

Capital Flight and Economic Growth in Selected West African Countries: Static Panel Model Approach

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ABSTRACT

This study examined the effect of capital flight on economic growth in selected West African countries with focus on, Ghana, Liberia, Nigeria, Sierra Leone and the Gambia from 1990 to 2022. The datasets were obtained from World Development Indicator (WDI) and IMF financial statistics data base and analysed using descriptive statistics, panel unit root test, random effects model and Hausman test among others. The panel unit root test results showed that all the variables were stationary. The estimated random effects showed that FDI outflows had a positive and significant effect on GDP. Evidence of a negative and significant effect of multilateral debt service on GDP was established from the random effects model. In addition, the results showed that personal income payments to non-residents and financial account outflows had negative and significant effects on GDP during the study period. Specifically, the estimated parameter showed that GDP declined by 0.0214% following a percentage increase in personal income payments to non-residents. Similarly, a percentage increase in financial account outflows was associated with 2.025% decrease in GDP. This finding explains that personal income payments to non-residents as an important aspect of capital flight poses a threat to the growth of the selected West African economies. The results equally showed that the selected countries tend to experience more financial outflows than inflows following the adverse implications of financial account outflows on economic growth during the study period. Given the findings, this study recommended among others, that policymakers in the selected West African countries should mitigate FDI outflows by implementing consistent economic policies that promote favourable ease of doing business, investors' protection and stability in government, as this would aid in attracting and restoring investors and thus, create more opportunities for economic growth in the region.

Keywords: *Capital flight, economic growth, GDP, FDI outflows, multilateral debt and financial account outflows*

Introduction

Capital flight has emerged as a significant phenomenon that poses critical challenges to developing nations, particularly in Africa. It is the term used to describe the movement of illegally acquired income or assets abroad, hidden from domestic law enforcement and national tax administrations. According to Helleiner (2005), capital flight is the term used to describe an outflow of capital not associated with regular business operations and occurs in a nation where capital is relatively limited. Cooper and Hardt (2000) described capital flight as abnormal financial outflows, often resulting in the acquisition of foreign assets by residents of a country. This could be attributed to unique risks and uncertainties in those countries including economic downturn and political instability. Thus, a suitable and stable macroeconomic environment that minimizes domestic macroeconomic policy errors will ensure that the economic distortions that bring about capital flight are eliminated.

The implications of capital flight in Africa are profound. With substantial resources leaving the continent due to factors such as political instability, corruption, regulatory uncertainties, and macroeconomic volatility; the potential for sustainable economic growth is severely compromised. As capital flight increases. It becomes more challenging for Africa to manage its currency value and pay for imports or service foreign debt. Although many countries in Africa strive to mobilise appreciable foreign capital from the rest of the world, the residents of these countries have continued to move the scarce capital out of their home countries to developed economies which has posed a serious threat to the stability of the domestic currency. In other words, the economy of most African countries is characterized by unstable exchange rates with an increased incidence of capital flight. As a result of decreased foreign currency inflow and decreased foreign aid and grants, increased capital flight undermines the stability of the domestic currency (Boyce & Ndikumana, 2021).

It is also worrisome to note that there have been huge capital outflows in West African countries which fall short of expectations and this has continued to pose a threat to the level of economic growth in the region. With the growing level of capital flight in the region, investments in the key sectors of the economies have continued to decline, thereby raising concern among policymakers and researchers on the growth implications. These concerns have continued to increase as capital flight remains predominant in the region. This has given negative signals to foreign investors, thereby worsening the issue of unstable economic growth in the region. Thus, it is considered important to explore the relationship between capital flight and economic growth in the selected West African countries.

Literature Review

Theoretical Literature

Kindleberger (1967) introduced the investment diversion theory as a part of the efforts to explain the reasons for the capital outflows in countries, especially in developing ones. Dunning and Robson (1988) are the scholars who first popularized the theory. One of the main assumptions of this theory is that socio-economic and political instability which are common in developing countries are the root causes of capital flight in the global south hence, it has an adverse impact on economic growth and sustainable development. This hypothesis holds that capital owners regularly remove their money from nations that are already experiencing or are predicted to experience political or macroeconomic instability. However, the presence of greater prospects in developed nations, such as interest rates that are favourable to investment, political and economic stability, tax breaks, and advanced financial sectors, sends out encouraging signals for capital inflows.

In developing nations, excessive taxes, insecure power supplies, inadequate infrastructure, political instability, inflation, and fluctuating currency rates are major causes of capital flight (Abbah et al., 2021). The domestic countries' weak macroeconomic circumstances would force them to borrow from other nations to strengthen their economies, which would result in debt and external dependency. According to Khan and Ajayi (2000), the country's local currency may depreciate if it adopts a floating exchange rate system due to liquidity constraints. The theory suggests that capital flight can have detrimental effects on the economy of the country experiencing it. It can lead to a reduction in domestic investment, economic instability, and a potential loss of confidence in the local currency. This, in turn, can exacerbate economic

challenges and create a vicious cycle of declining investment and economic performance. To mitigate the risk of capital flight, governments and policymakers often focus on creating a favorable investment climate by implementing policies that promote stability, transparency, and investor protection. These measures aim to attract and retain both domestic and foreign investment, reducing the likelihood of capital flight and its negative consequences. Although the investment diversion theory of capital flight provides insights into the factors influencing capital movement, it is not without its criticisms. First, the theory is criticised as it oversimplifies the complex factors driving capital flight. This is based on the understanding that capital flight is influenced by numerous factors, including political instability, corruption, ineffective governance, and restrictive policies, which cannot be adequately captured by a single theory.

Empirical Literature

Orji, Ogbuabor, Kama and Anthony-Orji (2020) investigated the impact of capital flight on economic growth in Nigeria. In carrying out the analysis, data from CBN statistical bulletin was used for the period 1981 to 2017. The Autoregressive Distributed Lag (ARDL) bounds test approach was adopted for the study. The study showed that capital flight significantly decreased economic growth in both the short run and long run. Other variables found to have a significant effect on economic growth include money supply, credit to private sector and domestic investment. The study therefore recommended proactive policy measures that would curtail capital flight and make the economy competitive and attractive for domestic investment that enhances economic growth.

Orimolade and Olusola (2018) investigated empirically the impact of capital flight on the growth of Nigerian economy. To achieve this task a model of GDP was specified explaining capital flight from Nigeria in line with the World Bank residual approach to the measurement of capital flight. The Autoregressive Distributed Lag approach to cointegration was used to analyse both short and long run relationship between variables. Research findings revealed that there was a long run negative relationship between GDP and all the capital flight variables. The study therefore, recommended a favourable economic policy to take care of inflation, poor and inadequate infrastructural facilities high rate of taxation, poor treatment of domestic capital and helpless domestic market situations, among others so as to discourage capital flight from the Nigerian economy.

Adams and Klobodu (2018) examined the differential effects of capital flows on economic growth in five Sub-Saharan African (SSA) countries over the period 1970–2014. Using the autoregressive distributed lag methodology, the findings showed that in the long-run capital flows (i.e foreign direct investment (FDI), aid, external debt, and remittances) had different effects on economic growth. FDI had a significant positive effect in Burkina Faso and negative effects in Gabon and Niger whereas the impact of debt was negative in all countries. Aid, however, promoted growth in Niger and Gabon while it deterred growth in Ghana. Remittances, on the other hand, had a significant positive effect in Senegal. Finally, gross capital formation was significant in most of the countries and the impact of trade was mixed. Their results suggested that the benefits of capital flows in SSA were overemphasized.

Ubi and Bassey (2017) examined the relative impact of remittances and capital flight on poverty in Nigeria. Time series data on variables of interest were obtained from various sources spanning from 1970 to 2010. The data were subjected to unit root, cointegration test and error correction

mechanism. The results revealed that a 1 percent rise in remittances can only increase per capita consumption by 0.27 per cent. While a 1 per cent rise in capital flight would reduce per capita consumption by 10.8 per cent. This implies that the impact of capital flight on per capita consumption is greater than that of remittances. Hence, the study recommended that policy should be geared towards reducing capital flight.

Ojiya, Zhegum and Amadi (2019) examined the impact of capital flight on certain macroeconomic variables in Nigeria including economic growth, investment and unemployment using annual time series data sourced from the CBN statistical Bulletin and World Bank Development Indicators database covering the period of 1999 to 2015. The study adopted a cointegration and causality testing approach. The result showed that capital flight exerted a negative impact on economic growth and unemployment in Nigeria.

Uzoma and Godday (2019) examined the effects of capital flight and economic growth in Nigeria using time series data covering the period of 1990 to 2017. The authors adopted a cointegration approach and the OLS method to examine the long-run relationship among the variables. Result showed the existence of a strong connection between capital flight and economic growth in Nigeria. Uguru and Enwere (2022) established the asymmetric responses of economic growth to capital flight in Nigeria using data sourced from World Bank development indicator and Central Bank of Nigeria Statistical Bulletin from 1981 to 2020. Their study employed the nonlinear autoregressive distributed lag model for analysis. The results showed that capital flight for all the periods was negatively related with gross domestic product. The study, therefore, recommended that appropriate policy measures such as moderate interest rates which will encourage investors to access funds and households to saving should be applied in Nigeria so as to increase economic growth and reduce capital flight in the country.

MacCarthy, Ahulu and Thor (2021) examined the effect of capital flight on the economic growth nexus in Ghana. The study used quarterly time series data from 1976 to 2020 to test three hypotheses. The paper used non-linear autoregressive distributive lagged employing unit root test, co-integration test, and Wald test to assess the asymmetrical relationship among the variables. The study posited that both the positive and negative changes in capital flight affect economic growth significantly. Again, the study revealed that capital flight and other macroeconomic variables explained about 75.28% of economic growth. Furthermore, the model can restore the short-run relationship to the dynamic long-run equilibrium at the speed of 35.6%. The study recommended that government economic policymakers build economic confidence by stabilizing economic conditions in the country to reduce the incentives for capital outflows. Further, as a priority, the government must formulate strategies to recover looted public funds by corrupt public officials stacked in foreign accounts and inject them into the economy to boost economic growth.

Methodology

Research Design

This study employed an ex-post facto research design. The use of panel data, which combines time series and cross-sectional units, makes the ex-post facto research methodology appealing.

Data Collection Methods and Sources

This study employed panel data comprising cross-sectional units and time series. Specifically, the cross-sectional units include the selected West African countries such as Nigeria, Ghana, the Gambia, Liberia and Sierra Leone. In addition, the time series includes data on capital flight and economic growth indicators. The data for the variables were obtained from the IMF Financial Statistics Database and World Development Indicators over the period, 1990-2022.

Model Specification

The functional specification of the model is presented as follows:

$$\text{GDP} = f(\text{FDIO}, \text{MDS}, \text{PIP}, \text{FAO}) \quad (1)$$

Where: GDP = gross domestic product, a measure of economic growth, FDIO= foreign direct investment outflows, MDS = multilateral debt service, PIP = personal income payments to non-residents and FAO = financial account outflows. The specifications of pooled, fixed effects and random effects models are as follows:

a. Pooled Regression Models

$$\text{GDP}_{it} = \beta_0 + \beta_1 \text{FDIO}_{it} + \beta_2 \text{MDS}_{it} + \beta_3 \text{PIP}_t + \beta_4 \text{FAO}_{it} + \varepsilon_{it} \quad (2)$$

Where: β_0 = constant parameter to estimated, $\beta_1 - \beta_4$ = slope parameters to be estimated and ε_{it} = error term, $i = 1, \dots, N$, $t = 1, \dots, T$, i = cross-sectional units including the selected West African countries and t = time frame (1990 to 2022)

b. Fixed Effects Models

$$\text{GDP}_{it} = \lambda_0 + \lambda_1 \text{FDIO}_{it} + \lambda_2 \text{MDS}_{it} + \lambda_3 \text{PIP}_t + \lambda_4 \text{FAO}_{it} + U_i + \varepsilon_{it} \quad (3)$$

Where: U_i = fixed effects (individual effects)

c. Random Effects Models

$$\text{GDP}_{it} = C_0 + C_1 \text{FDIO}_{it} + C_2 \text{MDS}_{it} + C_3 \text{PIP}_t + C_4 \text{FAO}_{it} + U_i + v_{it} \quad (4)$$

Where: U_i = Random effects (individual effects) and v_{it} = Remainder disturbance term

Data Analysis Techniques

To test the null hypothesis that the panel data has a unit root (assuming an individual unit root process) against the alternative hypothesis that the panel data has no unit root, the Im-Pesaran-Shin (IPS, 2003) panel unit root test was used. The Rao (1999) approach of co-integration panel based on residuals was used in this study to perform the co-integration test. This method can account for the heterogeneity in individual effects, the slope coefficients, and individual linear trends between countries. The within-regression estimator were relied upon for estimating the fixed effects model. Mundlak (1961) proposed the estimation of the fixed effects, especially the one-way error component model when there are heterogeneous intercept coefficients due to individual units but homogenous slope coefficients. In addition, the random effects model was estimated using maximum likelihood (ML) following the proposition of Balestra and Nerlove (1966). The choice of the appropriate model from the two competing models (fixed effects and random effects models) was based on the results of the Hausman (1978) test.

Findings and Discussion

Unit Root Test Results

The IPS panel unit root test results are presented in Table 1.

Table 1: Summary of IPS panel unit root test results

Variable	Level test results	1 st diff.test results	Number of Panels	Order of integration
GDP	-5.8435*** (0.0000)	-	5	I(0)
FDIO	-6.0504*** (0.000)	-	5	I(0)
MDS	-1.6952** (0.0450)	-	5	I(0)
PIP	-1.9977** (0.0229)	-	5	I(0)
FAO	-5.438*** (0.0000)	-	5	I(0)

Source: STATA 17 output

Note: * $p < 0.01$, ** $p < 0.05$, * $p < 0.1$ denote significant at 1%, 5% and 10% level respectively**

The panel unit root test results showed that GDP was stationary at 5% significance level. The implies that it is integrated at order zero, I(0). The results further showed that FDI outflows and multilateral debt service were stationary at 5% significance level. At the same time, evidence of stationarity was established for personal income payments to non-residents and financial account outflows at 5% significance level. This finding necessitated the rejection of the null hypothesis of unit root. In sum, the unit root test results showed that all the variables were integrated at order zero, I(0). This finding could be attributed to the short panels used for the investigation.

Model Estimation

The pooled regression, fixed effects and random effects and their associated statistical tests results for each of the models are presented in Tables 2.

Table 2: Panel regression results

Dependent variable: GDP			
VARIABLES	POLS	FE	RE
FDIO	0.0510** (0.0120)	0.0482 (0.0421)	0.0510** (0.0120)
MDS	-0.0220** (2.0178)	0.0312 (0.0268)	-0.0220** (0.0078)
PIP	-0.0214*** (0.00636)	-0.0248*** (0.00710)	-0.0214*** (0.00636)
FAO	-2.025** (0.852)	-1.434 (1.025)	-2.025** (0.852)
Constant	3.813*** (0.989)	3.259** (1.521)	3.813*** (0.989)
Observations	165	165	165
R-squared	0.688	0.5918	0.5880
F-test	3.86		
Prob.(F-stat.)	0.005		
Number of crossed		5	5
F-test(u _i =0)		3.94	
Prob.>F-(u _i =0)		0.004	
Chi-square(var(u _i =0))			15.44
Prob.> chi2(var(u _i =0))			0.0039

Source: STATA 17 output

Note: *** p<0.01, ** p<0.05, * p<0.1 denote significant at 1%, 5% and 10% level respectively

Table 3: Hausman test results

Variable	Fixed	Random	Difference	Std. err.
FDIO	.0481785	.0510078	-.0028293	.0027093
MDS	.0312355	.0219695	.0092659	.0200009
PIP	-.0247648	-.0213828	-.003382	.0031551
FAO	-1.433996	-2.02465	.5906545	.570266
chi2(4) = (b-B)'[(V _b -V _B) ⁻¹](b-B) = 3.78				
Prob > chi2 = 0.4371				

Source: STATA 17 output

The Hausman test results in table 3, provided the basis for deciding the appropriate model between the fixed effects and random effects models based on the fact the two models are significant. From Hausman's test results, the probability value (0.4371) of the chi-square statistic (3.78) is greater than 0.05, indicating that the random effect is the appropriate model and as such formed the basis for the interpretation. As observed from the results of random effects model, FDI outflow has a positive and significant effect on GDP. This finding is contrary to theoretical expectations, indicating that the outflows of FDI are associated with economic growth. The implication of this finding is that the movement of FDI out of the selected West African countries do not undermine the growth potentials in the member countries. The positive contribution of FDI outflows on GDP is contrary to the findings of Orji, Ogbuabor, Kama and Anthony-Orji (2020) who reported that capital flight adversely affected economic growth. However, the findings authenticated the results of Adams and Klobodu (2018) who reported that FDI outflow contributed positively to economic growth. The results further showed that there was a negative and significant effect of multilateral debt service on GDP. This finding followed the apriori expectation which predicts that debt servicing including interest payments and principal repayments are detrimental to the growth of GDP. Thus, it followed from the findings that the costs of servicing multilateral debts have posed some threats to the economic prosperity of the selected West African countries. The negative effect of multilateral debt service on GDP is consistent with the findings of Udeh, Ugwu and Onwuka (2016) and Ademola, Tajudeen and Adewumi (2018) who reported that debt servicing had a negative implication on economic growth in developing economies.

In addition, the results showed that personal income payments to non-residents and financial account outflows had negative and significant effects on GDP during the study period. These findings are in tandem with the theoretical expectations which predicts that capital flight including personal income payments to non-residents and financial account outflows poses a threat to economic growth. These findings further indicate that the countries have not benefited from the increasing outflow of capital, especially personal income payments to non-residents and financial account outflows. The negative effects of personal income payments to non-residents and financial account outflows on GDP are closely linked to the findings of Okonkwo, Ojima and Manasseh (2020), Sodji (2022) and Salandy and Henry (2017) who reported that capital significantly reduced economic growth. The R-squared (0.5880) showed that about 58.8% of the total variations in GDP were jointly explained by changes in the capital flight indicators. The Chi-square statistic (15.44) was associated with a significant probability value (0.0039) at 5%

significance level. This finding attests to the statistical reliability of the estimated random effects model for policy formulation and forecast.

Conclusion

This study examined how capital flight affected economic growth in selected West African countries with a focus on Nigeria, Ghana, the Gambia, Liberia, and Sierra Leone, from 1990 to 2022. This was necessitated by the growth in capital flight in the West African subregion and the general understanding by academics, researchers, and policymakers of its consequences for sustainable growth. The findings showed that FDI outflow contributed positively to GDP growth. This highlights that an increase in capital flight in the form of FDI outflows do not undermine the growth potentials of the selected West African countries. The results also showed that multilateral debt service retarded GDP growth. This explains that the costs of multilateral debt in terms of interest payments and repayment of principal have posed some threats to the economic prosperity of the selected West African countries. There is evidence of negative growth implications of personal income payments to non-residents and financial account outflows, indicating that they are growth-retarding. Thus, the study concludes based on the findings that capital flight undermines economic growth in the selected West African countries. Hence, it is recommended that policymakers in the selected West African countries should mitigate FDI outflows by implementing consistent economic policies that promote favourable ease of doing business, investors' protection and stability in government, as this would aid in attracting and retaining investors and also create more opportunities for economic growth.

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