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Foreign Capital Flows and Economic Growth in Some Selected West African Countries

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Abstract

This study explores the intricate relationship between foreign capital flows and economic growth in carefully selected West African countries. The analysis considers a range of foreign capital inflow variables, including foreign direct investment (FDI), foreign portfolio investment (FPI), remittances (RMT), official development assistance (ODA), external debt (EXD), real exchange rates (RER), and trade openness (OPN). It evaluates these variables within the context of several economic theories and models, such as the Balance of Payment Constrained Growth Theory, Factor Endowment Theory, Harrod-Domar Model of Growth, Neoclassical Theory of Growth, and Two-Gap Model Theory. The empirical findings highlight the varying degrees of influence exerted by foreign capital inflows on economic growth across the selected countries. FDI emerges as a consistently positive contributor to economic growth, albeit with variations in its magnitude. In contrast, FPI exhibits mixed effects, positively impacting growth in some nations while exhibiting negative or negligible effects in others. Remittances are found to play a pivotal role, with their influence on economic growth varying across countries. ODA and EXD are revealed to have positive associations with economic growth, underscoring the significance of development aid and external financing. Real exchange rates, while influential, display nuanced effects, and trade openness consistently shows a positive and statistically significant impact on economic growth. These findings have significant policy implications, emphasizing the need for tailored strategies that consider each country's unique economic context and characteristics. It is crucial for policymakers to navigate the complexities of foreign capital inflows to maximize their potential benefits while mitigating associated risks. This study provides a comprehensive examination of foreign capital flows and their impact on economic growth, offering nuanced insights into the intricate relationship between these variables. It underscores the importance of flexible and context-specific policy measures to harness the potential of foreign capital inflows for sustainable economic growth and development in an increasingly interconnected global economy.

Keywords: *Foreign Capital, Foreign Direct Investment, Foreign Portfolio Investment, Official Development Assistance, Remittance, Economic Growth, West African Countries*

1.0 Introduction

Foreign capital has played a significant role in the process of economic growth and development in many developing nations, especially in Africa and Asia. Foreign capital flow, especially inflow, plays an important role in the economic growth of developing countries to supplement domestic savings for investment and growth. There is a great need for foreign capital in Africa, given its high poverty levels and low domestic capacity to save. The realization of this need has led many African countries, including Nigeria, to liberalize their financial systems to attract foreign capital. In Nigeria, efforts to attract foreign capital flows began with the operation of rapid capital account liberalization from 1991 to 1995. Such efforts included relaxing restrictions

on foreign currency transactions and introducing foreign exchange-bearer certificates of deposit (FEBCs). Restrictions on portfolio investments, excluding some exceptions, and capital account transactions were also removed (Yoshino et al., 2015).

Foreign capital flows are defined by Nkoro and Furo (2012) as consisting of the movement of financial resources from one country to another, not minding the direction, which could be either way. The IMF (2009), however, defined worker remittance as consisting of goods or financial instruments transferred by migrants living and working abroad to residents of the home economies of the migrants. It is limited to transfers made by workers who have stayed in foreign economies for at least one year, while transfers from migrants who are self-employed are excluded. The economies of less developed countries (LDCs) such as Nigeria, as opined by Ezirim, Anoruo, and Muoghalu (2006), have been bedeviled by the twin economic crises of mounting debt burden and foreign investment inadequacies accompanied by more than proportionate foreign direct investment income remittances out of these economies, and the debt problem is incredibly horrible and appears to have no remedy.

Foreign capital flows involve the inflow and outflow of both tangible and intangible capital from foreign countries into a domestic country for investment purposes in order to promote economic growth and development. Chigbu, Ubah, and Chigbu (2015) defined foreign capital inflow as the movement of capital resources into a country for investment, trade, and production purposes. Foreign capital inflow can be regarded as the inflow of huge financial resources that enhances economic growth and development through the movement of modern technology, inventions, innovations, and technical expertise from foreign countries into a domestic nation (Fambon, 2013; Adusah-Poku, 2016).

On the other hand, economic growth refers to the significant improvement in the performance of an economy in terms of employment generations, poverty reductions, investments, and productivity enhancement. The need for foreign capital flow is built on the principle of the vicious poverty circle, which resulted in a mismatch between savings and the capital required for investment and growth, which created a vacuum, thereby leading to the need for additional sources of capital that could be complemented by foreign capital inflows (Ocharo, Wawire, Nganga, and Koseimbe, 2014) asserted that in order to cover the savings and investment gap created by poverty and unemployment, developing countries, such as West African countries, require substantial inflows of foreign capital for the purpose of stimulating capital accumulation, investment, and production, which are necessary for reducing poverty, improving standards of living, and promoting growth and development.

Over the years, since the adoption of the Structural Adjustment Programme, Nigeria has experienced a huge inflow of capital from developed countries like the U.S.A., the U.K., France, and Germany, among others. Eze and Okparaka (2017) opined that Nigeria has experienced the inflow of foreign capital through foreign portfolio investment, foreign aid, foreign direct investment, foreign remittances, and external debts, among others. According to the Central Bank of Nigeria Statistical Bulletin (2017), foreign direct investment fell from N 1,360.3 billion in 2011 to N 1,113.5 billion in 2012. Furthermore, foreign direct investment inflow into the economy continued to fall, reaching N 875.1 billion in 2013, N 738.2 in 2014, and N 602.1 in 2015. However, there was an increment in foreign direct investment to N 1,124.1 billion in 2016 before declining to N 1,069.4 billion in 2017 (CBN, 2017).

Numerous scholars have examined the pros and cons of foreign capital flow in developing economies, shedding light on its potential benefits and challenges. On one hand, FPI can serve as a source of much-needed capital inflows, providing liquidity to financial markets, stimulating investment activity, and fostering economic growth (Phiri, 2017). By facilitating access to

international capital markets, foreign capital flow can help diversify funding sources and reduce reliance on domestic savings, thereby promoting financial deepening and stability.

However, foreign capital flow also poses several risks and vulnerabilities, particularly for developing economies with less mature financial markets and regulatory frameworks. Scholars have highlighted concerns such as volatility, herd behavior, and contagion effects associated with FPI, which can exacerbate market fluctuations and financial instability (Albuquerque & Vega, 2019). Moreover, the short-term nature of portfolio investments can lead to speculative activities and abrupt capital outflows during periods of market stress, posing challenges for macroeconomic management and exchange rate stability (Ibrahim & Akinbobola, 2017).

In the context of selected West African countries, scholars have offered diverse perspectives on the role and impact of foreign capital flow. Some studies emphasize the potential benefits of foreign capital flow in enhancing capital mobilization, fostering financial sector development, and promoting economic growth. Others caution against the risks of excessive reliance on short-term portfolio inflows, advocating for prudent macroeconomic policies and regulatory measures to mitigate vulnerabilities. Overall, the literature reflects a nuanced understanding of the opportunities and challenges associated with FPI in West African economies, underscoring the need for context-specific analysis and policy responses (Adedokun, 2017).

By considering the nexus between foreign capital flow and economic growth, the pros and cons of foreign capital flow in developing economies, and scholars' perspectives on foreign capital flow in selected West African countries, this study aims to provide a comprehensive understanding of the dynamics and implications of inward foreign capital flow of FDI, FPI, RMT, ODA, and EXD work to create economic growth or not, as well as their impact on selected macroeconomic factors and trade factors in developing countries.

In view of the above analysis, efforts are being made by different national authorities to attract more foreign capital to Africa. It is against this backdrop that this research study is set out to look into the relationship between between foreign capital flows and economic growth in carefully some selected West African countries. The rest of this paper contains the literature review, methodology, results and discussions and conclusions and recommendation for police formulations.

2.0 Literature Review

This section deals with the conceptual clarification, theoretical frameworks and empirical literature.

Foreign Capital Flow

Foreign capital flows, as defined by Nkoro and Furo (2012), consist of the movement of financial resources from one country to another, not minding the direction, which could be either way. The IMF (2009), however, defined worker remittance as consisting of goods or financial instruments transferred by migrants living and working abroad to residents of the home economies of the migrants. It is limited to transfers made by workers who have stayed in foreign economies for at least one year, while transfers from migrants who are self-employed are excluded.

Furthermore, foreign capital flows involve the inflow and outflow of both tangible and intangible capital from foreign countries into a domestic country for investment purposes in order to promote economic growth and development. Chigbu, Ubah, and Chigbu (2015) defined foreign

capital inflow as the movement of capital resources into a country for investment, trade, and production purposes. Foreign capital inflow can be regarded as the inflow of huge financial resources that enhances economic growth and development through the movement of modern technology, inventions, innovations, and technical expertise from foreign countries into a domestic nation (Fambon, 2013; Adusah-Poku, 2016). There are some measures of capital flows, which are: foreign direct investment (FDI), foreign portfolio investment (FPI), remittance (RMT), official development assistance (ODA), and external debt (EXD).

Economic Growth

The search for a satisfactory definition of economic growth by many economists has actually continued without an end. However, it is important to conveniently adhere to the convention that real per capita national income or output represents the most reliable indicator of a system's economic achievement at any given point in time and that any change in real per capita income or output signifies welfare (Oriavwote and Eshenake, 2013). Economic growth can be defined as an increase in the amount of goods and services produced by economy over a given period of time. It is conventionally mentioned as the percentage increase in real gross domestic products, or real GDP. Growth is usually calculated in real terms, i.e. inflation adjusted terms; in other obviate the distorting effect of inflation on the prices of goods and services produced. In economics, “economic growth” or “economic growth theory typically refers to the potential output, i.e., production at “full employment”, which is caused by growth in aggregate demand or observed output (Omojimite, 2012).

Furthermore, economic growth measured in term of Gross domestic product (GDP) which is the market value of all officially recognized final goods and services produced within a country in a given period. GDP per capita is often considered an indicator of a country's standard of living, GDP per capita is not a measure of personal income. Gross domestic product is related to national accounts, a subject in macroeconomics. GDP was first developed by Simon Kuznets for a US Congress report in 1934, who immediately said not to use it as a measure for welfare. After the Bretton Woods conference in 1944, GDP became the main tool for measuring the country's economy. Output in economics is the "quantity of goods or services produced in a given time period, by a firm, industry, or country," whether consumed or used for further production.

The concept of national output is absolutely essential in the field of macroeconomics. It is national output that makes country rich, not large amounts of money.Net output is a quantity, of production that is positive if the quantity is output by the production process and negative if it is an input to the production process. "Gross" means that GDP measures production regardless of the various uses to which that production can be put. Production can be used for immediate consumption, for investment in new fixed assets or inventories, or for replacing depreciated fixed assets. "Domestic" means that GDP measures production that takes place within the country's borders. The monetary value of all the finished goods and services produced within a country's borders in a specific time period, though GDP is usually calculated on an annual basis. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory.

Theoretical Framework

There have been no generally accepted theories of foreign capital flow. However, there are several theories of the determinants of foreign capital flow and economic growth. Some of these theories are: balance of payment constrained growth theory, factor endowment theory, Harrod-Domar model of growth, neoclassical theory of growth, and two-gap model theory. But in this study the factor endowment theory and Harrod-Domar model of growth are discussed.

The Factor Endowment Theory

The theory was first developed by two Swedish economists, Heckscher (1919) and Ohlin (1933). The theory states that countries can have a comparative advantage when they are richly endowed with a particular resource. For example, countries with vast endowments in oil and gas resources may generally produce these endowments cheaper and would therefore have a comparative advantage in oil and gas production. The theory points out that there exist differences in relative factor endowment that explain observed differences in comparative production costs between countries, therefore prompting the need for international trade for a country's surplus goods. Given different factor endowments, relative factor prices will differ, and for this reason, factor combinations and commodity price ratios will differ, i.e., a country that has labor in abundance but lacks capital will have a relative cost advantage over other countries in the production of such goods and services that are labor-intensive. Such a country may therefore concentrate on the production of labor-intensive products, which will give them surpluses to export.

Similarly, countries with available capital would command a relative production cost advantage for goods and services that require abundant capital. Such a country should therefore engage in the production of capital-intensive goods and services, which will give them surpluses to export. The theory shows that both countries will benefit from specialization, increased output, and trade. According to Akrani (2011), the theory has been criticized for being restrictive as it assumes the production of only two commodities by two countries with two factors. Furthermore, Ohlin's theory is based on attaining partial equilibrium; it fails to give a complete, comprehensive, and general equilibrium analysis, thereby also neglecting other factors that influence international trade.

The theory is relevant for this study because Nigeria, so endowed with oil and gas resources, should command a comparative advantage in oil and gas production and export, thereby achieving an increase in foreign exchange earnings, which is one of the variables of external sector performance.

Harrod-Domar Model of Growth

Harrod and Domar extended the Keynesian analysis of income and employment to the long-run problem of economic growth and therefore considered both the income and capacity effects of investment. Harrod and Domar models of economic growth explain at what rate investment should increase so that steady growth is possible in an advanced capitalist economy. In the growth models of Harrod and Domar, the rate of capital accumulation plays a crucial role in the determination of economic growth. The problem of present-day mature economies in the late forties and early fifties lay in averting both secular stagnation and secular inflation. The Harrod and Domar models seek to determine the unique rate at which investment and income must grow so that full employment levels are maintained over a long period of time, i.e., equilibrium growth is achieved.

In this growth model, investment is seen as the prime mover in the growth of the economy. Investment is seen to have a dual role. It creates both demand and capacity, which are essential ingredients in the growth of the economy. The model essentially concentrates on the broad aggregates of investments, savings, capital, and output. Capital and output are related by the capital-output ratio (COR) and the changes in the stock of capital and changes in outputs by the marginal capital-output ratio (MCOR). The model starts by noting that savings are not only a function of income but also a given proportion of income. If savings are a given proportion of income, then

$$S = sY \quad (2.1)$$

Investment brings about a net change in the capital stock so that:

$$I = \Delta k \quad (2.2)$$

Any change in capital stock (ΔK) results in a change in the level of output (ΔY) in the economy (MCOR).

This implies that $\frac{\Delta K}{\Delta Y} = K$ (i.e. MCOR).

Or $\Delta K = K\Delta Y$ (2.3)

In equilibrium $I = S$ (2.4)

By substituting equation 2.1 and 2.3 into equation 2.4

$$sY = K\Delta Y \quad (2.5)$$

Divide equation 2.5 by Y

$$\frac{sY}{Y} = \frac{K\Delta Y}{Y}$$

$$s = K\frac{\Delta Y}{Y} \quad (2.6)$$

Where

$$s = savings \quad (2.7)$$

$K = MCOR$

$\frac{\Delta Y}{Y}$ = rate of growth of income (g)

Therefore $g = \frac{s}{K}$ (2.8)

Equation 2.8 shows that the rate of growth of national income or the growth of the economy is determined by the level of savings and the incremental capital-output ratio. Given a target growth rate (g) and the incremental or marginal capital-output ratio (K), it is easy to find out the level of savings that must be realised to achieve the growth rate. The model also predicts that given the incremental capital-output ratio, the higher the savings, the higher the growth rate, or the lower the capital-output ratio, with a given level of savings, the higher the growth rate. It argues that if the sufficient level of savings is not forthcoming from within the economy to attain a certain targeted growth rate, the economy can borrow or encourage capital inflow from abroad.

Empirical Literature

In the empirical literature, several studies have been carried out on the link between capital flow variables and economic growth in Nigeria using different variables and different estimating techniques. Some of the empirical studies will be highlighted in this research work.

Issoufou (2021) conducted a study on remittance and economic growth in Niger: An Error Correction Mechanism Approach. The study used various time series econometric techniques, including the unit root test, the Engle-Granger cointegration test, the vector equilibrium correction method, and some diagnostic tests on the residuals, to inspect the connection between remittances and economic growth in Niger. The empirical results showed that there is a long-term relationship between remittances and economic growth in Niger. The error correction term's coefficient shows that about 51.62% of the discrepancy between the long run and short run is

corrected with yearly data, suggesting an acceptable rate of adjustment to equilibrium. Also, in the short run, ceteris paribus, a 10% increase in remittances would lead to a 2.03% increase in Niger's gross domestic product.

In Otapo's (2020) study on the Dynamic Effects of Foreign Portfolio Investment on Economic Growth in Nigeria, the Augmented-Dickey Fuller test was used to confirm the need for dynamic techniques in assessing the significant role of foreign portfolio investment, domestic savings, government capital expenditures, and market capitalization in shaping the gross domestic product. The short-term empirical estimations revealed a significant negative impact of domestic savings on gross domestic product. The study provides empirical evidence and theoretical support for the assertion that foreign investment, domestic savings, government spending, and market capitalization are key determinants of long-term trends in gross domestic product formation in Nigeria. The empirical results also indicate that the substantial deficit of domestic savings in Nigeria poses obstacles to economic growth in both the short and long term, and that portfolio foreign investment has a greater impact on long-term economic growth than in the short term.

David, Clement, and Titus (2020) conducted a study on the asymmetric effects of remittances on economic growth in Nigeria, using non-linear ARDL analysis. They investigated the asymmetric and nonlinear relationship between remittances and economic growth using the nonlinear autoregressive distributed lag (NARDL) model, based on data from Nigeria spanning 1981 to 2018. The study revealed that in the long run, economic growth responds asymmetrically to remittances. It was found that both positive and negative changes in remittance inflows negatively impact the economy's productive capacity in the long run, while positive and negative changes in remittances have contrasting effects on growth in the short run. The study concluded that the continuous increase in remittance inflows has not been utilized for productive activities that could stimulate growth in Nigeria. Consequently, the study suggests that ongoing remittance inflows to Nigeria may not be contributing to economic growth as anticipated.

Gabriel et al. (2020) conducted a study on the impact of external finance, represented by external debt, on economic growth, measured by the real GDP growth rate, in the Economic Community of West African States (ECOWAS) sub-region. They obtained annualized panel data for 32 years (1986–2017) from the World Development Indicators (WDI). They used an ex-post facto design since the data was secondary in nature. The panel series became stationary when differenced at first order (I (1)), indicating that the panel series did not have a unit root. They used the panel least squares (PLS) estimation process to analyze their modified models, and further analyzed the model with both fixed and random effect panel regression estimators, using the Hausman test to determine the most appropriate choice between the two. Their analysis was based on the random effect (RE) estimator. They allowed a 5% error tolerance level for the study. The outcomes showed that external debt had a negative but significant effect on the real GDP growth rate, suggesting that external debt did not enhance economic growth in the sub-region during the sample period. This study contributed significantly to knowledge by conducting comparative analyses using the outcomes of a sub-regional study and the country-specific outcomes of the 15 member countries of ECOWAS. It employed modified panel regression models to analyze the research objective.

Furthermore, Eroni (2020) investigated a study on an empirical analysis of the impact of official development assistance (ODA) on economic growth: evidence from Fiji. The study examines the impact of foreign aid (official development assistance) on economic growth in Fiji from 1970–2008 using a vector autoregressive (VAR) time series cointegration technique. Following standard econometric time series treatment, the study finds that official development assistance (ODA) does not have a dynamic effect on per capita growth in Fiji. This can be attributed to the

high volatility in the level of official development assistance to Fiji, which is partly a result of the political instability experienced in the country. The study suggests that Fiji should consider more stable (or less volatile) sources of foreign capital, such as private foreign direct investments, to sustain economic growth in the future.

Mothibi and Mncayi (2019), employing the auto-distributive lag (ARDL) model, examined the effect of government debt in South Africa from 1994 to 2017. Findings of this paper indicated that there were long-run casual effects among government debt and government spending, real GDP, inflation, and real interest rates, with government spending, real GDP, and interest rates being the key propellers of public debt in South Africa. Government debt had a negative influence on economic growth and inflation. In the short run, there were no significant relationships between inflation, real interest rates, and government debt.

Gövdeli (2019) examined the effect of external debt on economic growth in Turkey, adopting annual time series data collected from the World Bank Development Indicators within the period 1970–2016. The ARDL technique was used to estimate the series. In view of this, the finding revealed that external debt exerted a positive influence on economic growth. In contrast, the openness of the economy and the consumer price index had a negative impact on economic growth within the sampled period.

Mazheri and Dahalan (2019) assessed the effect of external debt, interest payments, and export earnings on the economic growth of Pakistan from 1990 to 2017 using co-integration analysis. Also, a unit root test was carried out to ascertain the stationarity of the dataset. The error correction model (ECM) was used as a technique of analysis. In the short run, the following results emerged: (i) external debt (ED) to GDP had a negative but significant effect on GDP; (ii) external debt to export earnings (EE) ratio exerted a negative but significant influence on GDP; and (iii) interest payments on external debt (IP) to GDP ratio presented an insignificant but positive impact on GDP. For the long-run period, the results indicated that (i) ED to GDP, ED to EE, and IP to GDP ratios showed a negative and non-significant effect on GDP in Pakistan for the described period. It was concluded that independent variable ratios influenced about 56% of the Pakistani economy over the review period.

Seher and Taner (2019) examined the impact of public debt on economic growth in the Organization for Economic Cooperation and Development (OECD) using a panel threshold regression model to analyse panel data from 2002 to 2016. The outcome proved that the effect of public debt on economic growth was linear. The public debt threshold was projected at 99.75% for OECD countries, but it was non-significant. The public debt-to-GDP ratio was both below and above this threshold; the effect of public debt on economic growth was negative but significant.

Maitra (2019) studied the impact of public debt and foreign aid on selected macroeconomic variables: income, price level, and interest rate in Sri Lanka over the period 1980–2000. The study found that public debt in general and foreign debt, in particular, depressed income and stimulated price levels. Domestic debt had an effect on the price level. Foreign aid, however, had a harmful influence on both income and price levels. Foreign debt and aid raised the interest rate both in the short run and in the long run, whereas no significant effect of domestic debt on the interest rate was traced.

Mohanty and Panda (2019) assessed the macroeconomic effects of public debt in India using a structural vector autoregressive (SVAR) approach from 1980–2017. The specific objectives of the study were to investigate the impact of several types of public debt on economic growth, investment, interest rates, and inflation in India. The results indicated that public debt had an

adverse effect on economic growth, a positive effect on the long-term interest rate, and a mixed response (both negative and positive) to investment and inflation in India. Also, domestic debt recorded a more unfavourable effect on the economy than external debt in India.

Saungweme and Odhiambo (2019) reviewed the impact of public debt on economic growth in both developing and developed countries. The survey indicated diverse results and, in some cases, inconsistent evidence on the topic studied. Although the majority of the surveyed literature discovered negative outcomes, several other studies found a long-run positive impact. The study also found that a few other studies supported the Ricardian Equivalence Theory, which posits a non-existent relationship between public debt and economic growth. The paper also discovered growing empirical evidence that supported the threshold effects of public debt on economic growth.

León, Murillo, and Hernández (2019) examined the effect of public indebtedness on economic growth in Latin America. The major findings showed that a public debt-to-GDP ratio of 75 percent decelerated growth, adding that a ratio of 35 percent promoted growth volatility. Based on the panel autoregressive (VAR) model, the study also found that public debt and terms of trade influenced the effect of public debt on economic growth. This implies that the more public debt increases, the more vulnerable an economy becomes in the short term. However, in the long term, the growth was relevant for fiscal sustainability.

Friday (2019) used the autoregressive distributed lag (ARDL) model to scrutinize the short- and long-term connection between remittances, the development of the finance sector, and the economic growth of Nigeria from 1981 to 2017. The empirical result showed that there is a long-term connection between the research variables. The results also revealed that remittances have a significant negative effect on economic growth in both the short and long term, and the development of the finance sector has a significant negative effect on economic growth. The results further confirmed the existence of complementarity between remittances and financial sector development in influencing economic growth.

In 2018, Makoni and Marozva used autoregressive distributed lag, vector error correction models, and Granger causality techniques to study the relationship between foreign portfolio investment and financial market development in Mauritius. They analyzed secondary data from 1989 to 2016 and found a long-term positive relationship between foreign portfolios and real economic growth. In the same year, Mugableh and Oudat employed the autoregressive distributed lag technique to investigate the factors influencing foreign portfolio investments in Jordan. They discovered that domestic market capitalization, foreign direct investment, money supply, and government expenditures were all supportive of foreign portfolio investments in Jordan.

In 2018, Akinmulegun conducted a study examining the correlation between capital market development and foreign portfolio investment in Nigeria from 1985 to 2016. The study used the Augmented Dickey Fuller Test, Granger Causality Test, and Vector Error Correction Model. The findings revealed that capital market development had a significant impact on foreign portfolio investment in Nigeria. Ezeanyej and Maureen (2019) examined the influence of foreign direct investment on economic growth in Nigeria from 1986 to 2017 by utilizing secondary data. The study utilized the Augmented Dickey Fuller (ADF) test, the Johansen co-integration technique, and the Error Correction Mechanism (ECM) for data analysis. Their results indicated that foreign portfolio investments had a positive and substantial effect on economic growth in Nigeria.

Sami and Mbah (2018) studied the impact of government external borrowing on economic growth in Oman. Annual time series data for the periods 1990–2015 were obtained from the

World Bank and the Central Bank of Oman. The paper used the ARDL econometric method to estimate the variables. The paper established that external debt had a negative and significant effect on economic growth in Oman within the period studied. Moreover, gross fixed capital had a positive and significant impact on the growth performance of the Omani economy. The study recommended a more productive use of external debt to run the economy.

Adams and Klobodu (2018) studied the differential effects of capital flows on economic growth in five Sub-Saharan African (SSA) countries from 1970–2014. Applying the ARDL model, the findings indicated that in the long run, foreign direct investment (FDI), aid, external debt, and remittances recorded differing effects on economic growth. FDI recorded positive and significant effects in Burkina Faso and negative outcomes in Gabon and Niger, whereas external debt also recorded negative outcomes in the other countries studied. In contrast, aid boosted growth in Niger and Gabon, while it constrained growth in Ghana. Remittances equally recorded positive and significant effects in Senegal. Finally, gross capital formation was significant in most of the component countries; the effect of trade was mixed.

The study conducted by Shkolnyk and Koilo in 2018 examined how foreign debt relates to economic growth in Ukraine and other emerging economies from 2006 to 2016. The researchers used the Autoregressive Distributed Lag (ADL) model and correlation techniques in their analysis. The results from the regression analysis indicated that the original values did not have a significant impact on the estimation of the parameters. The study found that a higher level of external debt, combined with macroeconomic instability, hindered economic growth in the countries under investigation. Additionally, the research revealed a critical threshold for debt burden in emerging economies, beyond which the impact of external debt on economic growth became negative. These findings underscore the importance of implementing an effective public debt management strategy in Ukraine.

3.0 Methodology Issues

The research employs an ex-post facto design, relying on historical data without manipulation or control of the relevant explained and explanatory variables. The dataset for this study is derived from secondary sources, specifically the World Bank Development Indicators (2021), encompassing ten West African countries—Nigeria, Ghana, Gambia, Liberia, and Sierra Leone as Anglophone countries, and Niger, Benin, Senegal, Togo, and Mali as Francophone countries. Panel data, with both time series and cross-sectional dimensions, is deemed suitable for this study. In essence, this design follows a quantitative approach, collecting and analysing a time series of secondary data spanning from 2000 to 2021 using econometric analytical methods. Additionally, the study incorporates the Generalized Method of Moments (GMM) to enhance the robustness of the analysis.

Model Estimation

The objective of this section is to formulate models that will assist in achieving our stated objectives. The econometric technique is used to establish a model of the impact of foreign capital flow variables on economic growth in the ten (10) selected countries. The stated model, which captures the contributions of foreign capital flow variables as well as control variables to the growth of the West African economy, could be represented as follows:

The GMM model specification

Initial Model:

$$InY_{it} = \emptyset InY_{it-1} + \beta X_{it} + (\psi_i + \varepsilon_{it}) \quad (3.1)$$

Transformed Model:

$$\Delta InY_{it} = \emptyset \Delta InY_{it-1} + \beta \Delta X_{it} + \Delta \varepsilon_{it} \quad (3.2)$$

By transforming the regressors through first differencing the fixed effect is removed as it does not vary with time but the problem of endogeneity remains. From (2), the model becomes:

$$\Delta \mu_{it} = \Delta \psi_i + \Delta \varepsilon_{it} \quad (3.3)$$

$$\mu_{it} - \mu_{it-1} = (\psi_i - \psi_i) + (\varepsilon_{it} - \varepsilon_{it-1}) = \varepsilon_{it} - \varepsilon_{it-1} \quad (3.4)$$

From equation 3.4 unobserved fixed effects no longer enter the equation as they are by assumption constant between periods. Also, the first differenced lagged dependent variable is instrumented with its past levels and now changes in the dependent variable are assumed to be represented by equation 3.2.

By applying the above model to our variables, the model becomes:

$$\Delta RGDP_t = f\{\Delta(FDI, FPI, RMT, ODA, EXD, RER, OPN)\} \quad (3.5)$$

The system GMM equation based on the above functional relation is:

$$\Delta RGDP_t = \beta_0 + \beta_1 \Delta RGDP_{t-1} + \beta_2 \Delta FDI_t + \beta_3 \Delta FPI_t + \beta_4 \Delta RMT_t + \beta_5 \Delta ODA_t + \beta_6 \Delta EXD_t + \beta_7 \Delta RER_t + \beta_8 \Delta OPN_t + \mu_t \quad (3.6)$$

A priori expectations of signs of parameters as contained in model 3.6 are:

$$\beta_1 > 0, \beta_2 > 0, \beta_3 > 0, \beta_4 > 0, \beta_5 \lessgtr 0, \beta_6 < 0, \beta_7 > 0$$

Where;

RGDP = Real Gross Domestic Product proxy as economic growth

FDI = Foreign Direct Investment

FPI = Foreign Portfolio Investment

RMT = Remittance

ODA = Official Development Assistance (Foreign Aid)

EXD = External Debt flows

RER = Real Exchange Rate

OPN = Trade Openness

μ = error term

4.0 Results and Discussions

The study used the Generalized Method of Moments (GMM) to construct a System Dynamic Panel-Data Estimation for the model. These estimations provide insight into the coefficients, standard errors, endogeneity issues, and diagnostic test results, allowing for a comprehensive data comprehension.

Unit Root Results

To begin, it is necessary to test whether the underlying processes that generated the data series can be assumed to be invariant with respect to time. The Augmented Dickey-Fuller (ADF) test is widely used due to its robustness and its capacity to remove autocorrelation from the model. Furthermore, the unit root test was conducted to avoid a biased estimate that may lead to spurious regression results in the stated model. Test for stationarity were conducted by using unit root test suggested by the Levin & Chu t* in this study. All the unit roots were done at 5% significance level. The results are presented in table 4.1 for ten (10) pooled countries in West Africa.

Table 4.1 Stationarity Test Results (10 Pooled Countries)

Variables	Livin & Chu t*		prob	Order of int.	Decision
	@ level	@ 1st Diff			
RGDP	-0.98832	-7.75978	0.0000	I (1)	Stationary
FDI	3.16259	-11.2799	0.0000	I (1)	Stationary
FPI	-7.69931	-	0.0000	I (0)	Stationary
RMT	-0.62443	-8.25958	0.0000	I (1)	Stationary
ODA	-2.95417	-	0.0016	I (0)	Stationary
EXD	4.94109	-3.03834	0.0012	I (1)	Stationary
RER	0.87693	-6.84037	0.0000	I (1)	Stationary
OPN	-1.11061	-9.08307	0.0000	I (1)	Stationary

Source: Authors' own computation, 2023

Table 4.1 above revealed the results of the unit root test using Levin, Lin & Chu t* test of stationarity for all the variables in the ten pooled countries (dependent and explanatory variables). From the empirical results, the result showed that all the variables were stationary at first difference i.e. I (1) except foreign portfolio investment and official development assistance which were stationary at level i.e. I (0). This means that the Livin Lin & Chu t* value is significantly less than 5% level of significance and therefore we reject the null hypothesis of a unit root in the variables panel in favour of the alternative that the panel is stationary at level. Therefore we conclude that all the variables were stationary at either first difference or at level.

Panel Cointegration Test

Given the stationary trend of all the variables, investigation of the long run relationship is necessary using the Kao Residual Cointegration Test method was conducted. The results of the Kao Residual Cointegration Test value are shown in table 4.4 below for the various sector.

Table 4.4c Panel Cointegration Test for the ten pooled Countries in Africa

	t-Statistic	Prob.
ADF	-2.792941	0.0026
Residual variance	7.26E+23	
HAC variance	2.18E+24	

Source: Authors' own computation, 2023

The above result revealed that there is long run relationship between the dependent and the explanatory variables in the model. This is because the Augmented Dickey Fuller (ADF) statistics value has a probability value of less than 5% level of significance. Hence, the null hypothesis, shows no long run relationship between the dependent and explanatory variables hence they were rejected. Therefore, we conclude that there is long run relationship between the dependent economic growth (RGDP) and the explanatory variables (FDI, FPI, RMT, ODA, EXD, RER and OPN) in for the ten pooled West African Counties.

GMM: System Dynamic Panel-Data (Two-step) Estimation model for the pooled Countries
The further addition of Generalized Method of Moments (GMM) test in this study is due to its ability to handle endogeneity, dynamic models, missing data, and other complexities commonly encountered in accounting and finance datasets. Its flexibility and robustness make it a valuable tool for empirical investigations in these areas.

Table 4.9 GMM: System Dynamic Panel-Data (One-step) Estimation for Model for pooled countries

```
xtabond rgdp fdi fpi rmt oda exd, lag(1) nocons

Arellano-Bond dynamic panel-data estimation     Number of obs     =
200
Group variable: code                            Number of groups  =
10
Time variable: year
                                                Obs per group:
                                                              min =
20
                                                              avg =
20
                                                              max =
20

Number of instruments =     55                  Wald chi2(8)      =
34636.72
                                                Prob > chi2       =
0.0000
One-step results
------------------------------------------------------------------------------
        rgdp | Coefficient  Std. err.      z    P>|z|     [95% conf.
interval]
-------------+----------------------------------------------------------------
        rgdp |
         L1. |   .9617781    .006596   145.81   0.000     .9488502
.9747061
             |
         fdi |   212.1285   39.29553     5.40   0.000     135.1107
289.1463
         fpi |  -73.81711   19.94389    -3.70   0.000    -112.9064    -
34.7278
         rmt |  -79.70175   71.72714    -1.11   0.266    -220.2844
60.88086
         oda |  -97.94704   34.51949    -2.84   0.005     -165.604   -
30.29009
         exd |  -8.007914   6.888662    -1.16   0.245    -21.50944
5.493616
------------------------------------------------------------------------------
Instruments for differenced equation
        GMM-type: L(2/.).rgdp
        Standard: D.fdi D.fpi D.rmt D.oda D.exd D.rer D.opn

estat sargan
Sargan test of overidentifying restrictions
H0: Overidentifying restrictions are valid

        chi2(47)     =  187.3036
        Prob > chi2  =    0.0000
```

```
estat abond

Arellano-Bond test for zero autocorrelation in first-differenced errors
H0: No autocorrelation

Order         z    Prob > z
-------------------------
    1   -3.6367      0.0003
    2   -6.0386      0.0000
-------------------------
```

Source: Authors' own computation 2023

Foreign Direct Investment (FDI)

The study observed that foreign direct investment (FDI) has a positive and as well significant impact on economic growth of these West Africa. The results revealed a coefficient of 212.1285, which is an indication that a 1 unit increase in foreign direct investment would resulted in a 212.1285 units increase in economic growth for these West Africa countries. Based on the result we reject the null hypothesis and conclude that foreign direct investment significantly affect economic growth measured in terms of real gross domestic product (RGDP). The result is in agreement with some empirical results stated in chapter two of this work.

Foreign Portfolio Investment (FPI)

The research established that foreign portfolio investment had a negative and significant effect on economic growth in the selected West African countries. Though the outcome recorded a marginal coefficient of -73.81711, which is an indication that a $1USD increase in foreign portfolio investment would result in a -73.81711USD reduction in the growth of the economy of countries in West Africa measured in terms of real gross domestic product. The magnitude of this result appeared to be significant, the coefficient does appear to indicate that foreign direct investment significantly impacted the economic growth within the period covered in the study. Based on the result we reject the null hypothesis and conclude that foreign portfolio investment significantly affects economic growth. The result is in agreement with some empirical results stated in chapter two of this work.

Remittance (RMT)

The result further revealed that remittance had a negative and insignificant influence on economic growth in the West African countries. Specifically, the outcome for remittance with a coefficient value of -79.70175 indicated that a 1 unit change in remittance would resulted in -79.70175 units decrease in economic growth in these selected countries in West Africa. Based on the result of the probability value, we accept the null hypothesis for remittance and conclude that remittance insignificantly affect economic growth measured in terms of real gross domestic product. The result is in agreement with some empirical results stated in chapter two of this work.

Official Development Assistance (ODA)

The official development assistance of the sampled countries revealed a negative but significant impact on economic growth with a coefficient value of -97.94704, that is, 1 unit increases in official development assistance would result to -97.94704 units reduction in economic growth in these selected countries. This implies that the official development assistance received in West

Africa exerts a negative and significant effect on the growth of the economy. From the empirical results we reject the null hypothesis and conclude that official development assistance variable significantly affects the growth of these economies. The result is in agreement with some empirical results stated earlier in this work.

The study examined the role of the lagged dependent variable (real gross domestic product) in explaining the current economic growth situation in order to comprehend the significance of dynamics. Our estimated model's coefficient of lagged real gross domestic product (RGDP L1 = .9617781), which is a hallmark of a well-specified model, is less than unity. Otherwise, our estimating method, SGMM, is invalid. This result shows that our instruments' steady-state validity assumption is correct. Additionally, a strong level of persistence and the fact that the estimation series are almost a random walk validate the selection of SGMM as our estimation method.

The Sargan test verifies the reliability of the instruments; however, the Arellano & Bond test determines the autocorrelation and serial correlation of the error component at orders 1 (AR1) instead of (AR2). Specifically, this test determines whether the differenced error term has a first- and second-order serial correlation. The initial error term is implied to be serially uncorrected and the moment conditions to be properly defined if the null hypothesis of no second-order serial correlation is not rejected. In our investigation, the value of AR (1) less than 0.05 (0.0003 <0.05), likewise the value of AR (2) less than 0.05 (0.0000 < 0.05) in our estimation lead to the rejection of the null hypothesis of no autocorrelation. The Wald Chi2 test, which examines the combined significance of all coefficients, indicates that all coefficients are significant when the p-value is less than the set level of 0.05 in GMM estimation. The endogeneity result of the Wald test for F-statistic for the four independent variables (FDI, FPI, RMT, ODA, EXD, RER and OPN) was significant. This is significant at the threshold of 0.05, which demonstrated no endogeneity problem and suggests that the dependent variable does not correlate with the error term. The findings of the SGMM estimations in Table 4.7 above (also see Appendix 1) and the respective analyses have met all of the requirements for the adoption of SGMM as an unbiased, consistent, and efficient estimator for a study of this nature.

5.0 Conclusion and Recommendations

This study empirically examines the influence of foreign capital inflows on the economic growth of West African countries from 2000 to 2021. Foreign capital inflows have increasingly become an important source of financing for developing countries in recent decades. West African countries, with favorable economic policies, have been successful in attracting high levels of foreign investment, which has significantly impacted their economic development.

In conclusion, most measures of foreign capital inflows have had a positive impact on economic growth in West African countries. Foreign Direct Investment (FDI) in particular, has had a positive effect on investment and output growth. However, a favorable policy environment is necessary to ensure that foreign capital inflows lead to economic growth. The following policy recommendations presented in this paper can help to ensure that foreign capital inflows have a positive impact on economic growth in West African countries:

i. Government should ensure a stable macroeconomic environment. A stable macroeconomic environment can attract foreign investors and increase investor confidence. This requires sound monetary policies, fiscal policies, and exchange rate policies.

ii. There should be availability of improve infrastructural facilities. A reliable infrastructural facility is necessary to attract foreign investment, particularly foreign direct investment (FDI). This includes investing in roads, ports, and energy.
iii. The host country should ensure or encourage technology transfer from the donor countries. Technology transfer can help local firms to improve efficiency and productivity. This can be achieved by providing incentives for technology transfer and encouraging joint ventures between local and foreign firms.
iv. Government should encourage local participation from these multinational companies domicile in the host countries. Local participation can ensure that foreign capital inflows have a positive impact on local development. This can be achieved by requiring foreign investors to employ local labour and encouraging local firms to participate in joint ventures.

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