Impact of International Finance on Economic Growth in Nigeria

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ABSTRACT

The study investigated the effects of international finance on economic growth in Nigeria between 1980-2021. The explanatory variables or regressors for the model were Foreign Direct Investment **(**FDI), Foreign Personal Remittance (FPR), Foreign Aid **(**FA) and Portfolio Investment (PI) respectively while Gross Domestic Product Per Capita (GDPC) was the dependent variable. Time series data for the variables were obtained from Central Bank of Nigeria Statistical Bulletin, World Economic Outlook (WEO) and National Bureau of Statistics (NBS). Descriptive statistics, Unit Root tests, bounds co-integration test, autoregressive distributive lag (ARDL) technique, error correction model (ECM) and granger causality test were employed for estimation. The long run ARDL results showed that FDI has a positive but not statistically significant impact on Nigerian economic growth; FPR showed a negative and not statistically significant impact on economic growth in Nigeria; FA showed a positive and not statistically significant impact on economic growth in Nigeria; and the PI showed a negative and not statistically significant impact on economic growth. Based on the findings, the study concluded that only FDI and FA were found to contribute to the Nigerian economic growth. The study recommends that government should implement policies that will increase the ease of doing business and provide support services like investment promotion agencies to assist foreign investors to make Nigeria more attractive to foreign investors. Additionally, government should improve market access by entering into trade agreements to make Nigeria an investment hub for portfolio investments too. Finally, government should create a consistent regulatory framework and avoid frequent changes in policies that can create uncertainty and deter investment.

Key words: Foreign Direct investment, Foreign personal remittance, Foreign Aid, Portfolio Investment, GDP Per Capita.

Introduction

Amidst ongoing resource shortages and escalating poverty in Africa, the imperative to attract international finance has become increasingly vital for the continent's nations. This strategy is inspired by the success of several rapidly developing East Asian economies, which have shown that international financial integration can effectively address resource deficits, reduce debt accumulation, and tackle the root causes of poverty (UNCTAD, 2004). Despite a global increase in international financial flows, Africa still receives the smallest share of global Foreign Direct Investment (FDI) inflows. This is particularly critical for countries like Nigeria and other African nations facing significant savings and foreign exchange gaps, essential for rapid capital

accumulation. Additionally, Africa's distinct developmental challenges, characterized by widespread poverty and persistent debt crises, highlight the pressing need for economic growth and stability.

The historical context of this study traces back to the post-World War II era, specifically the 1944 Bretton Woods Conference, which led to the creation of key global financial institutions such as the International Monetary Fund (IMF) and the World Bank. These institutions were designed to promote global economic stability and support the reconstruction of war-ravaged nations. The subsequent decades witnessed a surge in cross-border capital flows and the rise of multinational corporations, marking a new era of economic interdependence.

The theoretical framework of this study includes various economic perspectives. Advocates of financial liberalization argue that opening economies to international capital boosts growth through foreign investment and competition, and facilitates the transfer of technology and knowledge. However, critics point out potential negative effects, such as increased vulnerability to external economic shocks, worsening income inequality, and a higher risk of financial crises.

A key focus of this research is the impact of FDI on economic development. FDI is often seen as crucial for technology transfer, job creation, and infrastructure development, but the extent of these benefits largely depends on the quality of institutional and governance frameworks in the host countries (Borensztein et al., 1998).

Moreover, the role of international financial institutions like the IMF and the World Bank adds complexity to the analysis. While these entities aim to provide financial support and policy advice to countries in need, the conditions attached to their assistance spark debates over national sovereignty and the suitability of uniform economic policies in diverse economic settings. Hence the need to explore these complex issues, providing insights into the intricate relationship between international finance and economic growth in Nigeria.

It is widely believed that economic growth is heavily reliant on both domestic and foreign investments. However, empirical research focusing on the impact of international finance on economic growth tends to explore either its overall effect on growth and welfare or its specific impacts on trade, employment, technology, entrepreneurship, and other sectors like health, infrastructure, and education.

In Nigeria, despite numerous studies investigating international finance and economic growth, the evidence regarding the relationship between these two factors and their benefits remains ambiguous. Although there appears to be a positive link between foreign finance and economic growth, there is no consensus in the empirical literature about the nature of this impact, indicating that Foreign Direct Investment (FDI) could either be beneficial or detrimental to economic growth. The critical importance of economic growth in these regions, driven by various strategies including policies that attract foreign capital and facilitate technology transfer, underscores the need for this study. It is essential to examine the effects of foreign capital on economic growth.

Theoretical advancements in economic growth suggest that successful developing countries have experienced growth primarily through a "catch-up" process in technology levels. However, there is a significant divergence in theoretical perspectives concerning the relationship between international finance and economic growth. Proponents of financial liberalization, such as Rajan

and Zingales (1998), argue that opening up to global capital flows can spur economic growth. On the other hand, critics like Stiglitz in 2000 warn of the risks, highlighting the susceptibility of developing economies to external shocks and the potential for increased income inequality. This theoretical split necessitates a thorough examination to reconcile these conflicting views and provide a deeper understanding of the issue.

A central challenge in this study is understanding the impact of international finance variables on economic growth. While these variables are often praised for its potential to facilitate technology transfer and create jobs, the realization of these benefits depends heavily on the quality of institutions within the host country. For instance (Ewubare and Ozigbu, 2017) posited that the increasing level of financial globalization and incidence of financial crises in recent times has drawn the attention of economists and policymakers to the macroeconomic implications of unrestricted capital flows to developing countries. It is against this backdrop that we raised the questions, what is the impact of foreign direct investment on economic growth in Nigeria? How does foreign personal remittance influence economic growth in Nigeria? To what extent does foreign aid affect economic growth in Nigeria? What is the impact of portfolio investment on economic growth in Nigeria? Thus, the study examined the effects of international finance variables on economic growth in a bid to unravel the nature of the relationship between international finance variables such as foreign direct investment, foreign personal remittance, foreign aids and portfolio investment on economic growth in Nigeria, which can offer valuable insights for policy-making aimed at maximizing positive outcomes.

Literature Review

Harrod-Domar Model

The Harrod-Domar growth model is a seminal economic theory that emerged in the mid-20th century, developed independently by Roy Harrod and Evsey Domar. This model was one of the first to provide a formal mechanism linking investment, savings, and growth, and it played a crucial role in shaping post-war development economics. The model's primary assertion is that the growth rate of an economy depends fundamentally on the levels of saving and investment, as well as the efficiency with which capital is used.

Central to the Harrod-Domar model is the concept of the capital-output ratio, which measures the amount of capital required to produce a unit of output. This ratio is assumed to be constant in the short run. The model posits that the growth rate of the economy (g) is directly proportional to the savings rate (s), as savings provide the funds necessary for investment. It is also inversely proportional to the capital-output ratio (k), reflecting the efficiency of capital usage. Thus, the growth equation is expressed as $g = s / k$. This relationship highlights that for any given savings rate, an economy can enhance its growth by reducing the capital-output ratio, thereby using its capital more efficiently.

However, the Harrod-Domar model also introduces the concept of dynamic instability, often referred to as the "knife-edge" problem. According to Harrod, the economy needs to maintain a precise balance between the actual growth rate and the warranted growth rate (the growth rate that keeps all resources fully employed) to avoid cyclical fluctuations and ensure steady growth. If these rates diverge, the economy could either enter a cycle of perpetual inflation or face a recession, making sustained economic growth a precarious balance to maintain.

Despite its insightful contributions, the Harrod-Domar model has faced criticism, particularly for its simplistic assumptions. It assumes that the production function is linear and that there are no diminishing returns to capital, which is unrealistic in the long run. Additionally, the model overlooks other factors that can affect economic growth, such as technological changes, labor force growth, and government policies. It also assumes that all savings are automatically invested, ignoring the complexities of financial markets and investment decisions in a real economy.

In conclusion, while the Harrod-Domar model may have limitations due to its assumptions and the instability issues it raises, it remains a foundational theory in economics. It has significantly influenced the way economists think about the relationship between savings, investment, and growth, and has paved the way for more comprehensive models that incorporate additional variables and dynamic elements. The model's focus on capital accumulation and its implications for economic policy continue to be relevant, particularly in discussions of economic development and planning.

The Dependency Theory

The dependency theory posits that developing countries, like Nigeria, are often at a disadvantage in global economic relations, dependent on more developed nations for capital and technology. This framework helps analyze the power dynamics in the international economic system, shedding light on how foreign finance may perpetuate or alleviate economic disparities. On the other hand, the neoclassical growth model emphasizes the positive impact of FDI on economic development, suggesting that inflows of foreign capital and technology can stimulate productivity and growth in the recipient country. The impact of foreign finance on economic growth in Nigeria can be understood through economic theories such as the dependency theory, which explores the unequal power dynamics in international relations, and the neoclassical growth model, which emphasizes factors like foreign direct investment (FDI) and technology transfer in fostering economic development.

Exogenous Growth Theory

The exogenous growth theory, commonly known as the neoclassical growth model or Solow-Swan growth model, was pioneered by Solow in 1956. This theory assumes that economic growth is generated through exogenous factors within production functions, such as the stock of capital accumulation and labor. Barro and Sala-I-Martin (1995) demonstrate that there is a positive relationship between economic growth and capital accumulation over time.

According to this theory, an increase in the stock of investment accumulation will result in an increase in growth, assuming that the amount of labor and the level of technology remain constant (Barro and Sala-I-Martin 1995; De Jager 2004), as cited in Elboiashi, H.A. (2011). Economic growth is affected only in the short run, determined by the stock of capital accumulation, which is influenced by the saving rate and the rate of capital depreciation. On the other hand, in the long run, economic growth is determined by exogenous factors such as technological progress, which takes the form of labor augmentation. Thus, the growth of the economy depends on the stock of capital accumulation and the augmentation of the labor force by technological progress.

Empirical Literature

Chude and Chude (2023) examined the effect of international capital inflows on economic growth in Nigeria, between the period of 1981 – 2021. The main objective of the study is to evaluate the extent to which international capital inflows have affected the performance of Nigeria economy. Ordinary Least Square (OLS) was used as a method of data analysis. The study used secondary data collected from Central Bank of Nigeria (CBN) Statistical Bulletin various years. The variables were foreign direct investment, international workers' remittance, foreign aid as well as real gross domestic product. The researcher employed unit root test, co-integration, and Error Correction Model (ECM). The study reveals that foreign aid has a positive impact and is statistically significant. Foreign direct investment is also positive and statistically significant. Workers remittance is negative and statistically insignificant. The study concluded that international capital inflows has positive and significance effect on the economic growth of Nigeria. The study recommends that. Government authorities should strive to create a friendly environment that will enhance foreign direct investment which will improve our economic growth. Nigeria should vigorously pursue further opening of its economy in order to create global linkages and synergies that are prerequisite for FDI attraction.

Ewubare and Ozigbu (2017) evaluated the effect of net capital inflow, Net foreign direct investment and trade openness on inclusive growth in Nigeria. The study employed the time series data in its analysis. The period of analysis spanned through 1980-2015 and the dataset required for the analysis were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin and National bureau of statistics publications. The study conducted trend analysis, descriptive analysis. The data were also tested for stationarity using the Augmented Dickey Fuller (ADF) unit root test and Ordinary Least Square (OLS) analytical techniques, cointegration test and error correction mechanism. It was evident from the unit root test that the variables were fractionally integrated while the cointegration test reveals that long run relationship exists among the variables. The findings equally reveal that capital inflow exerts significant negative influence on GDP per capita.

Onu (2012) used the econometric modelling of multiple linear regression to determine the impact of FDI on economic growth in Nigeria using the data for the period 1986 - 2010 and came up with affirmative relationship of FDI on GDP for Nigeria within the period of study. He rationalized that the rise in national savings and investment is a fundamental approach for economic growth and that FDI is an engine for economic growth.

Saibu and Keke (2014) examined the impact of foreign finance on economic growth using annual time series data from Nigerian economy. The paper employed Cointegration and Error Correction Mechanism (ECM) techniques to empirically analyze the relationship between foreign private investment and economic growth and to draw policy inferences on the observed relationship. The study revealed that there was substantial feedback of 116% and 78% from previous disequilibria between long-run economic growth and foreign private investment respectively. The findings also indicated that a substantial proportion of capital inflow were not productively invested however the relatively small proportion (22%) of net capital inflows invested, contributed significantly to economic growth in the Nigerian economy. The political environment was found to be unfavorable and overwhelmed the positive impact of foreign private investment.

Research Design

The study adopted the ex-post facto research design to study the impact of international finance on economic growth in Nigeria from 1980 to 2021.

Data Collection Methods and Sources

The data used in the study were secondary data extracted from the Central Bank of Nigeria, World Economic Outlook (WEO) and National Bureau of Statistics (NBS).

Model Specification

The study adopted the multiple regression model.
The functional form of the model was specified as thus:

$GDPC = f\ (FDI, FPR, FA, PI)$ (3.1)

Transforming equation (3.1) into mathematical model gives:

$GDPC = \beta_0 + \beta_1 FDI + \beta_2 FPR + \beta_3 FA + \beta_4 PI$ (3.2)

Transforming equation (3.2) into econometric model gives:
$GDPC = \beta_0 + \beta_1 FDI + \beta_2 FPR + \beta_3 FA + \beta_4 PI + Ut$ (3.3)
Autoregressive Distributed Lag (ARDL) model of equation (3.3) was re-specified as below.

$$GDPC_t = \alpha_0 \sum_{i=1}^{k} \alpha_i FDI_{t-i} + \sum_{i=1}^{k} \omega_i FPR_{t-i} + \sum_{i=1}^{k} s_i FA_{t-i} + \sum_{i=1}^{k} c_i PI_{t-i} + \mu_1 \quad (3.4)$$

Transforming model of equation (3.4) into error correction, we have the model below:

$$\Delta GDPC_t = \alpha_0 \sum_{i=1}^{k} \alpha_i \Delta FDI_{t-i} + \sum_{i=1}^{k} \omega_i \Delta FPR_{t-i} + \sum_{i=1}^{k} s_i \Delta FA_{t-i} + \sum_{i=1}^{k} c_i \nabla PI_{t-i} + \pi ect_{t-1} + \mu_1$$

Where:
GDPC = Gross Domestic Product per Capita (Dependent Variable)

FDI = Foreign Direct Investment

FPR = Foreign Personal Remittance

FA = Foreign Aid

PI = Portfolio Investment

β_0 = the intercept

β_1 to β_4 = are the coefficients for each independent variable

U_t is the error term.

$\alpha 0$ = constant parameter, $a_i < 0$, $w_i < 0$, $s_i > 0$ and c_i are the parameters, π = Coefficient of the error correction term, Δ = first difference notation, k = notation for optimal lag order, U_t = is uncorrelated white noise disturbances or error term.

A priori expectation: $\beta_1 < 0$, $\beta_2 > 0$, $\beta_3 > 0$, $\beta_4 > 0$

Data Analysis Techinques

The ARDL bounds cointegration test was employed to determine the existence of cointegration among the proxy of the dependent variable and the proxies of the independent variables (regressors). According to Pesaran, Shin and Smith (2001), bounds cointegration test can be used to test for cointegration in a mixture of variables of order I(0) and I(1). Furthermore, the long-run

and short-run estimations were conducted using the Autoregressive Distributed Lag (ARDL) technique. The Autoregressive Distributed Lag (ARDL) technique is a popular econometric approach used to model the relationship between a dependent variable and one or more independent variables both in the short and long run. The ARDL approach was used in this study following the outcome of the unit root test and the establishment of long run relationship among the variables. This so because some variables were stationary at level I(0) and others are stationary at first difference I(1). Additionally, Granger causality test was conducted to examine the direction of causality between international finance and economic growth in Nigeria

Results and Discussions

Unit Root Result

The ADF unit root result is presented in table 1

Table 1: unit root results

Variables	ADF statistics at level	ADF statistics at first difference	Order of integration
GDPC	0.4721	0.0000	I(1)
FDI	0.0020	NA	I(0)
FPR	0.0161	0.0000	I(1)
FA	1.0000	0.0001	I(1)
PI	0.0001	NA	I(0)

Sourced: Author's Computation from E-View 10

From the results of the ADF tests presented in table 1 shows that FDI and PI was stationary at level I(0) while GDPC, FPR and FA were stationary at after first difference. Following the mixed order of integration among the variables, the study adopted the ARDL bounds cointegration test to test for long run relationship among the variables.

ARDL bounds co-integration test

The ARDL bounds co-integration test result is presented in table 2

Table 2: ARDL bounds co-integration test results

Null Hypothesis: No long run relationship exists		
Test Statistics	Value	K
F-statistic	4.105503	4
Critical Value Bounds		
Significance	Lower Bound	Upper Bound
10%	2.2	3.09
5%	2.56	3.49
2.5%	2.88	3.87
1%	3.28	4.37

Source: Author's Computation from E-view, 10

K represents number of explanatory variables.

The ARDL bound test result shows that the F-statistics of 4.105503 is greater than the lower and upper bound critical value of 2.56 and 3.49 at 5% level of significance, indicating a long run relationship between GDPC, FDI, FPR, FA and PI in Nigeria.

The ARDL long-run test

The ARDL long run test is presented in table 3

Table 3: ARDL long run test results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	1918.371	1736.520	1.104721	0.2824
FPR	-3.810259	4.039285	-0.943301	0.3568
FA	14.28648	8.647848	1.652027	0.1141
PI	-18.00885	17.34006	-1.038569	0.3114
C	-1131.342	2152.863	-0.525506	0.6050

SOURCE: Author's Computation from E-view 10.

The ARDL long-run result shows that FDI has a positive but not statistically significant impact on Nigerian economic growth. The coefficient value of 1918.371 indicates that a unit increase in FDI contributes 1918.371 units to Nigeria's economic growth in the long run.

Furthermore, the FPR shows a negative and not statistically significant impact on economic growth in Nigeria. The coefficient value of -3.810259 indicates that a unit increase in FPR decreases economic growth in Nigeria by 3.810259 units in the long run.

Moreover, the FA shows a positive and not statistically significant impact on economic growth in Nigeria. The coefficient value of 14.28648 indicates that a unit increase in FA increases economic growth in Nigeria by 14.28648 units in the long run.

In addition, the PI shows a negative and not statistically significant impact on economic growth. The coefficient value of -18.00885 indicates that a unit increase in PI reduces economic growth in Nigeria by 18.00885 units in the long run.

Granger Causality Result

VAR Granger Causality/Block Exogeneity Wald Tests
Date: 02/08/24 Time: 22:40
Sample: 1980 2021
Included observations: 34
Dependent variable: GDPC

Excluded	Chi-sq	Df	Prob.
FDI	16.47587	2	0.0003
FPR	4.305437	2	0.1162
FA	3.571417	2	0.1677
PI	0.087180	2	0.9573
All	19.81650	8	0.0111

Source: Authors computation from E-View 10

The Granger causality test was conducted to examine the direction of causality between international finance and economic growth in Nigeria. It was discovered from the results that only FDI Granger causes GDPC, as its probability value is less than 0.05 at the 5% level of significance. This implies that FDI has a unidirectional significant effect on GDPC. Thus, the null hypothesis is rejected. This means that the variables FPR, FA, and PI cannot be relied upon to predict changes in economic growth but FDI can be relied upon.

Conclusion

Based on the findings, the study concludes that FDI and FA were found to contribute to the Nigerian economic growth, while FPR and PI were found not to contribute to Nigerian economic growth within the study period.

Recommendations

Based on the findings, the following recommendations were made among others;

1. That government should implement policies that make Nigeria more attractive to foreign investors. This could include improving the ease of doing business, enhancing legal protections for investments, and offering incentives such as tax breaks or grants to foreign companies willing to invest in key sectors.
2. it is advisable for the government to implement policies aimed at stabilizing the financial markets. This could involve strengthening financial regulations, improving the transparency of financial institutions, and implementing more robust monetary policies to control inflation and stabilize the currency in other to attract foreign portfolio investment.
3. Policies that promote financial literacy, support the development of local banks, and encourage savings and investments among the populace could be beneficial. Additionally, reducing dependency on external debt and fostering a more self-sustained financial sector could also be key strategies.
4. The government should strive to create a more consistent regulatory framework and avoid frequent changes in policies that can create uncertainty and deter investment. Establishing a long-term economic plan that transcends political cycles could help in achieving this stability which will guarantee the inflow of foreign capital

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