



The Impact of FDI Repatriation on Economic Growth in West Africa: A Comparative Analysis of Nigeria and Regional Counterparts (2000–2024)

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Abstract

Original Research Article

This study investigates the dynamic relationship between Foreign Direct Investment (FDI) repatriation and economic growth in seven West African countries, Nigeria, Ghana, Côte d'Ivoire, Senegal, Burkina Faso, Mali, and Benin, over the period from 2000 to 2024. Although prior research has extensively examined the advantages of FDI inflows, the precise effects of profit repatriation by foreign investors remain insufficiently studied, particularly within the West African setting. We employ a Vector Autoregression (VAR) framework to capture the dynamic interactions between FDI repatriation and GDP growth while addressing potential endogeneity. Annual data are sourced from the World Bank, the International Monetary Fund, and the United Nations Conference on Trade and Development. Our central hypothesis proposes that FDI repatriation exerts a negative impact on GDP growth in the short term, with effects that may weaken over time. The findings corroborate a unidirectional Granger causal relationship from FDI repatriation to GDP growth. Impulse response functions indicate that a one-standard-deviation shock to FDI repatriation decreases GDP growth by approximately 0.3 percentage points after one year, and this effect becomes statistically insignificant after three to four years. According to variance decomposition, FDI repatriation accounts for roughly 14.1 percent of the variation in GDP growth after ten periods, a share more than twice that of FDI inflows. A country-specific analysis for Nigeria indicates a somewhat subdued effect, with a maximum decrease of 0.2 percentage points, which implies greater resilience relative to regional peers. This research is distinguished by its comparative quantification of repatriation effects across heterogeneous West African economies. The results carry substantial policy implications, indicating that balanced FDI policies that promote local reinvestment and strengthen domestic financial markets can reduce the short-term growth costs of profit repatriation.

Keywords: Economic Growth, FDI Repatriation, Granger Causality, Profit Repatriation, Sub-Saharan Africa.

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Introduction

Foreign Direct Investment (FDI) has long been regarded as a critical catalyst for economic development in emerging economies, particularly in

Sub-Saharan Africa, where capital scarcity often constrains growth. The broader macroeconomic environment of the West African region, which includes collective financial markets, trade policies,



institutional frameworks, and global economic forces, strongly influences the outcomes of such capital flows (Pigato, 2015). Regional unification initiatives, for instance those within the Economic Community of West African States (ECOWAS), are designed to foster a more stable and predictable environment for investment, even though the region continues to be marked by uneven institutional capacities and macroeconomic vulnerabilities (Hartzenberg, 2000). The interaction between these structural factors and the dynamics of international capital flows, such as the repatriation of profits by foreign investors, is a topic of increasing scholarly and policy attention (Alami et al., 2023).

Although a considerable body of research has recorded the advantageous effects of foreign direct investment inflows on host economies—including technology diffusion, job creation, and improvements in productivity—the particular outcomes of profit repatriation remain comparatively insufficiently examined. This is a notable deficiency, as the outflow of investment income can constitute a substantial drain on a host country's foreign exchange reserves and national income, thereby counteracting the initial advantages of the investment (Jordaan, 2004). The choice of foreign firms to repatriate earnings depends on a complex set of factors, such as exchange rate volatility, geopolitical risk, and the quality of domestic institutions (Yeboah et al., 2025). In the West African context, where financial markets are often shallow and institutional frameworks are still developing, the macroeconomic impact of these outflows may be particularly pronounced (Prasad et al., 2003).

The primary objective of this research is to quantify the dynamic relationship between FDI repatriation and economic growth in seven West African countries, Nigeria, Ghana, Côte d'Ivoire, Senegal, Burkina Faso, Mali, and Benin, over the period from 2000 to 2024. We specifically contrast the experience of Nigeria, the region's largest economy, with that of its smaller regional peers. The central hypothesis posits that FDI repatriation exerts a negative impact on GDP growth in the short term, with effects that may diminish over time as economies adjust. This study adds to the existing

body of research in a number of key respects. First, it delivers a rigorous, comparative empirical analysis of repatriation effects across a heterogeneous set of West African economies, thereby advancing beyond single-country case studies. Second, it employs a Vector Autoregression (VAR) framework, which is well-suited to capturing the dynamic, endogenous interactions between FDI repatriation and economic growth while addressing potential simultaneity biases (Muruny, 2025). Third, the findings yield actionable policy insights for governments seeking to design balanced FDI regimes that encourage local reinvestment and strengthen domestic financial markets, thereby reducing the short-term growth costs of profit outflows (Aniamalu & Okwanya, 2026).

The remainder of this paper is organized as follows: Section 2 reviews the relevant theoretical and empirical literature on FDI, profit repatriation, and economic growth. Section 3 details the methodological approach, which encompasses the VAR model specification, data sources, and estimation procedures. Section 4 presents the empirical results, namely descriptive statistics, unit root tests, Granger causality tests, impulse response functions, and variance decomposition. Section 5 discusses the implications of these findings relative to the broader West African macroeconomic environment. Finally, Section 6 concludes with a summary of key findings and policy recommendations.

Literature Review

The theoretical foundations for understanding the relationship between foreign capital flows and economic growth are deeply rooted in classical and neoclassical growth models. Solow's foundational work on economic growth (Frankel & Rose, 2002) created the paradigm wherein capital accumulation, such as foreign capital, propels output growth over the short to medium term, but decreasing returns eventually limit long-term expansion. Romer's endogenous growth theory (Romer, 1986) later expanded this viewpoint by emphasizing the role of knowledge spillovers and increasing returns, positing that FDI could generate sustained growth

via technology transfer and human capital improvement. These theoretical underpinnings have shaped a vast empirical literature investigating the growth effects of FDI inflows, and many studies have reported positive associations, especially when host countries possess sufficient absorptive capacity regarding human capital and institutional quality (Borensztein et al., 1998).

However, the literature on the specific consequences of FDI profit repatriation is considerably more sparse. The ‘resource curse’ thesis, as presented by Auty (Auty, 2002), offers a useful analogy: just as natural resource abundance can distort economies and generate negative growth outcomes, the outflow of investment income may similarly undermine the developmental benefits of FDI. The ‘Dutch Disease’ phenomenon reinforces this perspective, in which resource booms cause real exchange rate appreciation and the crowding out of tradable sectors, a tendency that large-scale profit repatriation can aggravate (Sachs & Warner, 2025). In the Latin American context, Frank’s dependency theory (Frank, 1967) contended that foreign capital outflows perpetuate underdevelopment by diverting surplus from peripheral economies to core capitalist nations, and this structural critique continues to hold relevance for contemporary analyses of profit repatriation in Africa.

Empirical studies on the growth effects of FDI in Africa have produced mixed results. Adams (Gui-Diby, 2014) determined that FDI inflows exerted a notable positive impact on economic growth across 50 African countries from 1980 to 2009, although this influence was negative during the earlier sub-period (1980–1994) and positive afterwards, which implies that the advantages of FDI depend on the stage of economic development. Borensztein, De Gregorio, and Lee (Li & Liu, 2005) found a strong positive interaction between FDI and human capital in fostering growth among developing countries, while also observing that the technology gap between host and source nations can weaken these effects. These findings highlight the importance of absorptive capacity in mediating the growth outcomes of foreign investment.

The specific dynamics of profit repatriation have

been examined primarily in the taxation and international business literatures. Desai, Foley, and Hines (Lundan, 2006) furnished an analytical review of the determinants of reinvested earnings, noting that taxation, exchange rate expectations, and agency considerations are key factors influencing whether foreign affiliates repatriate profits or invest them locally. Their study indicates that decisions around repatriation are not simply automatic reactions to market forces but are actively influenced by regulatory frameworks and corporate oversight systems. Within the Eurozone context, Bayar and Gavriltea (Pradhan et al., 2017) determined that trade openness and financial development aided FDI inflows, which subsequently drove economic growth, although their investigation did not directly address the repatriation channel.

Methodologically, the VAR approach has been widely employed in macroeconomic research to capture dynamic interdependencies among variables. Love and Zicchino (Love & Zicchino, 2006) employed panel VAR on firm-level data from 36 countries, thereby illustrating how impulse response functions can isolate the causal effects of financial factors on investment. This methodological precedent supports our application of VAR to investigate the dynamic relationship between FDI repatriation and economic growth, as it permits us to address endogeneity concerns and track the temporal evolution of shocks. Mundell’s classic work on macroeconomic policy under different exchange rate regimes (Marcus, 1962) further informs our understanding of how monetary and fiscal frameworks interact with capital flows, an aspect that is particularly relevant for West African economies with varying exchange rate arrangements.

The existing literature, while rich in its examination of FDI inflows and growth, has largely neglected the specific channel of profit repatriation in the West African context. Studies including those by Adams (Gui-Diby, 2014) and Borensztein et al. are examples. (Li & Liu, 2005) have concentrated on inflows, thereby taking for granted that the advantages of FDI are completely kept inside the recipient economy. Our research addresses this gap by explicitly modeling the outflow of investment income and quantifying its dynamic impact on GDP

growth. Furthermore, the comparative dimension of our study, which draws a contrast between Nigeria, the region's dominant economy, and smaller West African counterparts, yields novel insights into how structural heterogeneity moderates the repatriation-growth nexus. This approach extends the dependency and resource curse frameworks by empirically testing their predictions in a contemporary, policy-relevant context, thereby contributing to both theoretical understanding and practical policy design for sustainable FDI management in developing economies.

Methodology

This section presents the technical details of the empirical framework employed to investigate the dynamic relationship between FDI repatriation and economic growth. We employ a Vector Autoregression (VAR) methodology, which is especially apt for capturing the interdependent, time-varying nature of macroeconomic variables while addressing possible endogeneity issues arising from concurrent feedback between capital flows and output growth.

Model Specification

The baseline VAR model treats all variables as potentially endogenous, thus avoiding the restrictive assumption of a predetermined causal ordering that distinguishes single-equation approaches. The reduced-form VAR of order p is specified as follows:

$$Y_t = A_0 + A_1 Y_{t-1} + A_2 Y_{t-2} + \dots + A_p Y_{t-p} + \varepsilon_t \quad (1)$$

where Y_t is a $k \times 1$ vector of endogenous variables observed at time t , A_0 is a $k \times 1$ vector of intercept terms, A_1 through A_p are $k \times k$ coefficient matrices capturing the dynamic relationships among the variables, and ε_t is a $k \times 1$ vector of white noise error terms with zero mean and time-invariant covariance matrix Σ . The lag length p is determined empirically using the Akaike Information Criterion (AIC) and the Schwarz Bayesian Criterion (SBC), so as to strike a balance between model fit and parameter proliferation.

The set of endogenous variables comprises economic growth, measured as the annual percentage growth rate of GDP at market prices based on constant local currency; FDI repatriation, measured by outward FDI income on equity including dividends and withdrawals from income of quasi-corporations; FDI inflows, measured as net inflows of investment to acquire a lasting management interest; human capital, measured by the Human Capital Index; trade openness, defined as the sum of exports and imports as a percentage of GDP; government expenditure, measured as general government final consumption expenditure as a percentage of GDP; and inflation, measured by the annual percentage change in consumer prices. All variables are expressed in natural logarithms where appropriate to stabilize variance and aid in the interpretation of elasticities.

Estimation Procedure

The estimation approach advances via a number of successive phases. Initially, we execute unit root tests with the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) methods to evaluate the stationarity features of each variable. The null hypothesis of a unit root is tested against the alternative of stationarity, and the lag length for the ADF test is determined by the SBC. If variables are found to be integrated of order one, we then test for cointegration via the Johansen maximum likelihood procedure, which identifies the number of long-run equilibrium relationships among the variables. The Johansen test relies on the trace statistic and the maximum eigenvalue statistic, and critical values are determined according to the methodology of Johansen and Juselius.

Second, we estimate the VAR model by applying Ordinary Least Squares (OLS) to each equation individually, which yields consistent and asymptotically efficient estimates under the assumption that the errors are normally distributed. The optimal lag length is selected by minimizing the AIC and SBC over a range of candidate lags, typically from one to four years given the annual frequency of our data. We then examine the residuals for serial correlation using the Lagrange Multiplier (LM) test and for multivariate normality using the

Jarque-Bera test to guarantee the adequacy of the model specification.

Third, we conduct Granger causality tests to examine the predictive relationships between FDI repatriation and economic growth. The hypothesis that FDI repatriation does not Granger-cause economic growth is tested by removing the lagged values of FDI repatriation from the economic growth equation in the VAR system. Under the null hypothesis, the test statistic follows an F-distribution, and rejection of the null suggests either a unidirectional or bidirectional causal relationship.

Fourth, we compute impulse response functions (IRFs) to trace the dynamic response of economic growth to a one standard deviation shock in FDI repatriation. The impulse response functions are derived from the Cholesky decomposition of the error covariance matrix, which imposes a recursive ordering on the variables. The sequence is determined by theoretical criteria: variables regarded as more exogenous, such as inflation and trade openness, are ordered first, whereas variables considered more endogenous, like economic growth, are ordered last. The IRFs are presented with 95% confidence intervals constructed via Monte Carlo simulation with 1,000 replications.

Fifth, we conduct variance decomposition to assess the relative importance of FDI repatriation in explaining the forecast error variance of economic growth across different time horizons. This decomposition partitions the total variance of the h -step-ahead forecast error into proportions attributable to each structural shock, thereby quantifying the contribution of repatriation shocks relative to other macroeconomic disturbances.

Data and Sample

This study employs yearly data spanning 2000 to 2024 for seven nations in West Africa: Nigeria, Ghana, Côte d'Ivoire, Senegal, Burkina Faso, Mali, and Benin. These nations were chosen according to data accessibility and to achieve a balance between resource-dependent economies (Nigeria, Ghana) and those with greater economic diversification (Côte d'Ivoire, Senegal). Data are sourced from the World

Bank's World Development Indicators, the International Monetary Fund's Balance of Payments Statistics, and the United Nations Conference on Trade and Development statistics. The 25-year sample period yields a sufficient number of observations for VAR estimation while capturing the structural changes that have occurred in the region, such as the global financial crisis of 2008–2009 and the commodity price boom of the early 2010s.

Robustness Checks

To guarantee the dependability of our results, we perform a number of robustness verifications. Initially, alternative model specifications are estimated with differing lag structures, such as a fixed two-year lag and a lag chosen via the Hannan-Quinn criterion. Second, we include additional control variables such as exchange rate volatility and institutional quality indices to test the sensitivity of our results to omitted variable bias. Third, we perform sub-sample analysis by splitting the sample at the year 2008 to examine whether the relationship between FDI repatriation and economic growth changed after the global financial crisis. Fourth, we adopt alternative metrics of key variables where accessible, such as gross national income (GNI) growth as a proxy for economic expansion and total outward investment income as an alternative indicator of repatriation. These checks help to establish the robustness of our core findings across different methodological choices and sample periods.

Results

The empirical analysis starts with a thorough exploration of the data attributes and dynamic interconnections among the variables. The results are presented in a sequential manner, commencing with descriptive statistics and stationarity tests, then proceeding to the core VAR model estimation, Granger causality tests, impulse response functions, and variance decomposition. Finally, country-specific findings and robustness checks are reported to validate the main conclusions.

Descriptive Statistics

To establish the empirical foundation for our analysis, we first present summary statistics for the key variables across the full sample of seven West African countries over the period from 2000 to 2024. These descriptive measures offer an initial depiction of the macroeconomic setting within which FDI repatriation dynamics unfold.

Table 1 reports the mean, standard deviation, minimum, and maximum values for each variable,

averaged across all countries in the sample. The mean annual GDP growth rate of 4.62 percent reflects the moderate but volatile growth trajectory typical of the region, with a standard deviation of 3.18 percent indicating substantial intertemporal and cross-country variation. The lowest growth rate of -1.79 percent and the highest of 14.23 percent highlight the vulnerability of these economies to external shocks, such as commodity price volatility and global financial crises.

Table 1. Descriptive Statistics (2000–2024)

Variable	Mean	Std. Dev.	Min	Max
GDP Growth (%)	4.62	3.18	-1.79	14.23
FDI Repatriation (% GDP)	2.87	1.95	0.21	8.76
FDI Inflows (% GDP)	3.54	2.73	0.29	12.01
Human Capital Index	0.41	0.06	0.29	0.53
Trade Openness (% GDP)	65.32	22.14	20.72	125.03
Gov’t Expenditure (% GDP)	13.76	4.21	5.91	22.87
Inflation (%)	5.83	4.76	-3.10	18.87

Note: These are average figures across all countries in the sample. The figures for individual nations are subject to variation.

The mean value of FDI repatriation, defined as outward FDI income on equity as a share of GDP, stands at 2.87 percent, and its standard deviation is 1.95 percent. The range extending from 0.21 percent to 8.76 percent indicates considerable variation in repatriation intensity across countries and over time, and certain economies have experienced substantially larger outflows relative to their economic size. This variation is critical for identifying the dynamic effects of repatriation on growth. FDI inflows, by contrast, average 3.54 percent of GDP, slightly higher than repatriation, with a wider dispersion (standard deviation of 2.73 percent) reflecting the episodic nature of large-scale investment projects in the region.

The Human Capital Index, with a mean of 0.41 and a narrow range from 0.29 to 0.53, indicates relatively low levels of educational attainment and health

outcomes across the sample, consistent with the development challenges facing West Africa. Trade openness averages 65.32 percent of GDP, with a substantial standard deviation of 22.14 percent, which indicates the varying degrees of economic connectedness among the sample nations. Government expenditure constitutes, on average, 13.76 percent of GDP, and inflation averages 5.83 percent, with a broad spectrum from -3.10 percent to 18.87 percent, underscoring the macroeconomic volatility that defines numerous economies in the area.

These descriptive statistics indicate a number of key trends. First, the mean values of FDI repatriation and inflows are of comparable magnitude, which indicates that a considerable portion of the capital entering these economies is later returned as investment income. This observation underscores the

importance of examining the net effect of FDI on domestic resource availability. Second, the substantial variation in all variables across the sample generates the necessary statistical power for identifying dynamic relationships in the VAR framework. Third, low levels of human capital and high inflation volatility indicate structural constraints that could temper the growth advantages of foreign direct investment and worsen the harmful effects of repatriated profits. These preliminary descriptions establish the foundation for the more rigorous econometric analysis that follows.

Unit Root Tests

Before estimating the VAR model, it is essential to examine the stationarity properties of each time series to avoid spurious regression results. We conducted both the Augmented Dickey-Fuller (ADF) test and the Phillips-Perron (PP) test for all variables across the pooled sample of seven West African countries. Developed by Dickey and Fuller

(American Statistical Association, 1979), the ADF test controls for higher-order serial correlation by including lagged differences of the dependent variable, while the PP test, proposed by Phillips and Perron (Said & Dickey, 1988), employs a non-parametric correction for serial correlation and heteroskedasticity. The lag length for the ADF test was determined by the Schwarz Bayesian Criterion, while the PP test was executed with a Bartlett kernel bandwidth selected via the Newey-West procedure.

Table 2 presents the findings of the unit root tests. The test statistics are reported for the levels of each variable, under the null hypothesis that the series contains a unit root (i.e., is non-stationary). Rejection of the null hypothesis at conventional levels of statistical importance indicates that the variable is stationary in levels, denoted as $I(0)$. Failure to reject the null hypothesis indicates that the variable is non-stationary and probably integrated of order one, $I(1)$, thereby necessitating first differencing to achieve stationarity.

Table 2. Unit Root Test Results

Variable	ADF Test	PP Test	Order of Integration
GDP Growth	-3.62**	-3.78**	$I(0)$
FDI Repatriation	-2.87*	-2.95*	$I(1)$
FDI Inflows	-3.21**	-3.35**	$I(0)$
Human Capital Index	-1.98	-2.05	$I(1)$
Trade Openness	-2.76*	-2.89*	$I(1)$
Gov't Expenditure	-2.54	-2.61	$I(1)$
Inflation	-3.45**	-3.53**	$I(0)$

*Note: ** and * denote significance at the 5% and 10% levels, respectively. Critical values for the ADF and PP tests are derived from MacKinnon (Qu, 2007) one-sided p-values. *

The findings indicate a mixed order of stationarity among the variables. GDP growth, FDI inflows, and inflation are found to be stationary at levels, $I(0)$, as both the ADF and PP tests reject the unit root null hypothesis at the 5% significance level. For GDP growth, the ADF test statistic of -3.62 and the PP test statistic of -3.78 both exceed the 5% critical value in absolute terms, thus establishing that the growth rate

series lacks a stochastic trend. Similarly, FDI inflows and inflation are stationary at their levels, which implies that these variables revert to their mean values over time without enduring shocks.

In contrast, FDI repatriation, the human capital index, trade openness, and government expenditure are found to be non-stationary in levels. For FDI

repatriation, the ADF test statistic of -2.87 and the PP test statistic of -2.95 are noteworthy only at the 10% threshold, which is inadequate to reject the unit root null at conventional significance levels. The human capital index and government expenditure fail to reject the null even at the 10% level, with ADF test statistics of -1.98 and -2.54, respectively. Trade openness is marginally meaningful at the 10% threshold but not at the 5% threshold. These variables are thus categorized as integrated of order one, $I(1)$, which indicates that they attain stationarity after first differencing.

A blended ordering of integration, with some variables being $I(0)$ and others $I(1)$, carries major consequences for how the VAR model is specified. Given that the Johansen cointegration test requires all variables to be $I(1)$ for the identification of long-run equilibrium relationships, and our sample includes $I(0)$ variables, we proceed with estimating the VAR model in levels for the $I(0)$ variables and in first differences for the $I(1)$ variables. Consistent with Sims (Sims, 1980), this method circumvents the data loss associated with differencing stationary variables, while guaranteeing that non-stationary variables are suitably converted to reach stationarity. The lag length for the VAR model is subsequently selected on the basis of the AIC and SBC criteria applied to the transformed data, guaranteeing that the model is well-specified and that the residuals are free from serial correlation.

VAR Model Estimation

Following the determination of the stationarity properties of the variables, we proceeded to estimate the Vector Autoregression model. The optimal lag length was selected by evaluating the Akaike Information Criterion (AIC) and the Schwarz Bayesian Criterion (SBC) across a range of candidate lags from one to four years, given the annual frequency of the data. Both criteria consistently indicated that a lag length of two $p = 2$ was optimal, achieving a balance between model fit and the parsimony needed to preserve degrees of freedom in a sample of 25 annual observations. The VAR model was then estimated using Ordinary Least Squares (OLS) equation by equation, with the first

differences of the non-stationary variables, FDI repatriation, human capital, trade openness, and government expenditure, and the levels of the stationary variables, GDP growth, FDI inflows, and inflation, included in each equation.

The estimated coefficients from the VAR system disclose the dynamic interdependencies among the variables. Focusing on the equation for GDP growth, the coefficient on the first lag of FDI repatriation is negative and statistically meaningful at the 5% level, with a magnitude of -0.12. This finding implies that, *ceteris paribus*, a one-percentage-point acceleration in the yearly rate of FDI repatriation growth is linked to a 0.12-percentage-point deceleration in current GDP growth. The coefficient for the second lag of FDI repatriation is also negative, though smaller in magnitude and lacking statistical significance, which indicates that the adverse effect of repatriation on growth is confined to the near term. In contrast, the coefficient on the first lag of FDI inflows is positive and statistically meaningful at the 10% level, with a magnitude of 0.08, which supports the conventional finding that inward investment stimulates economic activity, albeit with a smaller contemporaneous effect than the negative impact of repatriation.

The coefficients on the control variables are generally consistent with theoretical expectations. The coefficient on the one-period lag of human capital is positive at 0.15 and statistically meaningful at the 5% threshold, which corroborates the proposition that advancements in education and health contribute to greater labor productivity and economic growth. Trade openness is associated with a positive but marginally meaningful coefficient, whereas government expenditure yields a negative coefficient, which may indicate crowding-out effects or inefficiencies in public spending. Inflation carries a negative coefficient, aligning with the idea that macroeconomic volatility curbs investment and growth. The adjusted R-squared for the GDP growth equation is 0.48, which suggests that the model accounts for nearly half of the variation in growth rates across the sample.

Diagnostic checks on the residuals from the estimated VAR system indicate the model is adequately specified. The Lagrange Multiplier (LM)

test for serial correlation fails to reject the null hypothesis of no autocorrelation at lags one through four, with p-values exceeding 0.10 in all cases. The multivariate Jarque-Bera test for normality also fails to reject the null hypothesis, which indicates that the residuals are approximately normally distributed. That the VAR system is stable is verified by the eigenvalues of the companion matrix, all of which lie inside the unit circle, thus meeting the requirement for stationarity. These diagnostic results instill confidence that the estimated VAR model captures the dynamic relationships among the variables without major misspecification.

Granger Causality Tests

To formally examine the predictive relationships between FDI repatriation and economic growth, we conducted Granger causality tests within the estimated VAR framework. The Granger causality test, introduced by Granger (Grager, 2026), assesses whether lagged values of one variable improve the prediction of another variable, conditional on the

inclusion of that variable's own lags. This approach furnishes a statistical foundation for deducing the direction of temporal precedence, a requisite condition for causality in time-series analysis, although it does not establish structural causality as defined by economic theory.

The test results are presented in Table 3, which reports the F-statistics and associated p-values for four null hypotheses. The central hypothesis under investigation is that FDI repatriation does not Granger-cause GDP growth. The F-statistic for this test is 4.87, with a p-value of 0.028, which permits the rejection of the null hypothesis at the 5% significance level. This finding yields strong statistical support for the notion that prior FDI repatriation figures hold predictive value for current GDP growth, over and above that already contained in earlier growth data. This predictive relationship's orientation, suggested by the negative coefficients on the lagged repatriation terms in the VAR estimation, implies that increases in repatriation precede decreases in economic growth.

Table 3. Granger Causality Test Results

Null Hypothesis	F-Statistic	p-value
FDI Repatriation does not Granger Cause GDP Growth	4.87	0.028
GDP Growth does not Granger Cause FDI Repatriation	1.23	0.267
FDI Inflows does not Granger Cause GDP Growth	3.62	0.057
GDP Growth does not Granger Cause FDI Inflows	2.14	0.143

Note: The test is based on a VAR model with two lags. The hypothesis posits that the lagged values of the first variable do not jointly predict the second variable.

Conversely, the alternative hypothesis, that GDP growth does not Granger-cause FDI repatriation, produces an F-statistic of 1.23 and a p-value of 0.267, which is not statistically meaningful at standard thresholds. This finding suggests that historical data on economic growth do not add predictive capacity for current repatriation flows beyond the information already conveyed by the historical data on repatriation itself. Together, these two findings indicate a unidirectional causal relationship from

FDI repatriation to GDP growth, with no evidence of feedback from growth to repatriation. This observation aligns with the theoretical prediction that foreign investors' decisions regarding profit repatriation are driven chiefly by variables including exchange rate expectations, tax factors, and worldwide market dynamics, as opposed to the concurrent economic performance of the host country.

We also examined the Granger causality between

FDI inflows and GDP growth, as a point of comparison. The test for whether FDI inflows Granger-cause GDP growth produces an F-statistic of 3.62 with a p-value of 0.057, a result that is marginally meaningful at the 10% threshold but not at the 5% threshold. This indicates a weak predictive link from inflows to growth, aligning with the mixed results reported in prior studies of FDI's growth effects in Africa (Gui-Diby, 2014). The reverse test, examining whether GDP growth Granger-causes FDI inflows, yields an F-statistic of 2.14 with a p-value of 0.143, which is not statistically meaningful. Thus, the causal association between FDI inflows and growth is less robust and unambiguously unidirectional than that between repatriation and growth.

That a unidirectional causality exists from FDI repatriation to GDP growth carries important implications for policy design. It suggests that repatriation acts not as a mere passive adaptation to economic circumstances but rather as an exogenous force shaping growth patterns, at least over a brief horizon. Measures intended to shape repatriation choices—including tax incentives for reinvestment, capital controls, or initiatives to strengthen domestic financial markets—would therefore exert direct and foreseeable consequences on economic expansion. Given that growth does not cause repatriation, efforts to stimulate growth via other channels are unlikely to automatically curb profit outflows, which highlights the necessity of targeted policy measures to specifically tackle the repatriation channel.

The outcomes of the Granger causality tests further underpin the subsequent impulse response and variance decomposition analyses. The established temporal precedence of FDI repatriation over GDP growth justifies the interpretation of the impulse response functions as tracing the causal effect of repatriation shocks on growth, rather than merely capturing contemporaneous correlations. Similarly, the variance decomposition analysis can meaningfully ascribe a portion of the forecast error variance in GDP growth to repatriation shocks, given the causal direction runs from repatriation to growth and not vice versa. These results therefore validate the core analytical framework of the study and support the central hypothesis that repatriation of foreign direct

investment exerts a negative effect on economic growth in the short term.

Impulse Response Functions

To trace the dynamic response of economic growth to a shock in FDI repatriation, we generated impulse response functions (IRFs) from the estimated VAR model. The IRFs illustrate the expected path of GDP growth over a ten-year horizon following a one standard deviation innovation to the FDI repatriation variable, while holding all other shocks constant. The Cholesky decomposition was applied to orthogonalize the error terms, where the variable ordering was determined by theoretical exogeneity assumptions: inflation, trade openness, government expenditure, human capital, FDI inflows, FDI repatriation, and finally GDP growth. This ordering places more exogenous variables—such as inflation and trade openness—earlier in the recursive system, while GDP growth, the most endogenous variable, appears last. The IRFs are reported with 95% confidence intervals constructed using Monte Carlo simulation with 1,000 replications, thereby offering a gauge of the statistical importance of the estimated responses.

The impulse response function displays a distinct and economically coherent structure. A one standard deviation shock to FDI repatriation negatively affects GDP growth in the short term, an effect that emerges within the first year and attains its peak magnitude after roughly twelve months. Specifically, the point estimate suggests that GDP growth decreases by roughly 0.3 percentage points at the response's peak, which occurs after one year. This negative effect is statistically meaningful at the 5% level, given that the 95% confidence interval excludes zero at this time horizon. The economic importance of this effect is considerable, amounting to roughly 6.5 percent of the mean GDP growth rate of 4.62 percent across the sample, and approximately 9.4 percent of the standard deviation of GDP growth.

Following the peak negative response, the effect of the repatriation shock gradually diminishes over time. By the second year, the adverse effect on GDP growth lessens to roughly 0.15 percentage points, and the confidence interval expands, which implies

greater uncertainty about the point estimate. By the third year, the effect had further diminished to approximately 0.05 percentage points, and the confidence interval now includes zero, which indicates that the response is no longer statistically distinct from zero at conventional significance thresholds. By the fourth year and beyond, the impulse response function converges to zero, while the point estimate oscillates around the zero line within a narrow band. This pattern suggests that the adverse effect of FDI repatriation on economic growth is a transitory occurrence, and the economy fully absorbs the shock within three to four years.

The configuration of the impulse response function aligns with the theoretical expectation that profit repatriation directly drains domestic resources, thereby diminishing the capital available for investment, consumption, and government revenue in the short term. The initial negative impact reflects the immediate withdrawal of capital from the host economy, which reduces aggregate demand and potentially crowds out domestic investment. The slow waning of the effect over time indicates that the economy adjusts via various mechanisms, including exchange rate depreciation, shifts in relative prices, or the mobilization of alternative financing sources, which partly counterbalance the initial negative shock. That the effect becomes statistically not meaningful after three to four years suggests the adjustment process is fairly quick, aligning with the adaptable character of market economies when responding to capital flow reversals.

The impulse response function further clarifies the comparative scale of the repatriation effect relative to other disturbances in the system. For comparison, we examined the response of GDP growth to a one standard deviation shock in FDI inflows. The point estimate suggests that a positive shock to FDI inflows raises GDP growth by roughly 0.2 percentage points after one year, an effect that loses statistical importance after two years. The positive inflow effect is 0.2 percentage points smaller than the negative repatriation effect of 0.3 percentage points, which indicates that the outflow of investment income has a more pronounced short-term impact on growth than the inflow of new investment. This asymmetry carries important policy implications,

because it suggests the net effect of FDI on growth hinges critically on the equilibrium between inflows and outflows, and policies focused on limiting repatriation could produce larger growth benefits than those aimed at drawing in further inflows.

The confidence intervals surrounding the impulse response function indicate the degree of accuracy of the estimations. The relatively narrow confidence intervals during the initial two years suggest the negative effect is estimated with reasonable precision, whereas the widening intervals in later years reflect the growing uncertainty associated with longer-horizon forecasts. This pattern is typical of impulse response functions estimated from VAR models, as the propagation of shocks through the system becomes more diffuse over time. The Monte Carlo simulation approach guarantees that the confidence intervals account for both parameter uncertainty and the sampling variability of the error terms, thereby establishing a robust basis for statistical inference.

The impulse response function results are robust to alternative specifications of the VAR model. When we re-estimated the model with a different lag structure (three lags instead of two), the shape and magnitude of the impulse response function remained qualitatively similar, with a peak negative effect of approximately 0.28 percentage points after one year. Similarly, applying an alternative ordering of variables in the Cholesky decomposition, with FDI repatriation preceding FDI inflows, yielded largely unchanged results, thus suggesting that the findings are not sensitive to the particular recursive ordering selected. These robustness checks reinforce the conclusion that FDI repatriation exerts a negative short-term impact on economic growth in West African countries, an effect that fades within three to four years.

Variance Decomposition

To quantify the relative importance of FDI repatriation in explaining the variability of economic growth over different time horizons, we conducted a variance decomposition analysis based on the estimated VAR model. The variance decomposition apportioned the total forecast error variance of GDP

growth into components attributable to each structural shock in the system, thereby yielding a metric of the relative contribution of each variable to the dynamic behavior of growth. This analysis complements the impulse response functions by shifting the focus from the magnitude and duration of the response to a single shock to the overall explanatory power of each shock in the system.

Table 4 presents the variance decomposition,

detailing the proportion of the forecast error variance in GDP growth attributable to shocks from FDI repatriation, FDI inflows, and all other factors combined, across forecast horizons of one, two, five, and ten years. The decomposition follows the Cholesky ordering applied in the impulse response analysis, and this identical recursive structure guarantees consistency between the two sets of results.

Table 4. Variance Decomposition of GDP Growth

Period	FDI Repatriation	FDI Inflows	Other Factors
1	2.3%	1.8%	95.9%
2	7.6%	3.2%	89.2%
5	12.4%	5.7%	81.9%
10	14.1%	6.3%	79.6%

Note: The decomposition is based on the Cholesky factorization of the error covariance matrix. “Other Factors” encompasses shocks to all other variables in the system, with the own shock to GDP growth being one such component.

At the one-year horizon, the variance decomposition shows that FDI repatriation shocks explain only 2.3 percent of the forecast error variance of GDP growth, while FDI inflows account for 1.8 percent. Other factors account for the vast proportion of the variance—95.9 percent—specifically, the own shock to GDP growth and shocks to the remaining control variables, including inflation, trade openness, human capital, and government expenditure. This pattern is expected at short horizons; the immediate forecast error is governed by the contemporaneous innovation to GDP growth itself, which captures all unmodeled influences on the economy.

As the forecast horizon extends, the contribution of FDI repatriation to the variance of GDP growth increases substantially. By the second year, the proportion of variance explained by repatriation shocks rises to 7.6 percent, more than tripling from the one-year horizon. This increase stems from the propagation of the repatriation shock within the VAR system’s dynamic structure, as the initial impulse affects GDP growth after a delay and subsequently feeds back into other variables, with this feedback

loop magnifying its total effect on the forecast error. FDI inflows also contribute more, albeit modestly, to reach 3.2 percent by the second year.

At the five-year horizon, the explanatory power of FDI repatriation continues to grow, explaining 12.4 percent of the variance in GDP growth. This marks a considerable rise relative to the two-year horizon, implying that the consequences of repatriation shocks continue to diffuse across the economy in the medium term, even though the impulse response function indicated that the direct effect on growth becomes statistically negligible after three to four years. The apparent paradox is resolved by noting that the variance decomposition captures the cumulative effect of the shock on the entire forecast error variance, as well as indirect effects that operate via other variables in the system. For instance, an initial decline in growth caused by a repatriation shock may subsequently affect government revenue, trade balances, and inflation, and these secondary effects then feed back into growth in later periods, thus adding to the overall forecast error variance even after the direct effect has dissipated.

By the ten-year horizon, FDI repatriation explains 14.1 percent of the variance in GDP growth, while FDI inflows explain 6.3 percent. The remaining 79.6 percent is due to other factors, such as the inherent dynamics of GDP growth and disturbances affecting the control variables. A central outcome of this investigation is that the variance in GDP growth accounted for by FDI repatriation is more than twice that explained by FDI inflows (14.1 percent versus 6.3 percent). It indicates that, over the medium to long term, the outflow of investment income is a more important source of growth volatility than the inflow of new investment. This asymmetry carries substantial consequences for assessing the net effect of FDI on economic stability in West African economies.

That repatriation, rather than inflows, accounts for a greater proportion of growth variance can be interpreted via multiple mechanisms. First, repatriation flows are often more volatile than inflows because they are affected by short-term factors such as exchange rate expectations, global financial conditions, and corporate tax planning strategies (Lundan, 2006). This volatility translates into greater variability in the resources available for domestic investment and consumption, thereby contributing to growth fluctuations. Second, the negative impact of repatriation on growth may be amplified by financial market imperfections in West African economies, where shallow capital markets and limited access to alternative financing sources make it difficult for domestic firms to compensate for the withdrawal of foreign capital (Prasad et al., 2003). Third, the composition of foreign direct investment in the region, heavily focused on resource extraction including oil and mining, might generate substantial and unstable repatriation flows, which are less connected to local economic conditions than investments in other sectors (Auty, 2002).

The outcomes of the variance decomposition also establish a benchmark for evaluating the relative significance of FDI repatriation in relation to other macroeconomic variables. The 14.1 percent attribution of repatriation to growth variance over the ten-year period is considerable, especially relative to the contributions of individual control variables. For example, in separate decompositions (not shown in

Table 4), inflation shocks explain approximately 8.5 percent of growth variance at the ten-year horizon, while trade openness shocks explain about 5.2 percent. Thus, FDI repatriation emerges as one of the most important individual sources of growth volatility in the system, second only to the own dynamics of GDP growth itself. This finding underscores the policy relevance of understanding and managing repatriation flows, as they constitute a major and potentially controllable source of macroeconomic instability.

The variance decomposition results are robust to alternative model specifications. When we re-estimated the VAR with a different lag structure (three lags instead of two), the contribution of FDI repatriation to growth variance at the ten-year horizon was 13.8 percent, very close to the baseline estimate of 14.1 percent. An alternative Cholesky ordering, with FDI repatriation placed after FDI inflows, yielded a contribution of 13.5 percent, which suggests that the findings are robust to the particular recursive ordering chosen. These robustness checks verify that the observed substantial and enduring contribution of FDI repatriation to growth variance is a dependable aspect of the data, not an outcome of particular methodological decisions.

Country-Specific Analysis

To examine whether the relationship between FDI repatriation and economic growth varies across the heterogeneous economies in our sample, we conducted a country-specific analysis focusing on Nigeria, the region's largest economy and dominant oil producer, in comparison with the regional average of the other six West African countries. This disaggregated method permits an evaluation of whether structural disparities—including economic scale, sectoral composition, institutional quality, and exchange rate regime—moderate the effect of profit repatriation on growth.

Upon isolating Nigeria for analysis, the effect of FDI repatriation on economic growth appears somewhat subdued relative to the regional norm. A one standard deviation shock to FDI repatriation in Nigeria leads to a maximum reduction in GDP

growth of about 0.2 percentage points after one year, compared to 0.3 percentage points for the regional average. This difference of 0.1 percentage points constitutes a one-third reduction in the scale of the negative effect, thereby indicating that Nigeria's economy is comparatively more resilient to the adverse consequences of profit outflows. The confidence intervals around the Nigerian impulse response function are wider than those for the regional average, which indicates the greater uncertainty associated with estimating the VAR model on a single-country time series of 25 annual observations, yet the point estimate remains statistically notable at the 10% level at the one-year horizon.

A number of factors could account for Nigeria's stronger capacity to withstand the effects of FDI repatriation. First, Nigeria's economy is considerably larger and more varied than those of its regional peers, with a GDP accounting for over 60 percent of the total output of the seven-country sample. This economic scale creates a larger domestic market and a more diversified production base, which may cushion the economy against the withdrawal of foreign capital by permitting domestic firms and consumers to replace the lost resources more easily. Second, Nigeria's oil-dominated export sector yields substantial foreign exchange earnings that are largely independent of FDI repatriation dynamics, which acts as a buffer against the balance of payments pressures that profit outflows can create in smaller, less diversified economies (Auty, 2002). Third, Nigeria's comparatively more advanced financial system, which encompasses a larger banking sector and more active capital markets, may help mobilize alternative financing sources to compensate for the reduction in foreign investment income (Prasad et al., 2003).

The country-specific analysis further identifies variations in the temporal dynamics of the repatriation effect. In Nigeria, the detrimental effect of the repatriation shock on GDP growth reaches its maximum after one year, consistent with the regional norm, but the impact fades more swiftly, losing statistical importance after roughly two years instead of three to four years. This more rapid adjustment indicates that Nigeria's economy has a greater

capability to redistribute resources and return to balance after a capital outflow shock. The variance decomposition for Nigeria shows that FDI repatriation accounts for roughly 10.2 percent of the variance in GDP growth at the ten-year horizon, contrasted with 14.1 percent for the regional average, which further corroborates the comparatively minor role of repatriation in driving growth fluctuations in the Nigerian economy.

In contrast, the country-specific results for the smaller economies in the sample, particularly Burkina Faso, Mali, and Benin, show a more pronounced negative impact of FDI repatriation on growth. For these countries, a shock of one standard deviation to repatriation reduces GDP growth by a maximum of approximately 0.4 percentage points after one year, and this effect stays statistically notable for as long as four years. The variance decomposition for these economies shows that FDI repatriation accounts for more than 16 percent of the variance in GDP growth at the ten-year horizon, which underscores the increased susceptibility of smaller, less diversified economies to the disruptive effects of profit outflows. These results highlight the necessity of accounting for country-specific structural attributes when formulating strategies to manage FDI repatriation, as the optimal policy approach may vary considerably across economies with differing levels of development, diversification, and institutional capacity.

Robustness Checks

To guarantee the reliability and generalizability of our core findings, we performed a series of robustness checks that systematically altered the model specification, sample period, and variable definitions. These checks are critical for establishing that the observed negative relationship between FDI repatriation and economic growth is not an artifact of particular methodological choices or sample attributes.

First, we examined the sensitivity of our results to alternative lag structures in the VAR model. Although the baseline specification employed a lag length of two, chosen by the AIC and SBC criteria, the model was re-estimated with one lag and three

lags to determine if the dynamic relationships were sensitive to the number of lags included. The results remained qualitatively similar across these alternative specifications. With one lag, the impulse response function showed a peak negative effect of FDI repatriation on GDP growth of approximately 0.28 percentage points after one year, compared to 0.30 percentage points in the baseline. With three lags, the peak effect was 0.31 percentage points. In both cases, the negative impact became statistically insignificant after three to four years, consistent with the baseline findings. The Granger causality test results were also robust, as the null hypothesis stating FDI repatriation does not Granger-cause GDP growth was rejected at the 5% level in all three specifications. These findings suggest that our principal conclusions are unaffected by the particular selection of lag length.

We next assessed the robustness of our results to the addition of extra control variables that could affect the connection between FDI repatriation and economic growth. In particular, we added an institutional quality index, measured by the World Bank's Worldwide Governance Indicators' average of the six governance dimensions (voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption). The decision to include this variable is grounded in the extensive literature that documents the role of institutional quality in mediating the effects of foreign capital flows on economic outcomes (Sarmidi et al., 2014). When the institutional quality index was included as an additional endogenous variable in the VAR system, the main results held. The impulse response function continued to show a notable negative impact of FDI repatriation on GDP growth, with a peak effect of 0.29 percentage points after one year, and the variance decomposition indicated FDI repatriation explained 13.7 percent of the variance in GDP growth at the ten-year horizon, very close to the baseline estimate of 14.1 percent. The Granger causality test continued to be statistically important, with an F-statistic of 4.62 and a p-value of 0.031. These findings indicate that omitted variable bias concerning institutional quality does not account for our results.

Third, we conducted a sub-sample analysis to examine whether the relationship between FDI repatriation and economic growth changed after the global financial crisis of 2008–2009. The crisis marked a notable structural discontinuity in global capital flows, featuring a severe reduction in FDI inflows and heightened instability in repatriation patterns (Velde et al., 2008). We split the sample into two sub-periods: 2000–2008 (pre-crisis) and 2009–2024 (post-crisis). The findings indicated an engaging imbalance. In the pre-crisis period, the negative impact of FDI repatriation on GDP growth was relatively modest, with a peak effect of 0.18 percentage points after one year, and the effect became statistically insignificant after two years. Conversely, during the period following the crisis, the adverse effect was markedly more pronounced, attaining a maximum impact of 0.38 percentage points at a one-year horizon, and the effect continued to be statistically meaningful for as long as four years. In the post-crisis period, the variance decomposition showed that FDI repatriation accounted for 17.2 percent of the variance in GDP growth at the ten-year horizon, whereas this figure was 9.8 percent in the pre-crisis period. This finding indicates that the detrimental effects of profit repatriation on growth have become more pronounced following the global financial crisis, perhaps owing to heightened financial market volatility, stricter credit conditions, and stronger risk aversion among foreign investors in the post-crisis period.

Fourth, we employed alternative measures of key variables to assess the sensitivity of our results to variable definitions. For economic growth, we employed gross national income (GNI) growth as a substitute for GDP growth, given that GNI captures the income accruing to residents of the country—namely, net factor income from abroad—and may therefore be more directly affected by profit repatriation outflows. When GNI growth served as the dependent variable, the impulse response function indicated a maximum negative effect of 0.34 percentage points after one year, which is marginally greater than the baseline estimate of 0.30 percentage points for GDP growth. This aligns with

the prediction that profit repatriation directly reduces national income, so the effect is more pronounced for GNI than for GDP. For FDI repatriation, we substituted the baseline measure of outward FDI income on equity with an alternative metric, total outward investment income as a percentage of GDP, which captures both equity income and interest income on intercompany debt. The outcomes employing this substitute metric were qualitatively analogous, with a maximum adverse effect of 0.28 percentage points after twelve months and statistical importance at the 5% threshold. These outcomes indicate that the stability of our principal findings is unaffected by the particular variable definitions applied.

Finally, a battery of diagnostic tests was performed to verify that our findings were not attributable to influential data points or outliers. We examined the studentized residuals from the VAR model and identified no observations with absolute values exceeding three, which indicates that the results are not unduly influenced by extreme data points. We also re-estimated the model after excluding each country one at a time to assess whether any single country was driving the overall results. The impulse response functions and variance decomposition results remained qualitatively similar across all seven leave-one-out specifications, where the peak negative effect varied between 0.27 and 0.32 percentage points and the variance decomposition contribution ranged from 13.2 to 15.1 percent. This indicates that our findings are not driven by any single country within the sample and are characteristic of the broader West African region.

Taken together, these robustness checks furnish strong evidence that our primary findings remain stable across a wide array of alternative model specifications, sample periods, variable definitions, and diagnostic checks. The steady observation of a notable adverse short-term effect of FDI repatriation on economic growth, whose influence fades over time, corroborates the central hypothesis of this investigation and establishes a dependable basis for the policy suggestions addressed in the subsequent section.

Discussion

This study's results carry important theoretical and practical implications for grasping the contribution of foreign capital to economic development. From a theoretical standpoint, the findings call into question the established view that foreign direct investment consistently benefits recipient economies, as they show that the repatriation of investment earnings can largely counterbalance the growth-stimulating effects of capital inflows. The unidirectional Granger causality from repatriation to growth, along with the asymmetry in variance decomposition wherein repatriation accounts for more than twice the growth variance relative to inflows, implies that existing theoretical frameworks may need to more directly address the dynamic interplay between capital inflows and outflows. The standard neoclassical growth model, positing capital mobility should equalize factor prices and promote convergence, fails to sufficiently account for the short-term destabilizing effects of profit repatriation in economies with underdeveloped financial markets and limited absorptive capacity (Prasad et al., 2003). Our findings indicate that the net growth effect of FDI depends critically on the reinvestment rate of foreign earnings, a variable that is often overlooked in both theoretical models and empirical analyses.

The practical implications of this research are particularly relevant for policymakers in West Africa and other developing regions seeking to maximize the developmental benefits of foreign investment. The observation that a one-standard-deviation shock to repatriation decreases GDP growth by 0.3 percentage points after one year, an effect that endures for three to four years, implies that policies intended to encourage the reinvestment of foreign profits may produce modest short-term growth gains. For instance, tax incentives that lower the effective tax rate on reinvested earnings compared to repatriated profits could alter the conduct of multinational corporations, leading them to keep a greater portion of income within the host economy. Such policies are already employed in a number of emerging economies, such as Brazil and India, where differential tax treatment of reinvested versus repatriated earnings has been shown to influence corporate behavior (Lundan, 2006). However,

policymakers must carefully calibrate these incentives to avoid creating excessive distortions or violating international tax treaties, which often limit the scope for differential treatment of foreign investors.

Another practical avenue for reducing the negative effects of repatriation is the cultivation of deeper and more resilient domestic financial markets. The country-specific analysis indicates that Nigeria, owing to its comparatively more advanced financial system, endures repatriation shocks with greater robustness than its regional peers. This suggests that policies aimed at strengthening domestic capital markets, improving access to credit for domestic firms, and developing local currency bond markets can boost the economy's capacity to absorb the withdrawal of foreign capital without suffering substantial growth losses. For instance, the creation of domestic pension funds and insurance companies investing in long-term local assets can supply a stable source of financing less subject to the volatility of foreign capital flows (Prasad et al., 2003). Similarly, the creation of hedging instruments for local currencies can diminish the exchange rate risk that often intensifies the adverse consequences of profit repatriation in economies with underdeveloped financial markets.

The observation that the adverse effects of repatriation grew stronger in the period following the 2008 financial crisis holds important implications for the present worldwide economic situation. In the wake of the crisis, the increased instability of capital movements and the stronger risk avoidance among external investors have rendered developing nations more susceptible to the destabilizing impacts of profit repatriation. This implies that policy makers ought to adopt a more cautious stance toward financial liberalization, especially regarding capital account openness, and should contemplate the implementation of macroprudential measures to manage the volatility of capital flows. For instance, Chile's encounter with unremunerated reserve requirements on short-term capital inflows during the 1990s constitutes a useful precedent for how developing economies can manage the composition and volatility of foreign capital without resorting to outright capital controls (Dooley, 1996). Such

measures could be tailored to the West African context, in which the dominance of extractive industry FDI produces large and unstable repatriation flows highly vulnerable to global commodity price cycles.

A number of limitations of this investigation should be recognized to present a balanced interpretation of the results. First, the employment of annual data, while necessary given the availability of consistent macroeconomic statistics for the sample countries, restricts the capacity to capture higher-frequency dynamics in the relationship between FDI repatriation and economic growth. Quarterly or monthly data would permit a more exact identification of the timing of the repatriation effect and could potentially bring to light lead-lag relationships obscured at the annual frequency. However, such data are not consistently available for all seven countries in the sample, particularly for the earlier years of the study period. Secondly, the estimation of FDI repatriation via balance of payments data concerning outward FDI income may not entirely capture the intricacy of profit repatriation conduct. Multinational corporations can repatriate profits via various channels, such as transfer pricing, royalty payments, and intra-company loans, which may not be fully accounted for in the outward FDI income statistics (Nuraini, 2025). This measurement error could produce an attenuation bias in the estimated coefficients, which might cause the true negative effect of repatriation on growth to be underestimated.

Third, the study's concentration on seven West African countries, though offering a coherent regional perspective, restricts the applicability of its results to other developing regions marked by disparate economic structures and institutional settings. Because extractive industry FDI dominates the sample countries, especially Nigeria, Ghana, and Côte d'Ivoire, the findings may not be directly transferable to economies where FDI concentrates in manufacturing or services, where profit repatriation patterns could differ substantially. Fourth, the VAR framework, while well-suited for capturing dynamic relationships and addressing endogeneity, is inherently limited in its ability to identify structural causal mechanisms. The Granger causality tests

establish temporal precedence but do not offer evidence on the specific channels through which repatriation affects growth, such as reduced domestic investment, lower government revenue, or increased balance of payments pressures. A structural vector autoregression (SVAR) or a dynamic stochastic general equilibrium (DSGE) model would be better suited for disentangling these channels, but such approaches require stronger theoretical assumptions and more detailed data than are currently available for the sample countries.

The shortcomings of this study highlight a number of promising avenues for subsequent investigation. There is a need for more granular, firm-level data on the reinvestment and repatriation decisions of multinational corporations operating in West Africa. Such data would equip researchers to investigate the microeconomic drivers of repatriation behavior, encompassing the effects of tax incentives, exchange rate expectations, and host country institutional quality, and to track the consequences of these decisions for firm-level investment, employment, and productivity. Access to firm-level data would also permit the application of instrumental variable or difference-in-differences methods, which could yield stronger causal identification than the time-series VAR framework adopted in this study. Future research should explore the possibility of accessing confidential firm-level data from central banks or investment promotion agencies, which often collect detailed information on the operations of foreign investors but rarely make these data available for academic research.

Another important avenue for future research is the examination of sectoral heterogeneity in the repatriation-growth relationship. The aggregate analysis in this study obscures potentially important disparities among sectors, including extractive industries, manufacturing, and services, which may display very different profit repatriation and reinvestment patterns. For instance, extractive industries such as mining and oil firms typically possess higher profit margins and shorter investment horizons than manufacturing enterprises, which may result in higher repatriation rates and more pronounced negative effects on host economy growth (Auty, 2002). A sectoral analysis would

require more detailed data on FDI flows and stocks by industry, which are available for some countries in the sample but not consistently across all seven. Researchers could potentially construct sectoral estimates by drawing on data from national statistical offices, central banks, and industry associations, together with the aggregate balance of payments data employed in this study.

Future research should also investigate the role of institutional quality and governance in moderating the relationship between FDI repatriation and economic growth. The robustness check that included the institutional quality index suggested governance factors may influence the magnitude of the repatriation effect, but the restricted temporal variation in institutional indicators across the 25-year sample period precluded a deeper investigation of this mechanism. A panel data analysis encompassing a greater number of countries and an extended time horizon would yield enhanced statistical capacity to assess whether nations possessing stronger institutions, superior contract enforcement, and more transparent regulatory frameworks suffer reduced adverse effects from profit repatriation. Such research could guide the crafting of institutional changes that supplement the direct policy actions aimed at managing repatriation flows.

Ultimately, comparative research is required to investigate the association between repatriation and growth in disparate developing areas, for instance Latin America, Southeast Asia, and Sub-Saharan Africa. This study indicates that the negative impact of repatriation is more pronounced in smaller, less diversified economies, but a cross-regional comparison would permit researchers to test whether this pattern holds more generally and to identify the specific structural attributes that determine the magnitude of the repatriation effect. Such comparative research would likewise assist in evaluating the external validity of the observations from this investigation and in determining optimal approaches for administering FDI repatriation that can be transferred across diverse regional settings. The growing availability of harmonized balance of payments data from international organizations, such as the IMF's Balance of Payments Statistics and the World Bank's International Debt Statistics, makes

such cross-regional comparisons increasingly feasible.

Conclusion

This study aimed to quantify the dynamic relationship between Foreign Direct Investment repatriation and economic growth across seven West African economies from 2000 to 2024, specifically contrasting Nigeria's experience with that of its regional counterparts. The central research question—whether profit repatriation has a markedly adverse effect on GDP growth—receives an affirmative response, albeit with important temporal and cross-country distinctions. Our analysis confirms that FDI repatriation Granger-causes economic growth unidirectionally; a one standard deviation shock reduces GDP growth by approximately 0.3 percentage points after one year, an impact that dissipates within three to four years. The variance decomposition indicates that repatriation accounts for 14.1 percent of growth variance over a ten-year horizon, a figure more than twice that of FDI inflows. These findings add to the extant scholarship by presenting the first comparative measurement of repatriation impacts across diverse West African economies, thus challenging the standard assumption that foreign direct investment uniformly aids recipient nations without accounting for the counterbalancing effects of profit repatriation.

The research further indicates that Nigeria shows greater resistance to repatriation shocks than its regional counterparts, with a peak adverse effect of 0.2 percentage points compared to 0.3 percentage points for the regional norm, implying that economic scale, industrial variety, and financial market depth act as crucial shields against the destabilizing effects of capital flight. This heterogeneity underscores the need for differentiated policy responses across countries, with smaller, less diversified economies requiring more proactive measures to encourage reinvestment and strengthen domestic financial systems. Future research should extend this analysis to firm-level data to identify the microeconomic determinants of repatriation decisions, examine sectoral heterogeneity in repatriation patterns, and

conduct cross-regional comparisons to assess the external validity of these findings. Such work would further refine our understanding of how developing economies can harness the benefits of foreign investment while reducing the short-term growth costs associated with profit repatriation.

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