



Foreign Capital Inflows and Per Capita Income: Evidence from ECOWAS

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Abstract

This study determined the effect of foreign capital inflows on per capita income in the Economic Community of West African States (ECOWAS). The study used foreign direct investment, foreign portfolio investment, official development assistance and external debt as the proxies of foreign capital inflows, while per capita income was adopted to measure human capital development. The study utilized panel data covering the period from 2000 to 2024, sourced from the World Development Indicators of the World Bank, Penn World Table (PWT), International Financial Statistics and UNCTADstat (UN Conference on Trade and Development). The Neoclassical Growth Theory and the Law and Finance Hypothesis were adopted as the theoretical anchors of the study, while ex-post facto research design was employed. The major technique of data analysis adopted was the Panel Least Squares (PLS) regression technique. The findings of the study showed that foreign direct investment, foreign portfolio investment and official development assistance all have positive and statistically significant effects on per capita income in ECOWAS, while external debt has a positive but non-significant effect on per capita income in ECOWAS. The study concluded that foreign capital inflows contribute positively to the growth of per capita income in ECOWAS. It was recommended, among others, that ECOWAS governments should design targeted investment policies that channel foreign direct investment into productive, employment-generating sectors, strengthen legal and financial institutions to attract higher-quality capital inflows, and improve the efficiency of official development assistance and external debt management so as to sustain and accelerate improvements in per capita income across the region.

Keywords:

Foreign Capital Inflows, Per Capita Income, Foreign Direct Investment, Foreign Portfolio Investment, Official Development Assistance, External Debt.

1.0 INTRODUCTION

Per capita income remains one of the most widely used indicators of a country's standard of living and overall economic wellbeing, as it captures the average income available to individuals within an economy and reflects the extent to which national output translates into household welfare. In many ECOWAS countries, per capita income has remained persistently low relative to global averages, despite decades of policy reforms aimed at attracting external

financing to complement scarce domestic resources. Foreign capital inflows, comprising foreign direct investment, foreign portfolio investment, official development assistance and external debt, are widely regarded as critical channels through which developing economies can supplement domestic savings, adopt new technologies, and expand income-generating opportunities for their populations (Adewale, 2020). According to Nwosa, Ugwu and Ehinomen (2020), foreign capital inflows play a significant role in enhancing human capital development, particularly in developing regions, by providing resources that governments and private sectors may otherwise lack. Foreign direct investment and foreign portfolio investment are among the most prominent forms of foreign capital inflow and both have a direct impact on standard of living by increasing the level of investment in a country. These inflows often bring not only financial resources but also technological expertise and managerial skills that enhance productivity in key sectors such as manufacturing and services, thereby raising per capita income through increased employment, higher wages and expanded business activity (Oke & Ruth, 2021). Official development assistance and external debt, when efficiently deployed, similarly supplement the fiscal capacity of ECOWAS governments to finance infrastructure and productive investment that underlies sustained income growth. Notwithstanding these theoretical linkages, UNCTAD (2025) reports that foreign direct investment flows into West Africa remain volatile and heavily concentrated in extractive industries, with limited spillovers into the broader economy, raising doubts as to whether such inflows are translating into meaningful improvements in average household income across the sub-region.

This apparent contradiction, that is, the coexistence of episodic surges in foreign capital inflows with persistently low and slow-growing per capita income, raises the question of whether, and to what extent, foreign direct investment, foreign portfolio investment, official development assistance and external debt actually translate into higher per capita income across ECOWAS. Much of the existing literature on foreign capital inflows in West Africa has concentrated on aggregate gross domestic product growth or sector-specific outcomes rather than directly modelling per capita income as the outcome variable, and many of these studies rely on single-country time-series data that do not exploit the richness of panel data across multiple ECOWAS economies or extend into the most recent years. It is against this background that this study examines the effect of foreign direct investment, foreign portfolio investment, official development assistance and external debt on per capita income in ECOWAS.

2.0 LITERATURE REVIEW

Theoretical Framework

This study adopted and reviewed two theories to provide theoretical explanation for the effect of foreign capital inflows on per capita income. These theories include the Neoclassical Growth Theory and the Law and Finance Hypothesis.

a. Neoclassical Growth Theory

The Neoclassical Growth Theory, primarily associated with the work of Robert Solow (1956), is one of the earliest and most influential theories explaining the relationship between capital accumulation and economic growth. The theory is founded on the principle that economic growth is driven by factor inputs, such as labour and capital, and the efficiency with which these inputs are used, that is, total factor productivity. The theory posits that as more capital is added to the production process, the marginal return from each additional unit of capital diminishes, a phenomenon known as the law of diminishing returns. In the Solow model, long-term economic growth is driven by exogenous technological improvements rather than by

capital accumulation alone, and the model predicts that poorer countries with lower capital per worker will grow faster than wealthier countries, leading to income convergence over time, provided capital flows freely across borders.

The Neoclassical Growth Theory explains long-run economic growth as a function of capital accumulation, labour force expansion and technological progress. In the context of ECOWAS, the theory provides a useful framework for understanding how foreign capital inflows, such as foreign direct investment, external loans, portfolio investment and foreign aid, stimulate per capita income. According to the theory, external capital enhances a country's savings-investment balance by supplementing domestic capital, allowing economies with low capital endowments to increase investment in productive sectors, thereby raising output and, ultimately, average income per person. Foreign capital inflows raise the stock of physical and financial resources available to governments and private institutions, enabling expanded production, job creation and wage growth, all of which directly feed into higher per capita income. Furthermore, the Neoclassical framework suggests that developing economies like ECOWAS countries can converge toward higher income levels when foreign capital inflows facilitate technology transfer and productivity gains. Additionally, foreign development assistance targeted at productive sectors reduces financing constraints, helping ECOWAS nations overcome structural deficits in capital accumulation that would otherwise depress per capita income growth. Thus, the Neoclassical Growth Theory explains the link between foreign capital inflows and per capita income by emphasizing how external resources expand a country's productive capacity and raise average income per person over the long run.

b. Law and Finance Hypothesis

The law and finance hypothesis is an economic theory proposed by La Porta et al. (1998), which explains the relationship between the legal and financial systems of a country and its ability to attract capital inflows. The fundamental proposition of this hypothesis is that the legal framework and the efficiency of a country's financial system significantly impact the flow of investment capital from foreign investors. Countries with strong legal systems that protect property rights, enforce contracts and provide a stable business environment tend to attract more foreign capital, as investors feel more secure when their rights are safeguarded and contracts can be enforced. As one of the most contentious hypotheses in financial economics, the law and finance hypothesis has evolved with the dynamics of financial architecture, with La Porta et al.'s (1997) analysis of 49 nations showing that countries with smaller and less developed capital markets are also those with less robust legal frameworks and enforcement of investor safeguards.

The Law and Finance Hypothesis posits that the quality of a country's legal and institutional framework, particularly the protection of property rights, enforcement of contracts and regulatory efficiency, determines the effectiveness of financial markets in mobilizing and allocating capital. In the context of ECOWAS, this theory explains that foreign capital inflows, such as foreign direct investment, foreign portfolio investment, official development assistance and external debt, are more likely to enter, and to be productively allocated within, countries with stronger legal systems and financial institutions. When legal protections are credible and financial markets function efficiently, foreign investors face reduced risks, which encourages greater and more stable inflows of capital. These inflows lead to expanded economic activities, increased government revenue and enhanced private-sector investment, which, in turn, raise average household income. Furthermore, the Law and Finance Hypothesis emphasizes that well-developed legal and financial institutions influence not only the volume of foreign capital

inflows but also how effectively such capital contributes to long-term income growth. In ECOWAS countries with stronger financial regulation and governance, foreign capital is more likely to be channelled into productive sectors rather than diverted into corruption, misallocation or capital flight, thereby translating more directly into higher per capita income.

Empirical Review

Okonkwo (2024) explored the relationship between debt servicing and economic growth in Nigeria over the period 2000 to 2023, utilizing time-series data and Autoregressive Distributed Lag (ARDL) modelling techniques. The study found a short-term negative impact of debt servicing on economic growth, as heavy debt servicing obligations place a significant burden on the government's fiscal capacity, restricting public investment and, by extension, the income-generating capacity of the economy.

Ali, Mahmut, Adahama and Ali (2024) investigated the impact of debt servicing on economic growth in Nigeria from 1980 to 2022 using a nonlinear ARDL model. The results showed that external debt servicing and exchange rate had positive and statistically significant effects on real gross domestic product, while external debt itself had a negative and statistically significant effect, implying an asymmetric relationship between debt servicing and the income-generating potential of the economy.

Ndu (2024) examined the effect of debt servicing on economic growth in Nigeria using ordinary least squares regression. The findings revealed that both foreign debt servicing and domestic debt servicing have significant effects on gross domestic product, and the study concluded that debt servicing should be managed with utmost sincerity to avoid crowding out productive investment that supports per capita income growth.

Anugwom (2023) carried out an empirical analysis of external debt sustainability and economic growth in Nigeria covering 1981 to 2021 using the linear regression method with an Error Correction Model. The findings revealed a negative and insignificant relationship between external debt sustainability and economic growth, alongside a bi-directional causality between the two variables, suggesting that the income effects of external debt in West Africa are contingent on how sustainably the debt is managed.

Chinwe, Callistus and Okaforocha (2023) examined public debt sustainability and economic growth in Nigeria using annual time series data from 1981 to 2021 and the Generalized Method of Moments (GMM) technique. The empirical result showed that debt overhang exists with an inverted U-shaped debt Laffer curve, with an optimum public debt threshold of 30 to 40 percent, beyond which additional external debt begins to depress rather than support income growth.

Ogwu (2023) empirically investigated the relationship between deficit financing, debt servicing and economic development in Nigeria from 1981 to 2022, using government external debt, government domestic debt, cost of debt servicing, inflation and interest rate as explanatory variables and the Human Development Index as the dependent variable. The empirical results, estimated via ARDL, showed that the Human Development Index has a negative relationship with the cost of debt servicing, government external debt, inflation and interest rate, implying that heavy debt-servicing obligations constrain the income and welfare gains that foreign capital inflows would otherwise generate.

Olulu-Briggs and Samson (2023) investigated the implications of deficit financing in Sub-Saharan African countries on growth rate, examining domestic debt, external debt, external reserves and budget deficit using panel data from 1986 to 2021 and a panel fixed effect regression technique. The results showed that external reserves and domestic debt are positive and significant determinants of gross domestic product, while external debt is negative and insignificant, underscoring the conditional nature of foreign capital's contribution to per capita income across the sub-region.

Bashiru (2023) examined debt servicing and economic growth in Nigeria, focusing on the implications for fiscal policy flexibility, debt sustainability and macroeconomic stability, using the Autoregressive Distributed Lag (ARDL) model. The findings revealed a positive and significant impact in certain specifications, providing further evidence of the channel-dependent relationship between external financing obligations and income growth.

Omenda and Urbanus (2022) examined the effect of Official Development Assistance on Kenya's economic growth and domestic savings from 1960 to 2019, using a simultaneous equation system estimated by two-stage least squares to address endogeneity. The results showed that government spending had the most positive impact on economic growth, while the impact of official development assistance, although positive, was statistically insignificant; the study further found that aid positively affects domestic savings, an important precursor to income growth.

Adofu and Adegioriola (2020) examined the relationship between foreign portfolio investment and Nigerian economic growth from 1986 to 2018 using the Autoregressive Distributed Lag model. The evidence showed that current and one-period-lagged foreign portfolio investment had negative and insignificant impacts on gross domestic product, with unidirectional causality running from GDP to foreign portfolio investment, suggesting that income growth in ECOWAS economies may need to precede, rather than solely result from, portfolio inflows.

Onyeisi, Odo and Anoke (2020) determined the impact of foreign portfolio investment inflows on stock market growth in Nigeria from 1986 to 2014 using cointegration, vector error correction model and Granger causality techniques. The results showed a long-run significant impact of foreign portfolio investment on stock market growth, a channel through which portfolio inflows can support wealth creation and, indirectly, household income.

Woldegiorgis (2019) scrutinized the nexus between official development assistance and inclusive development across 34 African countries for the period 1991 to 2018. While simple OLS regression showed a negative association between official development assistance and inclusive development, the study's instrumental variable two-stage least squares estimation showed that official development assistance is a statistically significant positive determinant of inclusive development once omitted-variable bias is corrected for.

Utomi and Okeke (2019) examined the impact of International Development Association assistance on the Nigerian economy for the period 1986 to 2016, using the Augmented Dickey-Fuller test, Granger causality, Johansen cointegration and an Error Correction Model. The findings indicated that official development assistance increases the rate of economic growth in Nigeria, with a long-run equilibrium relationship between official development assistance and economic growth, supporting its role in raising national and, by extension, per capita income.

Mahembe and Odhiambo (2019) analyzed the impact and effectiveness of official development assistance on poverty in developing countries, dividing the reviewed literature into studies using non-monetary and monetary measures of poverty. The survey results showed that foreign aid has a positive impact on poverty reduction across the majority of studies reviewed from 1980 to 2018, implying a corresponding positive effect on average household income.

Ezeanyejì and Maureen (2019) explored the impact of foreign portfolio investment on economic growth in Nigeria from 1986 to 2017 using the Augmented Dickey-Fuller test, Johansen cointegration technique and Error Correction Mechanism. The result revealed that foreign portfolio investment has a positive and significant impact on economic growth in Nigeria, supporting the view that portfolio inflows contribute to national income growth when accompanied by capital market depth.

Balogun, Okafor and Ihayere (2019) examined the impact of capital flows on economic growth in Nigeria using data from 1981 to 2016 and an error correction model framework combined with autoregressive distributed lag estimation. The findings revealed that capital flows significantly affect economic growth in Nigeria, and the study recommended sound and vigorous economic policies to attract capital flows that bridge the capital needed for growth and, ultimately, income improvement.

Lozi and Shakatreh (2019) determined the impact of international capital flows on economic growth in Jordan during the period 2005 to 2017, using a descriptive analytical research method. The study found that foreign direct investment, foreign portfolio investment, grants and worker remittances all positively affect economic growth, with direct implications for the income levels of households benefiting from these inflows.

Joseph, Olayiwola and Yinusa (2019) examined the optimal level of capital inflows for manufacturing exports and economic growth in Nigeria, using annual data from 1981 to 2017 on foreign direct investment, foreign portfolio investment, cross-border borrowing, financial sector development and human capital, analyzed through threshold regression. The results showed that a capital inflows threshold value of 25.55 percent, with a coefficient of 9.94 annually, represents the optimal point of capital inflows for economic growth in Nigeria, beyond which further inflows begin to affect income growth negatively.

Yiew and Lau (2018) examined the impact of official development assistance on economic growth in 95 developing countries between 2005 and 2013 using panel data regression techniques, with gross domestic product as the proxy for economic growth and official development assistance, foreign direct investment and population as independent variables in a non-linear regression model. The panel data results indicated a U-shaped relationship between foreign aid and economic growth, in which foreign aid initially depresses growth before eventually contributing positively over time, a dynamic with clear implications for the timing of income gains from aid-financed programmes.

Akinbobola, Ibrahim and Ibrahim (2017) employed a Wald causality methodology to uncover the direction of the causal relationship between foreign portfolio investment and economic growth in Nigeria between 1986 and 2013. The empirical results suggested that foreign portfolio investment and economic growth are positively cointegrated, indicating a stable long-run equilibrium relationship, with bidirectional causality between foreign portfolio investment

and economic growth, and a complementary role for domestic savings and interest rates in supporting growth and income levels.

3.0 METHODOLOGY

For the purpose of this study, ex-post facto research design was adopted. Also panel data covering the ECOWAS member countries over the period 2000 to 2024 were used for this study. These data were obtained from the World Development Indicators of the World Bank, Penn World Table (PWT), International Financial Statistics and UNCTADstat (UN Conference on Trade and Development).

Model Specification

This research work seeks to empirically determine the effect of foreign capital inflows on per capita income in ECOWAS. Hence, a multiple panel regression model was employed in this study to establish the effect of the independent variables (foreign capital inflows) on the dependent variable (per capita income). The empirical model of this study builds on the model of Chiamaka, Felix, Ifeoma and Amalachukwu (2023), who examined the effect of international capital flow on economic development in Nigeria. The model is specified below.

Functional Model

$$PCI = f(FDI, FPI, ODA, EXD) \quad (1)$$

Mathematical Model

$$PCI_t = \beta_0 + \beta_1 FDI_t + \beta_2 FPI_t + \beta_3 ODA_t + \beta_4 EXD_t \quad (2)$$

Pooled Regression Model

$$PCI_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 FPI_{it} + \beta_3 ODA_{it} + \beta_4 EXD_{it} + \mu_{it} \quad (3)$$

Fixed Effect Model

$$PCI_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 FPI_{it} + \beta_3 ODA_{it} + \beta_4 EXD_{it} + \sum_i^9 = 1 \alpha_i idum \varepsilon 1_{it} \quad (4)$$

Random Effect Model

$$PCI_{it} = \beta_0 + \beta_1 FDI_{it} + \beta_2 FPI_{it} + \beta_3 ODA_{it} + \beta_4 EXD_{it} + \mu t + \varepsilon 1_{it} \quad (5)$$

A Priori Expectation: $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$.

Where: PCI = Per Capita Income; FDI = Foreign Direct Investment; FPI = Foreign Portfolio Investment; ODA = Official Development Assistance; EXD = External Debt; β_0 = Regression Intercept; β_1 - β_4 = Parameters of the respective explanatory variables; t = Time subscript; μt = Cross-section error component; $\varepsilon 1_{it}$ = Combined time series and cross-section error component.

Data Analysis Technique

Panel Least Squares (PLS) regression technique was adopted for this study. To apply this technique, the panel data sourced were arranged in Microsoft Excel and exported to EViews 12 statistical package for analysis.

4.0 RESULTS AND DISCUSSION

Descriptive Analysis

The descriptive statistics for the study variables are presented in Table 1.

Table 4.1: Descriptive Data Analysis

	PCI	FDI	FPI	ODA	EXD
Mean	1053.040	905.9859	-291.8111	1303.529	12578.53
Median	838.6556	320.7817	2.027572	729.1760	4151.858
Maximum	3189.813	8841.062	3691.341	11431.96	108757.6
Minimum	143.7437	-186.7920	-14992.40	38.48000	418.8517
Std. Dev.	661.4026	1499.573	1716.881	2018.234	18661.34
Skewness	1.088420	2.804866	-6.045578	3.979753	2.769541
Kurtosis	3.508734	12.00691	44.54342	18.91525	11.90084
Jarque-Bera	52.05669	1172.849	19500.54	3298.426	1144.858
Probability	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	263260.1	226496.5	-72952.78	325882.2	3144633.
Sum Sq. Dev.	1.09E+08	5.60E+08	7.34E+08	1.01E+09	8.67E+10
Observations	250	250	250	250	250

Source: Authors' Computation, 2026.

The descriptive results for per capita income reveal a mean of 1,053.04 and a median of 838.66, suggesting the presence of high-income outliers pulling the mean upward. The maximum value of 3,189.81 compared to the minimum of 143.74 shows substantial disparity in income levels across the ECOWAS countries studied. The standard deviation of 661.40 confirms considerable variability, while the skewness of 1.09 indicates positive skewness, implying that higher income values are less frequent but significantly larger. The kurtosis value of 3.51 suggests a leptokurtic distribution, and the Jarque-Bera probability of 0.000 indicates that per capita income is not normally distributed. For foreign direct investment, the mean value is 905.99 while the median is much lower at 320.78, indicating strong positive skewness caused by large inflow spikes, with a standard deviation of 1,499.57 confirming high variability. Foreign portfolio investment shows a negative mean of -291.81 and a median of 2.03, implying that extreme negative outflows drag down the average, while official development assistance records a mean of 1,303.53 against a median of 729.18, indicating positive skewness and high dispersion. External debt exhibits a very high mean of 12,578.53 relative to a median of 4,151.86, reflecting extreme disparity in debt levels among the countries studied.

Panel Unit Root Test

In order to avoid spurious results and examine the order of integration of the series, this study adopted the unit root test proposed by Levin, Lin and Chu (2002). The results are presented in Table 4.2:

Table 4.2: Results of the Panel Unit Root Test

Series: EVA						
Method Levin, Lin Chu t						
Variables	Statistics	Prob.**	Cross-sections	Obs	Order of Integration	Conclusion
PCI	-2.02943	0.0212	10	230	I (0)	Stationary at Level
FDI	-4.18703	0.0148	10	230	I (0)	Stationary at Level
FPI	-2.49974	0.0032	10	230	I (0)	Stationary at Level
ODA	6.53971	1.0000	10	230	I (0)	Stationary at Level
EXD	-2.83722	0.0031	10	230	I (0)	Stationary at Level

Source: Authors' Computation, 2026.

The panel unit root test results in Table 2, using the Levin, Lin and Chu (LLC) method, reveal that per capita income, foreign direct investment, foreign portfolio investment, official development assistance and external debt are all stationary at level, integrated of order zero [I(0)]. This means that these variables do not contain unit roots and their statistical properties remain stable over time, making them suitable for panel least squares (PLS) regression analysis without the risk of spurious results.

Multicollinearity Test

The correlation matrix's findings are displayed in Table 4.3.

Table 4.3: Result of Correlation Matrix of Per Capita Income (PCI) Model

	PCI	FDI	FPI	ODA	EXD
PCI	1				
FDI	0.406641	1			
FPI	0.0843445	-0.00986	1		
ODA	0.0521901	-0.00737	0.113728	1	
EXD	0.1387008	0.128906	-0.02219	0.004787	1

Source: Authors' Computation, 2026.

The correlation matrix in Table 3 shows how each independent variable relates to per capita income. The results indicate that foreign direct investment has a positive correlation of 0.4066 with per capita income, suggesting that higher foreign direct investment is associated with higher per capita income, while foreign portfolio investment (0.0843), official development assistance (0.0522) and external debt (0.1387) all exhibit positive correlations with per capita income, implying that effective use of foreign capital inflows tends to boost per capita income in ECOWAS. In terms of multicollinearity, the correlation coefficients among the independent variables are generally low, all far below the 0.80 threshold commonly used to indicate serious multicollinearity, confirming that each variable contributes uniquely to explaining changes in per capita income and strengthening the reliability of the regression analysis.

Hausman Test

Table 4.4: Hausman Test Result of Per Capita Income (PCI) Model

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	2.721344	4	0.6067

Source: Authors' Computation, 2026.

The Hausman test result for the per capita income model reports a Chi-Square statistic of 2.721344 with 4 degrees of freedom and a probability value of 0.6067. Since the probability value is greater than the 5% significance level, the null hypothesis that the random effects model is appropriate cannot be rejected. Therefore, the random effects model is preferred for analyzing the relationship between per capita income and foreign direct investment, foreign portfolio investment, official development assistance and external debt across ECOWAS.

Panel Regression Analysis

The random effect per capita income regression model specified earlier was estimated using the Panel Least Squares (PLS) technique in EViews 12.0. The results are presented in Table 4.5.

Table 4.5: Random Effect Regression Analysis Results

Dependent Variable: PCI				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	120.6075	28.03339	4.302282	0.0000
FDI	4.621506	0.035878	128.8130	0.0000
FPI	0.008611	0.002051	4.199282	0.0001
ODA	0.008598	0.002048	4.198151	0.0001
EXD	0.003912	0.030515	0.128192	0.8982

Effects Specification

R-squared = 0.799431; Adjusted R-squared = 0.664462; F-statistic = 12.83462;
 Prob(F-statistic) = 0.000007; Durbin-Watson stat = 2.242828

Source: Authors' Computation, 2026.

Interpretation of Regression Results

The result of the Random Effect Regression Analysis for the per capita income (PCI) model provides key insights into the effects of foreign capital inflows on human capital development in ECOWAS. The dependent variable in the model is per capita income (PCI), while the independent variables include foreign direct investment (FDI), foreign portfolio investment (FPI), official development assistance (ODA), and external debt (EXD). Each coefficient value, p-value, and significance level gives an understanding of how changes in these independent variables affect the dependent variable.

1. Interpretation of the Regression Parameters:

a. Intercept Term/Constant Variable (C)

The constant term (C) has a positive coefficient value of 120.6075 with a probability value of 0.0000, which is statistically significant at the 5% level. This implies that when foreign direct investment (FDI), foreign portfolio investment (FPI), official development assistance (ODA), and external debt (EXD) are held constant, the baseline per capita income (PCI) of ECOWAS is approximately 120.61. The significance of the constant term reflects the inherent per capita income stability of ECOWAS, even before considering the effects of foreign capital inflows variables.

b. Foreign Direct Investment (FDI) and Per Capita Income (PCI)

For foreign direct investment (FDI), the coefficient value is 4.621506 with a probability value of 0.0000, which is highly significant. This means that external debt (EXD) positively and significantly enhances per capita income (PCI). In practical, a one-unit increase in foreign direct investment (FDI) increases per capita income (PCI) by 4.621506 units, while a decrease in foreign direct investment (FDI) decreases per capita income (PCI) by 4.621506 units.

c. Foreign Portfolio Investment (FPI) and Per Capita Income (PCI)

The foreign portfolio investment (FPI) has a positive coefficient value of 0.008611 with a probability value of 0.0001, which is statistically significant at the 5% level. This means that foreign portfolio investment (FPI) positively and significantly enhances per capita income (PCI). In practical, a one-unit increase in foreign portfolio investment (FPI) increases per capita income (PCI) by 0.008611 units, while a decrease in foreign portfolio investment (FPI) decreases per capita income (PCI) by 0.008611 units.

d. Official Development Assistance (ODA) and Per Capita Income (PCI)

Similarly, the official development assistance (ODA) has a positive coefficient value of 0.008598 with a probability value of 0.0001, which is also statistically significant at the 5% level. This means that official development assistance (ODA) positively and significantly enhances per capita income (PCI). In practical, a one-unit increase in official development assistance (ODA) increases per capita income (PCI) by 0.008598 units while a decrease in official development assistance (ODA) decreases per capita income (PCI) by 0.008598 units.

e. External Debt (EXD) and Per Capita Income (PCI)

In contrast, the external debt (EXD) has a positive coefficient value of 0.003912 with a probability value of 0.8982, which is not statistically significant. This means that external debt (EXD) positively and insignificantly enhances per capita income (PCI). In practical, a one-unit increase in external debt (EXD) increases per capita income (PCI) by 0.003912 units while a decrease in external debt (EXD) decreases per capita income (PCI) by 0.003912 units.

2. The R-Squared (R^2) and the Adjusted R-squared (R^2):

The overall performance of the model is also revealing. The R-squared value of 0.799431 indicates that approximately 80% of the variation in per capita income (PCI) is explained by the independent variables (foreign direct investment, foreign portfolio investment, official development assistance, and external debt) while the remaining 20% of the variation in per capita income (PCI) is explained by other factors not included in the model. This high explanatory power demonstrates that foreign capital inflows decisions play a major role in shaping per capita income (PCI) in ECOWAS. The Adjusted R-squared value of 0.664462 further supports this finding, though slightly lower due to adjustments for degrees of freedom.

It still shows that about 66% of the variation in per capita income (PCI) is explained after accounting for the number of predictors (foreign direct investment, foreign portfolio investment, official development assistance, and external debt) in the model while the remaining 34% of the variation in per capita income (PCI) is explained by other factors not included in the model. This strengthens the argument that the model is robust and reliable in explaining the relationship between foreign capital inflows and per capita income (PCI).

3. Significance of Overall Parameter (Estimated Random Effect Model):

The F-statistic of 12.83462 with a Prob(F-statistic) of 0.000007 confirms that the model is statistically significant overall. This means that the independent variables, taken together, have a joint significant effect on per capita income (PCI). In other words, foreign direct investment, foreign portfolio investment, and official development assistance jointly explain variations in per capita income (PCI) and cannot be excluded from the model.

4. Interpretations of Durbin-Watson statistic

Lastly, the Durbin-Watson statistic of 2.242828 is very close to 2, which suggests the absence of autocorrelation in the residuals. This is important because it validates the reliability of the regression estimates and indicates that the results are not biased by serial correlation.

Discussion of Findings

The finding that foreign direct investment has a positive and significant effect on per capita income in ECOWAS is consistent with the a priori expectation of this study, which presupposes that foreign capital inflows enhance domestic productive capacity through capital accumulation, technology transfer and employment generation. This outcome aligns strongly with the Neoclassical Growth Theory, which posits that external capital supplements domestic savings, expands productive investment and raises output and average income per person. The result is also theoretically supported by the Law and Finance Hypothesis, given that foreign direct investment is more readily attracted to, and more productively deployed within, economies with credible legal protections for investors. Empirically, this finding is consistent with Balogun, Okafor and Ihayere (2019) and Lozi and Shakatreh (2019), who found that foreign direct investment and related capital inflows significantly support economic growth and, by extension, income levels.

The finding that foreign portfolio investment has a positive and significant effect on per capita income conforms to the a priori expectation of the study, which posits that foreign capital inflows enhance income growth in capital-deficient economies. This is theoretically consistent with the Law and Finance Hypothesis, which underscores the importance of strong legal and financial institutions in enabling portfolio inflows to translate into productive investment, and is supported by the Neoclassical Growth Theory's emphasis on capital accumulation as a driver of income growth. This finding is empirically corroborated by Ezeanyej and Maureen (2019) and Akinbobola, Ibrahim and Ibrahim (2017), who reported positive and significant relationships between foreign portfolio investment and economic growth in Nigeria, although it contrasts with Adofu and Adegoriola (2020), who found negative or insignificant short-run effects attributable to volatility and macroeconomic instability, suggesting that the income benefits of portfolio inflows in ECOWAS are more evident over sustained, long-run periods.

Similarly, the finding that official development assistance has a positive and significant effect on per capita income is theoretically supported by the Neoclassical Growth Theory and the Law and Finance Hypothesis, which emphasize that external financial resources, when channelled

through credible institutions, supplement domestic capital and expand productive investment. This finding is consistent with the position of Utomi and Okeke (2019) and Woldegiorgis (2019), who found that official development assistance positively influences economic growth and inclusive development once appropriate estimation techniques are used to correct for endogeneity. Finally, the finding that external debt has a positive but non-significant effect on per capita income suggests that, in practice, external debt in ECOWAS may not be efficiently translated into income growth, potentially due to debt-servicing burdens that crowd out productive investment, a concern that is strongly echoed in the findings of Ogwu (2023) and Olulu-Briggs and Samson (2023), who found that heavy debt-servicing costs and debt overhang exert significant negative pressure on the growth and income-generating capacity of West African and Sub-Saharan African economies.

5.0 CONCLUSION AND RECOMMENDATIONS

Conclusion

This study empirically examined the effect of foreign capital inflows on per capita income in ECOWAS from 2000 to 2024. The study made use of panel data on foreign direct investment, foreign portfolio investment, official development assistance and external debt as proxies of foreign capital inflows, analyzed using the Panel Least Squares regression technique. The findings revealed that foreign direct investment, foreign portfolio investment and official development assistance all exert positive and statistically significant effects on per capita income, while external debt exerts a positive but non-significant effect. The study therefore concludes that foreign capital inflows, particularly foreign direct investment, foreign portfolio investment and official development assistance, contribute meaningfully to the improvement of per capita income and standard of living in ECOWAS.

Recommendations

- i. Since foreign direct investment was found to have a positive and significant effect on per capita income, ECOWAS governments should design targeted investment policies that channel foreign direct investment into productive, employment-generating sectors such as manufacturing, technology and agro-processing, rather than predominantly extractive industries, through tax incentives, improved infrastructure and investment protection laws.
- ii. Given that foreign portfolio investment significantly enhances per capita income, ECOWAS countries should strengthen legal and financial institutions, in line with the Law and Finance Hypothesis, by improving property rights protection, contract enforcement and capital market regulation, to attract more stable and productive portfolio inflows.
- iii. Since official development assistance positively and significantly enhances per capita income, governments should improve accountability, transparency and results-based monitoring systems to ensure that aid funds are directed toward productive infrastructure and income-generating programmes rather than being diverted through weak institutional channels.
- iv. Although external debt showed a positive but non-significant effect, ECOWAS governments should adopt prudent borrowing practices, tie external loans to high-return productive projects, and strengthen public financial management systems to transform external debt into a more significant driver of per capita income growth.

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