI, Economic Growth, Interest rate, Inflation, Exchange rate, Foreign Investment Portfolio

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INTRODUCTION

1.1 Background to the Study

Global economic growth is contingent upon the inflow of foreign investment and the conduct of business transactions. Accumulation of established capital and technology transfer lead to trade opening in an expanding economy. Since FDI promotes both economic growth and financial stability, it is a crucial factor in the global economic integration process. Inflow and outflow of foreign investment are necessary for economic growth, and they are crucial for capital formation. As of 2019 UNCTAD; Oyegoke and Aras, 2021). Increased foreign investment inflows is one of the most notable aspects of the world economy in recent decades. Many West African nations, such as Nigeria, Ghana, Guinea, Senegal, and Sierra Leone, allow foreign investment to be a crucial component of their strategic development plans. In Africa, Nigeria is one of the main destinations for international investment. Chinese, Indian, Canadian, and British investors make up the majority of the investors, to name a few. A few of the important industries that attract the majority of foreign investments are mining, oil and gas, and primary agriculture. Technology and knowledge can be spread from one developed nation to another using this kind of capital and means. Foreign investment inflows may contribute to the country's economic prosperity in this regard. The expansion of the global economy and the welfare of its citizens are greatly impacted by trade. Within group trade spans a few ranges in the West African region.

Foreign investment inflows do have a developmental role, but their primary significance in the process of developing emerging economies remains hotly contested. Foreign investment inflow is a growth driver, so the argument goes. Li and Liu (2015) and Ozturk (2017), for instance, discuss how it assists developing nations in making up for shortfalls in savings, domestic income, and foreign exchange. Innovation, management, and technology skills are transferred to home economies through foreign investment inflows. Imports from abroad boost exports and encourage each country's economy to become more integrated into the world economy. Other proponents believe that increased foreign investment boosts the productivity of the factors of production while also improving resource efficiency, which raises the income level of the corresponding economy (OECD, 2012).

Opponents of the influx of foreign investment as promoters of growth. The argument put forth by (Konings, 2021); (Herzer, 2008) is that the negative effects of foreign investment outweigh any potential benefits. They claim that the "cost" of foreign investment inflow is the deceleration of emerging industries' growth, the erosion of political sovereignty, and the worsening of the balance of payments position (BOP) due to the excessive importation of capital goods by foreign investors and profits repatriation. Drawing on the previous discussion, it is contended that the majority of developers.

1.2 Statement of the Research Problem

A major concern for developing economies generally, and West African countries specifically, have been the inflow of foreign direct investment. This is the case due to the fact that foreign investment inflow has become a real source of funding gaps caused by differences in saving and investment, as well as promoting economic growth among West African countries. To help achieve this, a number of incentives have been implemented, such as tax holidays and subsidies, tax rate reductions, import duty exemptions, and accelerated depreciation allowances, among others. Despite this long list of incentives, West Africa continues to see low levels of foreign investment inflows. The region's declining trends in foreign investment inflows, along with this meager amount, may indicate that incentives are not the only factors driving these inflows. Furthermore, the reasons why multinational corporations have chosen other parts of the continent—some of which may not have as competitive growth rates and policy reforms as West Africa—remain unclear. Other factors that influence foreign investment inflows, like institutional factors and political risks, have recently been identified as being harmful to these inflows into an economy. In empirical research for West African nations, the degree to which these factors have impacted foreign investment inflow has not been sufficiently examined. in examining what motivates foreign investment.

1.3 Objectives of the Study

This study's main goal is to investigate how foreign investment inflows affect West Africa's economic development. The specific goals are to:

i. Ascertain the impact of foreign direct investment on West African economic growth
ii. Explore the impact of foreign exchange on West African economic growth
iii. Evaluate the impact of interest rates on West African economic growth
iv. Determine the extent to which inflation rates impact West African economic growth
v. Examine the impact of foreign portfolio investments on West African economic growth.

1.4 Research Questions

These research questions guided the study:

i. How does foreign direct investment affect economic growth in West Africa?
ii. Does foreign exchange impact economic growth in West Africa?
iii. Does interest rate impact economic growth in West Africa?
iv. How much does inflation rate impact economic growth in West Africa?
v. How much does foreign portfolio investment impact economic growth in West Africa?

1.5 Research Hypotheses

This study will test the following hypotheses, all of which are in the null form:

$H0_1$: Foreign investment has no significant impact on economic growth in West Africa;

$H0_2$: Foreign exchange has no significant impact on economic growth in West Africa;

$H0_3$: Interest rates have no significant impact on economic growth in West Africa;

$H0_4$: Inflation rate has no significant impact on economic growth in West Africa; and

$H0_5$: Foreign portfolio investment has no significant impact on economic growth in West Africa.

1.6 Significance of the Study

For West African nations like Nigeria, Ghana, Guinea, Senegal, Sierra Leone, etc., this study will be extremely beneficial. as it will reveal the financial advantages of intra-West African trade and foreign investment inflows. In addition to providing insight into the economic policies of the West African countries, the study will educate West African governments on the impact of exchange rates on the region's economic growth and enable them to devise policies that will counteract this effect and promote sustainable economic growth. The study will also serve as a data bank for future researchers desiring to delve deeper into the field, thereby establishing the foundation for their study. In order to help policy makers, create policies that will further strengthen economic integration among member nations, the study will provide them with information about the political and economic status of West African states.

1.7 Scope of the Study

The analysis concentrated on the relationship between foreign investment inflows and economic development in West Africa for a duration of 17 years (2007-2023).

Five countries from West Africa were selected for this study, namely Nigeria, Ghana, Guinea, Senegal, and Sierra-Leone. The rationale behind selecting such an extended time frame was driven by the notion that longer periods often yield more significant findings.

1.8 Limitations of the study

The data we used for our empirical analysis was one of the main obstacles we had to overcome in conducting this study. Results will depend on the quality of the data because it was essentially secondary data. While secondary data sources can give me a wealth of information, quality and appropriation are not the same thing, as Dencombe (2010) correctly points out. Moreover, the use of secondary data often leaves this kind of analysis vulnerable to a wide range of potential mistakes. Though it might be challenging to eliminate certain mistakes, being aware of them could be helpful in making defensible judgments and building some degree of trust in the findings. The focus of this research is solely on foreign investment inflows into the African region of West Africa. A wider and more comprehensive picture of foreign investment in Africa would result from expanding future research projects to additional African countries and regions. Another issue was that the analysis would be conducted in US dollars, which will solve the currency issue.

1.9 Definition of Operational Terms

The concept used thus far in this research and the meanings attached to their usage are set out hereunder:

Foreign Investment: It involves cash flows moving from one country to another to execute the transaction.

Openness to Trade: Multinational corporations often seek to export their products to other markets with a view to further boost their manufacturing or sales. Trade openness is measured by export and import divided by GDP.

Exchange Rate: The value of one currency for the purpose of conversion to another Thus, investors normally look out for those economies characterized by strong currencies to invest in.

Inflation Rate: Inflation measures how much more expensive a set of goods and services has become over a certain period, Inflation rate as measured by consumer price index (CPI) is utilized in many studies as a measure of economic instability.

Economic Growth: Refers to an increase in size of a country's economy over a period of time. The size of an economy is typically measured by the total production of goods and service in the economy, which is called gross domestic product (GDP).

Natural resources: Natural resources (often called land) refer to resources such as mineral, waters, trees and land itself. They are raw materials used in production.

Human Capital: Human capital is defined as the stock of knowledge skills and other personal characteristics embodied in people that helps them be productive.

Financial institutions: A company involved with the business of dealing with financial and monetary transactions such as deposits, loans, investments and currency exchange.

2.1 Conceptual Review

2.1.1 Economic Growth

When an economy's ability to generate goods and services increases over time, it is said to be experiencing economic growth. Real terms (adjusted for inflation) or nominal terms can be used to measure it. Economic growth can be defined as the increase in both the quantity and quality of the goods and services that we all need, which means that production of these goods and services is required. The best way to measure economic growth is through the gross domestic product (GDP), which accounts for the entire economic output of the country. Roser, Max (2021). Average marginal productivity increases are frequently correlated with overall production gains, though not always. Increased incomes as a result encourage people to spend more money, raising their standard of living and material quality of life. The labor force, physical capital, human capital, and technology are frequently modeled in economics as functions of growth. According to Osoba (2012), economic output can be directly increased by augmenting the number or caliber of individuals in the working age population, providing them with better tools, and creating more accessible recipes for combining labor, capital, and raw materials.

The majority of these states are in West Africa. According to the World Bank (2002), 22 of the 48 subSaharan African nations are categorized as "fragile and conflict afflicted states" due to inadequate governance policies and institutions that fail to provide basic public services and ensure the safety of their citizens. More so, over half the world's fragile countries are in sub-Saharan Africa. Africa has the largest number and proportion of fragile states in the world Fowowe and Folarin, (2019).

2.1.2 Foreign Investment Inflows

The creation of jobs, economic growth, and development of developing economies are all attributed to foreign investment inflow, according to Adegboye, Osabohien, Olokoyo, Matthew, and Adediran (2020a); Hasanov, Mikayilov, Yusifov, Aliyev & Talishinskaya (2019); Ogundipe, Oye & Osabohien (2020); and Osabohien, Awolala, Matthew, Itua & Elomien, (2020). Before the Corona virus pandemic (Covid-19), economic growth as measured by Gross Domestic Product (GDP) has been observed to be on the increase, though slowly, in most developing countries, including West Africa. In 2018, for instance, West Africa saw its highest GDP growth (3.3%) in over ten years, which allowed for a decline in unemployment and poverty due to the favorable effects of trade and investment opportunities on the region's economy African Economic Outlook, 2019; Zamfir, (2016). According to Baneliene & Melnikas (2020), Osabohien et al. (2020), and the World Economic Forum [WEF] (2020), there was a 13% decrease in global foreign investment inflow between 2017 and 2018. This amounts to approximately $1.3 billion. This decline in the global rate of foreign investment inflow was worsened by the Covid-19 pandemic, and the impact on foreign investment inflow is greatly felt by developing countries African Union Commission [AUC], (2020); World Bank, (2020). Trade and investment were two areas where the Covid-19 pandemic caused distortions in economies and nations. Foreign investments have been stopped altogether due to the current COVID-19 crisis.

The new UNCTAD projected that the inflow of foreign investment may decline by about 30 percent to 40 percent as a result of Covid-19, UNCTAD, (2020). Because of the earnings adjustments that confirmed the rapidly deteriorating global outlooks and the impact of global demand shocks on sales and disruptions to the global supply chain, this variation from the previous projections is noteworthy (AUC, 2020); Chidede, 2020; World Bank, 2020). However, the majority of the impact spreads to other regions due to supply chain linkages and demand shocks Chidede, (2020). The negative impact of foreign investment inflow will be particularly severe in regions hard hit by Covid19. As long as the advantages of trade and foreign investment are spread across various industries, as noted by Gillson, Balcombe, and Page (2004),

2.1.3 Foreign Exchange and Economic Growth

Trade and the flow of money between nations are impacted by exchange rates, which are the prices at which one currency will be exchanged for another. The values of the foreign and domestic currencies have an impact on exchange rates. In July 2022, there was a 1:1.02 ratio between dollars and Euros, meaning that $1 = €1. In most cases, the gross domestic product, unemployment rate, market interest rates, and economic activity of each nation influence the exchange rate between two currencies. Market exchange rates, as they are commonly known, are determined by these variables during round-the-clock currency trading by banks and other financial institutions on the global financial market. Even though it was less severe than in 2022, the global currency crisis continued in 2023. The majority of African currencies fell against the stronger US dollar as a result of persistently high global interest rates and ongoing geopolitical and trade tensions. As an example, in 2023, the value of Nigeria's currency declined by 95.6 percent. After changes to the foreign exchange market in June 2023—which resulted in the Naira's floating—this depreciation was mostly the result of a correction. The economic status and outlook for Africa, 2024.

Walsh and Yu (2010), employing the GMM dynamic approach for 27 developed and emerging market economies from 1985 to 2008, found that factors such as the real exchange rate, clustering effects, GDP growth rate, and market openness have a positive impact on foreign investment inflow. The research used detailed data, including macroeconomic and institutional/qualitative data for the three sectors: primary, secondary, and tertiary, providing valuable insights into the factors influencing foreign investment inflow in these countries. Although the study opted for the GMM dynamic approach to tackle issues like multicollinearity, endogeneity, and weak instrumental variables, the variance of unobserved country-specific effects appears substantial, leading to an excessive number of control variables relative to the sample size. Consequences of this include biased coefficient estimates, inflated standard error estimates, and weakened hypothesis tests, among others. Exchange rate policies in developing countries are frequently delicate and controversial due to the required structural changes, such as decreasing imports or expanding exports. Adebiyi (2007) held similar views.

The instability of foreign exchange during economic crises significantly influences exchange rates. Authoritative decisions regarding exchange rate adjustments can either amplify or decrease exchange rates, particularly when investors shift their deposits from low-interest currencies to those offering higher returns. Moreover, fluctuations in the supply and demand of money can impact foreign exchange rates in both the short and long term. Various studies have examined the causal relationship between foreign exchange rates and factors such as interest rates and economic development. Since the late 1990s, exchange rates in the West African region have shown substantial volatility due to various economic factors, including fiscal policy and global economic conditions. The impact of exchange rate fluctuations is intricate and context-dependent, depending on factors such as misaligned interest rates, inflation, and money supply. The West African region's average economic growth rate from 1999 to 2019 was 4.6%, but with notable differences among countries and time frames. In recent years, the value of currencies such as the Nigerian Naira and Ghana Cedi has weakened against the US Dollar and other currencies. Empirical research generally emphasizes the importance of managing exchange rates, according to Oloso & Ogbuji (2021).

2.1.4 Interest Rate and Economic Growth

The cost incurred by borrowers when they take out a loan is known as the interest rate. Interest rates are, broadly speaking, the cost of credit. Therefore, the calculation involves dividing the cost of the borrowed funds in rupees by the amount of money that the borrower actually uses. An interest rate is the price of taking out a loan. Without it, individuals wouldn't be inclined to lend money or even save it, both of which necessitate delaying the chance to forgo current expenditures. Different loan types will offer different interest rates, though, as current rates are constantly fluctuating. The interest rate is stated as a percentage of the annual rate. Interest rates are crucial for all parties involved in the financial system because they provide a price signal. For instance, a higher interest rate encourages larger savings and boosts lending activity. However, a lower interest rate deters people from saving and also discourages lending. Interest is the cost incurred when a certain amount of money is used for a predetermined amount of time. For one entity, interest can therefore be viewed as an expense, while for another, it is an income. Interest is the opportunity cost of lending money instead of keeping it in cash under your mattress. If you take out a loan, the interest you pay will be less than the price of losing the chance to use the money right away. It is the rent that is paid with the given funds.

Economic reforms of one kind or another have always prompted Nigerian policymakers to respond in an effort to stem these waves of outside shocks. The Structural Adjustment Program (SAP) was introduced by Nigerian authorities in the middle of 1986. In order to put the economy on a path of growth, the SAP sought to resolve the crises. Policies to reform the financial sector were among the many corrective actions that were implemented. The National Economic Empowerment and Development Strategy (NEEDS) was introduced in 2004 and has been a similar policy response used over the past ten years Millicent (2013). This all-encompassing policy's main goal is to stop the rising cost of living in the economy and the rate of unemployment, particularly among youth. Currently, "Vision 20:2020" is the tagline for the Economic Development Plan. In Eze (2013), both policy makers and development partners have focused heavily on macroeconomic policy and economic growth with respect to interest rates, exchange rates, and inflation rates. In particular, interest rates have remained extremely high with devastating effects on the cost of borrowing and investment in Nigeria. Despite some notable progress during the 1980s economic reforms, particularly in the financial system, there were still numerous unresolved economic problems.

2.1.5 Foreign Portfolio Investment and Economic Growth

Purchases of securities and other financial assets by foreign investors are referred to as foreign portfolio investments, or FPIs. Exchange-traded funds, stocks, bonds, mutual funds, American depository receipts (ADRs), and global depository receipts (GDRs) are a few types of foreign portfolio investments. Securities and other financial assets owned by investors in foreign countries make up a foreign portfolio investment (FPI). Although it is relatively liquid and depends on market volatility, it does not give the investor direct ownership of a company's assets. FPI is a popular means of investing in an international economy, along with foreign investment inflow. For most economies, foreign direct investment (FPI) and inflow of foreign capital are significant sources of funding. Portfolio investment involves the making and holding of a hands-off—or passive— investment of securities, done with the expectation of earning a return. In foreign portfolio investment, these securities can include stocks, American depository receipts (ADRs), or global depository receipts of companies headquartered outside the investor's nation. Mutual funds, Exchange

Traded Funds (ETFs) that invest in foreign assets, bonds, and other debt issued by these companies or foreign governments are also considered holdings.

2.2 THEORETICAL REVIEW

2.2.1 Endogenous Growth Theory

Paul Romer (1986), Robert Lucas (1988); Serigo Rebelo (1991); and Ortigueria & Santo (1977) defined the endogenous theory is a financial theory which argues that financial or economic growth is generated from internal (rather than external) procedures and inputs. the theory notes that productivity can be improved by the efficiency of a skilled labour force and by rightly using technology. Neoclassical economic theory maintains that external factors such as technological advancements are the main drivers of economic and monetary growth, in contrast to the endogenous growth theory. Most importantly, endogenous growth economists contend that higher investment in human capital and quicker innovation are directly related to increases in productivity. They concentrate on the results of offering improved training techniques, research and development, and more creative production methods. Therefore, the company would need to make investments in endogenous inputs like human capital, research, cutting-edge technologies, and other endogenous elements if it wanted to achieve sustainable growth. The government promotes economic growth by forming and encouraging more competitive markets, which leads to more productivity and generates healthy competition among enterprises; capital investments in infrastructure and in schools, health, and telecommunications; and access to capital for use in creating jobs, investments, and advancing innovation are just a few of the factors required for endogenous growth that come from the public and private sectors' contributions to the production environment. The professor of business, llc (2024).

2.2.2 Classical Theory

According to the traditional theory, multinational corporations (MNCs) and foreign investment inflow have a variety of ways in which they support the economic growth of their host nations. Transfers of capital, technological know-how, and equipment, better balances of payments, growth of the tax base and foreign exchange profits, employment creation, and integration of the host economy into global markets are a few of these. The exponential economic growth of newly industrialized nations like South Korea, Taiwan, Hong Kong, and Singapore, particularly in the 1980s and early 1990s, has reinforced these claims about foreign investment inflow. More recently, by China's remarkable growth (Muchlinski, 1995). In recent times, international institutions and organizations such as the United Nations (UN), the World Bank, and the International Monetary Fund (IMF) have been advocating for the classical doctrine, which emphasizes the significance of foreign investment inflow and a limited state role. Assuming a significant degree of correlation between macroeconomic variables, we can ascertain the relationship between interest rates and economic growth in Nigeria. The effects of interest rates on GDP—the measure of economic growth—can be traced back to this study thanks to the Keynesian model. Remember that growth reacts to changes in interest rates; an increase in investment will occur if interest rates decline.

$$Y = C + I \quad \ldots\ldots\ldots\

while the least developed nations make up the periphery. From this angle, the influx of foreign investment is perceived as a means by which the center subjugates the periphery and maintains its condition of underdevelopment and reliance. Foreign investment inhibits economic growth and upholds the dominance of weaker states, not strengthens it Somarazah (1994). MNCs are charged with exploiting their employees. Multinational corporations have frequently engaged in the exploitation of natural resources without providing comparable benefits to host economies, which has shaped these opinions in large part UNCTAD, (1999). It is this "extractive nature" of foreign investment inflow that the dependency theory largely opposes. UNCTAD (1999). One explanation for Nigeria's reliance on IMF foreign aid is the dependency theory. Insurance and its purpose are consistent with the tenets of the dependency theory, which postulates a divided world. "Centre and Periphery," August 2022, https://www. e-ir.com information. Emerging economies are suggested by the dependency theory.

2.2.4 Theory of Foreign Investment

According to Hymer's theory, the primary drivers of internalization of businesses are factors related to the ownership of particular assets and dimensions by the company as well as factors brought on by the presence of market inefficiencies. Foreign investment is advantageous when firm-specific advantages across nations enable overcoming additional costs of doing business abroad, according to Hymer. Furthermore, he believed that it is cost-effective for foreign businesses with particular advantages to conduct business abroad. Furthermore, according to Hymer, foreign investment aids in the introduction of new production features and technological advancements. It also helps to improve and advance other production processes by acquiring new skills and expertise. Regardless of a company's location in one or more countries, these benefits are inextricably linked from one department to another.

2.2.5 Capital Market Theory

As one of the earliest theories to explain the concept behind a company's international expansion, the capital market theory is a component of the portfolio investment theory. The interest rate and the value of the currency of the host country are the primary factors influencing foreign investment inflow, according to this method. Firms that have a strong currency value in their home country are more likely to expand overseas, according to Aliber (1971). According to Moosa (2002) and Faeth (2009), companies that are based in weaker-currency countries refrain from making foreign investments. Foreign companies are also encouraged to borrow money at lower interest rates than domestic companies due to higher currency fluctuations in the host countries. In his 1985 paper, Boddewyn outlined three circumstances that incentivize companies to extend their operations abroad, arguing that the capital market theory explains why companies invest overseas. First off, reduced production costs in the host nation are made possible by a lower (undervalued) exchange rate. In less developed nations, the lack of structured securities markets is the second factor that promotes foreign investment inflows rather than securities purchases. Third, there's a dearth of knowledge about these nations' stock markets. For this reason, Hennart (2015) favors foreign investment inflow, which permits control over the assets of the host nation.

2.3 EMPIRICAL REVIEW

In Nigeria, Ajuwon and Ogwumike (2023) examined the role of uncertainty (both economic and political) in determining the inflow of foreign investment inflow into the agricultural sub-sector for the period 1970-2008 using co-integration and error correction approach. their results indicated that, in the short-run, inflation impacted negatively but significantly on foreign investment inflow to the agricultural sector, while political freedom had a positive and significant effect. in the long run however, exchange rate volatility had a negative but significant effect on foreign investment inflow into the sector.

In Sweden, Karpathy and Poldahl (2016) analysed inward foreign investment inflow at the firm and industry level for the manufacturing and service sectors during the period of 2010 to 2019. Employing traditional panel estimators, the results reveal that, the drivers of manufacturing foreign investment inflow into the Swedish economy include the level of skills acquisition, energy intensity and capital intensity.

Harvey and Abor (2019) investigated the drivers of foreign investment inflow into the manufacturing sector in Ghana using the regional project on enterprise development (RPED) dataset. Utilizing the binary logistic regression model, the results indicate that firm size, capital requirement, skill intensity, labour cost, technological capability and unionization of a firm’s workers positively affect foreign investment inflow.

For China, Liu et.al (2022) investigated the regional determinants of foreign investment inflows in the manufacturing industry for the period 2008-2021. In order to provide accurate information for policy

makers to attract right foreign investment inflow into the right location, they classified manufacturing industries into low- and high-tech categories. their results reveal that while domestic market, labour cost and agglomeration effects are important determinants in the former development of telecommunication was vital for the latter.

Using a panel dynamic ordinary least squares model, Lin and Benjamin (2018) investigated the relationship between economic growth, energy consumption, and foreign investment inflow among other factors for Mexico, Indonesia, Nigeria, and Turkey (MINT). These countries are emerging economies with large populations, favorable demographics, and high expectations for robust economic growth. These interactions were looked at for each country separately and collectively from 1990 to 2014 in order to increase the homogeneity of the analysis. Coefficients of their long-term economic growth function were also computed. They discovered that, for Mexico, there is a bidirectional causal relationship between economic development, energy consumption, and foreign investment inflows, Turkey exhibited a bidirectional causal association between economic growth, energy consumption, and foreign investment inflows, but Nigeria had a unidirectional relationship between foreign investment inflow and energy consumption. They come to the conclusion that reducing over-reliance on fossil fuels and encouraging economic diversification are the best ways to increase labor productivity.

Bermejo and Werner's (2018) demonstrated in their study on foreign investment and its benefits to economic growth that it is frequently and confidently said that foreign investment inflows are advantageous for economic growth in the host economy. There are still gaps in the research, and the empirical evidence has been inconsistent. The industrialized nations have received the lion's share of foreign investment inflows. Although research has focused on developing countries, single-country studies are necessary because of the heterogeneous relationship between foreign investment inflow and growth, as well as the theory that the impact of foreign investment inflow on growth is greatest in open, advanced developed countries with educated labor forces and well-developed financial markets. They close these gaps by utilizing an updated empirical methodology to determine if foreign investment inflow has boosted growth in Spain, one of the top recipients of inflows; Spain's GDP growth was above average but has eluded examination. Between 1984 and 2010, there was a notable increase in foreign investment inflow, with Spain providing the perfect environment for these inflows to realize the growth-promoting effects that were predicted. It is also discovered that growth has not been positively impacted by Spain's EU membership or euro entrance. The results demand a thorough reconsideration of economics methodology.

Oloso and Ogbuji (2021) employed a system-GMM dynamic panel analysis to investigate the relationship between exchange rate policy and economic growth in a sample of 40 sub-Saharan African countries from 1970 to 2010. The findings suggest that exchange rate policy has a significant impact on economic growth, with appropriate exchange rate management contributing to higher growth rates. Carlos (2020) studied the determinants of the real exchange rate using macroeconomic variables. a panel data was used; with estimator system GMM that allows controlling the endogeneity of the variables that transformed the variables with forward orthogonal deviations (FOD) and first difference (FD), which allows us to eliminate unobserved effects that are invariant in time. to check the robustness of the estimates, different periods were used, from 1980-2019, 2000-2019 and 2010-2019. for the period 1980-2019, it is found that the past values of the real exchange rate, the current values of inflation, economic growth, fiscal and monetary policy have positive effects on the current values of the real exchange rate, while the money supply and the terms of trade have negative impacts on the real exchange rate. for the period 2000-2019, we had similar results and for the period 2010 to 2019, we found that economic growth has negative impacts on the real exchange rate. it is also presented the are llano-bond test and the sargan test to estimate model over identification.

Boopen (2018) used single-country estimation approaches to look into the factors influencing the exchange rate in a few sub-Saharan African nations. Specifically, using annual data from 1980 to 2013, an autoregressive distributed lag (ARDL) model is used to investigate the factors influencing the exchange rate in nine sub-Saharan African nations. Our results demonstrate that the country under investigation affects both the short- and long-term interactions between the exchange rate and its drivers.

Sylvia and Emeka (2022) examined empirically exchange rate determinants in African sub-Sahara countries specifically anglophone west African countries like the Gambia, Ghana, Liberia, Nigeria, and sierra Leone between 1981 and 2019. In order to achieve this objective, both descriptive statistics and the panel least square (PLS) estimation methods were employed to analyse the data. the result of the analysis reveals that inflation has a negative relationship with exchange rate but it does impact significantly on it at

5 percent level; interest rate has negative and an insignificant impact on exchange rate at 5 percent level; current account balance has negative relationship with exchange rate and it also impacts significantly on it at 5 percent level; term of trade has negative relationship with exchange rate and it also impact significantly on it at 5 percent level. The study therefore concludes that inflation rate (infl), current account balance (cabl) and terms of trade (tmtr) depreciates exchange rate (excr) in African sub-samara countries specifically anglophone west African countries. Based on the findings of the research work, the following are recommended: the government should encourage export diversification especially the non-oil sector exports. this can be achieved through value addition to both the agriculture and manufacturing sub-sectors output. There should be stable exchange rate management policy that avoids over-valuation or excessive depreciation of their currencies and ensures international competitiveness of tradable goods, relative price stability as well as avoiding inconsistent fiscal policies. research gate: exchange rates and growth of African countries: a study of selected sub-Saharan countries, 1999- 2021, (2024).

Haider et al (2017) investigated the impact of stock market performance on foreign portfolio investment (fpi) in china. the results showed that there was significant positive impact of stock market performance on the fpi, whereas inflation is found to be negatively

Loice (2017), a researcher connected to the FPI, looked into how stock returns of listed financial institutions in Kenya were affected by equity outflows from overseas portfolios. 14 financial institutions were the focus of the study, which used the purposive sample technique. The panel estimation results showed that stock returns of Kenyan listed financial institutions were unaffected by withdrawals of foreign portfolio equities.

Adekunle (2018) investigated the connection between different kinds of capital flows and Nigeria's economic growth. The results showed that while foreign investment inflow had a favorable effect on economic growth, foreign portfolio investment (FPI) had a negative effect. by managing the structural break dummy in addition to the "globalization" variables of trade openness, inflows of foreign investment, and portfolio investment.

Bataineh, Hayajneh, and Khodirat (2021) examined the impact of short- and long-term active foreign portfolio investments (fpi) on Jordan's economic growth (eg) between 1996 and 2017 using econometric methodologies such as ARDL and error correction models. The results indicate that fpi have a statistically significant long-term (-5%) positive influence on eg at level as well as a short-term (-5%) negative impact on eg at level, with eg requiring approximately ten years to fully adjust.

Ndiweni and Lumengo Bonga-Bonga, (2021) evaluated the relationship between foreign capital inflows and economic growth in emerging economies. The data show that the link between capital inflows and growth has a threshold impact. More precisely, the findings demonstrated that capital inflows have a positive and sizable impact on economic growth once a predefined threshold level of institutional quality has been attained. Below that threshold level, the relationship between capital inflows and growth seems to be nonexistent. These results support the hypothesis that the degree of institutionalization of a nation's economy determines the link between capital inflows and economic growth.

A study conducted by Ndugbu, Otiwu, and Uzowuru, (2021) examined the relationship between foreign portfolio investments and economic growth. The analysis made use of Granger causality and the vector error correction model (ecm). The independent variables were market capitalization, foreign portfolio investment, and trade openness; in Nigeria, GDP is used as a proxy for economic growth. The findings indicated that, of the three research variables, trade openness and market capitalization were crucial in promoting economic growth in Nigeria; foreign portfolio investment, on the other hand, was irrelevant and negatively correlated. Consequently, the report recommended that policymakers endeavor to enhance capital market activity as a means of stimulating capital transactions, so augmenting the nation's economic growth and performance. Scholars have often stated that several conditional elements can explain this fragile relationship.

According to Altavilla, Boucinha, and Peydró (2018), the competitive environment causes the interest rate spread to reflect the efficiency of the financial industry. The gap between the average lending rate and the average deposit rate is known as the interest rate spread in this study. In contrast to other African nations, Ghanaian banks offer astronomically high loan rates, but their deposit interest rates are quite moderate.

Makiela and Ouattara (2018) found that Researchers and policy makers continue to grapple with the difficult subject of how foreign investment inflow affects growth. Theoretically, it has been suggested that

an increase in foreign investment promotes growth. However, because the empirical studies that are now available do not seem to reveal a substantial association between the two variables, academics and policy makers are left puzzled. The results, which are based on data from a sample of industrialized and developing nations from 1970 to 2007, clearly show that growth is influenced by foreign investment inflow through the accumulation of inputs but not by the growth of total factor productivity. Furthermore, they opine that variables other than the influx of foreign investment could have played a role in the productivity boom that emerging nations have experienced in recent years.

METHODOLOGY

3.1 Theoretical Framework

Solow's theory (1956) serves as the theoretical foundation for this investigation. According to the theory, capital should move from capital-rich nations with low capital productivity to capital scarce nations with high capital productivity. Kose, Prasad, Rogoff, and Wei (2006) explain why low private capital appears to move from wealthy to impoverished nations. The output per capita of national or regional economies will therefore eventually converge, according to Solow theory. However, the majority of observed flows in practice, especially in the modern era, are between developed economies. Therefore, the neo-classical framework serves as a formal empirical framework for determining the factors that influence output growth, including foreign capital, by establishing a model that links foreign private capital inflows and economic growth. Technology is specified by the Solow Growth Model, which is derived from the aggregate production function. Production (Y) is therefore expressed as a function of labor (L), capital (K), and technology (A). This connection is expressed mathematically by Solow's simplified growth model.

$$Y = Af(K, L) \quad \ldots\ldots\ldots \quad \ldots\ldots \quad \ldots\ldots \quad \ldots\ldots \quad \ldots\ldots \quad (3.1)$$

Romer's work during the 1990s was primarily concerned with the theoretical and empirical drivers of growth. He made significant contributions to the theory of endogenous growth, paying close attention to the relationships between innovation and public investment and growth. Additionally, he was a pioneer in the field of econometric analysis, which looked at the key variables influencing growth in the modern era.

3.2 Research Design

The overall plan for collecting and analyzing data including specification for enhancing the internal and external validity of the study" is how Polit, Hungler, and Beck (2021) define a research design. A causal-comparative analysis of foreign investment in West African nations is what this study is. The longitudinal research approach was specifically applied. The study used pre-existing panel data that was gathered by the UNDP and the World Bank, which the researcher had no control over, which is why this design was chosen. Kerlinger (1964) defined longitudinal research as a study in which the explanatory variable or variables have already occurred and the researcher begins by observing the variable or variables being explained. In order to determine the independent variables' relationship to and effects on the dependent variable, he then conducts a retrospective analysis of them. Three fundamental characteristics of a longitudinal research approach are listed by Babbie (2023).

3.3 Method of data analysis

Panel data was the empirical analysis method used in this study. The eight countries that make up the west African region under investigation made this technique necessary. Im, Pesaran, and Shin (IPS) and Levin, Lin, and Chu (LLC) methods were used to test the variables for unit root. Expanded dickey-fuller (ADF) theory underpins both the panel-based unit root tests, LLC and IPS. In order to determine the linear combination of the long-run relationship between the variables, the study then used the co-integration test. Additionally, the study uses the panel fully modified ordinary least squares (FMOLS) estimator to estimate the given model. In order to get reliable and effective long-run coefficients for a cointegrating model,

Pedroni (2000) created the FMOLS estimator, a cointegration estimator. The selection of this estimator is motivated by the observation that Fully Modified Ordinary Least sq\. (FMOLS) yields long-run results.

3.4 Model Specification

Based on the theoretical reasoning above, the modified model used by Idoko and Taiga (2018), with substitution of some variables, was adopted for the study and specified as follows;

$$GDPGR = f(FDI, FPI, INTR, EXCH, INFL) \quad \ldots\ldots \quad \ldots\ldots\ldots \quad (3.11)$$

Where;

GDPGR = Growth rate of GDP

FDI = Foreign Portfolio Investment (used as ratio of inflow to GDP).

FPI = Foreign portfolio investment (ratio of FPI to GDP).

INTR = Interest rate.

EXCH = Exchange rate.

INFL = Inflation.

Equation (3.11) assumes that the number of FDI, FPI, INTR, and control variables determines changes in economic growth. Equation (3.11) contains the mathematical specification for the linear panel data model, which is as follows: GDPGRit = αi + γi+ β0 GDPGRit-1+ β1FDIit-j + β2FPIit-j + β3INTRit-j + β4EXCHit-j + β5INFLit-j + νit (3.12) where i = 1, 2… 8 (countries); t = 1, 2… 17 (years – 2007–2023), and v is the error term. The subscripted intercept term indicates that the chosen countries' intercepts might differ. Since they gauge the rate of change, the coefficients β1… β8 are actually elasticities. The intercept's value is αi. The study is predicated on the idea that there is a connection between a nation's economic growth last year and its current level of foreign capital inflows. As a result, the study will estimate the relationship between economic growth and foreign capital inflows using dynamic panel data.

The dynamic form equation is expressed as follows:

$$GDPGR_{it} = \alpha_i + \gamma_t + \beta_0 GDPGR_{it-1} + \beta_1 FDI_{it} + \beta_2 FPI_{it} + \beta_3 INTR + \beta_4 EXCH_{it} + \beta_5 INFL + V_{it} \ldots\ldots\ldots \quad (3.13)$$

For i=1,…,N and t=2,…, T. Where; $GDPGR_{t-1}$: one period lag of GDPGR; and other variables as the exogenous variables previously defined such that: $\alpha_i + \varepsilon_{it}$is the usual error component decomposition of the error term; α_i are unobserved individual-specific effects; V_{it} are the observation-specific (individual) errors. In order to also eliminate the individual effects and get a consistent estimate of α as N → ∞ with T fixed, equation (3.13) is rewritten in first difference notations. Then the first-differenced equation for the link between capital flows and economic growth is:

$$GDPGRit - GDPGRit{-}1 = \gamma_t - \gamma_{t-1} + \beta_0 \Delta GDPGR_{it-1} + \beta_1 \Delta FDI_{it} + \beta_2 \Delta FPI_{it} + \beta_3 \Delta INTR + \beta_4 \Delta EXCH_{it} + \beta_5 \Delta INFL + \Delta V_{it} \ldots\ldots\ldots\ldots \quad (3.14)$$

Considering t=3,…, T and i=1,…, N.... Due to its lack of time variation, the unobserved individuallevel effects αi have now vanished from the differenced equation (3.14). Δs are the first operators for differences. Because the fixed effect components were successfully eliminated from the model by this transformation, the following presumptions are made: First, the transient errors are serially uncorrelated (i.e. E. If i=1,…,N, and t≠ s, then E[vit vis] = 0. E[gdpgrit, vis] = 0 for t ≥ 2 is also satisfied by the initial conditions. There is a correlation between gdpgrit-2 and earlier values and Δgdpgrit-1, but not with ΔVit. In the first-differenced equation, gdpgrit values that are two periods or more behind are valid tools (3.12). The system equation, which is provided below, results from treating all of the foreign capital variables, Xit, as endogenous variables. Although the second set of equations, which considers the endogeneity issue, is identical to the level's equations, which are described as follows, the first set of equations is the same as that which was discussed for the first-differences estimation.

$$GDPGR_{it} = \alpha_i + \gamma_t + \beta_0 GDPGR_{it}{}^{-1} + \sum_{j=0}^{1} \beta_1{}_i FDI_{it}{}^{-j} + \sum_{j=0}^{1} \beta_2{}_i FPI_{it}{}^{-j} + \sum_{j=0}^{1} \beta_3{}_i INTRit$$

$$+ \sum_{j=0}^{1} \beta_4{}_i EXCH_{it}{}^{-j} + \sum_{j=0}^{1} \beta_5{}_i INFL_{it-j}$$

$$+ v_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.15)$$

Blundell & Bond (1998) provide the additional assumption that:

$$E(\cdot_{it} \cdot gdpgr_{it} = 0); \quad E(\cdot_{it} \cdot x_{it} = 0).$$

DATA PRESENTATION OF RESULTS, ANALYSES AND DISCUSSION

Statistical analysis and econometric analysis are the two sets of procedures used in the empirical analysis. Although the econometric analysis primarily consists of the model's estimation, the statistical analysis makes use of descriptive statistics of the key variables utilized in the study. Due to this, the Fully Modified Ordinary Least sq\.s (FMOLS) technique and the Generalized Method of Moment are used to estimate the relationships between the variables.

4.1 Descriptive Statistics

Table 4.1 displays the study's descriptive statistics for its variables. The Jarque-Bera (JB) statistic, which determines the normality of the series used for analysis, the average value, and the coefficients of skewness and kurtosis are the important statistics of interest.

Table 4.1 Descriptive Statistics of Key Variables

	GDPGR	FDI	FPI	INTR	EXCH	INFL
Mean	4.483730	5.651523	3.882723	9.486283	1092.534	17.82714
Median	4.870532	2.898997	3.828641	7.589895	478.6337	15.02920
Maximum	20.71577	103.3374	4.912655	92.14146	9829.927	72.56670
Minimum	-20.59880	-10.95400	0.011000	0.399035	0.932619	0.011000
Std. Dev.	3.921777	11.68134	0.734882	10.55465	2139.009	13.33646
Skewness	-1.489339	6.078649	-1.828484	4.958921	2.744646	2.079967
Kurtosis	13.56290	44.36184	8.794564	34.70033	9.467065	7.656166
Jarque-Bera	1114.138	17192.06	434.2910	10205.29	665.5862	360.6107
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	995.3880	1254.638	861.9644	2105.955	242542.5	3957.625
Sum Sq. Dev.	3399.055	30156.26	119.3513	24619.54	1.01E+09	39307.29

Source: Author's Estimation using E-views 10.

Table 4.1 illustrates that the West African sub-region's real per capita income growth rate from 2007 to 2021 averaged US$4.48 billion, with a minimum of -US$20.60 and a maximum of US$20.72. The series was leptokurtic (greater than 3) according to the Kurtosis, whereas the series' distribution was negatively skewed, as indicated by the coefficient of skewness of -1.49. The variable is not normally distributed, as indicated by the Jarque-Bera statistic that rejects the null hypothesis of normality at the 5 percent significance level with a p-value less than 0.05. For the sub-region under consideration, the average percentage of GDP that was Foreign Direct Investment (FDI) was 5.65 percent. During that time frame, foreign direct investment (FDI) varied from -10.95 percent to a maximum of 103.34 percent. The reason for this could be the subregion's nations' heavy reliance on foreign investment. The coefficient of skewness, Kurtosis, Jarque-Bera statistic, and the null hypothesis of normality at the five percent level all show that the FDI series does not follow a normal distribution. The sub-region's average foreign portfolio

investment (FPI) from 2007 to 2021 was 3.88 percent. During the period, the highest FPI in the sub-region was 4.91 percent. The Jarque-Bera statistic, kurtosis, and skewness all show that the variable did not have a normal distribution. The interest rate varied between 0 and 40 percent, with an average of 9 and 14 percent. According to the coefficient of skewness, which is 4.958921, the variable was not normally distributed.

FMOLS Estimate

Result of the estimation of the model using the panel FMOLS estimator is presented in the table below. The result does not include an intercept term because the estimator is designed to correct the problem of heteroskedasticity using the generalized least squares (GLS) procedure (Pedroni, 2000).

TABLE 4.2 FMOLS estimation results

Dependent variable: GDPGR
Method: panel fully modified least squares (FMOLS
Date: 07/09/24 Time: 09:34
Sample (adjusted): 2007-2023
Periods included: 17
Cross-sections included: 8
Total panel (unbalanced) observations: 136
Panel method: pooled estimation

Variable	coefficient	std. error	t-statistic	prob.
Fdi	0.131175	0.032059	4.091732	0.0001
Fpi	0.683136	0.391977	1.742796	0.0831
Intr	-0.064119	0.054032	-1.186685	0.2370
Exch	0.000129	0.000401	0.320797	0.7488
Infl	-0.072131	0.048042	-1.501414	0.1351

R-squared	0.201113	Mean dependent var	4.537265
Adjusted r-squared	0.104138	S.D. dependent var	3.870797
S.E. of regression	3.663709	Sum squared resid	2322.138
Long-run variance	12.70205		

Source: Author's estimation using e-views 10.

The results show that foreign direct investment (fdi) is in tandem with *a priori* expectation. it is positively related to gross domestic product growth rate in the long run and statistically significant at the 1% level. this implies that high level of fdi has the potential to boost economic growth of the subregion's economy in the long run. this corroborates evidence from Opeyemi (2020); Yenew (2022).

Foreign portfolio investment (fpi) in the ECOWAS sub-region is positive and significant at the 10% level. a unit rise in fpi is associated with 0.68 unit increase in economic growth. this finding is in consonance with previous empirical studies such as Albulescu (2015) which also found positive effect of foreign portfolio investment on economic growth. as such, incentive packages should be oriented toward investors.

Though exchange rate is positively related to economic growth in the long run, it is not significant in explaining economic growth within the sub-region within the period under review. this suggests that depreciation of the currencies of countries in the sub-region does not have the ability to impact economic growth. Inflation (infl) is against *a priori* expectations and not statistically significant in explaining economic growth in the sub-region for the period of consideration. Interest rate (intr) does not meet the *a priori* expectation and is not statistically significant in explaining economic growth in the sub-region for the period of consideration. however, it agrees with that of (Kolawole, 2013) who found that intr has a negative relationship and exacts no influence on economic growth in the west Africa.

4.3 Robustness Checks

To test the robustness of the results from FMOLS estimation, the approach suggested by White and Lu (2014) was adopted. In doing this, alternative specifications of the model were estimated using the panel least squares approach for estimation of a panel fixed effect model (which corrects the bias resulting from omitted variables), and the extended generalized least squares estimator for estimation of a random effect model (which corrects the problem of heteroskedasticity). The alternative model specification involved dropping some of the control variables (exch and infl). the results of the estimations are presented in table 4.3. This was done to examine the sensitivity of the key variables of interest (fdi, fpi, and intr) to alternative specification and estimation techniques.

Table 4.3: Fixed and Random Effects Models

	Dependent variable: GDPGR	
	Sample: 2007 to 2023	
Regressor	Fixed effect	Random effect (egls)
C	2.969671 (0.0754)	3.265280 (0.0344)
Fdi	0.123727 (0.0000)	0.103519 (0.0001)
Fpi	0.530861 (0.1543)	0.461921 (0.2036)
Intr	-0.010981 (0.7753)	-0.033689 (0.2188)
N	15	15
r^2	0.148599	0.084855
adj. r^2	0.075069	0.069278
f-stat.	2.020934	5.447460

Source: Author's estimation using e-views 10.

The outcomes of estimation of the fixed effect and the random effect models are similar to those of fmols estimation. Foreign direct investment and foreign portfolio investment are both positively related to gross domestic product growth rate though significantly and insignificantly respectively, while interest rate is negatively related to economic growth rate though insignificantly.

4.4 Test of Hypotheses

In this sub-section, the hypotheses formulated in section one were tested. this was done using the ratios of the estimated model parameters. The tests are performed at the 5% significance level.

Ho_1: Foreign direct investment (fdi) has no significant impact on gdp growth in west Africa

This null hypothesis is rejected on the strength of the observed t-ratio of the estimated coefficients as in the long run pmg regression and the fmols-estimated model at the 1% level. Thus, a relationship exists between foreign direct investment and gdp growth in West African countries.

Ho_2: Exchange rate (exch) has no significant impact on gdp growth in west Africa.

Based on the t-ratio of the estimated coefficient of exchange rate in the long run pmg regression estimated model we reject this null hypothesis as it passes the test of statistical significance even at the 1% level. Thus, exchange rate significantly impacted on economic growth in the countries within the west African sub-region.

Ho_3: Foreign portfolio investment (fpi) has no significant impact on gdp growth in west Africa.

This null hypothesis is rejected on the strength of the observed t-ratio of the estimated coefficients as in the long run pmg regression and the fmols-estimated model at the 1% level. Thus, a relationship exists between foreign portfolio investment and gdp growth in countries within the West African sub-region.

Ho_4: Interest rate (intr) has no significant impact on gdp growth in West Africa.

The t-ratio of the intr coefficient in the long run pmg regression output fails the test of statistical significance at all levels. Thus, we fail to reject this null hypothesis and conclude that interest rate does not significantly influence economic growth in the countries that subsist within the west African subregion.

Ho_5: Inflation (infl) has no significant impact on gdp growth in West Africa.

The t-ratio of the infl coefficient in the long run pmg regression output fails the test of statistical significance at all levels. Thus, we fail to reject this null hypothesis and conclude that inflation does not significantly influence economic growth through direct channel in the countries that subsist within the west African sub-region. however, there could be potent effect on growth through other macroeconomic variables.

4.5 Policy Implications of Empirical Results

The analysis indicates that foreign direct investment and foreign portfolio investment are positively and significantly related to economic growth in the economies within the West African sub-region. Thus, fdi and fpi should be channeled into productive ventures in order to aid sustainable growth and development. However, heavy reliance on fdi should be with caution. This is because it predisposes an economy to sharp fluctuations. In other words, when a country depends heavily on foreign inflow of resources, development policies become vulnerable to sharp fluctuations.

The findings from this study showed that interest rate has not effectively exerted the much needed effects on economic growth. A possible explanation for this is that interest rate fluctuates continuously with the period under consideration throughout the region. The observed positive long run growth effect of exchange rate is indicative of the j-curve effect in external trade. The implication of this is that depreciation of the local currency should be accompanied by massive investment in productive capacity building to enhance output from the various sectors of the economy which constitute the base of export as postulated by the vent-for-surplus theory of international trade. The positive and weak significant long run growth effects of inflation on economic growth affirm the predictions of various growth theories that underscore its relevance to the growth of the countries of the sub-region.

5.1 Summary

The study examined the effect of foreign private capital inflow on economic growth in West Africa, using panel data spanning from 2007 to 2023. The measures of foreign private capital inflow used in the study are foreign direct investment (fdi), foreign portfolio investment (fpi), exchange rate, interest rate (intr). the

study objectives are; to examine the impacts of foreign direct investment on gdp growth in west Africa, to investigate the impacts of foreign private investment on gdp growth in west Africa.

Also, the study set to examine the impact of interest rate on gdp growth in West Africa, and investigate the impacts of portfolio investment on gdp growth in west Africa. The study used fully modified ordinary least square (fmols) for the analysis of the data.

The robustness of the results of panel FMOLS estimation of the specified model is checked using alternative estimation techniques such as the random effect extended generalized least squares (egls) estimation and the robust least squares estimation (m-estimation). The inherent problems of heteroscedasticity and cross-sectionally correlated residuals in panel dataset are corrected by the egls estimator. summary of key findings include the following:

The result of the study found that foreign direct investment fosters a positive and significant effect on economic growth in the long run in West Africa for the period covered in the study.

The study also found out that foreign investment exerts a positive and significant impact on the economic growth in West africa for the period under review.

Similarly, exchange rate impacted positive and significant effect on economic growth in the long run in West Africa for the period studied.

In the same vein, the study found out that inflation has a positive and significant effect on economic growth of West Africa countries for the given period.

The study also found that interest rate exerts a negative and insignificant influence on economic growth for the period of study.

5.2 Conclusion

This study has analyzed the influence of foreign private capital inflows on economic growth in West Africa. With the dwindling nature of most west African economies especially after the covid-19 era, most west African economies are trying to bounce bank. Foreign private capital has been identified as sources of capital for the dwindling West African economies, especially as they are recovering from covid-19 crisis. the study employed FMOLS, and PMG for the study to ensure robustness.

However, empirical investigations from this study found that only fdi and fpi have significant impact on economic growth in West Africa. This outcome also highlights the importance of inflation- in analysing the relationship between foreign private capital inflow and economic growth in west Africa. This indicates the importance of sound monetary policy and stronger oversight in the financial system. Indeed, inflationary pressure could weaken the inflow of foreign capital and generate negative effect on the economies.

It is thus important to conclude base on the outcome of the result that more still need to be done to attract more portfolio investments. From the result, it is evident that there is relatively a low level of portfolio investment and foreign private investments in some major West African economies during the period of the study. However, increase in these private capital inflows in the economies will boost the sectoral output growths of the economies.

In conclusion, the study highlights the need to attract more direct and portfolio investments. from the results, high levels of in capital inflows in the economies will boost the sectoral output growths of the economies. Again, findings revealed that a sound control of inflation and exchange rate could strengthen the inflow of foreign capital and generate positive effect on the economies and the exchange rate must be influenced in the foreign exchange market to achieve the desired long-run growth of economies of the sub-region.

Policy Recommendations

Based on the findings from the study, the following recommendations are made:

First, the result of the study found that fdi has a significant positive effect on economic growth in west Africa for the period of the study, which underscores the need for the country to attract fdi and channel same into productive sectors. this will help to attract more fdi inflows into west African countries. policy

makers should look into the basic financial needs of their respective countries especially in the areas of power, education, agriculture, manufacturing, infrastructural development to mention but a few and pursue vigorously foreign capital policies that have a direct beneficial impact on the sectoral output.

Portfolio investment (fpi) was found to have a positive relationship with economic growth in west Africa. thus, the study recommends that the government of the countries within the west African region should sustain the current reforms in the various sectors of the economy to encourage the inflow of portfolio investment to promote rapid growth and development.

In addition, the study found that interest rate (intr) has a negative and insignificant effect on economic growth in West Africa. Thus, the study recommends that intr must be coordinated or harmonized in west African countries through administrative framework that has clearly identifiable focal point. in this regard, one coordinating body and one monitoring and evaluation system at the highest level of government cannot be overemphasized as it is currently done in the euro zone with monetary union.

Considering that currency depreciation adversely affects economic growth in the short run and positively affects it in the long run, there is need for occasional governments' intervention in the foreign exchange market to influence the exchange rate to achieve desirable levels of output.

The study also found that inflation has indirect significant influence on economic growth in West Africa. thus, it is recommended that government should continue to carry out policies aimed at targeting inflation and other monetary variables to attract more private capital inflow in the country. Private capital inflow needs to be attracted to the real sector that will improve the aggregate output growth and divert attention away from mono sector. This no doubt will go a long way in making them more self-reliant, increase employment opportunities and household income.

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